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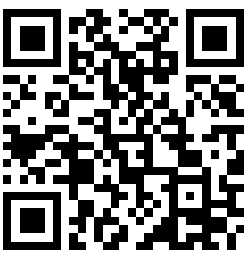

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Lecture

INTRODUCTORY TO THE COURSE ON SURGERY.

Delivered at the University of Edinburgh at the Opening of the Winter Session, 1879–80,

BY JAMES SPENCE, F.R.S. EDIN.,

SURGEON IN ORDINARY TO THE QUEEN FOR SCOTLAND; PROFESSOR OF SURGERY TO THE UNIVERSITY OF EDINBURGH.

GENTLEMEN,—It is my usual custom to proceed at once to the proper subject of my lectures, without any general introductory remarks. As the opening of this session, however, completes thirty years during which I have lectured on surgery, I have thought it well to try whether I could not make my experience useful as an introduction to the present course. To have lectured on a special department of medical science during a whole generation implies having witnessed much change and progress; and as I had taught anatomy and practised surgery for many years prior to my commencing a formal course of lectures on the latter subject, I fear I can claim a much longer period for my retrospect. I have no intention of entering on the improvements in, or the additions made to, special departments of surgery, as I did so to some extent in my Address on Surgery at the meeting of the British Medical Association in 1875. To enumerate all that has been done during the long period I review would be tedious, whilst it would scarcely bring out the kind of progress. The advance has been along the whole line; in *modifying*, improving, and restoring methods of treatment previously in use, as well as in furnishing us with new resources and enlarging the range of our operations. All I shall attempt will be to express what has most struck me in comparing my recollections of the surgery of forty-five years ago with the surgery of the present; to consider what are the causes which have led to advance; and see if we can throw out any suggestions which may be useful in enabling you to avoid certain errors and to promote true progress.

In looking back on surgery as I first recollect it, I confess that my feeling was to question whether the surgery of the present was equal to the great surgery of that time. Surgery had just then taken great strides in advance. Operations which had been hardly suggested previously, such as those on the jaws, the ligature of the great arterial trunks, and other brilliant feats, had been boldly and successfully carried out with a dexterity never likely to be surpassed. Conservative surgery, in substituting excisions for amputations in certain cases, had been revived and established on surer principles; whilst the treatment of the more ordinary surgical diseases and injuries had been modified and simplified so as to leave but little room for improvement. And it was a time of master spirits. It was the era of Dupuytren, Lisfranc, Roux, Velpeau, and Delpeche, in France; Sir Astley Cooper, Charles Bell, Abernethy, Brodie, and Lawrence, in England; whilst Edinburgh could boast of Liston, Lizars, Syme, and Fergusson. These were masters whose spirit has told upon the progress of our science, not only by the work they did themselves, but by the enthusiasm they created in their pupils. I know that in speaking thus I may be regarded as *laudator temporis acti*, and perhaps it is difficult in such a retrospect to rid oneself of the glamour of early impressions. All I wish to do, however, is merely to vindicate the brilliant position which surgery had attained some forty-five years ago. I certainly do not intend to take up the proverb that "the former times were better than these"; on the contrary, my object to-day is to assert that there has been advance, and to consider to what it is due. But for this purpose it is essential to define clearly the position of surgery, at our starting point.

On looking at the present state of surgery as compared with these early recollections, the things which strike me most forcibly are—(1) how much more generally the treatment of important surgical cases and the performance of surgical operations are undertaken by the profession; (2) the care and precision with which operations can now be performed; and (3) the larger and constantly increasing range of operative surgery.

Formerly, comparatively few but those who practised as pure surgeons undertook the more serious cases and the greater operations. No doubt, at all times, in our larger provincial towns, and even in country districts, there have been men who gained a well-earned reputation as surgeons and operators, and who did not a little to advance surgical science by their observations and contributions to its literature. Now, however, throughout the length and breadth of the land, in the country as well as in the larger towns, many general practitioners perform most of the great operations.

The causes which have led to this change are, I believe, the same which have produced advance in the other lines to which I have alluded, and, indeed, the progress of surgery as a whole. It might be considered as most obviously due to a higher and better system of education. It may be said, your schools send out men more fully equipped than formerly, and they, very naturally, are unwilling to leave their acquirements unemployed. The importance of higher education, the advantages possessed for practical study, and the value of applied science in furnishing means of exact diagnosis, are evident. There could be no real advance without them, and I shall have something to say about this immediately; but the higher education will not altogether account for the more general practice of operative surgery by the profession, nor, indeed, for the other two conditions in which progress in the surgery of the present is so observable. Formerly, many men highly educated never operated. It is stated that the illustrious anatomist, Haller, although he regularly demonstrated the operations on the dead body, and was frequently consulted in planning operations, never ventured to operate on the living; and, in like manner, many men who possessed the required knowledge wanted the necessary nerve. The truth is that operative surgery is easier of practice now, and disarmed of many of the dangers and terrors which formerly made an operation a trying ordeal for the surgeon as well as for the patient. If I am asked what has most conduced to this, and has most advanced the progress of surgery, both directly and indirectly, during the last forty years, I reply without hesitation, "the use of anæsthetics." I say so after experience in operating both before and since their introduction. Before their use I had performed most of the operations of surgery, many of them repeatedly, and was in the constant habit of witnessing and assisting at others. Looking back at that time, whilst those who did operate were cool enough, I can well recollect the distractions and annoyances which the surgeon had to encounter from the struggles and cries of the agonised patient, and the risks in dissections near important structures from some sudden involuntary movement. In some operations, as lithotomy in the adult, it is almost impossible to convey an idea of the difficulties, frequently superadded by muscular spasm and struggling. As to the use of anæsthetics in influencing the results of operations, not to speak of the intense shock which the patients must have endured during an operation, prior to their use, you can easily understand that they naturally put off the evil day as long as possible; too frequently until the disease had seriously affected the constitution, and thus greatly diminished the chances of recovery. Now all is changed. If the anæsthetic be properly administered, the patient thoroughly brought under its action and carefully watched, he lies perfectly still, and the operator can proceed deliberately without haste or distraction. Then as to the value of anæsthetics in influencing the care and precision with which an operation can be performed now, we find that exemplified in some of the greatest modern triumphs of surgery in such operations as ovariotomy and other abdominal sections—operations looked upon formerly, and not without cause at the time, as almost unwarrantable, but which now rank amongst the most successful operations of surgery. Formerly, in these, as in other operations, rapidity in operating was almost essential, to save shock. Hence imperfect arrest of bleeding from smaller vessels in dividing the parietes before opening the peritoneal cavity, then undue handling and exposure of parts, thence fatal results. Now every step is taken leisurely and methodically; all bleeding from small vessels divided in making the parietal section is arrested before the peritoneum is incised, all manipulation or exposure of parts as far as possible avoided, and after removal of the tumour, when all oozing has been arrested and thorough cleansing of the wound accomplished, the most careful suture of the divided parietes

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and peritoneum is performed with such care and delicacy that I find this part of the operation spoken of lately "as *accomplishing the peritoneal toilette.*" And thus care and precision in operating result in deserved success. But without anæsthetics could an operation such as I have described, requiring such leisure and care, have been performed? This invaluable aid to surgery has thus not only alleviated, or, I should rather say, abolished the suffering of the patient, but enabled the surgeon to perform successfully, by care and precision, operations formerly deemed unwarrantable. It has further facilitated greatly examinations required for accurate diagnosis, and finally has enlarged the range of cases of disease and deformity in which surgical operations may be justifiably performed. It is true that the impetus given to interference in cases of deformity preceded by a considerable period the introduction of chloroform; but division of tendons and such operations were not attended with much pain, and though I can recollect a good deal of suffering endured to obtain a doubtful facial improvement when the Talicotian operation first became fashionable here, and though Sir Astley Cooper used to mention the case of a gentleman with bowed legs who submitted to have their curves rasped down by an ingenious friend, and though the saying "Pride feels no pain," may be to some extent true, I beg leave to doubt whether the various osteotomies for knock-knee and other deformities would now be so frequently submitted to except for the use of anæsthetics.

It is just thirty-two years last September since a letter from Mr. Liston to my predecessor, Professor Miller, triumphantly announced that he had performed an operation on a patient under the influence of ether, and that the man had been quite unconscious of its performance. The researches of Simpson, which resulted in the discovery of the anæsthetic properties of chloroform, speedily led to its general adoption. I first had the opportunity of using it in a great operation (an amputation of the shoulder-joint) in the country in the beginning of November in the same year (1847) with perfect success, and since then I have seldom performed an operation, or seen one of any magnitude performed, without the use of chloroform or other anæsthetic.

The use of anæsthetics has been almost an unmixed blessing, for though it could hardly be expected that agents so potent as to annul pain and induce unconsciousness, should be altogether devoid of risk, and though most surgeons have met with alarming cases during their use, the actual loss of life has been almost infinitesimal when compared with the numbers of cases in which they have been used. In all my own experience in operating I have had but one fatal case, and I believe not more than seven or eight cases, if so many, have occurred in the Royal Infirmary during the thirty-two years anæsthetics have been in constant use. On these grounds I look upon the introduction of anæsthetics into surgical practice as the most notable of all the impulses to the advance of surgery.

Other aids less remarkable, but of great practical importance, have also done their part to rob operative surgery of its difficulties and terrors—e. g., the bloodless surgery of the present day, whether by Esmarch's method or by the use of the galvanic or thermo-cauteries. Though in one sense these cannot be spoken of as new in principle, yet as now used they are so improved that I may fairly include them as practically new aids to surgery. Esmarch's method in operations on the limbs enables us to avert all loss of blood, and to proceed in prolonged and complicated excisions and dissections as leisurely, and seeing parts as clearly, as on the dead body. Thus the terrors of hæmorrhage so graphically described by John Bell no longer exist for the young surgeon.

But whilst these aids have so modified and simplified the art of surgery that they stand prominently out as causes of progress, they would be valueless if unaccompanied by the only sure element of true progress — a higher education. That is all-important, even as regards the performance of an operation; however still the patient, however bloodless the incisions, there could be neither safety nor precision if the operator was deficient in anatomical knowledge, or had only vague notions of the principles and plan on which he was to proceed. But medical education has made very great advances both as regards the development of our science and the thoroughness of teaching, and the result has been more solid acquirements and a more highly educated profession.

No one who has witnessed the progress of medical science, least of all those who can look back on such a period as I do to-day, will hesitate to admit the benefits conferred by more thorough education. I almost envy the facilities for studying anatomy by dissection possessed by the students of the present time, though I sometimes think it might be well if they could feel some of the difficulties of the past, so that they might estimate more highly the advantages of the present. The means now enjoyed for the practical investigation of minute structure, healthy and diseased, the improved and more exact methods of teaching physiology and pathology, together with the aids given by the application of physical science in furnishing us with instruments of precision for the purposes of diagnosis and clinical observation, are so obviously connected with, and form so solid a basis for, true progress that I need not dwell on them in detail. My experience of the past rather suggests certain risks, not inherent in, but attending, such new acquisitions and advantages, unless we accept and use them properly. One error is that in acquiring something new, we are apt to cast aside the old as useless, or at all events less valuable, instead of accepting the new as an addition to, a development, an extension, of our knowledge. If the student of medicine be carried away by the attractions of histological research and transcendental anatomy, to the neglect of ordinary dissection as it is called, instead of regarding all parts of anatomical science as forming one great whole, his anatomical knowledge will be seriously defective. If the clinical student, exulting in all the modern means of exact physical diagnosis, neglect or throw aside the methods of observation and examination on which his predecessors relied, he will find that he has thrown aside much which if properly combined with recent aids would have rendered his diagnosis more exact. There is value, not easily defined perhaps, but real value, in the practised sight and touch; correlations between these senses and the brain. The sphygmograph is probably destined to play an important part in the medicine of the present day, or of the immediate future, but I would be loth to trust to a mechanical appliance, however delicate and exact, for the same kind of information as to the character and quality of the pulse which is conveyed by the educated touch of the living finger.

Do not misunderstand me. I look upon the modern aids to physical diagnosis and clinical observation as amongst the very greatest additions to our resources, and I consider their practical study and use as imperative on everyone who would keep abreast of or advance the progress of medical science. As I have warned you against trusting to these new appliances to the exclusion of other methods, so I would warn you, on the other hand, against giving up their study if you do not find them answer all your expectations.

You must, in the first place, recollect that these mechanical aids are not exactly self-acting, that you require to exercise patience and judgment in attaining the habit of using them. Then, like all human inventions, they are not quite perfect at first. Some you will soon learn to appreciate; others, as the endoscope, from the difficulties in using the illuminating power and the limited field of view which its calibre permits, may disappoint; but in such instances our duty is to try to overcome difficulties, to use these aids meanwhile so far as available, and to try to improve them.

The "pocket sphygmograph" of the present may look somewhat formidable, but the pocket watch of the ancient physician was not a thing to be lightly regarded, and possibly the sphygmograph may by and by assume less formidable proportions.

The modern aids to clinical observation, as exemplified in the clinical thermometer, and the methods of careful examination of the various secretions and excretions, can scarcely be too highly prized, and form marked advances. They are, I should say, if possible, even more useful in surgery than in medicine, just because in surgery our attention is more apt to be fixed upon the wound or local injury, to the exclusion of constitutional conditions. The clinical thermometer, when its markings are carefully registered, often serves as a "storm signal" to the surgeon, indicating some latent mischief, whilst as yet there is nothing in the general appearance of the patient or of the wound to excite alarm; whilst the careful examination of the secretions and excretions will often decide him in delaying or avoiding operations.

Hitherto I have been speaking of those departments in which the advance has been most conspicuous and most easily determined; but in regard to the treatment of disease, the end to which all else are but means, it is more difficult to speak. There has been no lack of new remedies and

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appliances, whether internal or external, proposed; but it is by no means so easy to decide as to their value, just because the methods of testing their mode of action, until a comparatively recent period, have not been exact. In that department of therapeutics which deals with internal remedies the difficulties in determining their *modus operandi* by exact methods of physiological research are very great, whilst by clinical observation alone the relation of cause and effect, the *post hoc vel propter hoc*, is not easily decided. At one time during the period I am surveying it seemed as if accuracy in diagnosis and exact knowledge of morbid lesions were to form the goal of medical science. Medical men began to question the adequacy of supposed remedies to cure the morbid conditions observed; they became sceptics as to treatment beyond what they termed "expectant"; they contented themselves with a dignified observation of what nature would do; like Mr. Micawber, they waited to see what would "turn up." The truth is, that both in medicine and surgery there had been too much interference, and so the inevitable swing of the pendulum resulted in what was considered a "masterly inactivity."

Now there seems the dawn of a clearer day. More exact methods of investigation seem to promise, indeed have already produced, more solid results; carefully conducted physiological observations have taken the place of the cruder methods, which often resulted in some remedy becoming fashionable as an almost universal panacea, and then vanishing into space. The recently concluded researches of my esteemed colleague, Professor Rutherford, on the action of cholagogues, form a model of patient labour and exact investigation in determining the action of certain drugs; whilst Dr. Lauder Brunton and other graduates of this University have done good service in this field. The value of surgical therapeutics, of local remedies and appliances, seems less difficult to determine, because the effects of local remedies and methods of treatment can be more readily watched and judged of; yet there is great need of more exact observation and investigation even in this department, for in surgery, as in medicine, there is a tendency to fashion in methods of treatment. In regard to the results of every method of local treatment, there is one thing the surgeon should keep before his mind—that certain constitutional conditions may interfere unfavourably with the wound or local disease, whatever may be the treatment; and we should beware of trusting to infallible methods, or so concentrating our thoughts on one part of the treatment as to exclude others equally important.

I know there is a charge brought against unfortunate seniors like myself, that we are disposed to reject, or look askance at, all new methods of investigation or treatment—that we get stereotyped in fact. I do not admit that charge, nor do I think it will stand thorough examination. It is true that the seniors may be somewhat slower than the junior members of our profession in giving their adhesion to all that is novel. A surgeon of long experience has seen a great many new things come in amidst acclamation and go quietly out, and so he becomes gradually less trustful, perhaps unduly sceptical. Another reason is the manner in which the advocates of new methods claim for them immense superiority, or even infallibility, and ignore the success of other modes of treatment. This very naturally excites distrust in the senior, for he knows that the statements are not in accordance with what he has himself witnessed, and so he may be prevented from accepting what is good in a new system. So much for seniors.

There remain a few suggestions I would offer to those who are about to enter the profession, for there are certain habits to cultivate, and some to avoid. If you would practise scientifically and successfully, be careful to attain a thorough knowledge of sound principles to guide your actions, and have them so clear and succinct, so ready at hand, as to be available in difficulties. Avoid studying the different branches of the medical curriculum as if the more purely scientific had no relation to the practice of your profession; believe me they all have important bearings on it, and it is just the habit of applying them to the diagnosis and treatment of disease which constitutes the difference between a scientific and a mere routine practitioner. There is nothing strikes me more in giving a student a case to examine in hospital than the want of this habit of using the knowledge he possesses of anatomy, physiology, and pathology, to diagnosis. Then acquire the habit of watching different methods of treatment, and forming your independent opinion after fair observation. I am a strenuous advocate for dogmatic teaching on practical subjects, like medicine and surgery, that the student may not be left confused and undecided in consequence of conflicting opinions. I feel that if after long experience I have arrived at decided views and mode of action in my own practice, I am entitled and bound to tell my pupils how I would act, and why; but then the student should not rest there, but endeavour by thoughtful observation to satisfy himself as to the principle of action. Ours is a progressive science, and I would not like to see surgery "stereotyped" either in my pupils or myself.

In conclusion, gentlemen, don't expect too much. Remember that ours cannot be classed amongst the exact sciences, for we have to deal with that "unknown quantity" *Life*, with all its undefined effects on the human frame, and with the peculiarities of individual patients. If, when engaged in clinical work, you find prognosis fail, or when accurate diagnosis only reveals some lesion for which, as yet, no remedy is known, you may feel discouraged. But don't lose faith in your science. The terse historic summary of Scripture "Joseph died, and all his brethren, and all that generation," will doubtless be the history of all the generations to come, as it has been of the past. But equally true it is that in the past and in the present our science has done and is doing much to relieve human suffering and prolong life. And so when you meet with disappointments don't despond; rather let them stimulate you to fresh efforts to advance scientific progress, and to reduce to a minimum the failures of our art.

Clinical Lectures
ON
SOME CASES OF HEART DISEASE.

Delivered at the Hospital for Consumption and Diseases of the Chest, Brompton,

BY R. DOUGLAS POWELL, M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL.

LECTURE I.[1]

GENTLEMEN,—Before directing my remarks more particularly to the cases which I shall bring before you for examination to-day, there are some facts and opinions respecting the conditions and relations of the normal heart to which I will briefly refer in order that we may understand one another if future reference be made to them. I need not detain you by describing the to you well-known position of the heart, but I will observe that, examined more nearly and separately, the attachments and connexions of the heart are found to be to movable points and to elastic structures. Whether we look to the ever-moving surface of the diaphragm on which it rests, or to the arched and elastic aorta and main vessels by which it is upheld, or, again, to the elastic lungs which envelop it on either side, we observe, I say, each attachment unfixed, and with a tendency to shift; so that the heart is held in position, balanced, as it were, by the convergence to it of elastic chords—for as such the diaphragm, the lungs, and the vessels, may in this view be regarded—which hold it within bounds rather by a series of spring checks than by opposing to its displacement any solid resistance.

Were it otherwise—were the heart surrounded by stationary fixed organs, instead of by those whose tendency is to withdraw from its surface, it is obvious that it would become in many of its vicissitudes subjected to serious compression. An effusion into the pericardium, for instance, intruding between the heart and the organs closely applied to it, must soon suffice to counteract the feeble pressure of the blood returning to its chambers in diastole, were it not that, in fact, the lungs retreat before the accumulating fluid, and, until the lax and capacious pericardium becomes distended so that its tense parietes react upon the heart,

[1] This lecture has been considerably curtailed, and all details of demonstration omitted.

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no intra-pericardial pressure is possible.[2] In distension of the abdomen by flatulence, ascites, or pregnancy, in effusions into the pleura, and in the numerous violent shocks to which in our daily life and amusements we are frequently subject, the heart is protected from pressure. And yet, with all this freedom, its mean position scarcely varies a fraction of an inch throughout healthy life.

The forces of which I have been speaking—the traction of the diaphragm, the lungs, and the elastic vessels—are of but feeble tension, but they are of constant action, and one more important effect which they have upon the centre of the circulation is to assist during diastole the filling of the heart's cavities.

Respecting the circulation generally and the innervation of the heart I have nothing now to say. As to the sounds of the heart every conceivable explanation has been suggested and insisted upon with much eloquence and warmth as accounting for them. We have now no doubt, however, that there are at least two important factors concerned in the first sound—viz., the sudden tension of the ventricular wall and that of the auriculo-ventricular valves, the mitral valve more particularly. It is one of the auscultatory features of the weak or fatty heart that the systolic sound is purely valvular and flapping in character, not being associated with any muscular sound. Doubtless, also, in excited action, the direct knocking of the ventricle against the thorax may add to the normal sound. Respecting the second sound there has been less dispute, the tension of the aortic and pulmonary valves being universally admitted as a sufficient cause.

By this simple method of testing the valves of the heart (by means of a syphon with a fall of nine feet of water, the metal nozzle of which is inserted alternately into the several orifices of the heart) the absolute perfection of the mitral valve in resisting regurgitation under any pressure of distension is well shown; the greater the pressure the more absolute the closure of the valve. It is not so with the tricuspid valve; you will observe that under considerable pressure (about nine feet of water) a twisted triangular stream regurgitates through the tensely closed valve.

My object in submitting to you these familiar facts is to remind you that the closure of the mitral and tricuspid valves is a mere matter of fluid pressure, just as we observe the closure of the semilunar valves to be, the papillary muscles, as such, and so far, having nothing to do in the matter beyond being part of the chords which support the valves. We cannot thus, however, fairly estimate the perfection of the mitral (or tricuspid) as a living valve, for this depends largely on the papillary muscles, which, contracting with the systole of the ventricle, maintain the tension of the chords during the approximation of their valve and ventricular attachments. The papillary muscles are believed to be concerned in the production of some murmurs not due to disease of the valve itself. It not unfrequently happens in some cases of hypertrophied heart that, from some cause or another—e.g., the oncoming of an acute lung complication—the pressure upon the ventricle is greatly increased, and we get rapid yielding of its walls and an apex systolic murmur produced. It is commonly believed that this murmur is due to the auriculo-ventricular orifice becoming dilated "beyond the tether of the valves," which thus permit of regurgitation. I think, however, we have all seen cases in which, the lung troubles having subsided under judicious management and rest, the relieved ventricle has rapidly resumed its former dimensions, and the murmur has disappeared. Now, were the murmur in the first instance due to dilatation of the rigid tendinous mitral orifice in such degree as to be beyond the tether of the valves, it is difficult to conceive how such reparation should occur.

A different and more tenable explanation is at hand, however—viz., that the ventricle itself becoming acutely dilated, the papillary muscles to which the chordæ tendineæ are attached are displaced outwards to a circle of wider arc; the valves are thus dragged upon, and their accurate closure interfered with, by the tightened chords, the direction of whose traction is also somewhat changed, and when systole takes place blood is forced between the leaflets, the breach being maintained rather than closed by the contraction of the papillary muscles.

In more chronic and less remediable cases the papillary muscles become stiffened and degenerated with the rest of the ventricle, and begin to fail in contracting and supporting the valve during systole. When, in cases of heart disease, the mitral orifice becomes dilated I believe the lesion, within the smallest possible limits, to be abiding.

In the first two cases of mitral disease which I will now ask you to examine—Case 1, that of a girl aged twelve, whose heart disease dates from rheumatic fever, two years and a half back; Case 2, that of a woman aged twenty-five, who at ten years old had rheumatic fever—you will observe that the murmurs at the apex (mitral systolic), although very distinct, are yet heard with, and in addition to, the first sound, which they do not wholly replace. There is but very little hypertrophy present, although the valve lesion is of some duration; and the patients are but little disabled by their heart disease, which, in fact, is better described as a *mitral leaking* than a mitral regurgitation. One of them, however, is unfortunately the subject of advanced phthisis.

If you contrast these two cases with others now in the room in which the mitral valve is more seriously damaged, and particularly with one in which there is stenosis as well as regurgitation, you will see how plainly is told the greater mechanical defect in the rapid growth of the labouring ventricle and the gradual yielding step by step of the strongholds of the circulation.

I shall have more to say of these cases at our next meeting, and will only now make the general observation that in taking a heart case we must never consider that to detect and localise a murmur is to make a diagnosis; still less can we on stethoscopic data alone build a prognosis. Having considered the murmur, whether it completely or only partially replaced the normal sound, and whether it be solitary or accompanied by other murmurs, we look to the heart and compare its degree of hypertrophy or dilatation with the duration of the disease. Then the pulse—its rapidity, regularity, force, and volume—is compared with the ventricular hypertrophy and other special qualities noted.

With regard to other organs, again, we must, in judging of their condition with a view to prognosis, have a due regard to the special heart lesions before us. Thus pulmonary congestion, normal to an early stage of mitral stenosis, would be of graver augury in simple regurgitation, and of speedily fatal significance in aortic disease. Similarly with systemic dropsy.

The previous habits, social condition, and occupation of the patient and the previous treatment of his disease are important points for consideration in estimating a prognosis. In most hospital cases the urgent symptoms have been hastened on by undue exposure and exertion, and, if not too far advanced, brilliant results are often obtained from rest and treatment. In other people these later symptoms come on rather in the natural course of the disease, in their due time, when the reserve forces have been exhausted, and they can be no longer staved off by judicious treatment. Unless, however, one is careful to ascertain this to be the case, one may make great mistakes in prognosis.

[2] Dr. T. M. Rotch, of Boston, in his "Absence of Resonance in the Fifth Right Intercostal Space diagnostic of Pericardial Effusion," has shown by some interesting experiments that the normal traction of the lungs upon the pericardium determines the shape assumed by the effusion.

Observations

INTRODUCTORY TO CLINICAL LECTURES ON THE

DISEASES OF WOMEN.

By ROBERT BARNES, M.D.,

OBSTETRIC PHYSICIAN TO ST. GEORGE'S HOSPITAL.

GENTLEMEN,—It is not unfitting, before inviting you to accompany me in the clinical study of the diseases of women, to examine into what is understood by a special department of medicine. There are not a few persons who, for want either of knowledge of the subject or of reflexion, are apt to look upon obstetrics and the diseases of women as something special. If the term means anything at all, it must mean a piece of medicine that can be taken up apart from the general body of medicine, studied and practised separately, or with only a feeble and casual reference to the other parts or to the whole. If this definition be objected to in theory, there can be no difficulty in showing that in practice it is true. There are two aspects from which the question may

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be regarded. First, there is the view which we will assume for the moment is that taken by the so-called general or "all-round" physician. Secondly, there is the view taken by, or ascribed to, the pure specialist. We will consider these two views first. By and by, perhaps, we may discover a third, truer than either of these, because it rejects the exclusive notions of both, and combines their common or mutual relations.

The first aspect, that of the general physician, is, in practice if not in theory, that medicine is made up of bits, each bit being the pathology of one organ or set of organs; further, that each of these bits of medicine may be detached from the rest, and be allotted to a distinct class of physicians; and, therefore, that the general physician need not trouble himself about these bits. He throws them off as of inferior importance, only worthy of the notice of an inferior order of practitioners—that is, of specialists. He studiously, almost contemptuously, ignores them, strangely preferring ignorance to knowledge. Let us take an illustration or two. The eye, the ear, the skin, the throat are told off to special practitioners, who are assumed to limit their attention to the organs assigned to them. Now the fatal error that lies at the root of this creed is the assumption that these organs are practically distinct entities or organisms, having no reciprocal relations to the rest of the body. Of course the reply will be that this is an extreme way of stating the case, that in fact no one will affirm that the diseases of one organ can be understood without reference to other organs and the state of the body generally. I will also freely admit that most physicians carefully include the study of the skin and throat in their grasp; that some take in the eye and the ear, more or less. This may be granted; but, on the other hand, it follows that, granting it, we acknowledge that a real specialism is impossible. And then, pursuing our inquiry from this basis, we shall find that the specialisms in vogue are not, indeed, pure absolute specialisms, but bits of medicine approaching more or less nearly to the definition we have laid down. In proportion as attention is concentrated upon the organ which is the subject of specialism, and its relation to other parts ignored, the nearer we approach to that definition. And it cannot be denied that the subdivision of medicine as now taught and practised tends strongly in this direction. We can never realise the abstract idea of specialism. But we are continually in danger of diverging farther and farther from the great truth that medicine, like the body which is its subject, is one and indivisible. To affirm that the eye could exist, live and see apart from the brain and body, would be to utter an absurdity so gross that the most ignorant would ridicule it. To affirm that the diseases of the eye can be studied and treated successfully without regarding the relations of the eye, anatomical and pathological, to the body at large, is in reality equally absurd. The absurdity may not perhaps strike so forcibly. But a moment's thought is enough to show that if the assumed physiological independence of the eye is absurd, its pathological independence is simply a corollary.

Now, I do not accuse any physician or surgeon of entertaining either of these absurdities in their naked abstraction, but I cannot help saying that not a few do encourage a belief in the second or pathological absurdity amongst the mass of the public; and the public do believe in it. Proofs abound. We shall glance at some as we proceed. One might touch upon a new development of the practice of specialism. Specialism itself tends to divide into subspecialisms. I prefer to take an example from my own department, but examples are not wanting in others. Some women will select physicians who are supposed to have made a special study of tumours of the uterus, whilst others will prefer those who know all about flexions.

We may perhaps come to see the field of the chiropodist cut up, and each of the toes assigned to a special physician. But the "great-toe doctor" will retain pre-eminence, on account of the splendour of the connexions of the great-toe with hereditary rank, sumptuous living, and the imperial stomach.

This splitting up of medicine into fragments may suggest to the historical student the reflexion that we are undergoing a retrograde or backward development towards the medicine of ages and nations lapped in barbarism, or only emerging into inchoate civilisation, which plotted out the human body, assigning each plot to a particular doctor, as the Egyptians plotted out the mud of the banks of the Nile. It is not a little curious that in no other country is this plotting process carried out so minutely as in England, especially in London, which, Alemannic pretensions notwithstanding, has held, still holds, and will hold, a significant position amongst the scientific and civilising energies of the world. This anomaly is to some extent due to the accident or blunder which permitted separate colleges for medicine and surgery to be founded, and gather independent, sometimes antagonistic, strength. Some sanguine men were once fired with the hope that the University of London would have reunited the detached elements of medicine, restoring her to her original integrity. But that dream is dispelled. Radical organic vices in the constitution and working of that much-promising body have, for a time at least, destroyed the possibility of its realisation. The colleges maintain, and I must frankly acknowledge greatly justify, their supremacy. Their justification would be complete if they were united in one corporation, as is the human body, whose welfare is their common object.

Now let us take an illustration of the popular outcome of this division of medicine:—A woman comes to a physician, selected for his supposed exclusive skill, complaining of amenorrhœa; she suffers at the same time from dimness of sight, perhaps pain in the eyeball, for this she goes to an ophthalmic surgeon; she has at the same time blotches on the legs—erythema nodosum,—and for this she goes to a skin doctor; she has also weakness and pain in the back, perhaps a little curvature, and for this she goes either to an orthopædic surgeon, or to some physician who takes special care of the nerves. And she visits all these specialists at short intervals, entrusting to each the organ which public opinion assigns to him. Here is the pathological absurdity carried into practice. One might give endless similar illustrations, more or less amusing or instructive. The public, personified if you like, is often strangely at fault to know what is the seat of his malady. He feels a pain or sees something amiss in some part of his body. He straightway fixes upon the pain or other symptom as an infallible indication of the seat of his disease. He feels his heart beat; he has disease of the heart, and goes in trepidation to a chest doctor. He feels a pain in his loins, or sees something queer about his urine; he has kidney disease, and goes to a kidney doctor. In both cases he is probably wide of the mark; and often he is governed in his choice simply by the name of a disease which somehow has got a hold upon his brain. I will tell you what happens to me frequently. A climacteric woman comes to me, complaining of pruritus of the vulva. The agony in that part rouses the dread of local disease. I test her urine—greatly to her surprise, for she does not take this to be my business—and find she has diabetes. Having determined this, and knowing that the pruritus is the consequence of the diabetes, I do not presume to treat it—of course, I am not competent to do that,—but I refer her to some friend who has a urinary reputation. And this is the way in which the evils that would infallibly attend upon pure specialism are neutralised or corrected. No reputed specialist ever will or can practise as a pure specialist. He cannot help reading in the organ or structure placed under his observation the record of troubles in neighbouring or distant organs, or of disorders affecting the system at large. At the same time that he recognises the alterations of function or structure in his particular organ, he studies by the light of his general physiological and pathological knowledge the reciprocal play of local and distant actions. Nor can he hope in a great number of instances to frame a rational scheme of treatment on any other basis. If he detects the master-disease, or a serious complication in some other part of the body, to treat which does not fall fairly within his scope, he seeks further counsel. Thus you see he is not, in fact or in theory, a specialist. He is a true physician bringing the light of general physiology and pathology to bear upon disorders more or less localised, and seeking in general as well as topical therapeutics for the means of cure.

Having explained to you that a pure specialist is an impossible monster, I may, without offence to anyone, describe the ideal specialist. We will suppose a physician who devotes great—I will not say exclusive—attention to the nervous system. He has to deal with a case of which epilepsy is a phenomenon. He examines with laudable care the nervous functions, the lungs, heart, kidneys; and yet—the subject being a woman—he specially omits to explore the condition of the uterus and ovaries. Is not this specialism? Might we not define a specialist as one who, in the investigation of disease, specially neglects an important factor in the problem? The man who takes a part

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for the whole is surely a specialist, and this notwithstanding that the part he ignores may seem to him insignificant.

The third aspect—better than that of the so-called pure physician, and better than that of the pure specialist—is that of the physician who neglects no part, but who gives due consideration to each separately, and to their mutual relations. If you watch the practice of the ophthalmic surgeon, you will see that he does not limit his inquiry to the physical examination of the eye. He takes a survey—rapid it may be—of the whole system. He knows, and he will show, that many functional and organic affections of the eye depend upon, or at least have a pathological relation with, disease of the brain, of the heart and vessels, of the blood, of the kidneys; and his treatment will be largely governed by these relations. Inasmuch as he knows that the disease he detects in the eye is due to disease elsewhere, he attacks the disease in the eye through the provoking disease beyond.

And there is something more than this to learn from the observation of local disease. Sometimes local disease, instead of being derivative or secondary, is primary, and acts in a retrograde direction, or towards the centre. And thus we have to watch closely and guard as far as we can the centres of life against invasion from the periphery. Every organ in the body affords examples of this centrifugal and centripetal pathology. If examples seem so manifold and so clear in the eye and in the skin, it is because those organs lie so directly open to inspection. In the eye and on the skin we may often see written in characters as plain to the educated mind as the characters in a book the history of disease distant in time as well as in seat of origin. It is not my place to dwell upon these points. What I want to enforce upon you is the necessity of studying local disease, no matter where, by the light of general science. It will be my business to show you how the local conditions of the female pelvic organs are linked inseparably with the physiology and pathology of other parts of the body. We shall have many opportunities of seeing how many of the disorders of this part depend for their origin or aggravation upon disease elsewhere; how, on the other hand, disorders essentially local in their origin produce functional disorder and structural disease in other parts of the body. You will soon realise the fact that the pelvic organs form an integral, I might even say a dominant, part of the female organisation. Nowhere, I think, will you find more instructive examples of that primary local and centripetal pathology, which you may trace, if you seek, more or less in connexion with every organ. A whole catalogue of ailments, some long classed as morbid entities or essential diseases, including neuralgia in many forms, hysteria, that much-abused term, many cases of epilepsy, of paralysis, notably of paraplegia, and—I almost tremble as I utter it, exposing myself, I fear, to wrath and ridicule—not a few cases of insanity, are no more than symptoms or consequences of surgical or medical disorders of the uterus and ovaries. Many blood diseases also take their origin here. I cannot stop to give particular instances. But if you weigh philosophically the experiments of Charcot on hystero-epilepsy, you will come to the understanding that if a presumed disease can be produced at will by playing upon the ovaries, that disease is not a primary or essential disease, but only a symptom of ovarian action. Now the cure of a large number of the cases to which I have referred depends upon the cure of the primary pelvic disease. And in a very large proportion of cases, this primary pelvic disease is not very difficult to cure.

This comparative facility of cure depends mainly upon the fact that the organs involved are within easy range of objective observation and topical treatment. Their size, position, consistency, shape, and other physical conditions are capable of being determined by touch and the sound with considerable precision, whilst some parts may be brought directly under ocular inspection, and the secretions are readily obtained and examined. One great means of diagnosis employed in medicine is the observation of the organs in the performance of their functions. Nowhere is this method so thoroughly or so scientifically applied as in the investigation of the eye. The ophthalmic surgeon now uses instruments and methods for testing the way in which the eye performs its functions, that may be said to give results almost mathematically exact. We cannot pretend to such precision in the examination of the pelvic organs in woman. But in precision of objective observation I think we approach at least as nearly to it as can be done in the case of any other part of the body. We touch the uterus directly from below; we feel its whole surface often from behind, from above, and in front; also we command it by palpation, we determine its texture, its mobility, its relation to other organs; we see a part of it which gives an indication of the vascularity and other features of the whole. How much of this can be said of any other internal organ?

Not to detain you longer before we enter upon the immediate study of our subject, I will simply press this lesson upon you: that the study of so-called specialties—the study of woman and her diseases is not a specialty, so the lesson is general—should be so pursued that you seek in that study examples and elucidations of general pathology. Take one instance, say inflammation. There is hardly another mucous membrane in the body whose pathology lies so open to study as that of the vagina and uterus. In seeing, then, a case of endometritis or vaginitis, you will see, not simply a local inflammation, but an instructive example of inflammation of a mucous membrane. You may, by the light of modern pathology, recognise a case of bronchitis or enteritis, and, in fact, know a good deal about it, but you cannot watch it through its changes in the living body as you can a case of vaginitis. So of other morbid processes. The history of fibroid, cancerous, hypertrophic, atrophic, and other morbid processes, can hardly be studied so effectively as in the uterus. It is not too much to say that few chapters in general pathology can be complete unless the correlated conditions of the pelvic organs be taken into account. The best definition or idea—for definitions are proverbially arbitrary and loose—of rational specialism is the application of general pathology to the investigation of the disorders of particular organs. The study of any organ of the body will lead us a part of the way on the right road to the understanding of pathology. He who neglects any one organ simply closes one of the gates of knowledge. To him may be applied the pathetic line of Milton lamenting his blindness— "And wisdom at one entrance quite shut out."

The difference is that, unlike Milton, the specialist is unconscious of his defect, and therefore of his loss.

CATARRH OF THE BLADDER; ALBUMEN IN THE URINE.

Part of a Clinical Lecture, recently given at University College Hospital,

BY SIR HENRY THOMPSON,

SURGEON EXTRAORDINARY TO HIS MAJESTY THE KING OF THE BELGIANS; CONSULTING SURGEON TO UNIVERSITY COLLEGE HOSPITAL; AND EMERITUS PROFESSOR OF CLINICAL SURGERY.

THERE is a group of symptoms frequently met with in men of advancing years, to which I desire especially to call your attention. One of the first circumstances to attract notice is that the urine is more or less cloudy when passed, and that on standing it deposits some adhesive opaque matter in the bottom of the vessel. Such urine is generally neutral, or at best faintly acid; occasionally it is alkaline, always becoming so rapidly by keeping. On interrogating the patient, you learn that the act of micturition is performed rather more frequently than natural—that he is disturbed by it two or three times in the night, and every two hours or so during the day. He may also complain of dull pains about the pelvis and back; he finds the effort to pass water rather greater than it formerly was, and the general health has of late suffered a little.

Now it is by no means uncommon to hear this group of symptoms spoken of as indicating the presence of a "catarrh of the bladder." And catarrh of the bladder is very generally regarded as a particularly obstinate, sometimes indeed as an incurable, affection. And I am free to confess that as long as these phenomena are considered referable to a specific disease, "catarrh," so long probably will the disease prove rebellious to treatment and sometimes even incurable.

Again, when the urine described is examined by the microscope, a quantity of pus, varying much in different cases, is seen to be present in it; and when examined by heat and nitric acid, a certain amount of albumen is, as a matter of course, deposited.

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It happens to me, in the course of consultations, to observe that these phenomena—the admixture of pus with the urine and the presence of albumen—are, singly or together, frequently regarded in themselves, and apart from other facts, as necessarily presenting indications of very grave importance. Are they so?

Certainly they are by no means necessarily grave; on the contrary, in the great majority of cases of elderly men, the presence of these products is not grave. Let me demonstrate to you the marked distinction which exists between the significance which albumen possesses in two different categories of cases. I can scarcely ask your attention to a matter of higher practical importance.

1. When a patient's urine, habitually clear, acid, and free from the faintest blood-tint, throws down to the test of heat and nitric acid a notable quantity of albumen, the source of that albumen is the renal circulation, and, if persistent, the case is almost certainly one of grave import. The presence of organic change in the kidney structure is to be inferred, and other evidence of its existence, if sought for, will probably be found.

2. A very slight admixture of blood in any urine, no matter what the source of the hæmorrhage, will produce a considerable deposit of albumen. It is evident, then, that the product in such cases, although sometimes grave, is not necessarily so, and that it may furnish an indication of the slightest possible import, inasmuch as a little blood may appear in the anterior passages, from a lesion which is slight and temporary in its nature.

3. Pus in the urine may, and most commonly does, proceed from some local condition of the bladder, occasionally, indeed, from local inflammation of the urethra. Nevertheless, albumen will be deposited on applying appropriate tests. It is evident that albumen, resulting simply from pus produced by chronic cystitis, has an import vastly less grave than that described above as No. 1, being a purely local and mostly temporary affection of an organ which has no vital function, but merely a mechanical one; the albumen in the former instance being evidence of disorganisation in the structure of a vital organ—that is, one the sufficient action of which is essential to the very existence of the body.

In short, there ought not to be the slightest temptation to confound two states so utterly unrelated as the two states which I have here contrasted, although they offer from one point of view an accidental similarity—that is, there is in both an admixture of albuminous material in the urine.

Still, nothing is more common than to hear, in connexion with a case of purely local bladder affection, the remark gravely and significantly made, "I assure you I have on several occasions found by testing a large quantity of albumen in the patient's urine." It is a little difficult sometimes, although necessary, to listen to such an observation with quite sufficient patience. Does the observer really desire to intimate that the patient has constitutional albuminuria—i.e., some form of Bright's disease? If not, his remark is simply devoid of meaning; since, as we know, there is vesical pus in the urine, we know equally that the albuminous constituent must appear on applying the test. And vesical pus in the urine certainly has no more relation to constitutional albuminuria than pus which comes from an external abscess or surrounds a common boil. Simple as all this may appear to you and to me, it is quite astonishing how much confusion there is in men's minds in regard to this matter, and how much importance some persons attach to all albumen found in a urinary test-tube, although the source of the deposit may be easily demonstrated to be the bladder, and no other part of the organs which lie above it.

Finally, the important practical point in relation to treatment is first to ascertain the occasion of the local catarrh. In nine out of ten of these cases it consists in inability, often only to a slight extent, on the part of the patient to empty the bladder completely. The universally acknowledged cause, hypertrophy of the prostate, is, of course, the first in order of frequency. But after this are others not infrequent. Defective action may be due, first, to simple atony, the result of past habitual or occasional over-distension of the bladder with urine; secondly, to thickened and incompetent muscular parietes of the bladder after chronic inflammation, sometimes associated with old stricture; thirdly, to defective innervation seen in connexion with other slight signs of impaired function in a nervous centre; the last being, of course, the most serious of all, in its nature and probable results.

In all of these local treatment, by carefully removing all the secretion by means of a soft catheter two or three times a day, perhaps aided by gently washing out some remainder, is the chief efficient remedy. Remember that this incompetence of the bladder is always to be sought for by physical examination; no other form of evidence in relation to it, as the patient's sensations, &c., is to be accepted as trustworthy. The introduction of a soft catheter immediately after the patient has passed water by his natural efforts, is the only test, and it should be applied on two or three occasions before arriving at a definite conclusion. The causal relation between the group of symptoms enumerated at the outset, and the defective function described, is far more common than it is generally supposed to be. It is on this account, therefore, that I have asked your attention specially to the subject.

THE HISTORY OF MENTAL MEDICINE.

Epitome of an Introductory Lecture to the Clinical Course on Mental Diseases, delivered Nov. 16th, 1879,

BY B. BALL,
PROFESSOR OF THE FACULTY OF MEDICINE OF PARIS.

AN old doge of Genoa, compelled by Louis XIV. to come and do homage at Versailles, was once asked what astonished him most in the great king's court. "Seeing myself there," was the reply. I might, in my turn, apply this phrase to myself, and when, after so long a waiting, I at length occupy this chair, approach to which seemed to be for ever forbidden, what most surprises me is to see myself here. Nor can I resist the desire to testify here my deep acknowledgment to all those who have given me their support: to the faculty which nominated me; to the ministry which appointed me; to the public bodies which have organised my service; to the pupils and friends whose courageous sympathy has never failed me; and, lastly, above all, to those eminent alienists, some of whom are my venerated masters, whilst others, after having been the comrades of my youth, are to-day my allies in the battle of life; and since I could not name them all may I be permitted to concentrate the expression of my sentiments on the name of one alone, on the name of a man who, after having pursued a career with incomparable *éclat*, has taken me by the hand to lead me to the place I now fill, for he is not a jealous master. You have all named M. le Professeur Lasègue, and I am glad, on this solemn occasion, to be able to render him public homage, so as to acquit myself in a very feeble measure of a debt of acknowledgment which I so long since contracted. Let this suffice for my sentiments and remembrances; you expect other things of me, and it is time to satisfy you.

We inaugurate to-day a new chair, and it is the duty and right of the holder to expound the principles which will guide him, and to sketch rapidly the views which should preside over his teaching. I would, disdaining classical traditions, leave general discussion aside and plunge at once into details—a plan coming more and more into vogue; but I would not thus belie my natural tendencies, and, besides, it is healthy to breathe sometimes the air of these lofty intellectual regions, understanding always that one does not sojourn there too long. History is the natural and legitimate means for the study of these problems, for by it we follow the evolution of the human mind; we pass up to the source of the great intellectual streams which have deposited the strata on which modern science rests, and by it we grasp the origin and filiation of our ruling ideas, define their source, and thus analyse the intellectual atmosphere now around us. I do not intend to sketch a complete picture of the rise of mental medicine; in the narrow limits of a lecture this would become but a catalogue of names, and, moreover, the history of psychiatry has been fully treated by competent

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authors, whose works it would be vain to analyse. I propose to trace with you the great currents which have dominated the study of mental diseases at different epochs. Conscious of incompleteness, I mean to be the historian not of men but of ideas, and by thus grouping around a few great figures the whole of the tendencies they represent, I shall try to show you, by this rapid glance over the past, the state at which science has arrived to-day, and the future that is probably in store for it.

In saying that insanity is of all times and ages, that the most ancient literature relates instances of it, and sacred books of all nations speak of it—is but to recognise once more that human nature has not changed. If it were only to keep to these common truths, it would be superfluous to interrogate the past. But a fundamental proposition is taught by this—that the dominating conceptions of every epoch have been imprinted on the theory and practice of mental medicine.

All primeval civilisations considered insanity as an immediate effect of heavenly anger, and all had recourse to the same means of meeting it—to prayers, exorcisms for the intervention of the gods; and even in the midst of the most developed civilisations evident traces of these indestructible tendencies of the human mind are met with: ruling in the middle ages, we find their vestiges to-day. And yet in the course of centuries experience and observation collected valuable facts of a real clinical bearing. Such are the materials furnished by the first builders of the edifice, when there took place in Greece that great awakening of the human mind to which all that is best in our modern civilisation is connected. That great revolution started by philosophers and poets, and pursued by mathematicians, is represented in medical science by Hippocrates, who on another side approximates the moderns; for in the midst of a generation of logicians, drunken with metaphysics, Hippocrates was a "positivist"—or, in less pretentious phrase, a clinician, occupied chiefly with the study of facts, and endowed with marvellous aptitude for observing them. He has left only ideas of detail in mental medicine, marked by his wise and practical spirit; and his theory of the four cardinal humours—blood, phlegm, bile, atrabilis—influenced psychiatry as well as general medicine. But the origin of psychiatry is to be found with the philosophers, for it has always been influenced for good or evil by contemporary philosophy. The question present to every logical mind on the threshold of mental medicine is, What is the seat of the understanding, and by what mechanism may the regular play of its operations be ascertained? Let us listen to the answers provoked by this eternal problem 2000 years ago.

Wearied with discussions the barreness of which is plain, we should nowadays voluntarily renounce any inquiry into the seat of the soul. Not so the ancient philosophers, who, logicians before everything, could not pass this by. So, as we are historical, we must accord a place to these ancient, powerful, and original minds, and, following their ideas, grow young again, as Pascal profoundly puts it, in discussing what the ancients were. At least we shall define the meaning and origin of many of our present ruling ideas. The divine Plato—an inspired man if there ever was one—is so confirmed a spiritualist that, not content with recognising one soul, he accords us three, really parts or powers of the soul, whose unity he does not dispute. The higher rational soul—the λόγος—resides in the encephalon, the others in the lower parts, the heart and the viscera below the diaphragm. Hence two very different kinds of delirium—one celestial, inspired by the gods, the other terrestrial, due to bodily diseases. Amongst the former would be classed, according to Plato, the delirium of prophets, inspired by Apollo, of poets by the Muses, of bacchantes by Bacchus, of lovers by Eros. The grosser delirium of purely earthly origin, corresponding with what we call *insanity*, is due to change in the humours deranging the organs. This *naive* and poetical theory, impregnated with mythology, was, perhaps, all that could be formulated at the time, when the Athenians did Socrates to death, and when capital punishment followed the slightest attempt to shake the childish faith at the root of Hellenic orthodoxy.

A more stable and logical doctrine, if not more physiological, was formulated by the great philosopher whom the friendship of kings placed beyond the resentment of the crowd. Aristotle divides the soul into two parts—the rational and the irrational soul. Both are seated in the heart, and he adds that the brain takes no share in the sensation. The mother quality of the soul is warmth, and the greater this is the better it acts. Cold and warmth explain all insanities, which are sometimes heats or excitations, sometimes chills or depressions of the soul. Other philosophers, more or less directly inspired by Aristotle, make of the soul a *pneuma*, a subtle vapour circulating in the blood, of which it is but an evaporation. But from the psychiatric standpoint this makes the blood absolute master of the intellectual functions. Reason is preserved whilst the blood is pure, it is changed if this corrupts. Theophrastus, in his treatise on Vertigo, pushing the doctrine of the master to the extreme, admits the brain to be only an outgrowth of the spinal cord—a sort of damp sponge to temper the ardour of the soul. Vertigo is an affection of the soul, but its seat is the heart—source and centre of all sensations. Returning to the Platonists, we find the Alexandrian school essentially anti-materialistic, viewing the soul as a reflex of the divine intelligence, a feeble but faithful image of the eternal principle. This soul is in two parts—one intelligent, directed upwards towards the head; the other irrational, downwards towards the body. As they considered the rational soul to be the whole intellect, and placed its seat in the brain, these old spiritualists were even then very near modern science. The psychical and sensorial centre was no longer the heart, but a part of the brain: Herophilus placed it in the fornix, Eristratus in the meninges, Strabo in the hemispheres. Truth could hardly be nearer reached. Let us add that Eristratus, by an intuition of genius, started an essentially modern idea—that the extent of intelligence is in direct relation to the development of the surface of the brain, to the depth of the sulci and the size of the convolutions. In a treatise upon *la maladie sacrée*, epilepsy, the Alexandrine author expresses himself in terms which modern alienists would readily endorse:—"Men have no joy, pleasure, gaiety, prudence, but by the brain; by it come to us also pain, sadness, chagrin, loss of reason. It is through the brain that we fall into delirium in mania, for these divers states are produced when the brain is diseased." Thus the Alexandrines held the seat of insanity as well as of intellect to be in the brain. Unfortunately these disciples of Plato developed and transformed the master's doctrine on delirium by heavenly inspiration, and, perhaps under the influence of the East, they admitted the intervention of *demons* in diseases of the mind, an expression which for them did not bear the sinister character attached to it later by the Fathers of the Church. We shall soon see what are the fruits of this deplorable error.

The name of Aretæus redeems ancient science from being wholly taken up with vain speculations. The scientific rigour, clinical perception, precision of detail, and abundance of facts, furnished in the admirable and picturesque writings of this great alienist cannot be too highly praised—fifteen centuries after they were penned. He is the true Hippocrates of mental medicine. A pneumatist, he placed the seat of the soul in the heart. A consummate observer, clever practitioner, and writer of the first order, he has left ineffaceable descriptions of erotic delirium, mania, and melancholia; he has clearly comprehended the relations uniting intellectual excitement and depression, and one might think him to have observed cases of circular insanity. The importance he gave to fixed ideas makes him a precursor of Esquirol, who created monomania. We owe to him also wise precepts regarding the prognosis of the different kinds of insanity, and the physical and moral treatment of the insane. Celsus, his predecessor by a few years, was a clever compiler rather than an original thinker. His chapter on insanity sums up the prevailing views of Greco-Roman physic. He was the first to describe visual hallucinations. Avoiding all theory, he is a real eclectic, but mainly of the doctrine of Hippocrates, modified in some respects by his opponent, Asclepiades, of Bithynia. The works of the latter have perished, but he appears to have been one of the most powerful minds of his epoch. A materialist, he explained everything by the movements of atoms. In medicine, he distinguished between chronic and acute diseases, and was the first to use the term *mental alienation*.

The picture of ancient psychiatry would be incomplete without the grand scholar, physiologist, and collator of ancient science, Galen. He who by his experiments founded our knowledge of nervous function, could not ignore the part played by the brain in intellectual operations. According to Galen, the rational soul dwelt in the encephalon; the irrational soul is placed in the trunk, where it is divided

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between the heart and liver. In psychiatry he is eclectic; but, more inclined to theory than to clinical observation, he is inferior to Aretæus in the description of mental diseases. But he was the first to distinguish clearly the delirium of acute diseases (phrenitis) from insanity, and there he diverges from Hippocrates; and in adding dementia (*áνοια*) and imbecility (*μώρωσις*) to mania and melancholia he preluded our present classification. Cœlius Aurelianus was the last and most complete of ancient psychiatrists. Not to speak of his views on mental pathology, he obtains a distinct place as regards treatment. Freed from humoral traditions, he recognises only moral and material cerebral causes for insanity. He speaks of isolation in treatment, as Esquirol did, prescribes the utmost gentleness, and enforces non-restraint, like our English *confrères* of to-day, and he supplements medical measures by intellectual and moral gymnastics.

Thus ancient psychiatry attained a high perfection. It possessed abundant and precise notions on the symptoms, diagnosis, and prognosis of insanity; it formulated in treatment, principles which do honour and glory to the moderns who have resuscitated them; and as to doctrines and theories we are only puzzled how to choose.[1]

But the days of ancient civilisation were numbered. A new faith sapped their bases, and whilst the seats of pagan society were crushed, an invasion of savages came down on the scene. A new religion required a new world. In the midst of this upturning ancient science perished. It disappeared smothered between the monks on the one side and the Germans on the other, and attempts at restitution of the facts of nature were submerged by a back wave which, under the impulse of the primitive races, carried back human intelligence to the ideas of primeval times. For civilisation is only made for the brains which have given it birth. The dwellers in Germanic forests brought into the Roman world their theological conceptions, superficially changed by Christianity. The universe was divided between the devil and the saints; everything extraordinary was supernatural, and the theory of demoniacal possession formulated by Alexandrine Platonists was revived in new guise and a favourable soil. Infernal spirits replaced Apollo, the Muses, Bacchus, and Venus, and changed into demoniacs those whom the old world regarded as inspired. Hence the abuses which slew so many of the insane as sorcerers. But whilst rendering justice to the enlightened and courageous men—for the most part physicians—who contended against these monstrosities at the risk of their safety and their lives, it must be said that this period yields nothing to the view of the scientific spirit. What is most astonishing is the coincidence of the most acute revival of this persecution of the insane with the awakening of the modern spirit, the Renaissance, and the Reformation. The most eminent physicians of the sixteenth and seventeenth centuries, in writing on mental diseases, are obliged to admit the agency of the devil and demons in the production of nervous disorders. But some, in order to speak with safety, like certain modern authors, prudently protested their devotion to the faith, whilst holding subversive doctrines. Having made this sacrifice, they were forced to lead back their minds to the healthy ideas of modern medicine: some, like Prosper Alpinus, in clinical symptoms; others, like Sennert, in psychology—were the precursors of the German school; and others, as Plater, Sylvius, Lepois, and Thomas Willis,[2] tried to combine with the knowledge of the time ingenious theories on the production of mental diseases.

At this time one of the most remarkable men to whom modern civilisation has given birth, appeared—I mean Stahl. To understand his system, which long played so great a part in psychiatry, we have to put ourselves into an intellectual state differing wholly from that of the present day in face of the great problem of life. Stahl was struck with an idea analogous to that expressed later by Bichat—the instability of organic compounds in presence of physical forces, which made him view life as a constant resistance to death. Matter is constantly changing, so that a living being requires a creative and a conservative force, of which the different organs are only a sort of specialised expression. The same force governing organised matter in its incessant transformations is that which restores equilibrium of function when disturbed, and prevents disease so long as harmony exists. It also explains the mutual reaction of different parts, and the action of the whole on the parts. Such is the preponderating *rôle* of the soul in the mechanism of life; not only presiding over functions derived from it, but restoring harmony when equilibrium is destroyed, and bringing the whole system back to the normal. The noxious and baleful intervention of sin frustrates the good intention of nature. Any derangement of the economy is, according to Stahl, due to disorder of the "idea" itself; because man has disobeyed the mission he has received from Providence; in a word, because original sin and individual sins have perverted the tendencies of the soul. Hence he arrives at the conception of morality being the source of all order in the life of the body and of the understanding, and immorality of all disorder, physical or mental. This, as shown by Professor Lasègue, is the starting-point of the German psychological school. Once admit moral evil as the origin of physical evil, and nothing is more natural than to make it enter into disorders of the intellect. For if sin can engender fever, *à fortiori* it can give rise to insanity.

Time will not permit the discussion of the ideas of Langermann, the founder of the school, nor of his pupil, Ideler, and his numerous successors; but we may concentrate our attention on the man who is the true incarnation of the system. Heinroth, one of the best pupils of Pinel, Professor of Psychiatry at Leipsig, Fellow of the Royal Society of London, correspondent of our Academy of Medicine, was one of the most distinguished alienists of the century, and one of the few Germans who have loved France. His doctrine was as far removed as possible from our modern opinions, and therefore of interest, representing, as he does, the most accomplished of a race of powerful minds, now almost extinct. Man as man, says Heinroth, lives by reason. In attaining this the intellect must traverse many stages. At first the infant has only an objective existence; it only lives by its senses. In the second degree individuality appears; the *ego* becomes distinct from the *non-ego*—external phenomena; and most men do not get beyond this stage. But in the final stage a new element—conscience—appears and rules. Then there is harmony between ourselves and the external world, and unity in the life of the man. Health is but the harmony between our thoughts and our desires. The man who lives in himself can abstract himself from the world, but he who is possessed by the world is constantly agitated by incessant desire, the fruit whereof is passion. Hence, says Heinroth, "insanity is a disease of the totality of the being." When feeling ceases to have its natural guide—conscience,—its first manifestation is egotism; the individual only obeying his personal taste is in a vague state of indecision. As reason diminishes, it is more and more replaced by feeling, until this reigns alone and unbridled, and excitement would then produce insanity. Loss of liberty is the chief fact, and absence of morality the prime cause, of loss of reason. It follows that the best preservative against insanity is devotion to the truths of the Christian religion. Treatment, whilst not neglecting physical health, should be moral, combating excitement or depression, and substituting by rational cultivation new faculties for those attacked by insanity. To the query, why vicious people and criminals do not become insane, Heinroth replies that vice and insanity are the extremities of two diverging series having each sin for their starting-point.[3]

Heinroth had many admirers and several pupils, the chief of whom was Beneke. One readily understands the opposition raised to such doctrines. Nasse, professor of psychiatry of Bonn, was chief of the somatic school, and he was followed by Friedreich, Vering, Amelung, and many others, the most vigorous of whom is Jacobi, who in his ardour to find lesions in the insane became the founder of sympathetic insanity, and sought for extra-cephalic causes to justify the outburst of insanity. The illustrious and venerable Schrœder van der Kolk followed on this path, and made two divisions—cerebral insanity and sympathetic insanity; the latter being the more important. And the somatic school has conquered; its doctrines represented by the classical treatise of Griesinger are universally adopted in Germany: and psychiatry, as Krafft-Ebing has recently said, has at length gained a place amongst the natural sciences.

(To be concluded.)

[1] The drafts I have made upon the works of MM. Michéa, Sémelaigne, and Trélat will be readily recognised.

[2] M. Calmeil seems to confound the great anatomist, Thomas Willis, with the alienist, Francis Willis, who lived a century later, and who, entrusted with the treatment of George III., King of England, had him beaten by his keepers. (Calmeil: De la Folie, &c. Paris, 1845, tom. i., p. 405.)

[3] I have borrowed the elements of this rapid analysis from the excellent work of Professor Lasègue (Ann. Med. Psych., iii., 1844).

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ON SOME POINTS IN THE DIAGNOSIS OF PHTHISIS.[1]

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A LITTLE over thirty-eight years ago, about this time of the evening, was made an examination of the body of a remarkable man by men who, in different lines of the same profession, were to become almost, if not altogether, as remarkable as himself. At page 230 of the sixth volume of the first series of the "Guy's Hospital Reports" is given at length an account of the "Examination of the Body of Sir Astley Cooper, Bart., in the 73rd year of his age, on February 13th, 1841, at 9 o'clock in the evening, thirty-two hours after death, by Mr. John Hilton, in the presence of Dr. Chambers, Dr. Bright, Mr. C. A. Key, and Mr. Edward Cock." It is hardly possible to conceive, from our professional standpoint, a more illustrious assemblage than this. The corpse of a man who had done his work well, examined by his colleagues in accordance with his "wish that the appearances which should be presented on the inspection of his body might be recorded in the Guy's Hospital Reports."

But the mere picture of this gathering I must leave at once for its more useful realities—realities which Sir Astley Cooper himself, in ordering the examination of his body, knew to be fruitful of advantage to the living. And of the four points to which he had particularly alluded, "the investigation of which he thought desirable—a cured oblique inguinal hernia, a cured umbilical hernia, some suspected indications of phthisis in his youth, and an inability to sleep whilst lying on his left side," I would, however, on the present occasion, direct attention mainly to the third, and to the thoughts, or some of them, which have been suggested by it to my own mind. It is otherwise sufficient to say that the puckered appearance of the peritoneum behind the umbilicus represented, probably, the result of the cork worn outside it up to Sir Astley Cooper's fatal illness; that a minute serous canal, extending into the cavity of the right tunica vaginalis, existed as the remains of a congenital inguinal hernia on that side; while no light is thrown by any of the post-mortem appearances on the presumed position during sleep.

On the other point—the suspected phthisis—we read: "At the superior and posterior part of the right lung was a small depressed and somewhat contracted surface about the size of a sixpence, a section of which exposed a calcareous mass, very uneven upon its surface, and about equal to the size of a small pea; it was placed about three lines distant from the pleura."

It is worth while to consider for a moment what, even before the time this post-mortem examination was made, was the pathological import of this calcareous mass, very uneven upon its surface. One of the greatest of clinical observers, Andral, writing of these so-called pulmonary calculi, uses the very same expression as to size as that employed here, "a rounded concretion, the size of a pea;"[2] and further describing, as I take it, the same bodies as that with which we are dealing, apparently produced in the midst of the pulmonary tissue, states that "bearing in mind the form, as it were branching, of these calculi, and comparing it with that of the culs-de-sac which terminate the bronchi, as they are represented in Reisseissen's work,[3] we shall be led to think that here again the concretion is seated in the ultimate extremities of the bronchial tree in the air vesicles."

These were, at any rate, the post-mortem results. On the history, not given in this record, I wrote to Mr. Cock, the alone survivor of those present. In his letter to me he says: "I believe that Sir Astley Cooper was always considered to be in his youth most healthy, and active, and daring;" and, further on, "I *think* I have heard a legend that in his early days he once lost some blood from the lungs and *bled himself* on that occasion. He has been in my recollection from the time I was three years old, and I never heard of his being ill." Mr. Cock referred me to Mr. Bransby Cooper's "Life" (1843) of his uncle, a book quite as full of the nephew as it is of his more illustrious relative. I have read the two volumes carefully, and the only help I have managed to obtain in reference to the reason why Sir Astley Cooper drew attention to this suspected phthisis is in the statements[4] that three elder sisters and a younger brother died of "consumption" after reaching the full age of womanhood and manhood. Sir Astley died in his seventy-third year; his father had died at the age of sixty, his mother at that of seventy, his grandfather, as his epitaph in St. John's Church, Norwich, still declares, at that of seventy-four.

That it was something which had occurred in early life, connected in some way with these deaths in his family, and nothing in the condition of his general health, that led him to the suspicion of phthisis—and observe that the directions for the post-mortem examination were given only "shortly before his death,"—may be gathered from this nearly complete history. It would hardly be fair to lay any stress on the ironical letter—to me, at least, it seems ironical—published by his nephew. Writing to the latter in his sixty-seventh year, under date Sept. 23rd, 1835, from Weymouth,[5] in reference to a report that he had died suddenly in the Isle of Wight, he says: "My dear Bransby,—It is with much self-gratification that I assure you that I am not *dead*, and that the only fit I have had is a fit of hunger, to which disease I have been extremely liable ever since I was born. Indeed, it is my full intention to practise my profession for the next thirteen years; after that time to retire for twenty, and then to be at God's disposal for as many more as He pleases." It will be noticed by anyone who cares to make out this sum that the end thus suggested of his period of retirement would bring him exactly to a hundred years. His nephew is justified in saying that in this letter "he sufficiently evinced his feeling of mind as to the probable duration of his life."

And it does so happen that the record of February, 1841, and the testimony of February, 1879, do coincide in a very important point. The calcareous mass found after death might possibly, did probably, represent—and here observe how the scientific carefulness of Mr. Cock unconsciously guards the truth—the "legend" of the hæmoptysis for which the surgeon "bled himself." Whether this be the fact or not, the case is one more example of the truth of Andral's remark,[6] with which my own experience, as well as that of others, leads me fully to concur—"We know of but very few cases in which symptoms of phthisis have shown themselves consecutively to the existence of simple calculi in the lungs." In other words, I believe that this calcareous mass was, as Sir Astley Cooper's great colleague, Addison, had found[7] in numerous instances under his own observation, "unequivocal evidence of antecedent inflammation" occurring "in early life and in a hale constitution." And, further still, I believe it to be an example of the same form of inflammation having this good result in the healthy members of a family, while in the more feeble and cachectic it went on to what must be supposed from their recorded history to have been disintegration and destruction of the pulmonary tissue—an example of catarrhal pneumonia, in which "the process which has gone on is a process of natural recovery."[8]

This is one point in the diagnosis of phthisis which I would insist upon—and it is most intimately connected with the prognosis,—that in a member of a family in which there are truly phthisical subjects, a lobular pneumonia, dangerous to the latter, need not proceed to fatal disintegration. Hæmoptysis, in its most restricted meaning, is by no means always to be suspected as indicative of phthisis. What hæmoptysis necessitates is caution, not condemnation. As in Sir Astley Cooper's case, the "suspected indications of phthisis in youth" are not seldom belied by a life of threescore years and ten.

There is a further point, however, which the post-mortem examination of the great vivisector and operator suggests to our minds, though it does not arise directly out of the comparison of his life and death history, a history in itself of some interest, and, so far as I know, not hitherto followed

[1] A paper read before the West Kent Medico-Chirurgical Society, March 7th, 1879.
[2] "Une concretion arrondie, du volume d'un pois." Clinique Médicale, 1840, 4me édition, iv., 181.
[3] De Pulmonis Structurâ. Strassburg, 1803.
[4] Life, vol. i., pp. 34, 36, 39.
[5] Ibid, vol. ii., p. 448.
[6] Clinique Médicale, t. iv., p. 134, 1840.
[7] See Guy's Hosp. Rep., series 1, vol. ii., p. 60; and ibid, series 1, vol. iii., p. 3.
[8] Watson, 4th edition, p. 187, 1857.

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to its due conclusions. The suspicion of phthisis, happily a fallacy in his case, may proceed on apparently stronger grounds, and much more wrongly, in other cases, to the diagnosis of phthisis. I will attempt to show that there are cases in actual experience of this latter kind—cases diagnosed and treated as cases of phthisis, yet demanding a treatment, so far as I can see, almost entirely opposite.

Among the various fallacies to which the diagnosis of phthisis is open, none seems to me to be so common as that of confounding it with bronchitis. And I would go further than did my old teacher, Dr. Barlow. He tells us[9] "the discrimination of simple bronchitis from early phthisis is the question that we are perhaps most frequently called upon to decide in the diagnosis of the latter." But a still more difficult question, to which the same writer only slightly refers,[10] is the diagnosis between chronic bronchitis and chronic—that is to say the ordinary form of—phthisis. In illustration of this difficulty I propose, even at the expense of being somewhat tedious, to follow out still the rule laid down by Morgagni, on which I have already laid stress elsewhere. For I am certain that the advance of clinical medicine depends entirely on a collation and comparison of numerous instances, gathered from various sources, and those not only of the presumedly more scientific times in which our own work is set.

Before quoting Bayle (1810), it is but justice to summon the testimony of Laennec[11] to the great skill of his predecessor in this branch of inquiry. "He was," says Laennec, "a practitioner who carried exactitude of diagnosis to its furthest. Few men united in so high a degree the qualities which make a good physician and a capable observer." I am sorry to bear still further testimony, and to say that this good book of Bayle's, and others I can scarcely doubt as good, are so little read nowadays, that I had the pleasure, only two days ago, in the library of the College of Surgeons, of cutting some of the pages of his "Researches on Pulmonary Phthisis," published in 1810 at Paris.

Bayle gives, at any rate, seven cases of chronic pulmonary catarrh simulating phthisis; four of these recovered, and so far we cannot deal with them. I may be allowed to pass them by, for the nonce, as cases of chronic bronchitis. Of three other cases—Cases 48, 49, and 52—the two first were certainly cases of chronic bronchitis. The first is the case of a baker, aged twenty-three, with long neck and narrow chest, who was subject to frequent colds, lasting sometimes several months in succession during the winter; he was remarkably emaciated, had night-sweats, slight diarrhœa, frequent cough, with abundant sputa resembling pus. He died of a capillary bronchitis, the probable cause of which was an attack of scarlet fever. Case 49 is that of a man, aged seventy-seven, formerly a cook, who suffered, as the history seems to show, from gouty bronchitis, though the physical signs led to the diagnosis of phthisis. The post-mortem examination, however, proved the lungs to be perfectly healthy, the mucous membrane of the trachea and bronchi only white—"not even reddened"—and scarcely at all thickened. Louis makes some very strong remarks in reference to a case given in his own book.[12] The patient was a labourer, aged fifty-nine, who had catarrh from infancy, a cough troublesome in winter and better in summer; diarrhœa and night-sweats; no hæmoptysis or pain in the chest. The physical signs were sonorous percussion over the chest, with rhonchus and pectoriloquy at the right apex. After death the bronchi were found dilated in the latter region, and less so at the left. "Undoubtedly," writes Louis, "facts of this kind are rare, and years may pass before I meet with another like it; but it is none the less worthy of attention, since it is a proof of the difficulty of diagnosis in cases which are to all appearance the most easy."[13]

Andral[14] gives a very similar case occurring in a blacksmith, aged twenty-seven. He had had a constant cough for two years, had never spat blood, had become emaciated, had slight night-sweats, with a rise of pulse-rate towards the evening. There was no dulness on percussion, or pectoriloquy, and only some mucous râles in different parts of the chest. The emaciation and general enfeeblement increased, diarrhœa supervened, and the patient died semi-comatose. The sputa preserved throughout the same character—separate, rounded, greenish patches floating on abundant fluid. The diagnosis made was that of "numerous tubercles commencing to soften." But the post-mortem examination showed the pulmonary tissue healthy, and slightly engorged, and the bronchi (as in the case quoted from Bayle) extremely pale, even down to their smallest divisions. Further on[15] Andral gives another case in a wig-maker, aged forty-six, who had been liable to catch cold easily for years. He had had hæmoptysis, and was extremely emaciated. To the illustrious physician and his colleague the physical signs were those of a pulmonary phthisis advancing slowly. But after death the supposed cavity was a considerable dilatation of a bronchus, others of which showed the same change, with the lung-tissue between the dilatations compressed, "resembling the tissues of a lung more or less forcibly pushed back by pleuritic effusion."[16] The sputa, with the exception of being yellow and fetid, resembled those in the preceding case.

(To be concluded.)

9 Practice of Medicine, p. 305, 1861.
10 Loc. cit., p. 214.
11 Auscultation Médiate, 2nd edit., ii., p. 109, 1826.
12 Second edition, p. 562.
13 Loc. cit., p. 566.
14 Clinique Médicale, t. iii., p. 165, 1840.

A RARE CASE OF INTESTINAL OBSTRUCTION OF THIRTY-NINE DAYS' DURATION; RECOVERY.

BY WALTER HUTCHINSON, M.R.C.S.

I HAD the following interesting case in my practice a short time ago, and as I cannot find a similar case in any text-book, I venture to place on record a short account of it.

T. E——, a deaf and dumb lad about seventeen years of age, was, on May 11th, taken suddenly with a sharp pain in the right iliac fossa, accompanied with diarrhœa and vomiting. My partner, Mr. J. R. Wright, saw the lad, and prescribed a mixture containing one drachm of chlorodyne, a sixth part to be taken every two or three hours, and a pill of calomel and opium (one grain to a quarter), and ordered hot fomentations to be applied over the seat of the pain. The diarrhœa ceased after a few hours, but the pain and vomiting continued.

On the following evening the vomiting began to be stercoraceous in character, when a large quantity of soap-and-water was thrown up the rectum, with the view of overcoming the obstruction, but with no relief to the symptoms.

May 14th.—The lad being no better, Dr. Latham, of Cambridge, was called in, when the boy presented a typical case of acute intestinal obstruction. Dr. Latham ordered another injection, but with the same result as the former one. The boy's friends were informed that it was an almost hopeless case, even if operative measures were taken, but this they would not allow. The stercoraceous vomiting was very severe, everything being brought up directly it was swallowed.

21st.—Nutrient enemata were begun to-day after a great deal of trouble in getting the patient's consent, and these were continued until June 3rd, ice being the only thing allowed internally, with the exception of a little iced champagne occasionally. For the next ten days he lay on the brink of the grave, the stercoraceous vomiting being very troublesome the whole time.

On June 13th during a fit of straining he passed per anum a small quantity of blood, and what at first sight appeared to be a piece of bowel structure. He was ordered five grains of Dover's powder every four hours. He had a most anxious expression of face, and was exceedingly afraid of his bowels being opened again. He lay in this state till the 19th June, when he passed a large quantity of blood and what I took to be bowel structure, the bulk being almost sufficient to fill a quart pot. The Dover's powder was continued, and day by day he gradually improved, his appetite, however, being very bad.

On June 24th his bowels were opened, and fæcal matter was found in the napkins, coated with blood and pus. His bowels were opened now about three times a week, and always presented the same appearance, which latter circumstance continued for about a month. Great care was taken

1 Ibid, p. 191 16 Ibid, p. 195

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during his convalescence with regard to his food, of which he would have taken immoderate quantities if he had been allowed. By the middle of September he was out walking, and apparently in perfect health.

My friend, Professor Curnow, was kind enough to examine under the microscope what had passed away from the lad, and I have his permission to quote from his letter to me the result of his investigation :—"I have carefully examined the specimen, and can find only blood-clot, with here and there some stringy mucus. There is no sign whatever of bowel structure; it is a most interesting case, and the obstruction must have been caused by the blood-clots. Of course I can form no opinion as to the site of the hæmorrhage, but the amount of the clot would make it very probable that the ruptured vessel (ulcerated?) was a tolerably large one."

One word with regard to the treatment. I think the Dover's powder was very beneficial, easing the pain, &c., and also quieting the peristaltic action of the intestines. During the earlier period of convalescence he was ordered a mixture containing ammonia and bark, but this was soon discontinued, as he seemed much better when not taking it, and nature having done so much for him, I thought I could not leave him in better hands.

Newmarket.

CASES OF
ARSENICAL POISONING RESULTING FROM A RED WALL-PAPER.

BY GEORGE GARLICK, M.D. LOND.

Two children were brought to me last August whilst I was seeing out-patients at the Children's Hospital, Great Ormond-street, for Dr. Barlow. Their mother, who brought them, gave the following account :—The elder, a boy of eight years, had been suffering some time from pains in the eyes, nose, and different parts of the body. He passed restless nights, and was during the day depressed and inert. His digestion was feeble, and he had flatulence after food; his tongue was furred, pale, tremulous, and silvery; and the motions were described as offensive. There was besides a small patch of ill-developed psoriasis on the face. The other child, a little girl, also had pains in the eyes, nose, and shoulder, described as of a shooting character. Her tongue was also furred, and she had, like her brother, dyspeptic symptoms.

This remarkable combination of symptoms—viz., the local pains in the eyes and nose, with the presence of dyspepsia—suggested to me the possibility of arsenical poisoning, and on further inquiry this supposition was much strengthened by the remarkable statement of the mother, that she was much surprised at her children describing exactly the same symptoms as she herself felt, and that two of her other children at home suffered in the same way; in fact, with the exception of the father and one child, all suffered in the same way. She was accordingly directed to bring some of the wall-paper of the rooms they inhabited.

On the following visit she brought specimens of the two kinds of paper they used, and I proceeded to test them. One was a powdery, suspicious-looking paper. This, however, gave no reaction, but on testing that of their sitting-room (a very thin paper) it gave at once a most copious reaction with Marsh's test. This latter paper had been put up about two years; it was of very inferior quality, and consisted of red stars stamped on a ground of pale-yellow and grey-brown. On testing different portions of the paper, the arsenic was found to exist in the red pigment only. This shows that green is not the only colour to be feared in wall-papers. The walls of the sitting-room were described as being in parts quite damp—that is, in a state which is said to render arsenical papers more dangerous. The mother, on being informed of the dangerous nature of the paper, at once, on arriving at home, went to work to pull it down, and set fire to it in the yard; in fact, she acted with such promptitude that I was unable to obtain another specimen of it. This is an interesting example of continued discomfort and deterioration of health going on in a family for almost two years, owing to the existence of the poisonous paper. The neighbours commonly remarked how pale the children looked and dull about the eyes. After the paper was removed the pain complained of in the eyes and nose at once ceased. The dyspeptic symptoms were more slow in mending.

The paper has been since tested by a distinguished analyst, who stated it contained a large quantity of arsenic; he characterised it as a most dangerous paper.

Great James-street, W.C.

CASE OF ACONITE POISONING.

BY THELWELL PIKE, M.D.

ON Dec. 19th I was hastily summoned to Mrs. A. B——, a lady staying in my house. I saw her at 6.15 A.M., and found her standing at the washstand retching violently and vomiting, with distressed and anxious manner. I learnt that about five minutes to six she had taken between three and four drachms of aconite liniment (P.B.) in half a tumbler of water, and had then returned to bed. In the course of ten minutes she began to feel pain and uneasiness at the pit of the stomach and upper part of the throat; this getting worse, and sickness coming on, I was called.

I immediately got some liq. ammoniæ which I happened to have in my room, and gave twenty or thirty drops in a tumbler of water, and followed this by a tumbler of warm water; both were almost immediately rejected, and some more water which I attempted to give was not, I think, really swallowed, and the same occurred on trying to give some milk. All this time the pain in the stomach and throat was increasing, and described as "horrible." I applied hot bottles to the feet and body, and a mustard poultice to the stomach; but the extremities became more and more cold, hands and fingers blue; also the chin and jaw, *not* lips, became so, and the countenance was most distressing—eyes glaring, pupils dilated. The pulse was becoming very feeble, scarcely perceptible, very quick and flickering, and the heart-sounds very weak. As all attempts to give anything by the mouth failed, and only increased the distressing retching and vomiting (ejected matter being at first frothy fluid, then viscid mucus, and then frothy mucus just tinged with blood, and subsequently some bile), it occurred to me to inject ether subcutaneously, and I prepared to do so. This was about 7 A.M. My friend Mr. Dawson, for whom I had sent, now arrived, and he concurring, I injected fifteen minims. But we could see no effect; pulse still almost if not quite imperceptible, and the other symptoms as bad as before. In about ten minutes I injected fifteen minims more; and soon after, all the symptoms remaining, or, if possible, getting worse, I injected twenty mimims. We thought this slightly improved the pulse for a time, but the improvement did not last; so in about ten minutes I again injected twenty minims, and this time with the happiest result. In about ten or fifteen seconds there was some excitement and delirium, similar to that produced by inhalation, which lasted for a few moments; and almost coincident with this the pulse improved and became full and much slower. From this moment my patient was saved; for, although the effect of the ether in some degree passed off, the pulse remained fairly good. Warmth gradually returned to the body and the extremities, the blueness disappeared, the retching gradually ceased, and after a while the patient was able to take a cup of warm milk and coffee, and recovery gradually took place without interruption. The symptom which remained longest was the distressing pain at pit of stomach and in the throat. I should have said that there was some weakening of muscular power; no convulsions, but, for a time, a rigid state of the muscles was induced on attempting to take hold of anything—cup, glass, &c. The intellect all the while, except as stated, remained clear; urine passed twice, bowels acted once.

I think we may fairly claim that the ether, at any rate, helped considerably to stave off death while the aconite was being eliminated, and the result of the last injection was so marked as to deserve, I think, a trial in a similar case. The dose of aconite was a very large one, and taken, too, when absorption was probably rapid; the last meal, a light supper, having been partaken of about 9 P.M. I cannot too gratefully acknowledge the kind aid rendered me for two or three hours in this anxious case by my friend, Mr. Dawson.

Malvern.

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LIGATURE OF THE COMMON FEMORAL ARTERY.

By HENRY PILKINGTON, M.R.C.S., &c.

C. S. L——, a black gentleman, aged fifty-three, who had been accustomed to undergo great fatigue on foot and on horse-back, came to me on Sept. 14th, 1877, complaining of a swelling in the left ham. He said that four months previously he had had a severe fall from his horse, and that shortly afterwards he felt pain behind the knee. A tumour soon afterwards appeared in the same place, which gradually enlarged, until he applied to me for relief. At the time of this application the left knee measured exactly twice as much as the right, on account of a tumour in the popliteal space, which pulsated strongly and disappeared on pressure being applied to the femoral. I advised him to submit to an operation, which he reluctantly did, and on the 1st October, ably assisted by Mr. M. P. Duke, L.R.C.S.I., and two non-professional gentlemen, I tied the superficial femoral in its upper third. Immediately after tightening the ligature severe hæmorrhage set in, and the colour of the blood, together with the strength of the jet, convinced me that the profunda femoris, which was given off very low down, had unfortunately been wounded, most probably by the aneurism needle. I enlarged the incision and applied a ligature above the origin of the profunda, but, as the bleeding still continued, another ligature was applied to the profunda itself. The hæmorrhage immediately ceased, and the wound was closed by four hempen sutures. The leg was surrounded with cotton wool, outside of which several hot-water bottles were applied, and the wound was dressed with carbolic lotion. The patient never showed any bad symptoms, and the pulse never exceeded 96.

On the fifteenth day after operation the ligature on the profunda came away, that on the superficial femoral on the twenty-first, and that on the common femoral on the twenty-fifth. He left his bed on the thirtieth day, the wound having healed, and he has now resumed his ordinary occupation, the tumour in the ham being only the size of a hen's egg, and gradually getting less.

Roseau, Dominica, W.I.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CARCINOMA OF THE RECTUM IN YOUNG ADULTS; REMARKS.

(Under the care of Mr. GEORGE LAWSON.)

Epithelioma of the rectum; left lumbar colotomy; temporary relief; death; secondary deposits.—Olive M——, aged twenty-seven, a servant, was admitted into Regent ward on July 1st, 1879, suffering from cancer of the rectum. The patient stated that about Christmas, 1878, she first began to have a feeling of uneasiness in the rectum, which sometimes amounted to pain, especially if she walked far. The bowels were very constipated, and it was for this she sought advice. She was ordered some purgative medicine, and was somewhat relieved. The pain, however, in the bowel increased, and she was obliged to give up her situation. A muco-purulent discharge with blood was next noticed, and she had frequent desire to go to stool, but she only passed small lumpy pieces of fæcal matter. The pain, the discharge with blood from the rectum, and the constant desire to defecate, continued to increase until June, when she was compelled by her sufferings to seek further advice, and on July 1st was admitted into the hospital.

On admission, she was greatly emaciated, and had a pale, drawn expression indicative of suffering and exhaustion. There was a constant desire to empty the bowels, but there had been scarcely any feculent matter passed for seven days, except the small lumpy bits accompanied with pus and blood, which escaped when she tried to relieve herself by going to stool. There was a constant, offensive, muco-purulent discharge, mixed with blood, which continued to drain from the anus. On introducing the finger into the rectum it at once came in contact with an extensive ragged ulceration, which included the entire circumference of the bowel, and extended upwards for about four inches. She complained of a constant aching pain in the bowel and of pain in the left leg.

The patient was evidently in the last stage of the disease, and, nearly worn out with continued pain, was gradually sinking. With the hope of procuring ease, by preventing the fæces from passing over the extensively-ulcerated surface in the rectum, and to relieve the obstruction of the bowels, Mr. Lawson decided to perform colotomy. This he did on July 5th, in the usual manner, in the left loin. After the operation there was a good deal of sickness, and this continued on and off for two or three days. When all the first effects of the operation had passed away, the patient expressed herself as much easier, and said she had lost the pain in her leg. Owing to her great emaciation, two bed-sores formed; but, after being placed on a water-bed, these took on a more healthy action and began to heal.

On Aug. 4th she was improved in health and spirits. There was a free discharge of solid fæces from the wound, and the bedsores were clean.

Shortly after this her health seemed suddenly to fail her; vomiting came on, and continued on and off until, quite worn out, she died on August 17th. The following is from Dr. Coupland's notes of the post-mortem examination:—Rectum: For about four inches the coats of the bowel were replaced by a ragged ulcerated surface, involving the whole circumference of the bowel. The upper margin of this ulceration was raised, everted, soft, and whitish. At one point the ulceration extended almost through the serous coat into the recto-uterine pouch. The liver was fatty, and two or three small, white, and firm nodules, from the size of a pin's head to a peppercorn, were found embedded in its substance. Both lungs were emphysematous, studding their pleural surfaces, and also largely distributed throughout their parenchyma were numerous nodules of the size of peas, those on the surface being flattened. On section they appeared white, dry, and friable. There were secondary epitheliomatous deposits.

Carcinoma of the rectum; lumbar colotomy; relief.—Eliza M——, a widow, a fair-haired and delicate-looking woman, aged thirty-one, was admitted into Queen's ward on Nov. 14th, suffering from cancer of the rectum. Her previous history was imperfect. She dated the beginning of the present illness five months back, when she had a violent attack of diarrhœa, and which continued with varying severity up to the time of admission. She had had much pain in the bowel and down the legs to the knee, with frequent, almost hourly, desire to empty the bowels. There was no family history of cancer.

On admission she was in a state of extreme exhaustion. Her admission into the hospital had been delayed a week in consequence of her parents being unable to move her, fearing that she might die during the journey. She had a hectic flush, and a small, rapid pulse. On examination with the finger, Mr. Lawson detected a large epitheliomatous mass involving a large portion of the anterior wall of the rectum. The pain in the bowel was very severe, and the diarrhœa, with constant desire to evacuate, added much to her misery.

On the following day (Nov. 15th) Mr. Lawson performed colotomy in the usual situation. The patient was greatly relieved by the operation, and at once began to improve. The pain in the bowel and down the legs was much diminished, and the desire to go to stool ceased.

On Nov. 19th, the artificial anus in the loin acted well. Some of the fluid portion of the fæces passed per anum, whilst the more solid escaped by the opening in the loins.

On Dec. 20th the patient felt so much better that she was able to sit up in the ward, and on Dec. 23rd she was allowed, at her own request, to go home.

Remarks by Mr. LAWSON.—Although cancer of the rectum usually does not occur till after thirty-five years of age, yet it does sometimes occur in early life, and in the Middlesex Hospital there have been many instances of young persons

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being affected by it. Mr. Nunn performed colotomy for the relief of cancer of the rectum in a young lad seventeen years of age, and the late Mr. Campbell de Morgan opened the colon for a girl aged twenty, whose rectum was occluded by cancer. In persons of full middle and advanced age cancer of the rectum makes slow progress, but in the young the disease is more acute, and will often destroy life in from nine to eighteen months. The disease is very insidious in its commencement and progress, frequently coming on and developing itself without producing sufficient discomfort to compel the patient to seek advice until it is far advanced. The signs are more or less constipation, small and lumpy fæces—there being no regularly formed motions,—frequent desire to evacuate the bowel, the passing of a little blood and matter from the bowel, and an offensive smell, an odour which those who have to deal with such cases consider almost as characteristic of the disease. There is one other symptom which is associated with this disease in its later stages, and is very distressing; it is pain down the thigh extending into the leg, and to obtain relief from this the patient keeps the limb in a more or less flexed position. The two cases above related are examples of cancer of the rectum occurring in young patients, both females, one aged twenty-seven, and the other thirty-one. In both the symptoms had become very distressing before their admission into the hospital. And in both the operation of colotomy was performed with the view of alleviating their sufferings. In each case the operation gave great comfort, the constant desire to go to stool was relieved, and the patients could stretch out their legs in bed, as the pain in the limb was removed. It may be well to add that after colotomy the fæces may be almost deprived of odour by giving daily a small teaspoonful of Belloc's charcoal in water, or a few charcoal biscuits.

EVELINA HOSPITAL FOR SICK CHILDREN.

A CASE OF SCORBUTIC DYSENTERY IN A CHILD PROVING RAPIDLY FATAL.

(Under the care of Dr. GOODHART.)

ANNE S——, aged eleven and a quarter, was admitted on July 29th, 1879. She had been unwell for some months with a bad appetite, and lately she had been fed very badly, having meat only once a week, and bread and butter on other days. As she walked into the out-patient room she was pale, with bloodless lips, and very feeble in her gait. Being placed upon the couch and undressed, her skin was noticed to be covered with purpuric flea-bites and other petechiæ, and over the legs were large, fading, bruise-like discolorations. The spleen was large and firm, not tender; it came two finger's breadth below the ribs. The blood looked watery, and under the microscope was poor in red corpuscles, while the colourless corpuscles were in large excess. It was further to be noticed that the colourless corpuscles were the same size as the red corpuscles, but they contained no colouring matter, and were a little granular. About one in every four was of this kind. The lungs were healthy. There was a soft systolic bruit over the pulmonary artery, probably hæmic in its nature. Temperature 100·8°. She was admitted, and ordered full diet, with half an ounce of lemon-juice every four hours.

July 30th.—Morning temperature 99·6°; evening 100·8°; free perspiration.

August 1st.—Temperature morning and evening 102°. The bowels, which had been confined since admission, were open once; the motions were not anything unusual.

On the 2nd, severe diarrhœa set in, with great thirst. The bowels acted five times during the day, and ten in the night, the motions being watery and pink from the presence of blood. Evening temperature 103°. She was ordered five drops of dilute sulphuric acid, and four of tincture of opium, with a little spirits of chloroform, every six hours in a tablespoonful of water; and three ounces of wine were given daily.

On the 3rd she was losing ground fast. The diarrhœa continued, and blood was passed every time. The pulse was very soft, 128. There was a systolic bruit (? splenic) heard over the ensiform cartilage downwards and outwards towards the left and over the splenic tumour. The hæmacytometer give 214 red corpuscles in ten squares, or less than one-half the normal quantity. Only one colourless corpuscle could be seen in ten squares of the micrometer; but there was some variability in the size of the red corpuscles. The hæmoglobiometer gave 65 per cent. of the colouring matter absent. The child was languid, exhausted, and more anæmic. The tongue was rather dry, but there was no sponginess of the gums. There was a short systolic bruit heard at the apex of the heart and in the axilla, as well as one at the base. The impulse was in the normal position, but too jerking. The optic discs were white, and two small hæmorrhages were seen on the right side, one near the disc, the other along a vessel running downwards from it. Temperature, morning, 104·2°; evening, 104°. The bowels were constantly acting, and she was frequently sick also. A grain of quinine was ordered to be taken with every dose of her medicine, and half a teaspoonful of brandy with ice-water every hour, with milk.

On the 4th bleeding from the gums commenced. The systolic bruit was louder, or rather what previously seemed to be two bruits could now only be recognised as one, heard equally loudly all over the precordial region. The heart-sounds were peculiarly loud and ringing, and the heart's action was very rapid. She was now ordered hamatoxylin and ipecacuanha with bismuth, but the diarrhœa persisted in spite of all treatment. The temperature rose to 105·6°, and she died on August 5th. Cold sponging reduced the temperature to 104°, but without any amelioration of her symptoms.

Decomposition of the body set in rather rapidly, and the inspection being unavoidably delayed for forty-eight hours, the viscera were too much altered to give evidence of disease. The spleen was distended into a large bladder of gas, so that it is probably a safe inference that it was reduced to a very soft and pulpy state. The only actual lesion found was in the colon and rectum. The lower part of the bowel was the seat of a severe diphtheritic inflammation, the mucous membrane and submucous tissue being swollen and forming thick folds, occluding the calibre of the bowel, and the ridges thus formed were coated with thick adherent membranes, which covered a bleeding ecchymosed surface beneath. The entire surface was affected below, but towards the upper part of the rectum the disease became patchy, the isolated spots being about the size of a pea, deeply ecchymosed, and with diphtheritic membrane in the central portion. They gradually became less frequent, and ceased altogether about the splenic flexure of the colon.

It should be said that the fauces, vagina, and other likely parts were examined for any evidence of diphtheria, but they were all quite healthy.

ST. MARY'S HOSPITAL, MANCHESTER.

RENAL ABSCESS CAUSED BY A FRAGMENT OF CARIOUS VERTEBRA ULCERATING INTO THE KIDNEY AND FORMING THE NUCLEUS OF A RENAL CALCULUS; OPERATION; DEATH; AUTOPSY; REMARKS.

(Under the care of Mr. CULLINGWORTH.)

FOR the following interesting notes we are indebted to Dr. William Walter, house-surgeon.

A married woman, aged thirty-two, a music-hall dancer, was admitted on May 9th, 1879, ten days after her ninth confinement. She had followed her occupation up to within seven months of her admission, to which date she referred the commencement of her present illness. For two years, indeed, she had occasionally felt pain in the left lumbar region after prolonged exertion, but about the time alluded to, after completing an unusually laborious engagement, she was seized with pain of a more severe character, and she presently noticed a swelling below the ribs, which, gradually increasing, led her to think she must be pregnant of twins. She suffered considerable pain in the left hypochondrium as well as in the back, and occasionally she felt the pain shooting downwards in the direction of the bladder. There was never pain during micturition, or any blood noticed in the urine, but during the last three months of her pregnancy the urine had been turbid, and since her confinement had smelt most offensive.

On admission she was looking pale, worn, and extremely ill. There was a distinctly fluctuating swelling anteriorly below the ribs on the left side, extending inwards nearly to the middle line, and downwards as far as the iliac crest.

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The percussion note over the swelling showed that there was bowel between it and the abdominal parietes. There was no lateral bulging but on the left side of the upper lumbar vertebræ posteriorly. There was another and much smaller swelling, in which fluctuation was not obtainable, but which communicated, on pressure, an indistinct impulse to the swelling in front. The patient endured constant and agonising pain, and the swellings, particularly that in front, were exquisitely tender. The urine contained a large quantity of fetid pus. On two occasions an unusually large quantity of pus was passed, and each time the tumour temporarily diminished in size. The morning temperature varied from 99° to 100°, that in the evening from 101° to 102°. The pulse was usually about 110, sometimes rising as high as 130. There was obstinate diarrhœa, and the patient perspired profusely.

On May 30th the posterior swelling was aspirated, with no result beyond blocking of the needle with what the microscope showed to be a quantity of broken-down tissue.

On June 13th an incision one inch and a half long was made in the long axis of the posterior swelling. Immediately the skin was divided a quantity of reddish pultaceous material escaped, resembling what a fortnight before had blocked the aspirating needle. On passing in the finger, the transverse processes of the adjacent vertebræ were felt to be exposed and roughened from caries, and the lumbar muscles were found entirely disorganised and pulpified. At a depth of three inches from the surface a tense membrane was reached, evidently the posterior wall of the fluctuating tumour in front. Twelve ounces of fetid pus were withdrawn by the aspirator. The opening was then enlarged by means of a probe-pointed bistoury, the abscess-cavity explored, and two calculi removed with the aid of a small lithotomy-forceps. The cavity was syringed out, a drainage-tube inserted, the wound dressed with tenax, and the patient removed. She never rallied, and died on the third day.

Necropsy, twelve hours after death.—The left psoas muscle was almost completely disintegrated, the small portion remaining being closely adherent to the left kidney. The left transverse process, and the left side of the body of the second lumbar vertebra, had disappeared, and the tips of the left transverse processes of the first and third lumbar vertebræ were also implicated in the caries. The left kidney and ureter were enormously enlarged, and the pelvis of the kidney had become a distended suppurating cavity, which had been opened and partially emptied through the incision made posteriorly during life. At the bottom of one of the dilated calyces lay a calculus of the size of half a marble. The kidney itself was riddled with abscesses, and at its posterior and inner aspect, where it had been in close contact with the vertebral column and bound down to it by strong adhesions, there was an ulcerated opening permitting free communication between the diseased vertebræ and the interior of the kidney. There was no evidence of peritonitis or other morbid condition.

The largest of the three calculi was of a light colour and an extremely angular and irregular shape. At its centre, where it was bent at a slightly obtuse angle, was found a small nucleus of carious bone, and around this a layer of oxalate of lime, while the outer portions of the calculus consisted of phosphate with some admixture of carbonate of lime. The two smaller calculi, of which the one removed during life was about equal in size to a Calabar bean, were of a darkish-red mottled colour, and possessed a smooth surface. They were found on analysis to consist of phosphate and carbonate of lime. The weight of the largest calculus was 5·8 grammes, and that of the two smaller 1·87 grammes and ·47 gramme respectively.

Remarks by Mr. CULLINGWORTH.—The sequence of pathological events in this case was unusual and interesting. It seems reasonable to suppose that the first morbid process was caries of the lumbar vertebræ, and that this was accompanied with chronic inflammation of the adjacent tissues, producing, in the case of the psoas muscle, disorganisation, and in the case of the kidney, firm adhesion of the capsule to the vertebral column. A small portion of necrosed bone appears then to have made its way by ulceration through the substance of the kidney into the pelvis of that organ, where it became the nucleus of a calculus of considerable size, and the exciting cause of the formation of two smaller calculi. The patient's vocation as a public dancer would no doubt intensify the irritation produced by the presence of these calculi, the ultimate result of which was pyelitis, destructive suppuration, and death.

QUEEN'S HOSPITAL, BIRMINGHAM.

ABSENCE OF THE UTERUS AND VAGINA; VICARIOUS MENSTRUATION.

(Under the care of Mr. JOHN CLAY.)

FOR the following notes we are indebted to Mr. J. Lloyd Thomas, obstetric assistant.

Sarah J. P——, aged twenty-one years, a pupil-teacher, was admitted on Aug. 15th, 1879. Her general health was good until her seventeenth year, when she commenced to have severe headaches, which came on at regular intervals of a month; they were followed by sickness and epistaxis. These symptoms generally lasted about three days, and as soon as they subsided she would be perfectly well. Four months ago she applied to one of the physicians of the hospital as an out-patient, and was treated for amenorrhœa. She was not aware of any arrest of development, nor was her mother conscious of any irregularity in that respect. The headaches were somewhat relieved by treatment, but in consequence of the amenorrhœa she continued to attend as an out-patient until she was transferred to Mr. Clay.

The patient was rather tall, of light complexion, of ordinary build, and had all the external appearances of a woman of her age. She was of a highly nervous temperament, and was very reserved and bashful. The breasts and the external organs of generation were very well developed. The site of the orifice of the vagina was occupied by a thick membrane, inasmuch as there was perfect continuity of structures from the external urinary meatus to the anus, and no aperture corresponding to a vagina could anywhere be found. A sound was also introduced into the bladder and a finger into the rectum, but the uterus was found to be absent.

On Aug. 19th, the patient having been put under the influence of chloroform, Mr. Clay made a transverse incision half an inch long in the central line of the thick membrane, and just above the anus. The finger now easily passed about two and a half inches into the loose cellular tissue between the bladder and the rectum, and the uterus was sought for, but in vain. On further exploration, a nodule was felt in the left side of the pelvis, and believed to be an ovary. The artificial opening was plugged with carbolised lint, which was changed daily for three days, after which the opening was kept patulous by passing the finger into it occasionally.

On Aug. 31st her usual monthly symptoms came on, four weeks exactly having elapsed since the last similar attack. She had severe headache and sickness; there was also a sudden rise of temperature from 99° to 104·6°; pulse 140. On Sept. 1st the temperature was 104°; pulse 152. She had a sharp attack of epistaxis in the night, and constant sickness. In the evening the temperature had fallen to 99·4°, and the patient was comparatively well. The artificial vagina had cicatrised completely when she left the hospital.

ABSENCE OF UTERUS AND VAGINA.

Ellen R——, aged eighteen years, machinist, was admitted on Sept. 15th, 1879. She had never menstruated. She had enjoyed good health until six months previous, when she began to suffer from headache, with pains in the back and abdomen. These symptoms were more marked at monthly intervals, when she had various hysterical phenomena. There was no vicarious discharge. The breasts and external organs of generation were remarkably well developed. The most careful examination by the rectum and bladder failed to discover either uterus or vagina. As in the previous case, there was no vaginal aperture. No surgical treatment was adopted.

DR. JAMES SHEEHY, of Ebbw Vale, has been publicly presented with a purse of gold and an illuminated address upon vellum, on the occasion of his recovery from a long and serious illness.

VACCINATION PROSECUTION.—At the Limerick Petty Sessions, recently, Mr. Jacob, a Quaker, was fined £1 and costs for refusing to have his child vaccinated. Mr. Jacob has been already fined three times for the offence, and the Limerick Board of Guardians last week adopted a resolution that he should be again proceeded against on his refusal to comply with the law.

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Reviews and Notices of Books.

Parasites; a Treatise on the Entozoa of Man and Animals, including some account of the Ectozoa. By T. SPENCER COBBOLD, M.D., F.R.S., F.L.S. 8vo, pp. 508. London: J. and A. Churchill.

IT is very difficult for the reviewer to convey a just idea of the peculiar importance of this addition to the scientific literature of the country. Dr. Cobbold's work does not lend itself readily to the critic's art (particularly when that art has to be exercised within strait limits of space), from the crowded and complicated details into which he enters, and from the fact that the essential value of the work depends upon these details. On laying it down after perusal the mind is oppressed with a sense of the prodigious and long-continued labour which must have been devoted to reducing the information it contains to the compendious form in which it is now given to the world. The work is, nevertheless, in the best sense readable. It affects no literary artifice, but it fixes the reader by the complete mastery of the subject displayed by the author, and by the ever-strange and increasing interest of its several details. Although, as the author says in the preface, "it does not concern itself with therapeutics and the curative treatment of parasitic affections" (these aspects of the question having been dealt with by Dr. Cobbold in a separate work) the book concerns the medical man in his not less important function as an etiologist and in his preventive treatment of diseases. In these respects it will prove of as great interest and value to the medical practitioner as it will to the naturalist in his particular field of study. But as the author himself tells us that in treating of the developmental phenomena exhibited by parasites which occasion fatal helminthiases he has had expressly in view "the requirements of sanitarians," we shall confine our observations to that aspect of the book which relates to the general question of the public health.

No previous work in the English language has presented so large a view of the phenomena of parasitism in man and the lower animals, and enabled so just a judgment to be formed of the important part which parasitism plays as affecting the public weal. Notwithstanding, however, that the work is so comprehensive, its plan is of the simplest. The first part, devoted to man, describes the parasites affecting the human frame in order of families, merely arranged for convenience of description, without reference to conceptions of zoological equivalency; the second part, devoted to the lower animals, describes in succession the parasites affecting the mammalia, birds, reptiles, fishes, and evertebrata. And when we speak of description, we must guard ourselves against causing a misapprehension, for Dr. Cobbold purposely omits minute anatomical details, for the purpose of giving more space to the developmental phenomena, the knowledge of which most immediately concerns the sanitarian and public health administrator. And of these phenomena we would note the remarkable illustrations they afford of a canon of sanitary administration laid down by Mr. John Simon, but which is still most imperfectly apprehended and applied. Parasitic diseases are especially diseases of filthy habits and practices, and cleanliness of habit and practices is the great condition of their prevention; but cleanliness for sanitary purposes can only be secured when, as Mr. Simon stated, "the cleanliness is practised with a clear intelligence of what cleanliness really means." Illustrations of this pregnant principle abound in Dr. Cobbold's work. While common notions of cleanliness effect and have effected much in abating the ravages of parasites, both among man and the lower animals, he makes it transparently obvious that our security against these ravages must be strictly proportionate to our particular knowledge of the manner in which parasitic infection is brought about In other words, he puts, by means of this work, vastly increased power into the hands of the sanitarian, human or veterinary, for accomplishing his functions. We quote almost at random some of Dr. Cobbold's observations on this point, and these only so far as to serve as "whets" to the book.

Writing of *Bilharzia hæmatobia*, he says:—"In the matter of sanitation, it is quite evident from the foregoing data that the danger of infection cannot arise from the drinking of impure water, as ordinarily understood. The embryonal larvæ would be killed by an admixture of sewage. It is obvious that infection can only occur from swallowing free cercariæ, or fresh-water molluscs, which contain the higher larval forms in their encysted or pupa condition. Slow-running streams, or stagnant pools with sedgy banks, are eminently favourable to the existence and multiplication of intermediary bearers, and consequently their waters are dangerous for drinking purposes" (page 54). Again, writing of cestode parasites, Dr. Cobbold says:—"The prevalence, or the rarity, of cysticerci in cattle in any given country must be determined primarily by the habits of the people; for since the beef-measle can only result from the ingestion by the ox of the eggs of the *Tænia mediocanellata*, it is clear that the degree of infection of cattle will correspond with the facilities offered for egg-dispersion. It may be affirmed that the frequency of this particular species of tapeworm amongst the people occupying any given area will bear a strict relation to the amount of underdone beef consumed by the inhabitants" (p. 82). Note also the observations in reference to our relations, as to contact and management of dogs, to cestode parasites (pp. 125, 126); and, again, with reference to the nematode flesh-worm, the *Trichina spiralis*—a subject of increasing importance in this country:—"Can we possibly avoid the contingency of playing the part of host to these creatures?" asks Dr. Cobbold; and he answers, "Certainly; it is simply a question of properly cooking the food" (p. 172). We should have liked to quote a paragraph from page 202, as to potable waters; from page 232, as to uncleanliness of hands; and from page 247, as to privies in relation to parasitism; but we must forbear.

Thus far we have spoken of the excelling merits of this work, but there are certain demerits of form which deserve a passing attention. Dr. Cobbold states in his preface that he has been induced to write this book in place of preparing another edition of his introductory treatise on Entozoa, now out of print. Yet he occasionally refers to that treatise for details which he does not care to introduce in the present work. This is surely awkward and must be most tantalising to the reader who may not have the introductory treatise by him, or be able to gain access to it in a library. Again, a considerable portion of the bulk of the book is made up by biographical references, printed in the same type as the text. This is inconvenient to the reader, and it would be more expedient that these references should be printed in a smaller type. But worst of all, as tending to prejudice the book in the opinion of readers who claim no technical acquaintance with the subject, is the absence of chapters dealing with general aspects of its subject. For instance, in the sanitary aspects it would be most advantageous to have a summary chapter on them. Dr. Cobbold is not disposed to attribute to the English people a widely diffused knowledge of parasitism, nevertheless he pays them the compliment of supposing that they may have an appetite for his book, although it is by no means written, or, indeed, intended to be written, in popular language. It is a technical work, technically treated; but we would ask Dr. Cobbold, in future editions, and in the interest at least of the large class of individuals whom he names "sanitarians,"

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and who are so immensely interested in it, to help them somewhat more freely than he has done in the present work to master the infinity of complicated details he gives in their practical aspects. At the same time we would ask him to amend the other faults we have referred to. Other sorts of workers will rejoice in the rich mine he has prepared for their individual delving.

The Heart and its Diseases, with their Treatment, including the Gouty Heart. By J. MILNER FOTHERGILL, M.D., M.R.C.P. Lond., Assistant-Physician to the City of London Hospital for Diseases of the Chest, &c. Second Edition, with Plates and Illustrations. H. K. Lewis, Gower-street.

IT is not necessary to give any lengthy notice of the second edition of this accepted and original work. When we speak of the work as original we do not mean that the author confines himself to an account of his own researches in his own special language. On the contrary, he borrows freely from writers of all countries, and lays them under contribution to the illustration of each successive branch of his great subject. Perhaps Dr. Fothergill carries this method a little too far, and the reader occasionally is disappointed to find the author avoiding the exprcssion of a personal opinion on a case or a subject, and contenting himself with quoting two opposite opinions, and saying that there is much to be said on either side. There is, too, a certain off-handedness and want of clinical and scientific precision and detail in the description of cases and diseases. These faults strike us in reference to Dr. Fothergill's notice of such subjects as the use of mercury in pericarditis, the order and relation of changes in cardio-vascnlar and renal disease, the nature of the degeneration of heart-tissue in pyrexia and in special fevers, &c. These faults notwithstanding, the book is both original and valuable. It presents a large, recent, sensible view of the many-sided subject of which it treats, in its clinical, therapeutical, and pathological aspects. The present edition is much more carefully written and in every respect more complete than the first. Dr. Fothergill's style of writing is Saxon and human, and will command the attention of many readers. In his hands disease is represented as the outcome of great social and personal conditions, to be retarded in its progress, and, if possible, cured by early detection and by an early rectification of these conditions. He is not a mere pathologist, but a physician who believes in his art, and who has most valuably contributed to its therapeutical efficiency and reputation. We commend his book to practitioners of medicine, who will find the great facts of heart disease and its treatment discussed in a way that will deeply interest them, and tend to give them more hopefulness and sense of usefulness with respect to a class of cases which is far too apt to be regarded from a narrow and dead-house point of view.

OUR LIBRARY TABLE.

Reports of the Medical and Surgical Registrars of the Middlesex Hospital for 1877. London: J. Smith and Co. 1879.—These reports, issued a few months ago, contain some valuable statistical and other information. The total number of patients under treatment in 1877 was 2458; the rate of mortality, 10·7 per cent., or exclusive of surgical cancer (a special feature of the hospital), 9·73 per cent. Several special tables follow the general analysis in the medical report. It is noteworthy that of the ten cases of infectious disease originating in the medical wards, five were cases of facial erysipelas, four of enteric fever, and one of measles. In only one of the first-named was there any evidence of direct contagion. The table and summary of cases of acute and subacute rheumatism are carefully compiled. It is noted that "there were cerebral symptoms with hyperpyrexia in five cases, one of which (with a temperature of 109·8°) died a few hours after admission, and four recovered." In each of these cases cold baths were employed, and salicylate of soda given. The next table is devoted to diphtheria—five cases in all, of which two affected the pharynx only, and one of those was fatal from syncope on the fifteenth day. Three cases, where there was membranous laryngitis (in two tracheotomy was performed), were all fatal. No fewer than forty-two cases of enteric fever were under treatment, with a mortality of 10·1 per cent. A table of these cases is given, and also one of the cases of visceral cancer, which concludes the medical section. The chief feature of the Surgical Report is the admirable summary of cases of cancer and allied malignant growths, comprising as many as 121 cases. Under the heading of "Infectious Diseases" there are thirty cases of erysipelas and cellulitis admitted during the year. "Nineteen cases of infectious disease originated in the wards, including seven cases of pyæmia and septicæmia, the remainder being erysipelatous in nature." Then follows a table of the cases of hernia, of which twenty-one were admitted—twelve in males and seven in females; eleven of these were strangulated and operated on, three of them proving fatal. A table of compound fractures, and a table of operations performed during the year, conclude the Surgical Report. The Medical Report is by Dr. Finlay, the Surgical by Dr. Lyell. A Pathological Report by Dr. Coupland, comprising an analysis of 231 inspections, concludes the volume, the somewhat late appearance of which is to be regretted.

Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, 1878. Paris: Asselin. 1879.—One of the special features of these reports is the quarterly return of prevalent diseases made by M. Ernest Besnier. These returns have now been made for many years, and are of much value for the sanitarian. Amongst the more interesting topics brought forward at the meetings of the Society may be noticed communications upon Spinal Rheumatism, by Drs. Rendu and Vallin; a case of General Scleroderma, with bronzing and disseminated vitiligo, by Dr. Féréol, which gave rise to discussion bearing on the relations of these conditions to Addison's disease; and a case of Tubercular Meningitis with recovery, by Dr. Dujardin Beaumetz. This last was of especial interest, for choroidal tubercle had been detected by the ophthalmoscope. The diagnosis was doubted by M. Chauffard, as the "tubercle" in the choroid was solitary. Much space is allotted to the full text of more or less extensive memoirs. Two of these are devoted to the subject of Obstetrical Anæsthesia, by Dr. Dumontpallier and M. Lucas Championnière. In a paper on the Diagnosis and Prophylaxis of Mumps in the Adult, based especially on observation of that disease in the army, Dr. Hervieux discusses the question of the frequency of orchitis in this affection. His statistics show a proportion of two cases of orchitis in every five of mumps, and he urges the adoption of measures of isolation in the affection. Amongst the memoirs is one by Dr. Luys upon General Paralysis, and one by Dr. Vallin on the Arthropathies following Acute Disease of the Spinal Cord, whilst a case of Rapid Ulcerous Syphilide in an Infant fourteen months old, by Dr. Dujardin Beaumetz, with marked osseous lesions, may be mentioned as of interest.

Des Paralysies Corticales du Membre Supérieur; Monoplegie Brachiale. (On Cortical Paralysis of the Upper Limb; Brachial Monoplegia.) By D. GASTON DECAISNE. Paris: Baillière et Fils. 1879.—An industrious compilation, one of the many works that have arisen from the doctrine of cerebral localisation. After a brief survey of this doctrine the author limits himself to instances of paralysis (partial or complete) of the arm, associated with lesion of the cortex in the opposite cerebral hemisphere. He concludes that the area hitherto ascribed to the centre

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for arm movements is too limited; and he accounts for the restoration of power in most cases either by the lesion being one of a transient character (e.g., temporary anæmia), or by the opening up of fresh paths and the assumption of functions by other nerve-cells, to replace those irretrievably damaged. The leading features of the cortical paralyses he discusses are summed up as follows:—1st, they are limited to one or more muscular groups; 2nd, they are often incomplete, pareses rather than paralyses; 3rd, they are not accompanied by loss of sensation. Trophic and temperature changes are rare in association with them.

The Microscopic Organisms found in the Blood of Man and Animals, and their Relations to Disease. By TIMOTHY RICHARD LEWIS, M.D. Calcutta, 1879.—This monograph, portions of which have lately appeared in the *Quarterly Journal of Microscopical Science*, is characterised by the care and scientific accuracy with which Dr. Lewis has already made us familiar. It deals with a subject which, comparatively speaking, is yet open to great development, and for future workers nothing could be better suited than this essay, partly historical and partly founded upon original observations. It is amply illustrated, and is altogether produced in a manner which does credit to its author.

The Handy Medical Visiting List, by ALFRED SHEEN, M.D., is, as its name implies, very simple, light, and easily carried in the pocket or in a pocket-book.

Analytical Records.

LIQ. BELLADON. DIALYSATI.

(MESSRS. SAVORY & MOORE, NEW BOND-STREET.)

THE process of dialysis has been employed by Messrs. Savory and Moore in the preparation of some liquid extracts of vegetable drugs, which promise to be valuable additions to those in present use. That of belladonna is a clear liquid, the colour of sherry, of which each fluid ounce represents one ounce by weight of the ext. belladonnæ of the Pharmacopœia, the unstable, albuminous, and colouring matters being separated by the process of preparation. It is a good and reliable preparation.

LIQ. OPII DIALYSATI.

(MESSRS. SAVORY & MOORE.)

This is an analogous preparation of opium, which is stated to possess the same strength as liq. opii sed. (the strength relative to that of a pharmacopœial preparation should have been stated). By the dialysis, the irritant and gummy substances are excluded.

LIQ. CINCHONÆ DIALYSATI.

(MESSRS. SAVORY & MOORE.)

Superiority is claimed for this preparation on account of the exclusion of the resinous matters which cause the preparations in use to become turbid when mixed with water. The specimen examined certainly mixes with water without the least precipitation. The alkaloids are contained in it in their natural combinations with the acids of bark for which febrifugal qualities have been claimed.

THE HARROGATE WATERS.

In order to promote the more extended use of these well-known waters, some very elaborate analyses have lately been made by Professor Attfield. His reports are exceedingly interesting; and although they confirm, in the main, the analyses made years ago by West, Hofmann, and Muspratt, some new and curious facts are revealed in them. Thus the presence of strontium in notable quantities, as well as of barium, is proved in all four of the waters. Lithium has also been found, as well as traces of bromides and iodides. These modern and more delicate analyses show the probability that we do not even yet know the whole truth about mineral waters, and serve to confirm the belief of almost all physicians that the natural waters are more valuable as remedial agents than any imitations of them. It is, indeed, impossible to imitate them successfully until all their constituents are known with certainty.

FRY'S MALTED CHOCOLATE PASTE (PATENT).

(J. S. FRY & SONS, BRISTOL & LONDON.)

As far as we know this "delicious combination of superior paste chocolate with Allen and Hanburys' pure Extract of Malt," is the first attempt to combine malt extract with chocolate. It may be said to be a success, for the preparation is excellent in flavour, and of course very nutritious. One objection must, however, be pointed out. Diastase, the little-understood active agent of malt, is destroyed or rendered inoperative at the temperature of boiling water. Now the directions for use on each tin prescribe the addition of *boiling* water to the paste. The difficulty may of course be overcome by keeping the temperature, both of water and milk below 170° Fahr.

TULLOCH'S DUTCH COCOA.

(MESSRS. TULLOCH AND SON, BURY-STREET, ST. MARY-AXE, E.C.)

This is a really good cocoa, freed from a portion of the superfluous cocoa-butter, and without any admixture. Its flavour is excellent, and the beverage prepared with it is remarkably smooth, pleasant, and palatable. It is one of the best pure cocoas which we have had an opportunity of tasting.

PURE EXTRACT OF MALT.

(ALLEN & HANBURYS, PLOUGH-COURT, LOMBARD-STREET.)

An excellent malt extract. It has about the consistence and colour of treacle, and the true malt flavour.

HORLICK'S FOOD, FOR INFANTS, DYSPEPTICS, AND INVALIDS.

(NEWBERY & SONS, NEWGATE-STREET.)

A preparation of malt, flour, &c. It dissolves easily in hot water, and yields a very pleasant and digestible food. For infants, water as well as milk must be added.

New Invention.

IMPROVED ENEMA APPARATUS.

MESSRS. J. G. INGRAM & SON, of Hackney-wick, E., have produced an enema tube made in one continuous piece. It is warranted not to split, which is a great point. Moreover it is fitted with valves at the extremities of the suction and delivery tubes, so that no air can be drawn in while the enema is refilling. The inventors claim as advantages of the apparatus that it is complete as enema and syringe, without any metallic connexions or wire fastenings; and that it will resist the heat of tropical countries, will not split, nor become hard or sticky.

DUBLIN SANITARY ASSOCIATION.—At the annual meeting of this Association, recently held, the report, which was adopted, referred to the amendment of the Vaccination Act, the condition of artisans' dwellings, the sanitary state of the houses in the city, and the death-rate of Dublin. The President of the College of Physicians, in moving the adoption of the report, urged the necessity for special cabs or ambulances, for the conveyance of the sick to hospital, or from it when they were in a convalescent state. It is intended that a special subscription shall be raised among the members of the Association, to defray the extra expenses caused by the inquiry lately held by the Royal Sanitary Commission, at which evidence was produced by the Association, and which the ordinary revenue is insufficient to meet.

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THE LANCET.

LONDON: SATURDAY, JANUARY 3, 1880.

THE interest attaching to the appointment of a successor to Major GRAHAM, who some months ago intimated his intention of retiring from the public service at the close of 1879, is thrown into the shade by the announcement that Dr. WILLIAM FARR has also signified to the Lords of the Treasury his desire to resign his appointment. When, nearly twelve months ago, Major GRAHAM publicly announced his intention to retire because he did "not wish to take a fourth census," Dr. FARR took the opportunity to intimate his intention to become a candidate for the appointment of Registrar-General. No one acquainted with the history of civil registration, and of the national system of vital statistics which has been based upon it, could fail to arrive at the conclusion we expressed at the time—namely, that the claims of Dr. FARR could scarcely be disregarded if fitness for the post, and the exceptional value of his past services, were duly considered.

Rumour pointed at the time to a desire, on the part of the Government, to bring the Registrar-General's Department into closer relations with the Local Government Board, a result which, however desirable it might theoretically appear, seemed to us to forebode a restricted usefulness for the General Register Office. The appointment of Sir BRYDGES HENNIKER, who has for the last few years fulfilled the duties of private secretary to the President of the Local Government Board, seems to suggest that the rumour was well founded. The first result of this appointment affords further evidence of the singular fatality which appears to have attended the ill-starred connexion between Poor-law and Public-health administration. It is but a year or two since Mr. SIMON was driven from his post as medical officer to the Local Government Board by the repressive policy adopted towards the sanitary and medical department by the central authorities of Poor-law administration. Now, Poor-law influence has secured the appointment of Registrar-General for the private secretary of the President of the Local Government Board, and Dr. FARR, finding that his hopes of succeeding Major GRAHAM are disappointed, has asked to be allowed to retire from the service on superannuation. Thus has the so-called Public Health Department succeeded in depriving the sanitary service of its two brightest ornaments, Mr. SIMON and Dr. FARR. It remains to be seen how the appointment of a Local Government official as Registrar-General will further affect the influence of the General Register Office on sanitary progress, which has hitherto been so strongly marked. Sir BRYDGES HENNIKER may possess the necessary qualifications for making an excellent Registrar-General; this remains to be seen. The loss to the public service, however, by the resignation of Dr. FARR, is beyond doubt, and cannot be too highly estimated. Major GRAHAM, in the concluding paragraph of his last Annual Report, published in May, 1879, expressed his obligations to Dr. FARR in the following words:—"Lastly, I must express to Dr. FARR, whom in 1842 I had the good fortune to find here presiding over the Statistical Branch, my grateful acknowledgments of the important services he has ever since continually rendered. He is acknowledged throughout Europe, the United States, East Indies, and the colonies, as one of the first statists of the day. To his scientific researches and reports I attribute any reputation that may have accrued to the General Register Office of England and Wales from the time he accepted office in this Department." This handsome tribute to the value of Dr. FARR'S forty years of service in the General Register Office makes it difficult to excuse the Government for ignoring Dr. FARR'S claim to fill the vacancy.

At present, however, we have chiefly to face the fact, and to regret, that the valuable official career of Dr. FARR has been suddenly brought to a close under circumstances which are painfully suggestive of a want of appreciation of their worth by the Government. Let us at least hope that this impression may be promptly and effectually removed. It is more than forty years since Dr. FARR accepted an appointment in the General Register Office under Mr. J. H. LISTER, the first Registrar-General, who, in his first Annual Report (published in 1839), announced that the task of rendering the results of civil registration available for beneficial purposes had been committed to Dr. FARR, "a gentleman of the medical profession, whose scientific knowledge and intimate acquaintance with statistical inquiries were ample pledges of his peculiar fitness." Previously to his appointment to the General Register Office Dr. FARR had acquired, in great measure through his contributions to these columns, a well-deserved reputation as an authority on vital statistics. Dr. FARR'S letters to the Registrar-General on vital and mortal statistics, in the forty annual reports issued by that official, have been important contributions to the literature of sanitary statistics. Apart from work more strictly connected with registration, Dr. FARR contributed valuable reports upon the cholera epidemics of 1849 and 1854; also the English Life Tables, Nos. 1, 2, and 3, the latter of which were formed upon a larger basis of facts than any other previously constructed Life Tables. Dr. FARR was a Census Commissioner, and took an active part in the three Census enumerations of 1851, 1861, and 1871; and he was mainly instrumental in the adoption of the system of Post-office Insurance, and has constantly advised the Government on the subject since its adoption. It would be impossible here to even enumerate the Commissions in which Dr. FARR has, during the past forty years, given valuable assistance. Whenever statistical advice was required by the Government, Dr. FARR has almost invariably been consulted, and hence his statistical labour and research have extended over an unusually wide field.

By ignoring Dr. FARR'S claim to the post of Registrar-General, the Government has incurred a serious obligation to repair, so far as may be within its power, this apparent slight upon a valuable public servant. Dr. FARR simply asks, after more than forty years' service, to be allowed to retire upon full pay. He could hardly ask less, but we can scarcely believe that the Government would be satisfied to grant so small a request. That Dr. FARR'S services to public hygiene call for some marked recognition is beyond all question, and we are unwillin

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anticipate the spontaneity of any intended action in the matter by suggesting the form in which this recognition should be made. We doubt not, however, that if Government should fail to redeem its responsibility in this matter, Dr. FARR'S retirement will not be allowed to pass unnoticed by the public which has so largely benefited by his long and steady devotion to the promotion of statistical and sanitary science.

THE adjourned discussion on Animal Vaccination at the rooms of the Medical Society of London on the 18th ult. was not a happy example of the aptitude of medical men to deal publicly with matters of public interest. From the beginning the discussion (if this term may be applied to a somewhat promiscuous talk) went wide of the real subject for consideration, and was still astray when the conference terminated for the moment by a further adjournment to the 31st ult. It was unfortunate that a communication by Dr. WARLOMONT was not read to the meeting at its opening. This communication might possibly have exercised some beneficial influence in getting the discussion into the right track. Dr. WARLOMONT had penned certain observations upon Dr. STEVENS' statements made at the previous meeting, and he began by specifying the object of the conference—namely, "whether it was expedient for the English Government to introduce animal vaccination officially into that country." He added, "I purposely state the question with precision, because it appeared to me to have been ill-understood by the speakers who followed me at the meeting." This was the impression left upon Dr. WARLOMONT'S mind by the debate at the first meeting, and it would have been deepened had he been present at the second, in which questions that he properly says might have been "provisionally disregarded" were almost wholly considered, to the exclusion of the real subject which should have occupied the conference.

It devolved upon Dr. BALLARD to open the discussion, and he entered first on an examination of Dr. CAMERON'S views, as expressed in his letters to *The Times*, on the deterioration of the humanised vaccine lymph in use in England, and the suggestion he has made that the recent undue prevalence of small-pox was traceable not only to this assumed cause, but also to the large use in our vaccine establishments of the lymph renewed from CEELY and BADCOCK'S successful variolisation of cows, and which he believes to be small-pox virus pure and simple. This examination was pursued at so great a length as to fix the attention of the meeting chiefly upon it, to the almost entire neglect of the important statements which Dr. BALLARD had to make as the representative of the Local Government Board, and which formed the latter part of his discourse. We must take exception to this treatment of his subject by Dr. BALLARD, because it not only gave an importance to Dr. CAMERON'S views on the subjects referred to which was misleading, but also greatly contributed to get the discussion out of its proper track. To call upon Mr. CEELY to speak upon such of those views as concerned him was ungracious. It was certainly a gain, we admit, that this turn of the discussion should have induced Professor SIMONDS, of the Royal Veterinary College, to take part in it. This gentleman rose to protest against the notion which underlay much of Dr. CAMERON'S observations, and which had cropped out in the first meeting, that the variola of man and the vaccinia of the cow were totally different diseases. He ridiculed the idea of CEELY and BADCOCK'S experiments in the successful variolisation of cows, and consequent production of vaccinia, being disputed. He himself, in conjunction with the late Mr. MARSON, had been one of the largest unsuccessful experimenters on the variolisation of cows, but his failures had not led him to doubt CEELY and BADCOCK'S successful experiments with full knowledge of the evidence regarding them. Mr. MARSON'S skill had prevented him from perpetrating the blunders into which CHAUVEAU fell—blunders arising in great measure from ignorance of what had been done in England on the subject. Apart from experimental observation, however, he pointed out that all analogy indicated that vaccinia was the inoculated small-pox of man in the cow. Before the introduction of vaccination, and when small-pox, inoculated and natural, was general throughout the kingdom, vaccinia was a common disease in cows; since small-pox has been brought under some sort of control, and had prodigiously diminished in amount, it was the rarest of diseases in our cowsheds. It was a disease limited wholly to the cow, and that the milch cow. Can we conceive a general, naturally-acquired disease, limited in this fashion to the female animal alone? We may add to these considerations that the analogy of vaccinia in its course in the cow is to inoculated small-pox in man, not to the general disease. We can understand these phenomena on the assumption that vaccinia in the cow is always an inoculated disease, not otherwise. All our information, then, apart from the experiments which confirm it, points to the conclusion that vaccinia is a product of variolous inoculation, accidental or otherwise, in the cow. Hence, then, the pretended distinction between so-called natural vaccinia in the cow and the vaccinia produced artificially—by variolisation, in fact—has no existence.

To turn now to the essence of Dr. BALLARD'S observations on animal vaccination as it concerns this country. And, first, it would appear that the Local Government Board, or its medical department, takes issue at once with the statements of the animal vaccinators, that the success now obtained in vaccination with animal lymph is equal to that obtained with humanised lymph. Whatever truth there may be in this statement elsewhere, it does not apply, seemingly, to vaccination with humanised lymph in England. Dr. SEATON visited the animal vaccine stations at Amsterdam, the Hague, Rotterdam, and Berlin, in 1878, with the purpose of satisfying himself on this and other points. The results of Dr. SEATON'S inquiry have not been published owing to his illness, but Dr. BALLARD gives the following important data on the question here referred to, derived as to animal vaccination from Dr. SEATON'S recent inquiry. At Amsterdam complete success at all insertions was obtained in only 34 per cent. of the children vaccinated; at Rotterdam it was 54 per cent., and at Berlin 21 per cent. At the Surrey Chapel station, where fresh arm-to-arm vaccination was employed, the success was 97·8 per cent. Then as to complete failure: at the Hague it occurred in 2·2 per cent.; at Rotterdam the percentage of failures was not stated; but

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at Berlin they were 7·1 per cent. At the Surrey Chapel, out of 1000 children vaccinated with humanised lymph, the complete failures were none. As to insertion-success, the calculation of what was obtained at Amsterdam was 700, or fewer vesicles out of 1000 insertions with animal lymph. At Rotterdam the number was not stated. At Berlin it was 678. But at the Surrey Chapel, with humanised lymph, it was 978.

We have still to learn how far this comparison of results will be accepted as just by the several animal vaccinators to whose work it refers; but the results, as here stated, explain in one essential matter the hesitancy of the Government in adopting animal vaccination in our ordinary system of public vaccination. As the results stand they are manifestly inconsistent with that completeness and efficiency of vaccination which the Government aims at in this country.

The second important point to which Dr. BALLARD referred, related to the question of "option"; and here he was instructed to say that the Local Government Board considered an arrangement for public vaccination in which the parents should have the option of choosing the sort of lymph which should be used for their child as quite inapplicable to the circumstances of our population. Dr. WARLOMONT, in the communication to which we have referred, has some observations on this subject, and generally on the fashion in which he would have animal vaccination made supplementary to arm-to-arm vaccination. He gives the proceedings of the State Vaccine Institute at Brussels for our example, but this does not touch the question at issue here at all. Compulsory vaccination does not exist in Belgium, and the State has no such responsible relation to the subject there as here. The whole question of vaccination is optional in Belgium, and so far as animal vaccination is concerned, its chief use is for the frequent renewal of stocks of lymph. Excepting those who live in the immediate vicinity of the station, "the poor," to use Dr. WARLOMONT'S words, "cannot have their choice" of lymphs. In fact, Dr. WARLOMONT enables us to see in the clearest light that the introduction of animal vaccination into England involves momentous questions which exist in no other country, and which clearly justifies the Government in moving most cautiously in the matter.

Dr. BALLARD tells us that the Local Government Board is doing more in the investigation of animal vaccination, with reference to the question of supplementing our existing public vaccination arrangements by its adoption in some form or other, than had previously been suspected. We may infer, however, that the efforts of the Board in that direction will be none the less active, and may even be expedited, by the discussion which has now been brought to an end. It is true that the meeting on the 31st ult. (as it proved) tended rather to weaken than to strengthen such positive results as were to be gathered from the earlier meetings. The speakers at this last meeting lost sight almost wholly of the special subject of discussion, and the number of persons present was so small that the chairman decided that no formal proposition of the results of the conference should be submitted to it. In this respect, the conference might be represented as futile; but, in reality, the manifestation of professional feeling as to the desirability of the introduction of animal vaccination, in some form, into the public arrangements of this country was too clear to be ignored. Therefore the question has probably gained some additional light from the proceedings of the conference.

IT would be pleasant to believe that when the Council of the Royal College of Surgeons declined, on December 11th, to alter the rule that restricts the Examinerships in Anatomy and Physiology to persons who are Fellows of the College, it did so rather from ignorance of the real nature and purport of the proposed innovation, than from a natural disinclination to accept any new measure. Two months ago (Nov. 8th), in criticising a proposal to rescind this rule altogether, and to throw the Examinerships open, we did not hesitate to express the opinion that it was not desirable to go beyond the Members of the Corporation for Examiners, as Mr. SIMON proposed, and by appeals to statistical evidence we endeavoured to show that it was not necessary to do so. But although statistics were wholly against Mr. SIMON'S scheme, they did suggest a compromise—viz., that the Board of Examiners should be selected from Members as well as from Fellows. By this means many well-known, and a few really eminent, teachers of Anatomy and Physiology would be made eligible for appointment as Examiners, who are at present shut out because they are not Fellows of the College. For instance, of twenty-three teachers of Anatomy at the nineteen medical schools in England thirteen, or 56·5 per cent., are Fellows, and nine, or 39·13 per cent., are Members of the College; but not one of these nine, no matter how eminent or distinguished he may be as an anatomist, is eligible for appointment to the Board of Examiners in Anatomy and Physiology. As regards the teachers of Physiology matters are still worse. Of the twenty-four teachers of Physiology, seven, or 29·16 per cent., are Fellows, and eleven, or 45·83 per cent., are Members who are similarly disqualified. In other words, 42·5 per cent. of the teachers of Anatomy and Physiology connected with the medical schools of England, though possessing a diploma of the College, are accounted unfit to examine *at the College* in the subjects in which they are recognised teachers, because they are not Fellows, and—this is the point—would probably fail to pass an examination for the Fellowship if they tried. This, at least, is the only inference that can be drawn from the arguments made use of to defeat Mr. GAY'S motion. At a meeting of the Council held on Dec. 11th, Mr. GAY moved that the members of the Board of Examiners in Anatomy and Physiology be appointed from persons who are Members or Fellows of the College, whereupon he was gravely informed that it was undesirable to appoint as an Examiner in Anatomy and Physiology a person who, being only a Member, might, while officiating as an Examiner, be tempted to seek the Fellowship by examination, and fail. This argument, if it were not a mere flimsy subterfuge, came with bad grace from a Council made up of 50 per cent. of persons who are only *honorary* Fellows, and have, consequently, never passed the examination for the Fellowship. But let that pass. It is of more importance to correct a general misapprehension respecting the nature of the proposed change. It is not intended to smooth matters for those who would be unable to pass the examina-

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tion in Surgery and Surgical Pathology for the Fellowship, if they wished, but for those who do not wish to do so. An illustration will best explain our meaning. Professor HUXLEY is generally allowed to know something of anatomy and physiology, and he is a Member of the College, and there is, as far as we know, no reason for believing that he has any particular desire to present himself for examination in Surgery, Operative Surgery, and Surgical Pathology, at the Second Fellowship. Even allowing that he does covet this diploma, and assuming that he would certainly be "plucked" if he endeavoured to obtain it by examination, we can conceive that, in spite of this, he could, if he gave his mind to it, examine very creditably in Anatomy and Physiology at the Primary Membership or Fellowship. Professor HUXLEY'S is perhaps an extreme case, but it is by no means unique. The Professors of Anatomy at King's College and at University College, London, one of the lecturers at Birmingham, and both the lecturers at Leeds, at Durham, and at Sheffield, are all Members of the College who are not eligible for appointment as examiners in Anatomy at the College, because they are not also Fellows, although Dr. CURNOW, of King's College, is the present examiner in Anatomy at the University of London. So, again, with the physiologists: the assistant professor at University College, the lecturers at Guy's and St. Thomas's and Westminster, two of the lecturers at Birmingham, the lecturer at Bristol, one of the lecturers at Leeds, and both at Sheffield, as well as the prælector of Physiology at Cambridge, are all Members of the College, but ineligible for appointment as examiners in Physiology at the College. The scandal is that they are ineligible, not that they might be unsuccessful at the second Fellowship examination, if perchance they entered for it. We have a right to ask whether the holders of such distinguished offices as these are to be told that unless or until they obtain the Fellowship of the College they will be looked upon by the Council as unfit to examine in the subjects they profess and teach. There may be some insuperable objection which we have overlooked to removing the disability of Members of the College in this respect, but it should be honestly stated. The allegation that Professors CURNOW and THANE are unfit to examine in Anatomy because they might possibly fail to pass the second Fellowship examination, and that Professor HUXLEY, Dr. MICHAEL FOSTER, Dr. PYE-SMITH, Dr. JOHN HARLEY, Mr. SCHAFER, and Dr. ALLCHIN are disqualified as examiners in Physiology for the same reason, is both senseless and undignified.

FEW observations or theories in medicine which have once been regarded as unassailable, escape question in succeeding generations. Many of them also undergo a period of denial and sometimes of re-establishment. Further investigation demonstrates that the observations, if not the theories, of older workers deserved more regard than had always been accorded to them. The question of the terminations of pneumonia furnishes an illustration of this, as Professor LEYDEN has shown in an excellent lecture delivered to the Charité Medical Society, and published in the *Berlin Klin. Wochenschrift*. The old pathologists taught that pneumonia which did not resolve might end in suppuration, in gangrene, or in chronic inflammation and induration; and although in this country these methods of ending, as occasional rare events, have perhaps never been doubted, they have not escaped question at the hands of German pathologists, more than one of whom has doubted whether these terminations of acute fibrinous pneumonia ever actually occurs. The occurrence of these events is in itself extremely difficult of proof, the ground for doubt being the question whether the pneumonia thus ending was really of the acute fibrinous variety in a previously healthy lung, a point naturally not easy of demonstration.

The termination of acute pneumonia in suppuration, in abscess of the lung, was first doubted by LAENNEC, and it is certain that such ending is far less common than was at one time assumed; but it must, in LEYDEN'S opinion, be regarded as unquestionable, and he cites a well-marked instance which has been recorded in the last volume of the "Charité Annalen." A similar doubt has been expressed regarding the termination in gangrene. It is certain that a large number of the cases of inflammation of the lung which terminate in gangrene have a special type, which suggests that they differ essentially from cases of primary fibrinous pneumonia. Crucial cases are difficult to find, but LEYDEN in this paper adds another to a series previously published—a case in which the patient came under observation on the fifth day of illness and died on the twenty-third, and hepatisation in the lower lobe coexisted with diffuse gangrene in the upper. There was no trace of circumscribed or embolic process. The patient was extremely prostrated by the pneumonia, and with the diminution of the fever the heart's weakness increased still more, and it is assumed that the compression of the vessels by the exudation was greater than the feeble heart could overcome.

The question of the termination of pneumonia in chronic inflammation of the lung is of the greatest practical importance and of the greatest difficulty. We must consider, not merely its termination in induration, but in all those chronic processes which may lead to phthisis—as caseous pneumonia and desquamative pneumonia. Can phthisis result from acute pneumonia in a previously healthy lung? At first sight the answer appears simple. Many cases of phthisis appear from their history unquestionably to have commenced with acute pneumonia. But more careful examination into the history of such cases demonstrates that in the majority, the pneumonia was not of regular course, but was evidently subacute or chronic. Cases in which the pneumonia was really acute are very rare, and even here we are in doubt as to whether the lung was not previously the seat of phthisical changes. The difficulty of the proof is very great in the case of hospital patients, who come under treatment only when the disease is developed or advanced, and LEYDEN believes that the process has not yet been demonstrably proved, while one of the first authorities in Germany, BUHL, denies that it occurs.

If we consider the anatomical processes, fibrinous pneumonia appears at first far enough removed from the changes in phthisis, but in the stage of resolution the difference between the two processes is smaller, and is diminished still further if we deny that the phthisical process has any specific characters. Thus the possibility of the result must, on anatomical grounds, be conceded, and its clinical probability, as we have seen, is great, but the actual proof has

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not yet been given, and is not quite furnished even by a case which LEYDEN adduces as affording almost a proof. The pneumonia came on in a man twenty-two years of age, after exposure to cold, but at an interval of fourteen days, which constitutes a weak point in the case. The inflammation ran a normal course, except for the incompleteness of resolution. The temperature became natural, but shortly afterwards the investigation of the sputum showed the existence of commencing phthisis, which the physical signs soon confirmed.

Simple retarded resolution in pneumonia is a condition of much practical importance. In some cases the physical signs remain for weeks, and even months, and then slowly disappear. LEYDEN states correctly that many such cases, coming under treatment at a later stage, are regarded as cases of phthisis, and help to swell the numbers of cases of consumption. Their distinction may be, as WALSHE long ago insisted, most difficult. LEYDEN points out as the differential signs the persistence of the crepitant râle at the end of inspiration (by no means, however, we think, always to be heard), the absence of large mucous râles, the slight degree or absence of retraction, and especially the examination of the sputum. This is scanty, greenish-yellow, and consists of fine threads and small globes, which are composed of pus-corpuscles and degenerated epithelium of the air-cells. He insists strongly on the importance of the microscopical examination of the expectoration in all such cases, and adds a series of illustrative cases, one of which is particularly instructive, since the pneumonia came on under observation, the patient being in hospital on account of enlargement of the liver, and ultimately dying of ulcerative endocarditis.

With regard to the causes of retarded resolution, LEYDEN points out that the process is influenced by age, occurring less readily in the old, but that this rule is of very limited application, since most of the cases he has recorded occurred in youthful persons. Physicians who see much of the diseases of children will probably agree with us, moreover, that the process is seen now and then in striking form quite early in life. We call to mind a case in which an acute basic pneumonia, of typical course, in a boy of five years, remained unresolved for three months, and then only cleared on removal to a higher altitude. LEYDEN insists also, with justice, on the influence of weakening of the circulation by the pyrexia, or by the other causes, and instances the tardy resorption of inflammatory exudation generally, in the pleura, pericardium, or peritoneum in those whose strength is low. A second, also important, element he believes to be an unusual density of the infiltration. Most of his cases suggested such a condition in an intense degree of dulness and slightness of râle. Similar dense infiltration is sometimes found in the young, so as to quench every sound at the height of the pneumonia. In the case which was investigated after death the view was confirmed in so far that, in many alveoli, there were very dense and firm plugs of fibrin, and it is readily conceivable that such plugs may resist disintegration much longer than those which commonly occur. An important aspect of the question is as to the anatomical changes which take place in the lungs in these cases, and which do not pass away when the retarded resolution takes place. Do such lungs recover perfectly, or are there not always changes in varying degree similar to those the origin of which has been admirably traced by Dr. WILSON FOX in his article on Chronic Pneumonia in REYNOLDS'S "System of Medicine." It is hardly conceivable that a lung can remain functionless for months, with solid instead of air within the air-cells, with the circulation persisting so as to nourish the walls of the air-cells, without these undergoing perversion of nutrition such as to prevent them recovering a normal state, even though the exudation within them is cleared completely. The point must await future investigation for its settlement.

THE year opens with, what some believe, and all hope to be, brighter prospects for the Army Medical Department. The long-promised Warrant has been brought out, and, as one of the immediate results, seventy-two candidates passed the competitive examination, and will immediately proceed to Netley as "surgeons on probation." Twenty-one years have elapsed since the Warrant based on the report of Lord HERBERT'S Commission was promulgated. It raised the Department from the very low condition into which it had been permitted to sink, and brought to the service an adequate supply of good and efficient officers. It was looked upon as the Magna Charta of the Department, and, if it had not been tampered with, would have continued to be so regarded. We need not here repeat the oft-told tale of the manner in which it was treated and its benefits stamped out by those in authority. Suffice it to say that from an early date after its promulgation the course of the Department was a downward one, till at last candidates could not be found in sufficient numbers to fill vacancies. After long and mature deliberation, the Warrant of 27th November last was at length brought out, and the first result has been a supply of candidates as large at least as could have been expected on the very short notice given of the first examination under its provisions. We trust that the military authorities may have learned a lesson from their past experience, and will carry out in spirit and in letter the regulations which have been made for the government of the medical service. It may not be amiss briefly to recapitulate some of the principal changes effected by the new Warrant. The system of ten years' service and subsequent dismissal with a gratuity, except in the case of 10 per cent. selected for further service, has been abolished, and the old conditions of service up to a given age restored; but the advantage of short service for those who desire it, with a gratuity on leaving, has been preserved, the option of retirement resting with the officer, and not with the authorities. An increase of pay and retirement has been granted to all ranks, and the allowance to surgeons on probation at Netley has been raised from 5*s.* to 8*s.* per diem. A new grade of Brigade-Surgeon has been established between that of Surgeon-Major and Deputy Surgeon-General, who will be an executive officer, though available for administrative charge. The relative rank of Surgeon-Major has been made that of Lieutenant-Colonel according to date of commission, instead of remaining always junior of the rank; that of Surgeon has been raised to Captain, and the rank of Lieutenant has been granted to the Probationers. While competitive examination is to continue to be the mode of admission into the department, a proportion of appointments, not exceeding

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one-half, may be filled up from candidates nominated by the different recognised medical schools. The promotion to the rank of Surgeon-Major is now to be given on the completion of twelve years' service, of which three must have been abroad, but power is granted to promote a Surgeon for distinguished service without reference to seniority. When a Surgeon-Major is appointed Honorary Physician or Surgeon to Her Majesty, he is to be promoted, if duly qualified, to the rank of Deputy Surgeon-General, supernumerary to the establishment—a course similar to that followed in the case of an officer appointed A.D.C. to the QUEEN. Exchanges are to be permitted between officers; forage has been restored to the Surgeon-Major; the period of sick leave on full pay which may be granted to a medical officer has been extended from six to twelve months, and, under certain circumstances, temporary may be converted into permanent half-pay at any period between five and twenty years' service. Provision is also made for the employment of retired medical officers at certain station hospitals, with a pay of £150 a year in addition to their retirement. Medical officers doing duty with corps are to be permitted to draw staff allowances, and principal medical officers are instructed to "avoid throwing mere routine duties on the senior executive officers."

These are the principal alterations introduced by the new Warrant, and, if fairly carried out, they will do much to render the service popular once more, and to obtain a good supply of well qualified candidates. But there are certain points not included in the Warrant to which the attention of the Secretary of State may well be directed, and which were prominently brought before him by Lord CRANBROOK's Committee. The first of these is the conferring of a fair share of honorary distinctions upon the officers of the department. This could not well be inserted in a Royal Warrant, but we shall watch anxiously to see that it is carried out in practice, and that the absurd and unjust classification of the medical officers as non-combatants is not made an excuse for excluding them from a fair participation in such rewards. Complaints were frequently made that under previous Warrants faith had not been kept by the Government, and although Lord CRANBROOK's Committee, in their report, deemed that such had not been the case, we have always held that there was ground for the statement. We sincerely trust that this may not occur again, and we would strongly urge upon the War Office the necessity for making known to the officers of the department and to the profession from which they are recruited, any changes which it may be found necessary to make from time to time in the conditions of the service and in its regulations. The Government has once again made a fair start, and it must be careful not to sacrifice the advantage it has gained, for even the suspicion of want of good faith must make every attempt at reorganisation more difficult and less likely to be successful.

WE refer above to the result of the new Army Warrant, in the increase of candidates at the late examination; and doubtless, with time given for working, and the departmental smoothing of difficulties not cleared away by the Warrant, a more satisfactory condition of that service will be brought about.

With regard to the Navy, which is now more than ever disparaged by the improvements in the Army, we may announce that the condition of its medical officers is under consideration at the Admiralty; and we expect to see its new scheme in print before the usual call is made for candidates in February. It would, however, be well if the proposed scheme were ventilated before being confirmed, since failure has so often characterised late Orders in Council for the Navy or the Army which have been scrupulously kept from the knowledge of those whose interests have been concerned.

Early in December we gave our opinions on the causes of decay of the Naval Medical Service; we need not now therefore do more than express our hope that the points we advanced will meet with due attention in the coming Warrant.

Annotations.

"Ne quid nimis."

THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

WE learn that Dr. Seaton has resigned his office of Medical Officer to the Local Government Board. Although there has been a not inconsiderable improvement in his state of health since we last had occasion to refer to this subject, it has become obvious that he would not be justified in attempting again to undertake the heavy duties and responsibilities attaching to the office he held. Dr. Seaton succeeded Mr. John Simon in the appointment—the chief medical appointment in the Civil Service of the Crown. At the time that he entered upon his duties it is believed that his health was far from satisfactory, and the heavy strain upon his powers involved in the exercise of his office soon began to tell upon him. It was held desirable last year that he should take a six months' sick-leave, and he returned from this period of relaxation apparently with his strength renovated. He had not long resumed his duties when the breakdown of health occurred which has rendered it necessary for him now to retire from office. Dr. Seaton has held the post of Medical Officer to the Local Government Board, or as it is frequently termed, Medical Officer to the Government, three years or thereabouts. By the retirement of himself and of Mr. Simon the Government has lost in quick succession the two men whose names are most closely associated with the formation and development, first of the Medical Department of the Privy Council, and now of the Local Government Board. Dr. Seaton's name is mainly identified with the vaccination work of the Department, which, including the work of the National Vaccine Establishment, had particularly his supervision. To him are owing the growth and perfecting of our present system of public vaccination which have made it unique among the different systems in vogue in various nations, and render it, perhaps, the best illustration of a perfectly organised plan of public health administration, as applied to a particular subject, in existence. No department of the Government could lose chiefs so conspicuously qualified for their posts as Mr. John Simon and Dr. Seaton without sensible injury; but they leave behind them in the Medical Department of the Local Government Board men not unworthy to take up the labours they have had to drop. Notably is this the case with Dr. Buchanan, the Assistant Medical Officer of the Board, first under Mr. Simon, and next under Dr. Seaton. The profession will at once revert to this gentleman as the person best fitted to succeed to the vacant office, and we learn that he has been appointed to it. His appointment will be hailed with great gratification by those members of the profession

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who have been brought into communication with Dr. Buchanan in his official capacity; and no other appointment could have given equally great security to the profession at large that the traditions of the department would not suffer, or yield fuller promise of a further development of the department's scientific as well as practical utility, consistently with the ever-advancing medical knowledge of the day.

SIR STAFFORD NORTHCOTE ON THE LICENSING SYSTEM.

SIR STAFFORD NORTHCOTE, in his address to the Licensed Victuallers, on Tuesday, spoke as we should have expected him to speak. The great hope expressed in his address was that the licensed victuallers themselves might come to co-operate with the friends of temperance for the reduction of drunkenness. It must be admitted that Sir Stafford, though using all his gifts of euphemism in speaking of "mine host" and the evils of the trade as at present conducted, betrayed his personal sense of the gravity of the vice of which all must be perfectly ashamed, and of the earnestness of the public demand for its being dealt with. It must be conceded, too, that he was faithful, in a creditable degree, in warning the licensed victuallers that if they did not set their house in order, it would be bad for the country and worse for them. We gladly note such a tone of speech in a leading member of the Government. Mr. Gladstone, in his recent speeches, has shown that, in his judgment, any injury done to the vested interests of publicans, in remedial legislation, must be compensated for. With such consideration on all sides for "the trade," it will be infatuated indeed if it does not see that its only course is to come to terms with those who are bent on reducing the traffic to proportions consistent with national health and happiness. No political consideration will much longer be allowed to influence legislation on this subject. The present Government, which took the great responsibility of relaxing the legislation of 1874, has to deal with the recommendations of the Committee of the House of Lords, in the main demanding the reinforcement of that legislation; and the Sheffield election goes to show that, from a merely political point of view, the public interest is a larger one than the publican's.

THE CALCUTTA GENERAL HOSPITAL.

"IT is the desire of the Government (of India) that 'not less than they (the patients) require should reach the sick'; but under the recently fixed limit of eight (8) annas, or a shilling a day, there is irrefragable testimony to show that this intention cannot be honoured if due regard be had to the quality as well as the quantity of the food supplied. Thus in evidence the Superintendent says (Annexure D., Appendix C.):—'Q. 22. Do many contractors send in tenders? A. I advertised largely, but there is no competition. Only one was tendered. He sent in two tenders, and we took the lowest.—Q. 23. Why is this? A. They give us inferior meat. Our prices won't command good meat. We pay four (4) annas and six (6) pices for mutton, and two (2) annas and three (3) pices for beef.—Q. 24. Can you fine the contractor? A. Yes; he has been fined repeatedly, and it makes him worse.—Q. 25. Could he supply good meat at the price? A. No.—Q. 26. What is the nature of the complaints described as frivolous? A. Chiefly about short weight and bad tea. We pay eleven (11) annas a pound for tea, and it is difficult to get it good at the price."

We quote the above sentences from a letter addressed by Deputy Surgeon-General Dr. Joseph Ewart, to the Secretary to Government, Bengal, rebutting a charge, as it would appear, and protesting against a condemnation unheard, of extravagance during the period he was Superintendent of the General Hospital, Calcutta. In other words, Dr. Ewart does not appear to have conducted his administration in complete accordance with the economic principles implied in the above-given quotation, and which it would also appear it is desired by the Government of India to extend to the administration of medicines and the provision of surgical instruments. The freedom of action of the physician in the administration of medicines, and of the surgeon in the use of instruments, is to be interfered with, we gather, if the medicines and instruments chance to be costly. Moreover, it seems that the members of the medical and surgical staff of the hospital are to be held individually responsible if they transgress the strict limits of money economy laid down by the Government! With the Government the "economy" of the matter is a question of pounds, shillings, and pence only; with the doctors the "economy" is the best welfare of the patient, as manifested by efficiency of treatment and rapidity of cure. Dr. Ewart pens his hardly needed justification of this latter notion from Brighton. There is something ludicrous in his being lassoed there by Indian red-tapists casting their skein from Calcutta.

DEATH OF PROFESSOR BOLL.

FRANCIS BOLL, Professor of Comparative Physiology in the University of Rome, died on Dec. 19th. He was one of those German physiologists, like Moleschott and Schiff, who have made Italy their home since it became a united kingdom, and who, by the precision of their researches and the brilliant contributions they have made to science, have revived the taste for physiology throughout the Peninsula, and repaid the debt which Europe in general and Germany in particular owed to Italy at the Renaissance. Professor Boll, young as he was, had contributed effectively to put the healing art on that scientific basis which physiology alone can confer; and, thanks to him and Moleschott and Schiff, the younger generation of Italian physicians bid fair to rival the best of their professional brethren in France or England. His funeral, which took place on the 20th, was conspicuous for the large attendance of men of letters, of science, and politics, which it evoked. As the mournful *cortège* come to a halt in the Protestant cemetery the pall-bearers were Baron Kendell, the German ambassador; Signor Sella, president of the Accademia dei Lincei; the Commendatore Occioni, professor of Latin and rector of the Roman University; and the Commendatore Zanfi, representing the Ministry. Addresses in commendation of the moral and scientific worth of Professor Boll had previously been delivered by his colleagues, Moleschott, Blaserna, and Todaro.

LOCALISATION OF FUNCTION IN THE CEREBRUM.

M. JACCOUD, in the *Gazette Hebdomadaire*, relates two cases which he is of opinion tell against the view that there are separate centres in the cerebrum. The first case is that of a man, aged forty-two, with suppurative meningitis. The right hemisphere was very hyperæmic, but presented no adhesions of the meninges, but the pia mater of the left hemisphere was infiltrated with pus, especially in the region of the central convolutions and central sulcus. The pia mater was adherent over the two upper thirds of these convolutions. During the last two days of life, the patient suffered from convulsions of the left side of the body, but there was no hemiplegia. M. Jaccoud sees in this case an example of unilateral convulsions in consequence of a stimulating lesion of the motor region of the same side. The subject of the second observation was a woman, aged eighty-three, who survived two days after an attack of apoplexy, and during this period suffered from hemiplegia of the right side, with anæsthesia. Speech was not dis-

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turbed, and death was the result of advanced phthisis pulmonalis. The left hemisphere was intact; the right presented an extensive flattened hæmorrhage between the dura mater and the pia mater, covering the upper border of the hemisphere; so that the central sulcus was about its middle. No other lesion was visible. M. Jaccoud refers the hemiplegia in this case to compression of the upper parts of the central convolutions, but mentions also its occurrence on the same side.

THE METROPOLITAN AND NATIONAL NURSING ASSOCIATION.

AT a time when we are all on the look-out for good causes to encourage and to help, we may be excused for saying a word on the above Association. In several districts of London, represented, respectively, by the Central Home and Offices, 23, Bloomsbury-square, W.C.; the Northern Home, 413, Holloway-road, N.; Paddington and Marylebone Home, 510, Edgware-road, W.; and Eastern District, 49, Philpot-street, Stepney, this Association is doing excellent work. It carries to the homes of the poor all the advantages of trained nursing; and transforms these homes, giving to the inmates new conceptions of what homes can be made, and of the simple ways in which suffering may be alleviated. The benefits are not entirely restricted to the very poor. Nurses are sent willingly, and go cheerfully, to patients who could not afford to pay the ordinary sums for a nurse all to themselves; but who are most ready to contribute, according to their means, to the funds of the institution. By its very operations it trains nurses, and tends to establish an organisation by which the nursing of the poor may be systematically and effectually carried out both in London and the country. It is one of the best of charities.

CARDIAC LESIONS IN CHRONIC INTERSTITIAL NEPHRITIS.

IN a note presented to the Société Anatomique, and published in the current number of *Le Progrès Médical*, Drs. Debove and Letullé direct attention to the constant presence of fibroid overgrowth in the papillary muscles and wall of the hypertrophied left ventricle in chronic Bright's disease. They assert that such a condition has been hitherto overlooked by writers; but it is fair to state that it has not escaped observation, although the significance they give to it has, perhaps, not hitherto been dwelt on. Indeed, it may safely be said, as a matter of common post-mortem experience, that considerable muscular hypertrophy of the ventricle is associated with patches of limited fibroid change, and this wholly apart from any chronic valvular lesion. The present writers show, however, that the sclerosis takes place at the expense of the muscular elements, which appear shrivelled and wasted in the vicinity of the change, and they go so far as to attribute the final symptoms of chronic Bright's disease to this cardiac condition. Thus they say that the first period of interstitial nephritis—the renal period—is characterised by slight albuminuria, polyuria, and slight and transitory œdema. But in the second, or "cardiac stage," palpitation and dyspnœa supervene, with oliguria, considerable albuminuria, and increasing anasarca, with dropsical effusions. Whatever truth may exist in these suggestions, they are certainly open to the criticism that no notice is taken of the increased impairment of the renal function, with the altogether strange omission of any reference to uræmic poisoning as an element in the production of some of the symptoms. The note is too brief to admit of extended or minute criticism, and we are glad to see that the authors promise to continue their investigations, and to enter more fully into the subject in a memoir shortly to be published.

LAPSE OF ANOTHER SANITARY COMBINATION.

THE North Devon Combination of Sanitary Authorities, for the purpose of having a joint medical officer of health, has come to an end. The combination consisted of the Okehampton, Torrington, Dulverton, South Molton, and Bideford authorities. Okehampton and Torrington have withdrawn from the combination, and in consequence Dr. A. Wynter Blyth, the medical officer of health of the combined health authorities, has felt himself called upon to resign his appointment as it concerns the three other authorities. The meeting of the South Molton Rural Sanitary Authority, at which Dr. Blyth's letter of resignation was received, passed unanimously the following resolution, on the motion of Earl Fortescue, seconded by Col. Dewy, "That in accepting, with regret, the resignation sent in by Dr. Blyth, the Rural Sanitary Authority consider it only due to him to thank him heartily for his valuable services, rendered all the more efficient as well as acceptable from the pains he has always taken to explain to those who were to be affected by them the reasons for his recommendations."

FORMATION OF GLYCOGEN.

J. MAYER has made a series of researches on the formation of glycogen in rabbits, and finds that section of the spinal cord between the fifth and sixth cervical vertebræ effects considerable diminution in the formation of glycogen by the liver from grape-sugar introduced into the circulation, whilst it does not lead to any increased elimination of such sugar through the kidneys. Section of the spinal cord between the last cervical and the first dorsal vertebræ, on the other hand, leads to an increased formation of glycogen by the liver. Section of the cord between the second and third dorsal vertebræ causes diminished formation of glycogen in the liver, and increases also the quantity that can be obtained from the tissues. Lastly, section of the cord between the fifth and sixth cervical vertebræ, between the last cervical and first dorsal, and between the second and third dorsal vertebræ, does not interfere with the retention in the blood of grape-sugar injected into it, and of the application of this to the metabolism of the tissues.

MR. JOHN LIDDLE'S INDEX.

MR. JOHN LIDDLE, the medical officer of health for Whitechapel, has prepared and issued an elaborate and most useful index to the series of his quarterly and annual reports, extending from October, 1856, to June, 1879, inclusive. The reports admit of arrangement into three volumes, of which the first contains the reports from 1856 to December, 1867; the second from March, 1868, to June, 1879; and the third the special reports prepared by him. These reports have reference not only to the sanitary work which has been carried out during the last twenty-three years, but they also embrace some particulars of the sanitary condition of the district before the present Board of Works was formed, refer to nuisances suppressed by the board of guardians under the preceding sanitary arrangements of the district, and give certain particulars respecting the displacement of large populations by the formation of the docks, Commercial-street, the Blackwall Railway, &c. The series of reports, indeed, relate from year to year, as they have occurred, to a succession of changes in Whitechapel, in the betterment of its sanitary condition, which have transformed the district. The Whitechapel of the present time is a very different locality from the Whitechapel of 1856. Only those who have had the opportunity of watching some of these changes can rightly apprehend the vast sanitary improvements which have been effected by the District Board under Mr. Liddle's advice. Much of this improvement has been effected, and is continued, by the remarkable organisation

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established for the continuous sanitary supervision of the district. For Whitechapel is one of those areas which contain a mass of population amenable to improvement only by dint of constant observation and unremitting action on the part of the local authority. When will Mr. Liddle give us the story in summary of his work during the past twenty years, and what has been effected by it? The District Board, in its own interest, ought to call for such a narrative, for it would redound equally to the credit of the board and its medical officer.

LEADEN PASTRY.

THE familiar complaint, that bad pastry is as heavy as lead, has been justified by our neighbours in a literal sense. French pastry has always been renowned for its lightness; but among other evil consequences resulting from the present severe winter is a somewhat startling exception to this rule. The prolonged duration of frost has rendered eggs at once so scarce and expensive that the pastry-cooks have found it no easy matter to supply their customers with the delicacies they have the art of producing. Some Paris confectioners have consequently resorted to the expedient of using chromate of lead as a substitute for the coloration derived from the yelk of the egg. From the capital the knowledge of this stratagem soon spread to the provinces; and M. Personne recently submitted a sample to the Academy of Medicine which had been collected by M. Galippe senior, chemist of the Department of the Oise. The *brioche* in question contained a percentage of 0·073 milligramme of oxide of lead. As usual, the culprit disclaimed all knowledge of the toxic powers of the ingredient he had employed, and he was certainly a novice in the art of adulteration. Had he used a smaller quantity the cake would not have presented the exaggerated vivid yellow colour which awakened suspicion, and the evil now discovered might have remained unnoticed. Considering how many of our fellow-countrymen, but more especially ladies and children, avail themselves of every opportunity, when abroad, of enjoying the exquisite delicacies French pastry-cooks know so well how to prepare, we may be said to experience a national interest in the suppression of so dangerous a fraud. Our own English pastry, though too often leaden in weight, would be preferable to the light pastry of France, if the latter contain a proportion, be it ever so small, of real lead. It is to be hoped that the publicity given to this incident will prevent its recurrence.

TYPHUS IN ST. GILES'S DISTRICT.

THE Metropolitan District Board of St. Giles's has caused a circular letter to be sent to the various metropolitan hospitals, in which it is stated that the attention of the sanitary committee of the Board has recently been called by their medical officer of health (Mr. S. R. Lovett) to a source of danger of spreading typhus fever and other infectious diseases, which a little aid on the part of hospital authorities would greatly assist in removing, and asking that aid. The guardians of the poor send every pauper case of typhus and other infectious diseases to one of the special hospitals of the Asylum Board, and at once inform the medical officer of health of the house and room occupied by the person so removed, the room being then immediately disinfected. But patients who do not belong to the pauper class may be admitted into the general hospitals without the knowledge of the medical officer of health, as happened in several instances during the recent appearance of typhus in St. Giles's district. Under these circumstances, the sanitary authority and its officers are unable to take such measures as may be found necessary to eradicate the centre of infection from which the patient may have been brought, by disinfection of the dwellings. The District Board, therefore, requests, as a great favour, that when patients suffering from typhus or other infectious diseases are admitted into a general hospital from the Board's district, the hospital authorities will give to the Board information of the fact. The request here made ought to be acted upon as a general rule in the metropolitan hospitals, with respect to infectious diseases admitted, and to the sanitary authorities of the districts from which they have come.

LOCAL TEMPERATURES.

M. PETER has made a further communication to the Académie de Médecine, on the subject of local temperatures in abdominal diseases. In ascites the temperature of the abdominal wall remains at the average normal 35·5° C., and sometimes falls below this point. In chronic peritonitis the abdominal temperature rises to at least one degree Centigrade above the normal. He described three types of chronic peritonitis: (1) that which arises by extension from a chronic "phlegmasia" of the stomach, "gastrite sclereuse"; (2) chronic tubercular peritonitis; (3) chronic cancerous peritonitis. In the first case the temperature of the abdominal wall was raised ·8° C. above, while that of the axilla was lowered ·5° below, the normal (temperature of inanition), so that the local excess amounted to 1·3° C. In the second case the local excess of temperature was from 1° C. to 1·9° C., and presented the remarkable peculiarity that, when the axillary temperature had fallen 2·5° C. (to 34·5° C.), the local was still 1° C. above the normal temperature of the wall (at 36·5° C.), thus being absolutely 2° C. above that of the axilla, and relatively 3·5° C., a proof of the existence of local thermogenetic centres. In the third case, cancerous peritonitis, the excess of abdominal temperature varied from ·8° C. to 2·0° C. above that of the axilla. In answer to a question, M. Peter stated that he used an ordinary thermometer for the observations, which, on account of its simplicity, he preferred to instruments of greater precision.

AN INTERNATIONAL PRIZE.

THE Royal Academy of Medicine of Turin has just announced that the prize of 20,000 francs (£800), instituted by the late Alessandro Riberi, has, thanks to his heir, the advocate Antonio Riberi, been rendered perpetual and quinquennial, and that the quinquennium expires on the 31st December, 1881. The subject for the next competition is "La Fisio-patologia del Sangue" (The Physio-pathology of the Blood), and the conditions imposed on the competitors are the following:—

1. The essays must be printed, or in manuscript, in the Italian, French, or Latin languages. 2. Printed essays must not have been published before 1876, and two copies of them must be sent to the Academy post free. 3. Manuscript essays must be written in intelligible characters, and will remain the property of the Academy, while the author will have the power of getting extracts copied from them at his own expense. 4. Should the Academy award the prize to an essay in manuscript, this will have to be printed and published before its author can receive the amount of the prize, and two copies in its published form will be sent to the Academy.

MUSCULAR CONTRACTILITY.

CH. RICHET distinguishes in the contraction of the large muscles of the chelæ of the crab, caused by strong induction shocks, two stages of relaxation—a stage of sudden and a stage of gradual relaxation. With moderate weighting, and with weak electric stimuli, following each other at short intervals, as from six to ten shocks in a second, the intensity of the contraction increases. He concludes from

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his experiments that a muscle which has just contracted, and has been extended by a weight to its original length, is in a condition of latent contraction, and if it be now excited by a fresh stimulus, it is found to be more irritable than at first.

THE new Order in Council under the Contagious Diseases (Animals) Act, 1878, which was issued on Dec. 15th, and is substituted for the Orders previously existing in relation to the particular subjects to which this Order applies, is a document of much interest. It contains a complete code of regulations relative to the public-health measures to be used in respect to the contagious diseases of animals. This Order, which is styled "the Animals Order," is divided into six sections, with schedules attached. The first part is preliminary; the second part applies to "Diseases," and deals with cattle plague, pleuro-pneumonia, foot-and-mouth disease, sheep-pox, sheep-scab, glanders and farcy, swine-fever, &c.; the third part relates to disinfection; the fourth to transit; the fifth to foreign animals, quarantine, &c.; and the sixth to general matters affecting the Order. The Order is necessarily extensive, and occupies 58 folio pages of printed matter.

THE Lettsomian Lectures at the Medical Society of London will be delivered by Mr. W. F. Teevan, B.A., F.R.C.S., on Mondays, Jan. 5th and 19th, and Feb. 2nd, at 8.30 P.M. Subject—"The Treatment of Stricture of the Urethra, Enlarged Prostate, and Stone in the Bladder, with special reference to recent progress."

IN memory of the late Mr. Robert W. Tibbits, three hundred and fifteen guineas have been subscribed and handed over to the trustees of the Bristol Royal Infirmary, the interest of which is to be expended in a prize to the students at the infirmary, to be called the "Tibbits Memorial Prize."

AN epidemic of measles is stated to be prevalent in Hull, and a peculiarity of the disease is that it attacks adults. Ten deaths are already reported.

THE next meeting of the Obstetrical Society will be held *not on the first*, but on the second Wednesday (14th inst.) in January.

HEALTH OF LARGE ENGLISH TOWNS.

FIFTY-SECOND WEEK OF 1879.

IN thirty of the largest English towns, containing nearly a third of the entire population of England and Wales, 3862 births and 3877 deaths were registered during the week ending last Saturday. The births were no less than 1320 below, while the deaths exceeded by 507 the average [weekly numbers during 1878. The Christmas holidays were undoubtedly the cause of the small number of births, and it is more than probable that but for this cause the number of deaths would also have been higher. The deaths showed a decline of 439 from the high number returned in the previous week. The annual death-rate in the twenty towns, which had been equal to 30·6 and 30·5 per 1000 in the two preceding weeks, declined last week to 27·4. During the thirteen weeks ending on Saturday last, the death-rate in these towns averaged 24·2 per 1000, against 22·8 and 25·0 in the corresponding periods of 1877 and 1878. The lowest death-rates in the twenty towns last week were—16·8 in Brighton, 17·3 in Sunderland, 19·1 in Sheffield, and 21·0 in Portsmouth. The rates in the other towns ranged upwards to 30·7 in Leicester, 32·6 in Nottingham, 35·8 in Liverpool, and 46·3 in Plymouth.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 588 and 627 in the two preceding weeks, declined again last week to 574; they included 181 from whooping-cough, 160 from measles, and 153 from scarlet fever. Whooping-cough mortality showed a further increase upon that recorded in recent weeks. The proportional fatality of scarlet fever was largest last week in Newcastle-upon-Tyne, Nottingham, and Bristol; of measles, in Plymouth, Hull, Liverpool, Nottingham, and Leeds. Of the 20 deaths referred to diphtheria in the twenty towns, 11 were recorded in London and 4 in Birmingham. Small-pox caused 2 more deaths in London, but not one in any of the nineteen large provincial towns. The Metropolitan Asylum Hospitals contained 48 small-pox patients on Saturday last (of whom 5 had been admitted during the week), corresponding with the number at the end of the previous week.

After making allowance for probable delay in death registration during the Christmas holidays, it appears that the fatality of acute lung diseases declined in London last week. The registered deaths referred to diseases of the respiratory organs within the metropolis, which had increased from 190 to 799 in the eleven preceding weeks, declined to 652 last week, which, however, exceeded the corrected weekly average by 128; 447 resulted from bronchitis, and 125 from pneumonia. The registered annual death-rate from diseases of the respiratory organs and phthisis during last week was equal to 11·4 per 1000 in London, and to 13·9 per 1000 in Liverpool. It is to be regretted that the Registrar-General's weekly returns do not show the mortality from diseases of the respiratory organs in each of the twenty large towns dealt with in those returns.

Correspondence.

"Audi alteram partem."

THE LATE PROFESSOR PARKES ON TOBACCO SMOKING.

To the Editor of THE LANCET.

SIR,—About four years ago I was thinking a good deal about the use of tobacco. I of course consulted every authority I could lay my hands on. I did not omit Parkes's excellent Manual of Practical Hygiene. To my disappointment I found in it nothing upon the subject. I immediately wrote to Dr. Parkes himself, and received in reply the enclosed letter. It is a very interesting and instructive letter, and is, I certainly think, worthy of better preservation than in a heap of old papers, both on account of the subject of which it treats and of the great and good man who wrote it. I therefore send it to you for a place in the pages of THE LANCET.

I remain, Sir, yours truly,

WILLIAM PRATT.

Newtown, Montgomeryshire, December 29th, 1879.

MY DEAR DR. PRATT,—I think my state of mind as regards tobacco is very much what yours seems to be. I have honestly tried to collect evidence from *moderate* smokers, both medical men and others, and when tolerance has been established, I have never been able to make out any symptoms which implied injury. In the case of many medical men whom I have asked to study their own condition, the answer has always been the same—viz., they could see no harm or disturbance of any function. Even in some cases of enormous smokers—i. e., men who rarely were without a pipe or cigar—I could learn of no injury.

On the other hand, I have seen, like all of us, men complaining of dyspepsia, nervousness, palpitation, &c., and who were much better for leaving off smoking; in fact, in these cases there could be no doubt of an injurious effect.

In boys of fourteen or fifteen who begin to smoke, I think I have observed that tolerance is slowly attained; that appetite is less, and I presume digestion and nutrition less good, and that the complexion becomes pasty and less florid and clear. There was a striking case of this kind in the son of a medical friend, who watched his son naturally very carefully, and who told me that the effect of the tobacco (a good deal was smoked) was quite unmistakable. I persuaded the son to lessen his tobacco one-half, and his health certainly improved, but he was then a young man. That some injury, therefore, is sometimes produced, and especially on

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young people, seems to me quite clear; but it is curious, in other cases, how difficult it is to find ill effects, even in the young, when the quantity is not excessive.

As to the effect on the young even, it is curious in Burmah to see children smoking in their mothers' arms; and yet when I was serving in Burmah, many years ago, I often saw a woman walking along smoking her cigar of tobacco rolled up in a plantain-leaf, and carrying on her hip her child of two or three years old, who also had his or her little cigar, which was smoked with the greatest gravity. On talking to the Burmese (who smoke constantly), they would never allow that even young children were in the least damaged. When I was in Turkey I tried to make inquiries of some of the intelligent Turkish gentlemen; one or two of them said that they thought the Turks had learnt to smoke from the Europeans, and had been growing apathetic and dull ever since. But others laughed at this, and the rural Turk, who smokes a good deal, is a fine, active, energetic fellow.

I have talked to many Germans, who all stand out manfully for tobacco.

In conclusion, I confess myself quite uncertain. I can find nothing like good evidence in books; too often a foregone conclusion, without any evidence to back it, is given.

I think we must decidedly admit injury from excess; from moderate use I can see no harm, except it may be in youth.

My opinions are, you will see, very indefinite, and I would gladly see some really good evidence collected. If at any time you can send me any facts, I shall be very grateful.

Believe me, very sincerely yours,

Bitterne, Southampton, Jan. 28, 1876. E. A. PARKES.

ON EXTRACTION OF CATARACT BY SUCTION.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Dec. 6th, p. 828, Dr. Wolfe says of suction in the extraction of soft cataract:—"Having been an opponent of the introduction of pumping instruments into the cornea for soft cataract operations, when first recommended, I am gratified to see that several surgeons of eminence, who, led by high authority, then advocated that system, have, after experiencing disasters, come to my way of thinking."

Such a condemnation by one of the leading ophthalmic surgeons of Scotland is likely to discredit the operation of suction.

As the introducer of this method into British ophthalmic surgery, I feel called upon to vindicate its claims to the confidence of the profession; and having used the method for nearly twenty years in perhaps three-fourths of my cases of soft cataract, I may fairly lay claim to an opinion of some weight against that of one who was "an opponent of the operation when first recommended," and "is gratified that several surgeons of eminence," having had disasters, "have come to" his "way of thinking."

The fact is that, like many good things, it is liable to be misused, and perhaps I am myself not altogether free from blame in not having written more fully upon its difficulties and dangers, especially when it came to my knowledge that disasters had occurred in the hands of some ophthalmic surgeons.

As a fair and impartial judgment upon the operation, I cannot do better than quote the opinion of Mr. R. B. Carter, in his work "on Diseases of the Eye," 1875, p. 362:—"If I had been writing a little more than a year ago, I should have described the method as being practically free from danger; for at that time I had never seen it followed by any result except a good recovery. But, . . . my recent experience would lead me to speak of suction with somewhat diminished confidence, but I still think it the best method of removing cataracts in the cases for which it is suited. It is not, as I once believed, almost without risk, but I still think that the risks it entails are less than those which attend upon other methods; and I am not at all satisfied that the unfavourable results in the cases above-mentioned may not have been due to causes not essentially connected with the procedure. It is difficult to clean the suction curette thoroughly, and it cannot be put into hot water without dissolving the cement which unites the silver portion of its tube to the glass. It occurred to me that the ordinary washing with cold water after use might have left some particles of organic matter in the channel, and that these accidentally introduced into other eyes at subsequent periods might have excited the inflammation described. I have since taken the precaution of soaking the curette for some hours in diluted Condy's fluid, and of then washing it well in pure water immediately before an operation, and my cases subsequent to the adoption of this precaution have done well. Mr. Teale informs me that his own experience of suction is highly favourable, but I have heard less satisfactory reports from other sources."

Let me now summarise my ideas and matured views in the following propositions:—

1. When a cataract is almost fluid it will readily flow out in the groove of the ordinary curette, and there is no need of extraction by suction.

2. When a cataract is immature or semi-solid, to attempt to withdraw it by suction is to put enormous atmospheric pressure upon the ocular structures and to risk disaster.

3. For cataracts between these extremes—and they constitute a large proportion of soft cataracts—there is no method, to my mind, more simple, more speedy, more effectual, more safe, or less liable to be followed by opacity of the capsule, than the method of suction.

4. To use a suction instrument with safety requires attention to minute details, no less than is needed for the use of the lithotrite. Lithotrity carelessly performed becomes disastrous. Performed with due care and gentleness, it is one of the most successful of the major operations of surgery.

5. The safest form of suction instrument is the one in which the action is regulated by the mouth. The "pump syringes" are more difficult to use, and do not admit of an equal delicacy in the regulation of the suction power, and, therefore, demand most exquisite manipulation in the operator.

6. The aperture in the curette ought to be oval, and level with the upper surface of the curette, so that on the completion of the flow of cataract the cornea may close the opening and act as a valve, arresting further and mischievous suction. It is this valve-like action of the cornea which is one great safeguard in the use of suction, a safeguard which is impossible in the case of the instruments made some years ago, in which the opening was enlarged by notches at the side.

7. The suction force ought to be applied with gentleness, with *short draws* of the mouth, and with no great force. If the cataract proves to be stiff, and requires great suction power, the attempt to extract by suction should be abandoned, and further proceedings should be deferred until the wound is soundly healed.

8. On no account whatever ought transparent lens to be withdrawn by suction. Firstly, because it is too firm to be safely drawn into the curette; secondly, because, owing to its transparency, it is impossible to judge whether the whole lens has been removed or not.

9. "When the lens is of firmer consistence, and the aspirator drags upon the vitreous and other delicate structures, and is sure to do mischief" (Dr. Wolfe), to use suction is surely to misuse it. It is hardly fair to condemn the use of a method because abuse of it produces disaster.

10. It is of supreme importance to preserve the posterior capsule of the lens unruptured, otherwise the vitreous humour comes forward, and is drawn into the curette instead of the lens.

In conclusion, may I venture to refer to my own experience in support of the views herein expressed?

As far as I can recollect, I have had but three cases of destructive inflammation after the use of suction. In the first case, a syphilitic boy, diffuse keratitis set in, first in the eye operated upon; afterwards in the untouched eye. The other two cases occurred about six years ago, so closely upon each other that I suspect that some such cause as suggested by Mr. Carter may be the explanation—viz., that the curette conveyed decomposing material into the eye.

On referring to the notes of my private operations for soft cataract (the record of my hospital cases not being complete enough for comparison), I find that of my last fifty-three cases of soft cataract, in forty-seven suction has been used. Of these only one has been lost by destructive inflammation. Of the forty-seven, seventeen are noted as reading No. 1 or 2 Jäger. Of the remaining thirty, many are noted as "good sight"; many were too young to have their sight tested; and

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two or three, though perfect as operations, had defective retinæ. These facts, though very imperfect as statistics, show—1. That I am still as convinced of the value of suction in the treatment of soft cataract as when I first brought it out. 2. That it is possible to use suction extensively without "experiencing disasters."

I am, Sir, yours faithfully,

Leeds, December 13th, 1879. T. PRIDGIN TEALE.

TYPHOID FEVER.

To the Editor of THE LANCET.

SIR,—I beg to enclose an interesting communication, recently received, on the subject of typhoid fever. It seems to confirm, so far, the view advocated by me at the Epidemiological Society, that a fever, having all the symptoms and pathological conditions peculiar to enteric fever of this country, does exist in tropical and subtropical climates, but that it is not always due to the specific causes that are believed to give rise to it here.

If such be the case, and I have long been of opinion that it is so, is it not possible that the typhoid of Europe generally, and even sometimes of our own island, may have origin in other causes than the filth to which, in most cases, it is rightly assigned? I hope other medical men practising abroad will communicate their views or experience on this interesting subject.

I am, Sir, yours, &c.,

Dec. 24th, 1879. J. FAYRER.

To Sir J. FAYRER, M.D., &c.

Sir,—I have to-day read, with great interest, in THE LANCET, your letter of the 9th instant, with accompanying letter from Dr. Grabham, of Madeira, corroborating opinions lately published by you on the etiology of typhoid fever—which, unfortunately, I have not seen, as I have only just returned from the seat of war in Zululand,—in which you say, "Possibly other medical officers practising abroad in tropical or subtropical climates may be able to confirm the opinion, that fevers of climatic origin do occasionally present all the symptoms that characterise typhoid in this country."

Three days ago I sent a short paper on this subject to the *British Medical Journal*, written last year, before leaving for South Africa, giving the result of sixteen years' experience in this matter in New Zealand, Fiji, Western and South Australia, and New South Wales, after adding that my latest experience of the fever, as it occurred among the troops in Zululand, coincided with my previous experience as above, which is as follows:—1. That a fever occurs frequently in all those countries, having all the characteristic symptoms of typhoid fever as it occurs in this country. 2. That in no case, although every pains was taken by me, especially when I held the office of Provincial Surgeon of Westland, have I been able to trace the origin of the fever to contagion. 3. That in a few cases that disease seemed to have arisen from the fouling of the drinking water by excremental matter in a state of putrefaction. In the majority of cases the fever has broken out among Europeans first inhabiting or cultivating a virgin soil, the "new comers" being most liable to attack, apparently, as in Westland, from decaying vegetable matter, paludal emanations, or other climatic causes.

The importance of this matter, not merely from a scientific view, but to the practical physician and sanitarian, must be my excuse for thus addressing you. I may say *apropos* of this, and in conclusion, that some of the army surgeons and others in South Africa call the fever in question a "hybrid fever," between typhoid and remittent, and treat it, as remittent fever, with large doses of quinine. When I inquired the meaning of the term, or the reason for its application, I found it was not because the fever presented any remission or differed essentially from typhoid fever as it occurs in this country, but *because of the difficulty of accounting under the circumstances* for true typhoid by those who hold the views of Dr. Budd or Sir Thomas Watson, or even those of the lamented Dr. Murchison, as to its genesis or etiology.

I am, Sir, yours obediently,

J. RUTHERFORD RYLEY, F.R.C.S. Edin.,
L.R.C.P. Edin.

Edinburgh, December 13th, 1879.

TREATMENT OF TRANSVERSE FRACTURE OF THE PATELLA.

To the Editor of THE LANCET.

SIR,—As the treatment of transverse fracture of the patella is now much discussed, I beg you to insert the following notes in your much valued journal.

I have read with much interest in THE LANCET an abstract of the paper read by Mr. Royes Bell in the Medical Society of London, and the discussion that took place thereafter, as I practised the metallic suture in a case of transverse fracture of the patella as long ago as July, 1878, and published this case in the *Nederlandsch tydschrift voor Geneskunde* (Dutch periodical of medicine). As Mr. Royes Bell indicated that Mr. Rose (I believe, surgeon to the same hospital as Mr. Royes Bell) would read a more complete paper on this subject, I have sent to Mr. Royes Bell the above-named publication.

Since Mr. Rose, in his paper read 17th November in the Medical Society, has not mentioned my case, perhaps because neither Mr. Bell nor Mr. Rose understands the Dutch language, I beg you (notwithstanding your unsympathetic judgment of this line of treatment in your "Annotations" in the number of Nov. 29, and the letter of Mr. A. Pearce Gould in the same number) to insert the following very brief notes of my case.

A married woman, aged forty-four, entered the Chirurgical *Clinique* of the University of Utrecht on July 6th, 1878. On examination I found a complete transverse fracture of the right patella, that occurred the day before. The knee-joint was not much swollen, but a soft, and a little prominent, blood coagulum was distinctly felt between the two halves of the broken patella. By means of the ordinary bandages it was impossible to hold the two fragments in complete juxtaposition. Therefore, and as I had never seen in hundreds of operations that fresh-cut wounds under the most accurate antiseptic precautions of Lister were followed by suppuration, or other accidental wound complications, I thought it right to cut down to the fractured patella, to remove the blood coagulam, and to unite accurately by means of metallic suture the two halves of the broken patella. This I made accordingly on the 13th July, eight days after the accident, by a *longitudinal* incision of the length of seven or eight centimetres over the middle of the patella, and dissected the soft parts from the fibrous capsule on the front of the patella to both sides, so as to lay open to the sight the interstice between the bone fragments. Partly with the fingers, partly with a curette of Volckmann, I now removed the blood coagulum, washed the interstice between the fragments with 2½ per cent. carbolic solution, bored a little canal through the corresponding parts of the fragments of the patella, not perforating its posterior surface; introduced a soft platina wire, twisted the fragments together, and fixed the suture by torsion. The platina wire was cut short, and the cut end depressed in the fibrous tissue on the front part of the patella. The bone fragments were by this single suture brought so accurately together that more metallic sutures would have been superfluous; therefore I united the fibrous tissue on the front of the patella by two catgut sutures on both sides of the platina suture, and closed the external wound by nine aseptic silk sutures, without inserting a drainage tube. A typical Lister bandage was applied with moderate firmness around the knee-joint. Before the operation the knee was shaved, cleansed with ether and strong carbolic solution, and the operation performed under spray—in one word, with *all* Lister's antiseptic precautions.

On July 18th this first antiseptic bandage was removed to take out the silk sutures, and a new one applied, so that the suture canals might not become the *porte d'entrée* of infection. This bandage was removed on the 2nd of August, and the wound found united as beautifully as in the most perfect plastic operation. A plaster-of-Paris bandage was now applied from the middle of the leg to the middle of the thigh and renewed on August 17th, when the patient was permitted to leave the bed and to walk round the ward. With this bandage the patient was dismissed on August 23rd. Three weeks thereafter the woman returned; the bandage was removed, and the joint found perfectly cured,

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only a little stiff, as in all cases of application of a plaster-of-Paris bandage around a joint. Active and passive movements of the knee were now performed, and the woman and her family instructed in the process.

Four months after the definitive dismissal, the woman returned at my request. The movements, active and passive, in the knee-joint were now made with the same force and over the same extent as in the left knee-joint. By the most careful examination I could not find a groove between the two bone fragments, but rather a little crista (superfluous bone formation), nor could I detect the platina wire. Even on pressure there was no spot of tenderness by which foreign bodies often indicate their presence in the tissues.

During the operation I found the bottom of the interstice between the two fragments of the patella closed by a membrane, that adhered to the posterior surface of the bone fragments, which membrane separated the cavity between the two fragments from the cavity of the knee-joint, and thus prevented the more or less irritating carbolic solution from penetrating the joint. The adhesion of this membrane to the posterior surface of the patella was so firm that it was not broken by the necessary manipulations during the boring of the canals. That this membrane was *not* the plica synovialis patellaris (Henle)—ligamentum marsupiale, alare s. ligamenta alaria—I supposed; and by experiments *in cadavere* (transfixing that plica by strong needles pushed through the patella in the extended knee-joint), I found that this plica does not reach as high as the middle of the patella. By this experiment I found the explanation—that part of the synovial membrane that covers the anterior surface of the femur, that forms the posterior wall of the *recessus sub quadricipe*, is, namely, very feebly connected by very loose connective tissue to the bone, so that it is moderately movable. During straight extension of the knee-joint, the posterior surface of the patella rests on that part of the synovial membrane, and can, as in our case, adhere to it by a light adhesive inflammation, and thereby separate the groove between the patella fragments from the cavity of the joint. This is of great importance, as thereby the metallic suture of the broken patella can be performed without making a perforating wound of the joint. It is therefore that I recommend waiting about eight days after the accident before performing the metallic suture of the transverse broken patella, and that it should not be done save under the most rigid antiseptic precautions.

I am, Sir, yours, &c.,

DR. J. E. VAN DER MEULEN,
Lecturer on Operative Surgery at the University of Utrecht.

Dec. 16th, 1879.

BADER v. GORDON.

To the Editor of THE LANCET.

SIR,—Like Mr. Critchett, I must for a moment forget the good proverb, "*qui s'excuse s'accuse.*" Mr. Critchett was subpœnaed, and he obeyed the law and appeared. This has repeatedly happened to me, but never to give evidence against one of my own profession. Often I escaped the subpœna by stating that my medical evidence would go against those who demanded my assistance. In Mr. Gordon's medical evidence it is said that I might have wounded the crystalline lens, and caused cataract (since Mr. Gordon had cataract, this would not have signified, though the suggestion, to say the least, was an ungenerous one). This, however, falls to the ground by the fact that Mr. Gordon had it explained to him that two operations would be required for the absorption of cataract. Injury to the iris and crystalline lens is, as a rule, followed by pain and inflammation. Mr. Gordon, after the iridectomy, had not the least pain nor unfavourable symptoms. His medical advisers might have stated this fact in my favour, but did not even hint at the smooth course which the case took after the iridectomy.

Cautious answers were given to Mr. Gordon by Mr. Bowman, and Mr. Bowman distinctly stated in court that Mr. Gordon had not lost binocular vision. Mr. Gordon, however, laid much stress upon his loss of binocular vision. Surely Mr. Critchett knows that good convergence, parallel movements, perception of light and colours with both eyes, are also essentials of binocular vision. Mr. Gordon, by virtue of his cataract, had lost binocular power of reading, but not the other attributes of binocular vision; and just because he possessed the latter, the treatment of the cataract was advised.

Mr. Critchett, in his note in THE LANCET of Dec. 20th, states, "the fundus was so far examined that a detachment of the retina," &c.; a little further on, "surely the ophthalmoscopic examination could only have been made," &c.

It is most tedious to have to repeat the A B C of an ophthalmoscopic examination for displaced retina when there is a cataract—i.e., when one is prevented from seeing the fundus of the eye.

Mr. Soelberg Wells, the energetic and able oculist, years ago made known the method (a translation of Von Graefe's articles) in the reports of the Eye Infirmary, Moorfields.

To the oculist of even moderate experience is known the frequent complication of displaced retina with cataract in short-sighted persons. This is one of the drawbacks of these cases, hence the note in my case-book, "displaced retina." When I found Mr. Gordon had only perception of light and could not see to read, I was anxious to ascertain with the ophthalmoscope the degree of perception of light of the different parts of the retina, and having at a second interview with Mr. Gordon found that satisfactory, I entered the note in my case-book "normal perception of light all over;" that means in all parts of the retina (light of different intensity is, with the ophthalmoscope, thrown from different sides through the cataract into the eye, and if especially the lower parts of the retina perceive it well, the doubt as to displaced retina is removed, though the retina cannot be seen).

Surely Mr. Critchett knew all this; if not, let him own it, instead of exposing himself to the suspicion of ill-will towards a fellow oculist.

I am, Sir, yours, &c.,

C. BADER,
Ophthalmic Surgeon to Guy's Hospital.

Dec. 23rd, 1879.

THE ARMY MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Having many personal friends amongst the medical officers of the Brigade of Guards, I beg to echo the remarks of your correspondent, "Army Surgeon," in your issue of the 20th December, respecting the unfairness which has been dealt out to them by the recent Royal Warrant, which not only practically refuses promotion to the Surgeon and reduces his pay, but also totally ignores the claims of the Surgeons-Major to be promoted to the new rank of Brigade-Surgeon, by insisting upon an amount of foreign service which it is not possible for these officers to attain whilst the present custom prevails of only sending the guards abroad during great wars.

The Regimental Surgeons-Major of the Foot Guards have from time immemorial discharged duties precisely the same as those now proposed for Brigade Surgeons, and, in addition, acted as Principal Medical Officers of their regiments.

The Surgeon-Major of the Grenadier Guards is P.M.O. of three battalions, with six medical officers serving under him; whilst those of the Coldstream and Scots Guards have similar duties, with two battalions and five medical officers each.

In addition to regimental duties, the Surgeon-Major in Brigade Waiting has to be at the call of the Major-General Commanding, to advise him upon all departmental matters connected with the Brigade of Guards, thus discharging administrative functions little short of those of a Deputy Surgeon-General, whilst his pay is only that of an ordinary Surgeon-Major in the army.

Notwithstanding all this, he is declared to be unfit for promotion to Brigade Surgeon because he has not sufficient foreign service, although he has served with his regiment in the Crimea, at Alma, Inkerman, and Sebastopol, and would have volunteered to serve in smaller wars had he been permitted to do so.

The duties of the juniors are not limited to their own regiments, and, in consequence of numerous detachments, are heavier than those of other army surgeons on home service, as they often have to travel long distances without receiving any allowance for forage or cab hire; whilst they labour under the great disadvantages respecting pay and promotion pointed out by your correspondent above alluded to.

The Guards' Surgeon is usually "a picked man," profes-

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sionally speaking, and has never failed to take a high place in competitive examinations at Netley and elsewhere; whilst many have gone further, and taken the F.R.C.S.; and, if I mistake not, one has the F.R.C.P.

These are not the men who can with justice be left out in the cold, and I sincerely hope you will advocate their cause until the Secretary of State for War puts them in their right places. I am, Sir, &c.,

December 24th, 1879. F.R.C.S.

To the Editor of THE LANCET.

SIR,—Some of your correspondents, in writing recently on the new Army Medical Warrant, seem to criticise it in a very fault-finding spirit. So much so is this the case, that, with the single exception of "Surgeon-Major," none of them say a word in favour of the Warrant, while unfavourable criticism is not restrained. It is true the adverse criticisms are neither logical nor forcible, and, in the main, are so vague and indefinite that the adjective "captious" may be linked to them. Indeed, the framers of the Warrant may, if so inclined, regard the strictures as gratifying proofs of the success that has attended their efforts on behalf of the medical service of the army, if those who seek for defects and endeavour to pick holes can find none more tangible than those they have already given public expression to. It seems to me that "Audi alteram partem" is a fair cry in this matter, and in the conviction that the great bulk of army medical officers must cordially recognise the great advantages that the Royal Warrant of Nov. 27th, 1879, has conferred upon them, I beg your permission to place some considerations before the few who remain still dissatisfied.

With hardly a single exception, all the valid grievances that have for years past been urged in the pages of THE LANCET have been removed. Pay and pensions have been very solidly increased, and bonuses have been granted for the shorter periods of service. Sick leave has been extended from six to twelve months on full pay. Exchanges are allowed. The terms of qualifying Indian service for promotion to the administrative ranks are made known. Forage is restored, and soldier servants granted.

With these concessions before us, it surely would not be doing more than rendering unto Cæsar the things that are Cæsar's, if the officers of the Army Medical Department cheerfully admitted that very much has been done for them. Such, it seems to me, would be more becoming than a carping spirit of distrust, or the bad taste of being never satisfied.

I am, Sir, yours, &c.,

Dec. 30th, 1879. VERAX.

A RARE COMPLICATION IN MIDWIFERY.

To the Editor of THE LANCET.

SIR,—Perhaps the infrequency during labour of the complication mentioned below may entitle the accompanying note to a place in your columns.

On October 4th, at 4.30 A.M., I was requested by a member of this dispensary to go and see his wife, who, he said, was bleeding as fast as she could. I complied with his request, and, on my arrival, I found my patient, who was in her seventh month of pregnancy, unable to speak, and almost pulseless, and the bed and bedding completely saturated with blood. I at once made a digital examination, and found the os sufficiently dilated to admit the tip of my index finger, but not sufficiently so to allow of my making a diagnosis with any certainty. She had not complained much of pain during or in the interval of the remissions of the hæmorrhage. On the removal of my finger I found the hæmorrhage had ceased. I ordered her a mixture of gallic and sulphuric acids with opium, and gave the usual instructions as to diet and rest. On my visiting her the same afternoon I was informed that she had had a slight return of the hæmorrhage once.

By the end of the next week she was up and able to assist in her household duties.

On Oct. 21st, at 2 A.M., I was again requested to attend her under circumstances in every way similar to those just recorded. As on the last occasion, I examined her digitally, and, as before, with negative results. I ordered her the gallic acid mixture as before. On visiting her in the afternoon I found that the hæmorrhage had stopped.

In the evening, being too tired to visit her personally unless absolutely necessary, I sent the dispenser to inquire how she progressed. He returned in due time with the message that the bleeding had not recurred, but that labour was coming on, and that they would send for me when my assistance was required.

My aid not having been sought during the night, I visited her in the morning, and was informed that she had had pains all night, but that they had left her for the past four or five hours. On examining her I found the bag of membranes hanging outside the uterus and quite flaccid. These I ruptured, and made out the head high up, with the cranial bones quite loose. These conditions I took as ample evidence of the child's death. Apprehending something unusual, I went to the dispensary for my instruments and other appliances which might be required, and on my return I found that the head had come down a little.

At the end of three hours from this time the head was in the vagina, but for the next four hours no progress whatever was made. The patient being now so low that she was quite speechless and almost pulseless, I determined upon putting on the forceps, which I accordingly proceeded to do, but after applying them three times I gave them up, as they slipped off the head as off a partially distended bladder. I next introduced my whole hand and grasped the head with hope of being able to bring the whole away, but this I was perfectly powerless to effect, owing to the great resistance. Not being able to satisfy myself otherwise as to the cause, I again introduced my hand and made a careful examination, which revealed the fact that the neck of the child was firmly grasped by the uterus, and so intense was the contraction that I was not able to insinuate my finger between these parts. Concluding that I would have to perform embryotomy at once, I retired to an adjacent room to write a note to a neighbouring medical man to request his help. I had left my patient but a few minutes when the nurse requested my presence as the patient was in a fit, and, as she thought, dying. Just as I got into the room she had a rigor, and also another whilst I was removing my coat. I administered some stimulants, and proceeded to examine her, when I found that the child had been completely expelled from the uterus, and, further, that the rigors were due to the irritation produced by a corner of one of the parietal bones, which had perforated the scalp and scratched the vagina during the passage of the child.

Four hours after delivery her temperature was 99·6°; pulse not perceptible. Talked incoherently and laughed; this was, no doubt, attributable to the stimulants. Next morning the temperature was 103·4°; pulse too rapid to be counted, and a very fetid discharge was taking place from vagina. I washed the vagina out with Condy's fluid and sprinkled the room plentifully with the same, and ordered her plenty of nourishment in the shape of beef-tea &c., and a mixture containing three grains of quinine and half a drachm of sulphate of magnesia to be taken every three hours. The same night her temperature was 100·2°, and the next morning 99·2°. After this day she made a rapid recovery, and is now able to sit up.

I fear I shall be considered prolix, but I give the antecedents of the case, as I think they had a most material influence in bringing about the subsequent events.

I am, Sir, faithfully yours,

JULIUS CÆSAR, L.R.C.P. ED., &c.

Victoria Dock District Dispensary.

COMBINED SANITARY DISTRICTS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Nov. 29th, in reviewing Dr. Fox's report for the Mid-Cheshire combined sanitary districts, and comparing the sanitary condition of rural and small urban districts, you comment on the advantage of such combinations, and urge the importance of all other urban authorities within the area being compelled to join.

While fully alive to the importance and advantage of these combinations, enabling small places to have the aid and supervision of a specially trained officer occupying an independent position, I think that something may be said, on the other hand, in favour of smaller urban authorities, having their own medical officer always at hand to advise.

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In your comment you say, "It is to be feared that the one other neighbouring townships excluded from the combination would not be able to show a much cleaner bill of health."

As medical officer of health of the Altrincham Urban Sanitary Authority, I beg to demur to that conclusion. Altrincham is an urban district, pretty densely populated, having an acreage of 657, and a population at the last census of 8478. Its estimated population in 1878 would at the previous rate of increase be 9973; but the population has increased much more rapidly since the last census. In January, 1877, there were 2183 inhabited houses in the district, which, allowing 5 persons per house, the density of population found by enumeration at the previous census gives a population of 10,915. I consequently estimate the population in 1878 as being at least 11,000.

In the year 1878 there were 374 births and 198 deaths—15 from zymotic diseases, and 58 under one year of age. This gives us, taking the population at the lowest estimate of 9973, according to previous rate of increase, a death-rate of 20·25; while, if we take the higher estimate of 11,000, which is undoubtedly the correct one, the death-rate sinks to 18 per 1000. The zymotic death-rate was 1·53 according to the first estimate, and 1·36 according to the last. The deaths of children under one year of age were at the rate of 155 per 1000 births.

On referring to your article, you will find that these figures compare very favourably with the combined urban districts, and not unfavourably with the rural districts.

The medical officer, being always at hand to deal with emergencies as they arise, and having a special interest in the welfare of his district, has sometimes appeared to have advantages far outweighing even the self-evident ones of combinations. Intimately acquainted with his own district, in communication with his fellow-practitioners, and in active practice in the place, he is often able to act promptly and energetically in opposing infectious disease when the medical officer of the large combined district may be far away and inaccessible. That some combination of the two systems might be the best I do not doubt, but in the meantime I think it is evident that both have some claims for consideration. My township has a very complete infectious disease hospital, with disinfecting oven and carriage for patients. The nuisance inspector is also School-Board inspector; hence he is always about among those people who are most energetic in spreading infection, and hears early of any such sickness, can at once consult the medical officer as to the steps which should be taken, and has not to telegraph all over the district for instructions. I have no doubt that other urban districts similarly situated could put in similar pleas for consideration. At all events, I think there is some ground for praying an arrest of judgment in their behalf.

I remain, Sir, your obedient servant,

G. HAINES ATWELL,
Medical Officer of Health, Altrincham Urban Sanitary Authority.

December 22nd, 1879.

P.S.—Since writing the above I have received from the clerk the following statistics: "Number of inhabited houses, December, 1879, 2398, which, at five persons to a house, gives a population of 11,990." Hence my estimate of 11,000 for the year 1878 is evidently not excessive.

G. H. A.

POISONOUS STING; INFLAMMATION OF LYMPHATICS; BICARBONATE OF SODA.

To the Editor of THE LANCET.

SIR,—In the month of August last I was called in to a case of peculiar interest, and I now send you the particulars. A young fisherman, while netting on the coast of Donegal, took a fish there known as the "stang." This fish is like a small greenish herring, with hard scales and sharp dorsal fins, and is well known to the fishermen to give a most dangerous sting. On this occasion, the night being very dark, the fish was not observed until the young man received from it a very severe sting in the ball of the thumb. He immediately applied his lips to the wound, and sucked it. Very shortly, however, a stinging pain began to creep up his arm as far as the axilla. That night he was unable to sleep from pain, and during the next day the hand and arm continued to swell, while the patient suffered from headache, shivering fits, and constipation. Next day he came to me, and on examination I found the whole hand and arm swollen and inflamed. At the spot where he was stung there was a dark-coloured subcutaneous spot; the entire lymphatic system of the arm was much deranged, the lymphatics standing out clearly defined as red lines, while there was a very large glandular swelling under the axilla about the size of a man's clenched hand. His pulse was 98, and his temperature 100·5° F. I made an incision down to and through the dark spot, and applied a large linseed poultice to his hand, wrapping the arm up to the axilla in cotton-wool, having previously applied to the principal seats of inflammation dry bicarbonate of soda, and administered to him a dose of scammony powder and calomel. On visiting him the next day I found the pain and inflammation nearly gone and the bubo in the axilla quite reduced, while the wound discharged about half an ounce of dark matter. Under this treatment he made a very rapid recovery, and went back to his work in about a week.

I ascribe the rapid reduction of the lymphatic inflammation principally to the application of the bicarbonate of soda, though of course in conjunction with the removal of exciting cause, and the purgative administered. I was led to use the bicarbonate of soda by reading in your journal of its application by an American doctor to burns and scalds, a use I have since frequently made of it with uniform and gratifying success. Apologising for the length of this letter,

I am, Sir, your obedient servant,

CHARLES F. MURRAY, M.D., M.Ch.,
Medical Officer, Gweedore, Co. Donegal.

Dec., 1879.

PARIS.

(From our own Correspondent.)

AN unusually large number of vacancies have occurred lately at the Academy of Medicine, and candidates for the honour of a seat in that august assembly are showing the greatest activity in canvassing their friends. On December 23rd, the election of a successor to the late Professor Chauffard, in the section of Medical Pathology, was closely contested by MM. Fournier and Bucquoy, whom I mentioned in a previous communication as having very equal chances of success. At the first balloting the former obtained thirty-six, and the latter thirty-five votes; but, as seventy-two members of the Academy were present, the regulations required that a second vote should be taken, and this resulted again in favour of M. Fournier, by a majority of five, through the desertion of some of M. Bucquoy's supporters. As is customary on such occasions, the friends of the unsuccessful candidate are prepared to prove that the result would have been different, had not some unfortunate circumstance occurred to influence the election. Had the weather been more genial, they are confident that the more ancient Academicians would have been able and ready to sally out in force to vote for M. Bucquoy, and to oppose the nomination of M. Fournier, who is the representative of that party in the honourable company which calls itself advanced and liberal.

At the same meeting Professor Peter replied to a communication which had been made by Dr. Gueneau de Mussy, on the subject of local temperatures. It was stated by that gentleman that the merit of priority in this mode of clinical research was due to Dr. Seguin, of New York, who had called attention to its importance in a work published in 1876. Professor Peter said that he had been engaged in the study of this question since 1864. In the following year he sent in a note to the Academy of Medicine, which was publicly read by the late Professor Tardieu two years later, and reproduced in the contemporary medical press. He thought it, therefore, somewhat *piquant* that the question of priority should be raised in this same assembly. When he began his researches he wished to settle the question whether a local morbid action was accompanied by a local elevation of temperature. This he had found to be the case, and he was now engaged on a work which would some day be published as a whole, but which he offered the Academy, from time to time, "by bits, in order to render it less indigestible." Scientific truths, observed the Professor, make their way in the world only after passing through two preliminary periods.

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In the first, that of doubt and negation, when a new fact is asserted, it is objected that it is improbable or untrue. In the second, that of acceptance, the exactitude of the statement is acknowledged, but people will always be found to cry out that it is not new. It really matters very little to science whether Professor Peter or Dr. Seguin first practised local thermometry, but the subject is itself of the greatest importance, and this episode may have the effect of inducing clinical teachers to work it out more thoroughly.

The extreme cold of the last few weeks has had the effect of crowding the surgical wards of the different hospitals with sufferers from frost-bite. When the injury occurs on the hands its seat is irregular, but when the feet are attacked it is almost always in the first and fifth toes, no doubt on account of the pressure on these parts. The affection begins with plantar anæsthesia, which renders walking impossible. The feet then swell, and become red. This is followed by the formation of phlyctenulæ, which leave an ulcerated surface, very slow in healing.

The *Progrès Médical*, in an article on this subject last week, remarks that frost-bite may give rise to locomotor ataxia; and an interesting case in point is related in the last number of the *Revue Mensuelle*.

M. Pasteur recently made a communication to the Academy of Sciences upon the action of extreme cold upon different kinds of bacteria. He had submitted the microscopic organisms which give rise to charbon to a temperature of 40° Centigrade, and they came out of the ordeal as prolific and as virulent as ever. Another parasite, which causes the disease known as Fowl's Cholera (*Choléra des Poules*) was found to be endowed with equal vitality.

MM. Couty and Lacerda have sent in a memoir on Curare to the same Society, in which they announce the dis overy of a new variety, which acts only on unstriped muscle, and which kills by lowering the arterial tension. This curare is the extract of the bark of a Brazilian strychnos (S. Gardnerii), and is prepared by maceration and subsequent concentration. They find also that prolonged boiling of the S. triplinervia causes it to lose its ordinary curarising power on voluntary muscle, and developes in it the same properties as those of the S. Gardnerii.

Paris, December 29th, 1379.

Obituary.

DUNCAN M. MACLURE, M.B. LOND., M.R.C.P.

THE death of Dr. Maclure occurred at his residence, in Harley-street, on Friday, December 12th, after an illness of little more than a fortnight's duration. Although his premature decease interfered with his obtaining a very marked position in the scientific world, Dr. Maclure was widely known and universally liked. In the earlier years of his medical career he travelled in Spain, India, and Australia, and the opportunity which he thus enjoyed of studying "men and cities" was not, probably, without its effect in producing an ease and geniality of manner which rendered him a pleasant and always welcome companion in society. Whilst travelling he was recalled to London by the death of his father, whom he succeeded in practice in Harley-street, and shortly afterwards he was appointed Medical Registrar at the Westminster Hospital. This post he subsequently resigned to become Lecturer on Physiology at the same institution.

The appointment in which Dr. Maclure was perhaps best known was that of medical adviser to the London, Brighton, and South Coast Railway Company. A post of this kind, involving a great deal of work, sometimes of an anxious character, is besides one of considerable delicacy. To occupy with dignity and respect a position in which the interests of a great company have to be protected from exaggerated or sometimes even fictitious claims, whilst at the same time the rights of sufferers have to be treated with tenderness and justice, is not given to every man. We have never heard a word of complaint against the manner in which Dr. Maclure conducted his delicate task. On the contrary, he always appeared to hold the balance with an even hand, and to approach the investigation of a claim against the company in a thoroughly honest and impartial spirit. His kindly nature and obliging disposition endeared him to his colleagues at the Queen-square Hospital, by whom he will be sincerely regretted. He was in the fullest meaning of the phrase "a good physician," who proved himself to his patients a kind friend as well as skilful adviser, and he gained in the hearts of many a place from which no lapse of time can remove his memory.

JAMES LONG, F.R.C.S.

IN James Long, consulting surgeon to the Royal Infirmary, the profession in Liverpool have lost not only one of its ablest representatives, but a connecting link between its surgeons of the past, as represented by Henry Park, and those of to-day.

For some years Mr. Long had been failing in health, but he preferred to work up to the last, and, like many others, it may be literally said of him that he died in harness. Months ago he was advised by those who knew him best to seek that entire repose from professional work which would have freed him from incurring risks he could ill afford to run.

His death occurred somewhat unexpectedly on Saturday, the 20th ult., of a urinary affection, from which he had for some time suffered.

Mr. Long, who had just completed his seventieth anniversary, commenced his medical career over fifty years ago by an apprenticeship to Mr. Halton, one of the surgeons to the Liverpool Royal Infirmary. Of the advantage derived by him from the apprenticeship system, at that time in vogue, he used often to speak as giving him a thorough knowledge of all those practical details in medicine and surgery which so largely contributed to his own success as a practitioner. He completed his medical education at University College, where afterwards his no less distinguished brother, George Long, held the Professorship of Greek and Latin. In 1832 he was admitted a member of the Royal College of Surgeons, and in 1843 he was amongst the first recipients of the Honorary Fellowship when this distinction was established. His earlier professional appointment in Liverpool was that of house-surgeon to the Royal Infirmary. On settling in practice he was soon appointed surgeon to the dispensaries, a position he held until, in 1855, he again returned to the infirmary as one of its surgeons.

In 1867 he resigned his surgeoncy, and was appointed consulting surgeon, a position he held up to the time of his death. At the School of Medicine he took a most active part; he assisted in founding it, and during the thirty-two years he was connected with it he lectured successively on Anatomy, Physiology, and Surgery. He will be long remembered as a remarkable man. His large acquaintance in Liverpool will miss his well-known ruddy face and the half humorous half crusty way in which he greeted even those with whom he was most familiar. He was a great reader and a keen observer. Being possessed of much determination and disposed to be sanguine, it can be well understood how it was that the remark was so often made about him, "Long never gives a patient up." His brusqueness, undoubtedly, sometimes interfered with his professional success. It was almost Abernethian, both in kind and manner. Though occasionally ill-timed in such remarks, he was quite free from the suspicion of unkindness. Those who knew him best will always remember him as possessing a warm heart in a somewhat rough exterior. As a practitioner he was chiefly conspicuous for his power in diagnosis. Though not brilliant as an operator, by a judicious selection of his cases, and scrupulous care in the after-treatment, his results were above the average of success. For many years he had a very considerable general practice, in addition to being one of the leading consultees of the neighbourhood.

As a lecturer, by his anecdotes and ready power of illustration he succeeded in commanding the attention of his audience in a manner which is often denied to more finished speakers. His style was simple and colloquial, and there was an earnestness about his delivery which always impressed and was never forgotten by the numerous students who had the benefit of his instruction. In the education of the nurses of the Royal Infirmary he took a deep interest. His lectures to them have recently been published and are remarkable for their soundness as well as for their easy and engaging style.

He had a wonderful memory, and his large store of anecdotes gave him a command in illustrating or enforcing a

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lesion which comparatively few persons possess. His strictly professional communications to scientific journals, though not numerous, were in keeping with their author, being essentially practical. He was the first to draw attention to the use of aconite as preventing rigors after catheterism; other contributions, such as those relating to pyæmia and injuries of the trachea, contained much valuable information as well as being highly suggestive.

Mr. Long was buried in Hedge Hill churchyard, on Wednesday the 24th ult., his funeral being numerously attended by representatives of all classes with whom, either professionally or socially, he had been brought in contact during an active professional career in Liverpool of about half a century. He leaves a widow, four sons and a daughter; his eldest son, Surgeon-Major Long, holding a distinguished position in the medical service of the British army.

JOSEPH B. SADLER, M.R.C.S., L.S.A.

MR. J. B. SADLER, for the long period of forty-five years, had been in practice as a surgeon at Winterton, near Brigg, Lincolnshire. He was much and deservedly respected by a large number of patients, friends, and pupils. His health had been declining for some time, and no cause of death can be assigned beyond that of gradually increasing anæmia and consequent weakness. Mr. Sadler was a nephew of the late Michael Thomas Sadler, M.P. for Leeds, F.R.S., &c., one of the most famous philanthropists and politicians of his day; and for his uncle's memory Mr. Sadler always entertained warm affection and deep reverence. It is by a remarkable coincidence that death has, during the past year (1879), removed from the same place another much respected member of our profession, M. Bennett, Esq.; M.R.C.S. Eng., L.S.A. Mr. Sadler and Mr. Bennett both studied at the same place, the then united schools of St. Thomas's and Guy's Hospitals; both qualified in the same year, 1832; both began practice in Winterton at the same time; both died in the same year, at about the same age; and for upwards of thirty years they were the only medical practitioners in Winterton. Mr. Sadler had succeeded to a practice which dates far back into the last century, and is succeeded by R. P. Goodworth, Esq., L.R.C.P. Edin., M.R.C.S. Eng.

E. CARR JACKSON, M.R.C.S.

WE have to record with sorrow the death of Mr. E. Carr Jackson, of Harley-street, the son of the late well-known surgeon. A large circle of friends will mourn his loss, and many will regret this early termination, at the age of twenty-six, of a career which was full of promise.

Mr. Jackson was educated at the University College School and in Germany. He entered the medical profession as apprentice to Mr. Le Gros Clark, then senior surgeon to St. Thomas's Hospital, at which institution, as well as in Paris, he carried on his medical studies. After having held the appointments of resident-assistant at the Great Northern and house-surgeon at the St. Mark's Hospitals, he began practice with the posts of Surgeon to the National Orthopædic Hospital and to the British Equitable Insurance Company. He also for some time assisted Mr. Allingham in his practice.

For some time past he had been much out of health, suffering from debility and loss of sleep and appetite, for which he had consulted Dr. Ord, his former teacher at St. Thomas's. His death, which took place at the house of his father-in-law, Dr. Robert Barnes, was preceded by an aggravation of his symptoms and an attack of intestinal hæmorrhage.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Dec. 24th:—

Heritage, Julius Harvey, Montpelier-road, Peckham.
Lowe, Howard Griffiths, Birmingham.
Mehta, Maneckjee Seraljee, M.D. Brussels, L.R.C.P. Ed., Bombay.
Stroyer, Herbert Charles, St. Heliers, Jersey.
Swale, Harold, Guildford.
Thornton, James Parsons, Riding-street, Southport.
Wright, Geo. Arthur, M.B. Oxon., F.R.C.S. Eng., Vange, Essex.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At the December examinations the following obtained the licence in Surgery of the College:—

Robert Allman, John Richard Baker, Charles James Barry, James Henry Beattie, Robert Ettingsall Beatty, Charles Mathew Brady, Hubert Watson Brownrigg, Charles Hayden Cox, James Davison, Mathew Digan, Geo. Digby, Geo. Philip Elliott, Hubert Flanagan, John Gray, Arthur Greene, Arthur Robt. Harper, Thomas Higgins, John Anderson Irwin, L'Estrange Isdell, James Kernan, Anthony Kidd, Patrick Joseph Lenihan, John Stephen M'Ardell, John M'Cullagh, John M'Loughlin, George Alex. Montgomery, Charles George Drummond Moss, John Murphy, Thomas Joseph O'Donnell, James Joseph O'Dwyer, John Pollock, William James Swanson, John Whittaker Tate, William Augustus West, Edward De Lacy Wickham, John Wilson.

DR. EVORY KENNEDY, of Clondalkin, has been appointed a Deputy Lieutenant for the County of Dublin.

THE Physico-Medical Society of the University of Moscow has added Mr. Spencer Wells to its roll of Honorary Fellows.

AT a meeting held at the Town Hall, Kidderminster, the Vicar in the chair, a motion was made by the Mayor and carried, to establish a Provident Dispensary.

VACCINATION GRANT.—Mr. J. D. Roberts, of Barnoldswick, M.R.C.S.E., has received a grant for successful vaccination for the second time.

HEALTH OF DUBLIN.—During the week ending the 20th December the deaths registered represented an annual mortality of 48·9 per 1000; the deaths exceeding the births recorded by 107. Zymotic diseases caused 58 deaths, which included 16 from measles, the highest number registered in any week in Dublin for many months.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.—The Annual General Meeting of this Society for the election of officers and Council for the ensuing year, and for transacting the usual business, will be held on Wednesday, January 28th, at 4.30 P.M. The following is a list of the names of gentlemen recommended by the Council to be appointed to the offices named below:—President: *W. A. N. Cattlin, Esq. Vice-Presidents: J. A. Baker, Esq.; Samuel Cartwright, Esq.; Alfred Coleman, Esq.; John Smith, Esq., M.D., F.R.S. (Ed.); *J. A. Salter, Esq., F.R.S. Treasurer: T. Edgelow, Esq. Hon. Secretary: J. Hamilton Craigie, Esq. Council: *Edward Bartlett, Esq.; S. Hamilton Cartwright, Esq.; J. Fairbank, Esq.; F. Fox, Esq.; W. Donald Napier, Esq.; George Parkinson, Esq.; W. G. Ranger, Esq.; *Augustus Winterbottom, Esq. An asterisk is prefixed to the names of those not holding the same office the preceding year. The Fellows of the Association, and their friends, will dine together in the evening at the Langham Hotel, at seven o'clock; Samuel Cartwright, Esq., in the chair.

Medical Appointments.

ADRIEN, E. W., L.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer to the Workhouse, Balrothery Union, co. Dublin, at £90 per annum, and £10 per annum as Consulting Medical Officer of Health.

ANDREWS, S., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the No. 2 District of the Basingstoke Union, and Medical Officer of Health for the No. 2 Subdistrict of the Basingstoke Rural Sanitary District, vice Sweeting, resigned.

ASHBY, A., M.B., F.R.C.S.E., has been reappointed Medical Officer of Health for the Grantham, Newark, and Sleaford Rural, and Newark, Sleaford, and Ruskington Urban, Sanitary Districts, at £650 for three years, ending 23rd July, 1882.

BERRY, G. A., M.B., C.M., has been appointed House-Surgeon to the Royal London Ophthalmic Hospital, vice Gunn, resigned.

BROOM, C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Wednesfield District of the Wolverhampton Union, vice Riley, whose appointment has expired.

BRUCE, J., M.B., has been reappointed Parochial Medical Officer and Health Officer for the Parish of Holm, Orkney, vice the Rev. D. McNeill, Free Church Minister, who held the appointment for one week, and resigned.

BYRNE, Dr. W., has been appointed an Assistant-Surgeon to the Central London Ophthalmic Hospital, vice Dunnage, deceased.

COKE, W. H., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer for the No. 1 District of the West Ashford Union, Kent, vice Sheppard, resigned.

COLLINS, C. E., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer, East Grinstead District, Redhill Workmen's Provident Society, vice Rogers, deceased.

CRANNY, J. J., A.B., M.D., F.R.C.S.I., has been appointed Surgeon to Jervis-street Hospital, Dublin, vice Collins, resigned.

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CUNNINGHAME, R. J. B., M.D., has been appointed an Ordinary Physician to the Royal Hospital for Sick Children, Edinburgh, vice Linton, whose term of office has expired.

CUTLER, P. A., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Medical Officer to the Fanning Institution, Waterford, vice Elliott, deceased.

DALL, J. C., L.R.C.S.Ed., has been appointed Resident Medical Officer to the Grantham Friendly and Trade Societies' Medical Institute.

DEAKIN, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Ashton-upon-Mersey District of the Altrincham Union, vice Renshaw, resigned.

ELLIOTT, C. N., M.D., C.M., has been appointed Certifying Factory Surgeon for the District of Whittlesea, Cambridgeshire.

FREER, E. L., M.R.C.S.E., has been appointed Honorary Assistant-Surgeon to the Birmingham Orthopædic and Spinal Hospital.

GABE, J. R., M.R.C.S.E. & L.S.A.L., has been appointed Resident Medical Officer to the London Dispensary, vice Gayton, deceased.

GILL, J., M.D., has been appointed a Surgeon to the Stratford-on-Avon Infirmary, vice Rice, deceased.

HODSON, F., M.R.C.S.E., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Hornsea, Hull.

JONES, W., L.S.A.L., has been reappointed Medical Officer and Public Vaccinator for the Llansilin District of the Oswestry Incorporation of the Poor, at £35 for one year.

LANGTON, J., F.R.C.S.E., has been appointed Consulting Surgeon to the City of London Lying-in Hospital, vice Callender, deceased.

LAWSON, J., M.B., L.R.C.S.I., has been appointed Medical Officer for the Erringden and Wadsworth District of the Todmorden Union, for one year, vice Thomas.

LEIGH, T., L.R.C.P.L., M.R.C.S.E. & L.M., has been appointed Medical Officer and Public Vaccinator for the Central District of the Parish of Brighton, vice Henderson, deceased.

LETTS, E. A., Ph.D., has been appointed Professor of Chemistry at the Queen's College, Belfast, vice Andrews, resigned.

MALVIN, M., M.R.C.S.E., has been appointed Medical Officer for the Hutton District of the Stokesley Union, Yorkshire, vice Dale, resigned.

MORRISSY, E., L.R.C.S.I., L.K.Q.C.P.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Kingscourt, co. Cavan, vice O'Hagan, resigned.

PALK, H., M.D., M.R.C.S.E., L.S.A.L., has been appointed a Surgeon to the Holy Trinity Annual Benefit Society, Southampton.

PAYNE, H., M.R.C.S.E., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Loxley, Sheffield.

PENNY, C. H., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Wymondham District of the Melton-Mowbray Union, at £32 per annum and fees, and Medical Officer of Health for the Wymondham Sub-district of the Melton-Mowbray Rural Sanitary District, at £15 10s. per annum, vice Leacock, resigned.

REID, W., M.B., C.M., has been appointed Resident Visiting and Dispensing Medical Officer to the Jersey General Dispensary, vice Le Quesne, resigned.

RICHARDSON, R., L.R.C.P.Ed., L.F.P.S.G., has been appointed Certifying Factory Surgeon for the District of Rhayader, Radnorshire.

RUGG, G. P., M.D., L.R.C.P.L., has been appointed Medical Attendant to the British Home for Incurables, Clapham-rise, vice Farnfield, resigned.

SCOTT, G., M.D., M.R.C.S.E., has been appointed a Surgeon to the Holy Trinity Annual Benefit Society, Southampton.

SHANN, F., L.R.C.P.L., M.R.C.S.E., has been appointed Third Honorary Surgeon to the York County Hospital, vice Husband, resigned.

SIDEBOTHAM, G. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Hyde District of the Stockport Union, vice Beecroft, resigned.

SPURGIN, H. B., Surgeon-Major Militia Medical Department, has been appointed to the Medical Charge of the 29th Brigade Depôt at Northampton, under the provisions of Arts. 49 & 51 of the recent Army Medical Warrant.

SUTHERLAND, C. J., L.R.C.P.Ed. & L.M., has been appointed Medical Officer for the Laygate and Tyne Dock District of the South Shields Union, vice Dalziel, resigned.

WELCH, R., L.R.C.P.Ed., M.R.C.S.E., has been appointed a Surgeon to the Holy Trinity Annual Benefit Society, Southampton.

Births, Marriages, and Deaths.

BIRTHS.

COLLINS.—On the 22nd ult., at Harcourt-street, Dublin, the wife of Edward W. Collins, M.D., of a son.

GOODENOUGH.—On the 22nd ult., at Dysart, Fifeshire, the wife of William Hessman Goodenough, L.R.C.P.Ed., of a daughter.

HAMMOND.—On the 21st ult., at Nuneaton, the wife of William Hammond, L.R.C.P.Ed., of a daughter.

LUNDY.—On the 20th November, at Thayetmo, British Burmah, the wife of Arthur C. J. R. Lundy, M.B., Surgeon, Army Medical Department, of a daughter.

MCNAB.—On the 24th ult., at Vernon-parade, Clontarf, the wife of William R. McNab, M.D., of a daughter.

POWELL.—On the 19th ult., at Henrietta-street, Cavendish-square, the wife of Richard Douglas Powell, M.D., of a son.

MARRIAGES.

COSSAR—RUSSELL.—On the 18th ult., at Regent-terrace, Edinburgh, Thomas Cossar, M.D., to Isabella, daughter of the late George E. Russell, Esq.

LACY—BROCK.—On the 16th ult., at the Parish Church, St. Peter Port, Guernsey, Alexander Gairdner Lacy, M.R.C.S.E., to Marion Emily, daughter of William Brock, Esq.

MAY—GUNDRY.—On the 30th ult., at St. Paul's, Honiton, Albert E. May, L.R.C.P.L. &c., to Mary Augusta, only daughter of the Rev. J. S. Gundry.

DEATHS.

BOULLAND.—On the 22nd ult., at his residence, 36, Woodhouse-street Leeds, Alfred B. Boulland, L.R.C.P.L., M.R.C.S.E., &c., aged 42.

DAY.—On the 23rd October, at Auckland, New Zealand, Richard De M.D., formerly of Cork, aged 74.

EMMERSON.—On the 19th ult., at Torquay, Charles Emmerson, M.D., of Sandwich, aged 64.

JACKSON.—On the 26th ult., at Harley-street, Ernest Carr Jackson, M.R.C.S.E., aged 26.

JACKSON.—On the 21st ult., at Darlington, Thomas Hayes Jackson, F.R.C.P.Ed., aged 69.

LONG.—On the 20th ult., at Hardman-street, Liverpool, James Long, F.R.C.S.E., aged 70.

MOSS.—On the 6th ult., on board the steamer *Senegal*, James West Moss, L.R.C.P.Ed., aged 34.

NICOL.—On the 20th ult., at Church-road, Higher Tranmere, William Nicol, M.B., of Ayr, aged 22.

SADLER.—On the 28th ult., at Winterton, near Brigg, Joseph B. Sadler, M.R.C.S.E., L.S.A.L., aged 70.

SWEETING.—On the 22nd ult., at Reading, Robert Bray Sweeting, M.R.C.S.E., late of Basingstoke, aged about 47.

TASSELL.—On the 20th ult., at Dover, Robert Tassell, M.D., formerly of Canterbury, aged 54.

WALKER.—On the 26th ult., William Charles Walker, M.R.C.S.E., of Shepton Mallet, aged 66.

WOOLLETT.—On the 18th ult., at Monmouth, John Moore Woollett, M.R.C.S.E., aged 65.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

J. E. ADLARD, London.
Transactions of the Pathological Society of London. Vol. XXX.

BAILLIÈRE, TINDALL, & COX, London.
The Pocket Gray, or Anatomist's Vade-Mecum.
Anatomography, or Graphic Anatomy. By Dr. W. Darling.

D. CAMPBELL & SON, Glasgow.
Medical Visiting Book.
Professional Account Rendered Book.

J. & A. CHURCHILL, London.
Year-book of Pharmacy for 1879.

H. KIMPTON, London.
The Pathology and Treatment of Venereal Diseases. By Dr. F. J. Bumstead and Dr. R. W. Taylor.

LETTS, SON, & Co., London.
Diaries and Visiting Lists for 1880.
Saxby's Weather Table and Almanac for 1880.

LONGMANS, GREEN, & CO., London.
Angiportus. By the Rev. A. N. Malan and C. S. Jerram.
The Last Plague of Egypt, and other Poems. By the Rev. J. B. McCaul.
The Art of Perfumery. By G. W. S. Piesse.

W. P. NIMMO, Edinburgh.
The Lay of the Bell. By Schiller. Translated by Dr. A. Wood.

H. RENSHAW, London.
A Manual of the Practice of Surgery. By Dr. W. F. Clarke.

SMITH, ELDER, & Co., London.
A Manual of Skin Diseases. By M. Morris.
Atlas of Histology. By Dr. E. Klein and E. N. Smith. Part IX.
The Treatment of Hepatic Disease. By Dr. W. Stewart.

E. STANFORD, London.
On the Influence of Colloids upon Crystalline Form and Cohesion. By Dr. W. M. Ord.

THE GOVERNMENT PRINTING OFFICE, Washington.
The Medical and Surgical History of the War of the Rebellion. Vol. I. By S. J. Woodward.

"THE HAND & HEART" PUBLISHING OFFICE, London.
Robin's Carol, and what came of it. By the Rev. C. Bullock, B.D.

J. WHITAKER, London.
An Almanack for the Year 1880.

The Royal London Ophthalmic Hospital Reports; Part III.; December. (J. & A. Churchill.)—The Contemporary Review; December. (Strahan & Co.)—Pathologie Clinique du Grand Sympathique. By Dr. A. T. de Fontarce. (Baillière et Fils, Paris.)—Traité Clinique et Pratique de la Phthisie Pulmonaire et des Maladies Tuberculeuses des Divers Organes. By Dr. H. Lebert. Etude Médico-Légale sur les Testaments Contestes pour Cause de Folie. By le Dr. Legrand du Saulle. (Delahaye, Paris.)—Observations in One Hundred Cases of Carcinoma. By Dr. T. E. Satterthwaite. (Appleton & Co., New York.)—Facts about Fevers, or Practical Rules. By Dr. D. Page. (W. Fisher, Kendal.)—The Magazine of Art; Part XXI.; January. Little Folks; Part LXI.; January. (Cassell, Petter, Galpin, & Co.)—Time; January. (The World Office.)—Fraser's Magazine; January. (Longmans, Green, & Co.)—The Sunday Magazine; January. Good Words; January. (Isbister & Co.)—Photographic Illustrations of Skin Diseases. By Dr. G. H. Fox. (E. B. Treat, New York.)—Traité Clinique des Maladies de la Moelle Epinière. By E. Leyden. (Baillière et Fils, Paris.)

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, Jan. 1st, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Dec. 26	30·56	E.	32	32	..	33	28	..	Overcast
,, 27	30·44	S.W.	29	..	..	39	26	..	Bright
,, 28	30·18	S.W.	39	39	..	54	27	0·03	Overcast
,, 29	30·02	W.	46	44	..	52	44	..	Overcast
,, 30	29·84	S.W.	42	40	..	46	36	..	Bright
,, 31	29·77	S.W.	42	39	..	52	36	0·28	Overcast
Jan. 1	29·96	W.	54	52	..	56	44	0·22	Raining

Notes, Short Comments, and Answers to Correspondents.

THE FORCE OF THE WIND ON THE BODY.

IT is doubtful whether attention has been sufficiently directed to the part the *force* of wind plays in producing alterations of blood-pressure in localities of the surface. In rude health this may be an unimportant consideration, the skin being stimulated to a proper degree of tension, and the underlying vessels suffering no compression; but in the case of persons of low vitality this "bracing" may not occur, or almost instantly subside, and congestion of deep organs may then be mechanically produced by prolonged exposure to the force of a strong wind. Sometimes numbness and even paralysis of the nerves may result from the same cause. In the old coaching days facial paralysis was a well-recognised result of sitting with the face to the wind at an open window. In the more rapidly moving railway carriage of to-day the angle of incidence and reflection throws the current of air on the passenger sitting one seat removed from the window, or the current of air strikes the back of the carriage, and is passed round behind the necks of the passengers, as anyone may demonstrate with a lighted match. In all these instances it is the *force* as much as the temperature of the jet of air which produces the results sometimes experienced from "sitting in a draught." The question arises whether this little fact, taken in connexion with others, may not hereafter be found to throw some new light on the nature of "cold" and its morbid phenomena. Perhaps, after all, "cold-catching" is, in part at least, a process in which the blood is forcibly driven out of a particular area of the surface, while the vitality of its nerves is diminished by mechanical compression. A very small jet of air playing continually on a limited space will give some hypersensitive individuals a severe "cold."

Dr. C. F. Warneford.—Extract. cinchonæ rubr. fluid. has been recommended. See THE LANCET, July 19th, 1879.

Mr. John Hall.—We do not either prescribe or recommend practitioners.

THE MORNING TUB.

To the Editor of THE LANCET.

SIR,—Referring to "Philydor's" letter, in your issue of this date, on the mode of taking the morning tub, he does not mention how long he was in the habit of tubbing before he discovered the better way, after sponging face, neck, &c., was to sit in it. It is only what I have done for the best part of my life, now exceeding threescore years and ten, without supposing I was doing anything extraordinary. But before getting into my tub I lather myself all over with soap, so that the water clings to me, instead of running off as it will without soap, and use a bowl to pour the water down my back and over me. I recommend "Philydor" to do likewise.

Yours &c.,

Dec. 27th, 1879. G. E. A.

To the Editor of THE LANCET.

SIR,—I am seventy-two years of age, and have during my life had very little illness, and I am now in perfect health. I have for nearly fifty years, summer and winter, taken a cold plunge bath, and about a month ago the servant had to remove a thin covering of ice before I could get into the bath. The enclosed cutting from a local paper has somewhat disturbed, if not alarmed me, and I write to ask you to be kind enough to say whether a person of my age may safely take a cold bath, *provided* he has a good fire in the bath-room; or would you advise some *hot water*, and, if so, what should be the proper temperature of the water in the bath. I suppose I must consider myself *old*, although I never feel so. When asked by my friends for my recipe for apparent juvenility, I answer, "Cold bath every morning; plenty of exercise; no whisky-and-water at night; no smoking."

Yours obediently,

Bradford, Dec. 26th, 1879. JOHN DARLINGTON.

*** "Age" is less a question of years than of strength; but it would be discreet to use water which is not quite cold.—ED. L.

INCONVENIENT CONSEQUENCES OF AN OLD "SCARE."

SOME years ago there was a great outcry about the danger of moistening the adhesive lining of postage-stamps with the mouth. The like peril was afterwards alleged to attend the contact of the tongue with the gum on the flaps of envelopes. In regard to postage-stamps, the difficulty was overcome by using a saucer of water. This device is not applicable to the case of envelopes, and as a consequence these wrappers are seldom securely fastened. A very large proportion of the missives which pass through the post-office are delivered only lightly closed, because insufficiently wetted. The consequent results are not to be contemplated with satisfaction. The thick paper now employed in the manufacture of the best envelopes requires a large amount of moisture to soften the adhesive substance with which they are coated. It would be well if a practice of brushing the gum with a little camel-hair pencil dipped in water could be adopted. As it is, the remote consequence of the old "scare" seems to be that servants enjoy unusual facilities for becoming acquainted with their employers' correspondence, and, occasionally, with inconvenient results.

M.D.—We regret we cannot give our correspondent the information he desires.

STETHOSCOPES.

To the Editor of THE LANCET.

SIR,—Having read Dr. Veale's letter on Stethoscopes, permit me to say that I, for one, quite agree with his remarks as to the qualities of a "perfect stethoscope," but would suggest one additional merit it should have, and that is a double ear-piece.

To my mind, both ears should be employed during auscultation, instead of only one. In the houses of the poor it is sometimes found to be almost impracticable to gain any information with an ordinary wooden stethoscope, on account of the various noises incident to a room where perhaps a family of children are living, and which most medical men must have experienced.

An objection, if I may offer it, I find to the particular stethoscope Dr. Veale advocates is, its having two *screws*, the threads of which will be constantly getting out of order. The one I am in the habit of using, and which I like better than any other, is a double flexible stethoscope. It consists simply of two india-rubber tubings, eighteen inches in length, having for ear-pieces two small ebony cylinders, an inch and a half long, fitted into the ends of the tubing; the ends of the cylinders are bevelled off to fit into the meatus of each ear, where they can be comfortably retained. The distal ends of the tubings have each a similar attachment of ebony, the ends of which are made to fit tightly (*without a screw*) into two holes made to receive them in a chest-piece, also of ebony. The chest-piece is similar in shape to about an inch cut off the chest-end of an ordinary stethoscope, having, instead of a central hole on its upper part, two holes. Its diameter is an inch and three-eighths. This chest-piece I find useful for ordinary purposes, but would prefer one with a diameter of one inch only for use with thin or emaciated subjects and for heart examinations. I would, therefore, suggest the use of two chest-pieces.

The advantages of this form of stethoscope are: 1st. Both ears are employed, all external noises being excluded, the sounds thereby being intensified. 2nd. Its flexibility. The chest-piece can be moved from part to part with the finger and thumb, without disturbing the patient or removing the ear-pieces; thus also dispensing with the inconvenience of the stooping in, sometimes, a most uncomfortable position for the medical attendant (especially where only one side of the bed is accessible). With children this flexibility is especially useful; in fact, I have used it frequently where it would have been out of the question to auscultate with an ordinary stethoscope satisfactorily on account of the restless movements of the child. 3rd. It has no screws to get out of order. 4th. The pressure on application is less. This is one of the charms of this instrument in children and delicate people. 5th. The medical man is better able to see exactly where he is applying his chest-piece. 6th. Its adaptability to the pocket. I usually tie the tubing once, and it fits into the pocker easily, taking no harm if it happens to be sat upon.

I am, Sir, yours truly,

Rotherham, Dec. 1879. WM. W. HARDWICKE, L.R.C.P., &c.

SEA-SICKNESS.

M.D. would refer "Nitrite" to the Medical Digest, sections 861 and 862, where he will find references to a host of papers on the subject he mentions. We have, happily, been preserved hitherto from a text-book on Sea-sickness.

Tyro.—We are not acquainted with any specific work on the subject. The instrument may be obtained through any London firm.

Dr. R. Maclaren's paper will appear in an early number.

THE WEST COAST OF AFRICA.

To the Editor of THE LANCET.

SIR,—Perhaps among your numerous readers there may be some who have had some experience of the West Coast of Africa. If so, by giving some useful hints and information respecting what to eat, drink, and avoid, so as to escape as far as possible the effects of fever so common there, they would, by communicating the same through the medium of your journal, greatly oblige one about to emigrate to,

Dec. 1879. AFRICA.

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WARMTH AND ENERGY.

IN ancient times, energy of mind and strength of body were supposed to be the effects of warmth, while depression of spirits and bodily weakness were ascribed to cold. Modern science has explained and modified these theories concerning the production of physical and psychical force, but in the main it has confirmed the principle of causation. In a general sense, it may be said that animal heat, when duly generated within normal limits, is the concomitant of vigour. Practically, therefore, warmth is to be sought and cold avoided; but with this qualification, that the heat must be elicited by organic processes going on within the body, and not borrowed from without. The chief, if not the only use of wraps and "warm" surroundings is to avoid the loss of animal heat by abstraction. It is neither scientific nor hygienic, in any true sense, to trust to external sources of supply for the warmth we require to live well, happily, and usefully. The food is more than the raiment, and those who desire to help the poor and melancholy over their "dead points" in the course of life should be chiefly anxious to feed them well and sufficiently. So in the management of self—to live well is to feed appropriately. Stimulants do not give strength, because they cannot add to the normal and healthy sources of animal heat. Nutriment is the only true fuel. This fact cannot be too often or too strongly urged on public attention.

Mr. W. Spencer Watson.—The subject has not escaped our attention, and we shall hope to notice it soon.

Mr. Cole will find an advertisement in our number for Nov. 22nd with reference to the supply calf lymph.

FOUR CONSECUTIVE BREECH CASES.

To the Editor of THE LANCET.

SIR,—Having had lately in my midwifery practice four breech cases almost consecutively within six weeks, I thought perhaps a few notes of these cases would be interesting, as it is far from common to meet with as many such cases within so short a time.

CASE 1.—Sept. 15th. Mrs. R——, aged thirty-five, has had several children. Footling presentation; rapid and easy labour; no interference whatever; arms and head born without difficulty. Child mature, large, and living.

CASE 2.—Oct. 6th. Mrs. H——, aged thirty-eight years, and a primipara. Breech presentation; tedious labour, lasting forty-eight hours; breech born in anterior position; birth of body and arms easy, but head was delayed for fifteen minutes; no instrumental interference. Child mature, large, but dead.

CASE 3.—Oct. 24th. Mrs. S——, aged twenty-six, has had several children. Breech presentation; labour short and easy; breech born in anterior position; no interference; arms and head followed body directly. Child premature (eight months), small, and only lived for half an hour.

CASE 4.—Oct. 27th. Mrs. B——, aged twenty-five years, has had four children. Breech presentation; labour lasted sixteen hours; breech born in anterior position; body followed slowly, and there was some difficulty with the arms; head refused to come, in spite of strong pains and abdominal pressure; it descended very slowly through the pelvis, and finally was drawn over the perineum by powerful traction made at the mouth and sinciput by Mr. Coalbank, whom I had called in consultation. The child was hydrocephalic, the circumference of the head being sixteen and a half inches, with well-marked spina bifida, the spinal canal being open throughout the dorsal and lumbar regions, but the body and limbs were full-sized and well developed. The child was born dead. The mother during her pregnancy had been much shocked at a circus by the fantastic shapes into which a young boy conjuror twisted and bent himself in the performance. She thought that he could have "no bone in his body." Is it not possible that this incident, in its effects upon the pregnant mother, might have influenced the development of the osseous system of her offspring?

Yours respectfully,

Teddington, Dec. 1879. N. SCOTT WHITNEY, M.B.

REMOVAL OF LOOSE CARTILAGES FROM THE KNEE.

To the Editor of THE LANCET.

SIR,—In one of your recent issues I saw an account of two operations for the removal of loose cartilages from the knee. As a former student of Edinburgh, where Professor Annandale was then assistant-surgeon, I was interested in the description, more particularly as it has recently fallen to me to remove a cartilage as large as, and very similar to, those illustrated in your issue. Owing to the difficulty of obtaining ganze, it is impossible to carry out the Edinburgh antiseptic plan; but I followed what I believe is a German method—viz., salicylic spray (1 in 300), and dressing with salicylic wool. The case was in every way a success, there being no subsequent pyrexia, although, owing to some difficulty in separating adherent bands and a paucity of instruments, the joint was a good deal interfered with during the operation. From what I have seen in subsequent operations on joints, I venture to recommend the salicylic antiseptic treatment as a cheap and handy substitute for carbolics, particularly for practitioners in remote localities.—Yours &c.,

W. PEEL NESBITT, M.B., M.R.C.P.E.,
Senior Honorary Medical Officer, Burra Burra Hospital.

Burra, South Australia, Oct. 5th, 1879.

THE SANITARY STATE OF MEMPHIS, TENNESSEE.

A COMMITTEE appointed by the United States National Board of Health to make a sanitary survey, including a house-to-house inspection, of Memphis, Tennessee, which suffered so much from yellow fever during the recent outbreak in the States, has made a preliminary report. The Committee consists of Dr. J. S. Billings, Mr. H. A. Johnson, and Mr. R. W. Mitchell. The inquiries of the Committee have disclosed a most deplorable state of things sanitarily in the city, and they have thought it desirable, before completing their investigation, to prepare a series of provisional recommendations for the consideration of the local authorities. These recommendations seem to show that even the rudimentary requirements of municipal sanitary administration have to be put in force in Memphis.

Mr. W. H. Henderson.—We cannot undertake to move in the matter.

THE MEMBERSHIP AND FELLOWSHIP OF THE COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—The fact that Mr. Gay's proposal at the Council of the College of Surgeons was rejected, "that examinerships should be open to members and fellows alike," will lead many members to consider what advantages they have derived from joining so learned and ancient a Corporation.

Nearly twenty-seven years ago I was admitted a member of the College, and I recollect being told by the President that I had acquired a great dignity; that the diploma conferred upon all members the position of gentlemen, and, further, that it absolved me from such onerous duties as serving upon juries &c. I was then compelled to sign a declaration, amongst other things, that I would do all in my power to uphold the dignity of the College by strict probity, and the careful abstention from all acts unworthy of a gentleman. Now, as far as in me lies, I believe that I have honestly acted up to my pledges. But what has the College done for me (and when I speak of myself I speak of the members generally)? There is not a single portal open to me through which my voice can be heard in the management of the institution, although the members are numerically so much stronger than the fellows. There is not a lectureship or professorship, or even the position of examiner upon any subject, that I am considered eligible for, although I might possess profundity of knowledge and peculiar aptness for the duties; all this because I am only a member! Whence arises the talismanic influence of the term "fellow"? The title itself can confer no wisdom, and yet I find that no less a number than twelve of the most influential members of the Council never proceeded beyond the examination for membership, and they are fellows only so far as an honorary title can make them so. Nevertheless, they have not been considered ineligible (although precisely on an equality with myself as far as examination goes) for the highest positions the College could present, and several of these twelve gentlemen have acted most worthily as Presidents of the College. So much, then, for the fellowship *per se* being necessary to enable a man to fill high and important offices in the College!

Having for twenty-seven years been thus rendered, as it were, an alien to the College in its corporate capacity, again I ask, what has the College done for me? The reply would be, "We, the Council, have sold you the right to practise surgery." True. But how have they protected me in the rights they have conferred upon me? Have they prosecuted or condemned those who have usurped the title? Have they struck off the roll the names of those who have disgraced the title?

I am well known, Sir, as a thorough-going Conservative; but I am an Englishman first and a Conservative afterwards. I would never give my vote to conserve that which I believe to be unjust.

The time will come—it must come, Sir,—when the voice of the members will be heard in the Councils of the College, and when the examinerships and other offices will be free alike to all.

I am, Sir, yours &c.,

H. COOPER ROSE, M.D., M.R.C.S., &c.,
A Subscriber of Thirty Years.

Hampstead, Dec. 1879.

E. D.—The fee is a personal question, and can only be determined by the operator. It is proposed to admit paying patients into St. Thomas's Hospital; but we do not know whether the scheme is yet in force.

Dr. A. Patterson.—If possible, in our next issue.

MR. MOORE'S CASE OF "HYDROPHOBIA."

To the Editor of THE LANCET.

SIR,—In your issue of the 13th instant there is a report of a case of "Hydrophobia or Rabies, Recovery," by Mr. Thomas Moore. This case is very interesting, and its successful termination most satisfactory; but I am greatly disposed to disagree with Mr. Moore in his diagnosis, from the fact that the dog lived for eight months after having bitten the patient without showing any symptoms of rabies, and that at the end of this period of time he was killed merely to appease the patient's *dread of the disease*. The disease in dogs is much more rapid in its course, and generally terminates fatally in eight or nine days. If, therefore, the dog was not rabid at the time when the patient received the bite, true hydrophobia was not the disease from which he suffered and recovered, but, in my opinion, simply "nervous hydrophobia."

Yours faithfully,

Cork, Dec. 18th, 1879. S. O'SULLIVAN, M.D., &c.

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Dr. Williams.—The following, in the language of H.M. College of Arms, is the description of those at the head of the diploma of Fellowship: "Quarterly a Cross of St. George thereon, an Imperial Crown between two Anchors erect in pale, and two Portcullises in fess; in the first and fourth quarters, a Serpent nowed; in the second and third, a Lion couchant guardant," with a "Chief thereon a Lion of England," and "on a wreath an Eagle reguardant, an Imperial Crown on the head, and a Mace in the dexter claw," with the motto, "Quæ prosunt omnibus artes." On the dexter side "the figure of Machaon, holding in the exterior hand a broken arrow, and on the sinister the figure of Podalirius, in his exterior hand a staff entwined by a Serpent." An amusing tale is told in connexion with the Mace. The late Sir Everard Home, an especial favourite of George IV., when President of the College, requested his Majesty's permission to grant the College a Mace. "Oh," said the King, "take a Mace by all means," whereupon the order was given to the Court jewellers, Messrs. Rundle and Bridge, to supply one; and some time after, when the "little bill" (£200) was sent in to the King, he plainly expressed his surprise to Sir Everard, saying they were at liberty to have a Mace, but not to call on him to pay for it. It is believed it was one of the bad debts of the King which the nation was subsequently called upon to liquidate.

Dr. Wm. Curran's paper will be published in an early number.

ARMY MEDICAL OFFICERS AND THE COURT.

To the Editor of THE LANCET.

SIR,—Although at the risk of passing the confines of that region over which "angels fear to tread," I feel constrained, having no personal interest in the matter, to venture to give expression to what I know to be a very general feeling among medical officers in the army on an extremely delicate subject. We all agree most thoroughly with the observation made in your issue of Dec. 13th on the subject of the recent investiture of two army medical officers with the Order of the Bath by Her Majesty at Windsor, that the value of the distinction is enhanced by its personal reception at the hands of the Sovereign; but at the same time we feel that, while the two medical officers referred to were personally invested along with a number of their combatant brethren, there was a difference in the subsequent proceedings which must have struck the most unobservant, and which is so obvious that it can only be considered to have been intentional, as indeed under all similar conditions it has been habitual. I mean that while a fairly representative proportion of the other officers were invited to dine at the Royal table, neither of the medical officers was so distinguished. My readings of the *Court Circular* are very cursory and occasional; but looking back over an experience of five-and-twenty years' service I cannot recall a single instance to my own knowledge, or that of any medical officer of whom I have inquired, of any member of the Army Medical Department, from the Director-General downwards, having ever been honoured with a command to dine at the Royal table. So long as such invidious distinctions are made, Royal Warrant may be heaped on Royal Warrant, and army medical officers may be adorned with brass hats and extra tinsel and glitter, but all will fail to remove the lingering sense of social inferiority.

Yours truly,

Dec. 17th, 1879. HONI SOIT QUI MAL Y PENSE.

Mr. David Edgar Flinn.—We concur in many of the views of our correspondent; but if the gentleman referred to is qualified, and ready to do the duties of the office, we doubt whether it would be of any use to protest.

Alphonse.—Our correspondent is really the best judge in such a question. Ten guineas would be a reasonable fee.

OXIDE OF ZINC IN CHRONIC ECZEMA.

To the Editor of THE LANCET.

SIR,—At this season of the year, when eczema seems to take the opportunity of worrying the life out of its victims, I beg to send you my experience of a simple palliative remedy, which has acted magically in more than one inveterate case, and which I consider a great boon for relieving that most unmanageable disease. The case in which I discovered it was a fat, healthy woman up to the time she was attacked with the acute form, and which left her body and extremities heir to the chronic disease in the most aggravated form. Everything I tried, both internally and externally, that I ever read or heard of, even oxide of zinc in other shapes besides the one that happened to relieve. In this case I ordered two or three different applications each day to different parts, with the hope of finding something to mitigate the burning pain. One happened to be the oxide of zinc, four drachms, rubbed up with eight ounces of water, adding one drachm of hydrocyanic acid (Scheele's); the other two the woman said aggravated the pain, when this gave instant relief, and, in fact, her pain of weeks was suddenly, as she said, cured.

I have tried the same lotion, and without the hydrocyanic acid, in many cases since with the most wonderful relief, and which can be improved on by bandaging oiled-silk over lint soaked in it on the legs and arms.

Thinking this well worthy the notice of some of our professional brethren who may sometimes find themselves puzzled to relieve that desperate of all skin diseases, I remain, Sir, yours, &c.,

Chelsea, Dec. 1879. H. FISHER, M.D.

Dr. Radcliffe Crocker writes to correct an error in our List of Contributors for 1880, in which he is described as "Assistant Medical Officer to the Skin Department of University College Hospital." Dr. Crocker was, it will be remembered, on the death of Dr. Tilbury Fox, appointed Physician to the department named.

Constant Reader, (Southsea.)—The best work is "Anatomy for Artists," by Professor John Marshall, F.R.S., and published by Messrs. Smith, Elder, and Co., Waterloo-place.

THE CANAL BOATS ACT, 1877.

To the Editor of THE LANCET.

SIR,—Many philanthropists will now think of that numerous class of their fellow-creatures who dwell in canal boats, and may perhaps think that, thanks to the legislation of 1877, a great improvement has been effected in these poor folks' way of life. I wish it were so, but facts are otherwise. As the Act is virtually a dead letter, allow me to point out how it works, or rather does not work.

1. No authority has power to detain any boat committing a breach of the Act, unless for the purpose of visiting and disinfecting it when necessary; consequently in other circumstances, if a boat is not registered, is in an insanitary condition, or without proper separation of sexes, before a summons can be served on the offending person, he is away out of ken and jurisdiction of magistrates or other district "powers that be."

2. I, as an official duly appointed to carry out the Canal Boats Act, have this year supervised 492 of these vessels. I have only managed to register two of them! Certainly the boats of some firms were registered; but in many instances there was palpable evasion of the Act, and I could do nothing to prevent this.

Nor shall I or any of my compeers succeed in carrying out the wishes of its promoters until our hands are strengthened. The reluctance of parents to place their children in any school board list entirely prevents voluntary registration when children are of school age.

Yours obediently,

BENJ. BROWNING, M.D., R.N., &c.,
Medical Officer of Health to the Vestry of
Dec. 1879. Rotherhithe.

"SISTERHOODS."

To the Editor of THE LANCET.

SIR,—The article in THE LANCET of Dec. 20th on the above subject acquires additional point when considered together with the letter of the ex-Physician to the Hospital for Sick Children at Manchester. It would appear that the institution at Pendlebury is to lose the services of a physician, who has during the last three years given ample evidence of his fitness for the position he has held, simply on account of some silly dispute about sisters and nurses. I have the greatest possible respect for those ladies who, in a spirit of self-sacrificing devotion, give their best energies to the noble work of nursing the sick in our hospitals, and hitherto their influence has been beneficial, inasmuch as it has been exercised in the interests of the sick, and in aiding the work of the physicians and surgeons with whom they have acted. But if skilled officers are liable to be snubbed and suspended in consequence of misunderstandings amongst these ladies, the sooner they are replaced by a staff of properly trained and properly paid nurses the better it will be for the hospitals and the patients. I know nothing of the sisters or nurses who have been engaged at Pendlebury Hospital; but all who know Dr. Humphreys and the work he has done feel that the Committee should hesitate before they deprive the charity of the services of one whom they will not easily replace.

I remain, Sir, yours &c.,

Dec. 22nd, 1879. SUPERSEDEAS.

EFFECTS OF THE ELECTRIC LIGHT ON VISION.

To the Editor of THE LANCET.

SIR,—In your issue of about three weeks ago some remarks were made as to the possible evil effects of the electric light on the organs of vision; but as no one has taken up the point, I venture to give you my own experience of it.

In the early part of the present year I visited the exhibition of electric lighting apparatus at the Albert Hall, and examined the character of most of the lights pretty narrowly. On my return home in the evening I was surprised and annoyed to find that the gas-lamps in the street and the house appeared to be of a rose colour, with a similarly coloured halo round the flame. This effect subsided gradually, and at the end of a week had disappeared. The phenomenon was probably the result of excessive exposure of the retina to the rays of the electric light; but it is not impossible that a somewhat similar effect might be produced by long-continued exposure to a less powerful, because less concentrated glare.

Hoping that this communication may throw a little light on the question started in your remarks, which certainly requires investigation,

I remain, Sir, yours faithfully,

EDWARD C. BOUSFIELD, L.R.C.P. Lond., &c.

Burgoyne House, Wandsworth, Dec. 15th, 1879.

ERRATUM.—Our list in the Annus Medicus of the witnesses examined by the Select Committee on Medical Bills was incomplete. The number examined up to this point is thirteen—viz., Dr. Acland, Mr. Simon, Dr. Quain, Dr. Robt. D. Lyons, Dr. Waters, Dr. Glover, Sir Jas. Paget, Mr. W. J. C. Miller, B.A., Sir Dominic Corrigan, Professor Turner, Rev. Samuel Haughton, Mr. Ernest Hart, Dr. Andrew Wood.

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COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Spence, Edinburgh; Dr. Brown-Séquard, Paris; Mr. Bader, London; Mr. Macnamara, London; Dr. Murrell, London; Mr. Teevan, London; Mr. G. Holmes, London; Dr. Macnalty, Pattendale; Dr. R. Neale, London; Mr. A. T. Smyth, London; Mr. Trenerry, Bristol; Mr. Crowther, Luddenden; Dr. Boustield, Wandsworth; Mr. Crosse, Norwich; Dr. Hollis, Freshwater; Dr. Garlick, London; Dr. Masterman, Ixworth; Messrs. Maw and Co., London; Dr. Kilner, London; Mr. H. Morris, London; Mr. Padley, Swansea; Mr. Carte, London; Mr. Dunlop, Bradford; Dr. Dolan, Halifax; Dr. Drummond, Newcastle-on-Tyne; Mr. Riccard, Southmolton; Dr. Low, Helmsley; Mr. Hardey, Birmingham; Mr. Masters, Thrapston; Messrs. Herbert and Co., London; Dr. Hope, York, Western Australia; Dr. Juler, London; Dr. Kartulis, Alexandria; Dr. Muirhead, Edinburgh; Dr. Greenway, Plymouth; Dr. Brown, Wansford; Mr. Croft, London; Mr. Philips, Plymouth; Dr. H. A. Allbutt, Leeds; Mr. Menzies, Bromley; Mr. Ayrton, London; Dr. E. Lane, London; Mr. W. S. Watson, London; Mr. Owen, Pwllheli; Mr. Twelvetrees, London; Mr. Teale, Leeds; Mr. Solomon, Titchfield; Dr. Flinn, Brownhills; Mr. Smith, Halifax; Mr. Lovett, London; Dr. Massey, Putney; Dr. Van der Meulen, Utrecht; Mr. Grantham, Dalston; Dr. Law, Richmond; Dr. Tatham, Walford; Dr. Satterthwaite, New York; Mr. Batterhouse, New York; Mr. Kenyon, Bury; Mr. Burnie, Bradford; Mr. Furder, Maidstone; Mr. Groves, London; Mr. Ramsden, Halifax; Mr. Greenwood, Liverpool; Mr. Thompson, Chelmsford; Mr. Davis, New York; Mr. Hall, London; Mr. Murphy, London; Mr. Tyson, Folkestone; Mr. Streker, Upton; Dr. M'Veagh; Mr. Carey, Widnes; Dr. Reid, Jersey; Dr. Pike, Maldon; Mr. Redwood, Rhymney; Mr. Birdwood, Pucklechurch; Dr. J. Williams, London; Dr. Pratt, Newtown; Mr. Rickard, Southmolton; Surgeon-Major Curran, Warrington; Mr. Edwards, Furneaux Pelham; Mr. Bathe, New Swinton; Dr. Mackie, Oldham; Mr. Beck, Leamington; Mr. Dobson, Aberdeen; Mr. Ryley, London; Dr. Maclaren, Tarbert; Dr. Fisher, Chelsea; Dr. Thorn, Crieff; Mr. S. Snell, Sheffield; Surgeon-Major Smith, Bristol; Mr. Hebbert, London; Mr. Ward, Natal; Dr. Lediard; Dr. Bruce, Kirkwall; Dr. Rose, Hampstead; Mr. Darlington, Bradford; Mr. Dickson, Worksop; Mr. Welton, London; Mr. Morrison, London; Mr. Carrington, Brixton; Mr. Craigie, London; Mr. Burman, Richmond; Mr. Brunton, Sydenham; Mr. Bilby, London; Mr. Harrison, Liverpool; Dr. Crocker, London; Mr. Bradford, London; Dr. Patterson, Glasgow; Dr. Maclaren, Carlisle; Mr. Whitmore, Kensington; Mr. Butlin, London; Mr. Barrow, London; Mr. Francis, Swansea; Mr. Eaton, London; Mr. Johnson, Kirkby Overflow; Dr. Cannie, Dublin; Mr. Bush, Nottingham; Mr. Saunder, Manchester; Mr. Brett, Leicester; Mr. Cocking, London; Mr. Hend, Tamerton; Mr. Smith, Aberdeen; Dr. Bowes, Berrywood; Dr. Jones, Birmingham; Mr. Macdonald, Dumfries; Surgeon-Major Spurgin, Northampton; Mr. Wormesley; Thorpe; Dr. Bigelow, Boston, U.S.A.; Dr. Kroczynski, Lemberg; Mr. Caird, London; Mr. Carrington, London; Mr. Taylor, Barnsbury; Mrs. Pope, Wimbledon; W. R. G. D. I.; Keowe; A Constant Reader; Accoucheuse Diplomée; Alfonso; An M.D. of Twenty Years' Standing; L.S.A.; Acting Surgeon; L.R.C.P.; M.D.; A Registrar; G. E. A.; A Surgeon, South America; Surgeon-Major; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from — Mr. Elliott, Carlisle; Mr. Hales, Burslem; Dr. Walker, Aldborough; Dr. Pocock, London; Mr. Lewis, Hay; Mr. Hopkinson, Harrogate; Mr. Firth, Edinburgh; Mr. Kay, Claycross; Mr. Crofts, Burton-on-Trent; Mr. Cohen, Aberdeen; Messrs. Keith and Co., Edinburgh; Mr. Cronie, Charleville; Dr. Gramshaw, Gravesend; Dr. Eastwood, Darlington; Mr. Arnison, Allendale; Mr. Easton, Jedburgh; Mr. Jennings, Coleford; Mr. Bowes, Herne Bay; Dr. Tuckwell, Oxford; Dr. Gramshaw, Lowestoft; Mr. Hesslegrave, Marsden; Mr. Howell, Cambridge; Dr. Crerar, Maryport; Mr. Simpson, Sheerness; Mr. Harding; Mr. Fry; Mr. Pike, London; Mr. Barnet, Weston-super-Mare; Mr. Cave, Bromyard; Mr. Young, Chilton Polden; Dr. Water, South Petherton; Mr. Davis, Wrexham; Mr. Lovegrove, Liverpool; Mr. Larken, Hexham; Medicus, London; A. M. W., Crumlin; E. T., Bristol; Practitioner, London; A. C. G., Salisbury; Unqualified Assistant; M. B.; A. B. C., Borough; H.; Principal, West Brighton; X. M. D.; G. F., Framlingham; L. C., Gwynfa; M.D.; Cosmopolitan; M.R.C.S., Leeds; F.R.C.S., Kennington; T. H. M., Great Yarmouth; Proteus, Edinburgh; X. Y. Z., Leamington; M.R.C.S., Leamington; G. E. M., Manchester; W. A. W., Sheerness; R. S. C., Weston-super-Mare; Medicus, Biggleswade; A. X.; Paratus; W.; Dr. P., Finsbury-park; M.R.C.S.

Northern Echo, Carlisle Journal, Orcadian, High Peak News, Dundee Advertiser, Barnsley Chronicle, &c., have been received.

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Medical Diary for the ensuing Week.

Monday, Jan. 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON. — 8½ P.M. Lettsomian Lectures: Mr. W. F. Teevan, "On the Treatment of Stricture of the Urethra."

Tuesday, Jan. 6.

ST. MARK'S HOSPITAL.—Operations, 9 A.M.
GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Tyndall, "On Air and Water." (Juvenile Lectures).
PATHOLOGICAL SOCIETY OF LONDON. — 8½ P.M. Annual Meeting for the Election of Officers &c.—The following Specimens will be shown:—Large Gallstone passed per Anum, with Remarks on the Structure and Formation of Biliary Calculi; some Urinary and Intestinal Calculi; Syphilitic Disease of Bone in a Fœtus of six months; late Hereditary Syphilis; Malformation of the Heart, with Transposition of Aorta and Pulmonary Artery; Dislocation of the External Semilunar Cartilage; Organs affected by Visceral Syphilis; Dislocation and Fracture of Clavicle; Dislocation Forwards of first Phalanx of the Thumb; Œsophagus and Stomach from a Case of Carbolic-acid Poisoning; &c. &c.

Wednesday, Jan. 7.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARK'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturda at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
EPIDEMIOLOGICAL SOCIETY (Council-room of University College). — 8 P.M. Dr. Norman Chevers: "Notes on the Relapsing Fever of India." — Surgeon-General Ross: "Remarks on Epidemic Diseases (Men and Animals) in the Colony of Natal."

Thursday, Jan. 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION. — 3 P.M. Professor Tyndall, "On Air and Water." (Juvenile Lectures).
HARVEIAN SOCIETY.—8½ P.M. Election of Officers; President's Address; and Conversazione.

Friday, Jan. 9.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Ordinary Meeting.
CLINICAL SOCIETY OF LONDON. — 8½ P.M. Annual Meeting; Election of Officers.—Report of the Committee appointed to inquire into the Deleterious Effects which follow the prolonged and continuous use of Chloral in ordinary doses. — Dr. Goodhart, "On a Case of Rheumatic Fever treated with Salicylate of Soda, and terminating fatally." — Mr. Pick, "On a Case of Subastragaloid Dislocation." — Dr. Hewan (for Mr. Adam), "On a Case of Bullet-wound of the Lung." — Mr. Brodhurst will show a Case of Genu Valgum (shown also last session).—Mr. T. Smith will show (1) a Case of Spontaneous Gangrene; (2) two Cases of Cystic Hygroma; (3) a large Nævus.

Saturday, Jan. 10.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Clinical Lectures ON LOCOMOTOR ATAXIA.

Delivered at the National Hospital for the Paralysed and Epileptic,

BY THOMAS BUZZARD, M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL.

LECTURE I.[1]

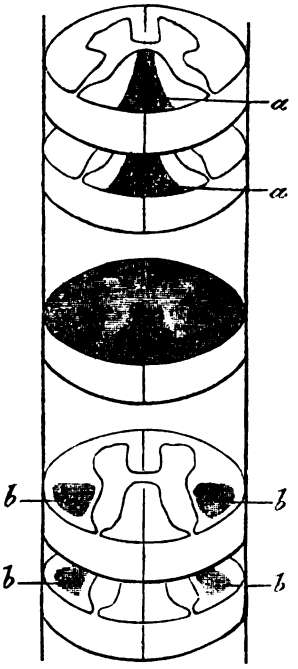
WE had lately the opportunity of examining after death the spinal cord of a man who had suffered for the last year of his life from complete paraplegia. His paralysis was due to destruction of the essential elements of the cord in the mid-dorsal region brought about by a sharp angular curvature of the spinal column. Sections of the hardened medulla, stained with carmine, which I have prepared, exhibit important changes under the microscope, as you will presently see. But before describing these, it may be well to refer to a few points connected with the anatomy of the spinal cord.

The spinal cord, I may remind you, consists of an irregular cylinder of grey matter (roughly represented on horizontal section by the letter H), imbedded in white substance, much as the wick of a candle is enclosed in the composition. The grey matter is composed of ganglionic nerve-cells and nerve-fibres, and the white substance consists almost entirely of nerve-fibres. Not all, but a very large majority of these fibres, take a longitudinal direction, so that when you cut the cord across they are seen under the microscope as circles of varying diameter with a central dot. This dot is the axis-cylinder (the essential element of the fibre), and the circular line defines the limit of the myeline in which the axis-cylinder is enclosed. But besides the nerve-fibres and cells (which may be called the parenchymatous elements) there is a quantity of interstitial fibrous tissue in the cord forming a network, the use of which appears to be to transmit the capillary bloodvessels to the substance of the cord, and to hold the more delicate nervous elements in their places. This connective tissue surrounds the cord outside beneath the pia mater, and penetrates into its substance at various points, breaking up into meshes of increasing fineness, in which the nerve-fibres and cells are included. Indeed, its office, as it appears on cross-section, is not very unlike that of the fine brass wire which forms little *cloisons*, or cells, for the reception and support of the enamel upon the well-known metallic vases of Japan.

Now, in the cord which was destroyed in its mid-dorsal region, you will observe some very important changes. In the first place, at the point where it was most damaged the nerve-fibres no longer present any axis-cylinders, and the ganglionic nerve-cells are altered in appearance; and, in the second place, the connective tissue has increased enormously, so much so, indeed, that instead of being subsidiary to the nerve elements, it now tends to monopolise the section. The changes are the result of chronic inflammation of the spinal cord, to which the term myelitis (μυελός marrow, ῖτις) is applied. And because grey matter and white are indifferently merged in the destructive process, which involves, as you will see, the whole transverse section, this myelitis is termed *diffuse*.

If we make transverse sections of the cord at various points above and below the part affected with this diffuse myelitis, we find that changes of a similar kind, as seen under the microscope (especially increased growth of connective tissue and destruction of nerve-fibres), extend to each extremity.[2] In the cervical region, however, as well as in the lumbar region, they are no longer diffused over the whole section, but are concentrated in certain definite tracts. Downwards these changes are seen to occupy, in the lumbar region, the posterior portion of each antero-lateral column (*b*, *b*); upwards they are limited, in the cervical region, to two bands which border the posterior fissure (posterior median columns or columns of Goll, *a*, *a*). If we make various sections we find similar appearances in each. The term "sclerosis" is applied to this alteration of tissue; and because the changes run, as you see, in different bundles of fibres taking a longitudinal course, the condition is called "fasciculated sclerosis."

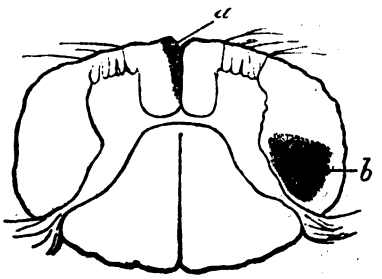
FIG. 1.



A similar effect is well known to be produced by a destructive lesion of a certain portion of the brain-substance (I need not here describe it in detail), from which degenerative changes of the kind described may be traced downwards through the crus cerebri, pons, and medulla oblongata, into one of the anterior pyramids. The fibres of the anterior pyramid for the most part, as you know, cross over to the opposite side of the cord, but it has been shown by Flechsig that a varying proportion of them descend (without crossing) on the same side just at the inner edge of the anterior column bordering the anterior median fissure.

In Fig. 2, which will stand for a section of the cord in its lower cervical region, *a* represents these *direct* pyramidal fibres, and *b* the pyramidal fibres which have crossed over from the left side of the brain to the right side of the cord.

FIG. 2.



Now, it is important to remark that whilst (as shown by this latter instance, as well as by the former, Fig. 1) chronic myelitis or sclerosis follows a *descending* course in a system of fibres in the antero-lateral columns, it takes an *ascending* course in the system of fibres constituting the posterior median columns. Why should this change—systematic myelitis it is sometimes called—travel downwards in the one system and upwards in the other? Türck, who, I believe, first described these changes, explained their occurrence by reference to the law established by Augustus Waller in regard to degenerations of nerve-trunks after section. Waller, you will remember, made the extremely important observation that if the anterior root of a spinal nerve were cut through, the nerve-fibres thus separated from the cord degenerated right down to their remotest periphery. If, however, the posterior root were cut through between the cord and the ganglion upon the nerve, it was now not the peripheral but the central portion of the nerve which degenerated, that part which lay between the point of section and the cord. The spinal ganglion thus appears to perform the office of a trophic centre for the sensory nerve, whilst the spinal cord does the same for the motor nerve. According to this view, then, the fibres in the antero-lateral columns, which have been picked out by the degenerative process, would have their trophic centres above, and those of the posterior median columns would have theirs below.

[1] The substance of the lectures as delivered has been rearranged and broken up into several short lectures for convenience of publication.

[2] Important lectures by Professor Charcot on the subject of these secondary degenerations are now in course of publication in *Le Progrès Médical*.

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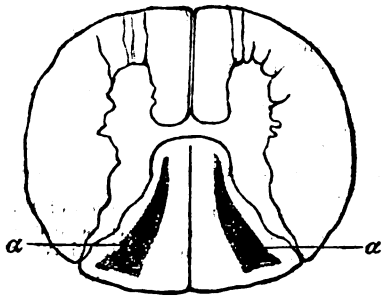
You must remember, however, that a centre of this kind is hypothetical, and we cannot indicate its position.

For the rest the mode of development of the spinal cord will probably help to explain the distinctness and independence of various strands of fibres which pathological anatomy thus indicates. The columns of Goll, the lateral columns, and the anterior median columns (according to Pierret) are each developed by separate points and at a somewhat later period than the outer portions of the posterior columns to which I will now draw your attention. The posterior root of a spinal nerve, on arriving at the cord, divides into two parts, one of which enters the posterior horn and the other (the larger) consists of fibres, which take a more or less vertical direction on their way to the grey substance. It would seem, indeed, that these fibres of the posterior roots practically constitute, at all events to a great extent, the outer portion of the posterior column—the part which lies between the column of Goll and the posterior horn. In consequence of this the part has been called by Charcot and Pierret the "posterior root zone."

Now, it is not only in those columns which you have seen picked out by degeneration (Figs. 1 and 2) that fasciculated sclerosis may occur. It is also found in the posterior root zones which I have just described to you. The same kind of change, with the same tendency to travel, is found to constitute the essential lesion in locomotor ataxia, and to have its seat in the posterior root zones. In Fig. 3 you will see

FIG. 3.



marked (at *a*) the site of the sclerosis of the posterior root zones, which is characteristic of locomotor ataxia. But as a matter of fact you must not expect to meet with the change limited, as it is in the drawing, to this situation. You will much more often find, in cases of locomotor ataxia, that in the upper lumbar and dorsal regions the change involves the whole of the posterior columns from one horn to the other, whilst in the cervical region it may be almost entirely confined to the columns of Goll. It is to Charcot and Pierret, whose investigations into the morbid anatomy of locomotor ataxia are of world-wide renown, that we owe the explanation of this apparent anomaly. They have shown, and the explanation is generally accepted, that the sclerosis of the middle portion (columns of Goll) is really a secondary degeneration consequent upon the systematic myelitis beginning in the posterior root zones of the lumbar region—a sclerosis secondary to a sclerosis. I have called your attention already to the sclerosis of the columns of Goll, which takes an ascending course as a consequence of diffuse myelitis of the dorsal region, and here we have again a degeneration in the same columns, taking a similar ascending course as a result of a destructive change in the outer part of the posterior columns. This change—viz., the sclerosis of the posterior root zones,—which is, as I have said, to all intents and purposes the essential lesion in locomotor ataxia, is generally supposed to be a primary one. Whereas, as we have seen in the two instances adduced, the change in the columns of Goll is evidently apt to occur as a secondary degeneration, the alteration of similar character in the posterior root zones is considered to be independent of a previous lesion—to be, in fact, a primary change. (In both cases, I should say, it is supposed that the change commences in and is propagated by the essential nerve element, not by the connective tissue.) There appears to me, however, to be some clinical evidence to suggest the probability that the change in question is at least not unfrequently a secondary affection, and that it commences in the connective tissue.

Let me add that, besides the appearance described as found post mortem from locomotor ataxia, there are usually others. The pia mater shows evidence of chronic inflammation; it is usually thickened and adherent to the diseased portions of the posterior columns. The posterior roots also are seen to be atrophied between the cord and the spinal ganglion, but not, according to Vulpian, beyond the ganglion. Other changes, too, are found, upon which I need not now dwell.

These, then, are probably the most important anatomical features of a disease for the practical recognition of which we have been first indebted to the late Dr. Duchenne (de Boulogne), whose monograph upon it must ever retain its place amongst the classics of medical literature. For the symptomatology of the affection in its typical form, one cannot do better than quote from the definition given by Duchenne in the last edition of his work.[3] "Progressive locomotor ataxia," he says, "is characterised—1. By an overgrowth of connective tissue (sclerosis) of the posterior columns of the cord to a greater or less extent. 2. During an early period by a paralytic strabismus (paralysis of one or more motor nerves of the eyeball); by atrophy of the optic disc, and morbid conditions of the pupil; by special, pathognomonic pains, lancinating, lightning-like, tearing, deep-seated, with cutaneous hyperæsthesia of the skin circumscribed to the seat of pain—each pain not lasting more than a few seconds. 3. During a second period by disturbance of co-ordination and equilibration equally characteristic, localised in the lower extremities, extending to the upper limbs during this period, aggravated by darkness, but occurring even when the patient can help himself with his eyes. 4. By a feeling of weakness whilst standing upright and walking, which is manifested at the same time with the troubles of motor co-ordination and equilibration, and which contrasts with the integrity of the force of individual movements. 5. By loss of sensibility in different degrees (analgesia and anæsthesia of the skin and parts beneath it—that is to say, of the nerves, muscles, osseous and articular surfaces), anæsthesia which increases the disorder of co-ordination and equilibration, but is not necessary for its production. 6. By functional troubles of the genital organs, of the bladder and intestine (impotence or satyriasis), micturition and defecation difficult or impossible. 7. Lastly, by the slow and fatally progressive development of all these morbid phenomena, and by their manifestation usually in the order described."

Now it is to be remarked that the ἀταξία (*disorderliness*) from which the disease has acquired its most commonly employed title, whilst it may be a very prominent feature, is by no means a constant one. It is often absent for a considerable time, and it may never occur, or it may be so slight as to be recognised with difficulty. This name therefore tends to mislead.

The term Tabes dorsalis, first applied to the disease by Romberg, seems to me better because it simply describes a broad physical feature observed after death—a shrinking of the cord, especially in its dorso-lumbar portion. So you will understand that when I speak of "tabes dorsalis," or "tabes," I mean to signify the disease more commonly known as locomotor ataxy.

Of this disease I propose to show you several examples. On the present occasion the patient who is shown is a typical instance. Others, which you will see later, have been selected as representing various phases of the disease, which are liable to give rise to more or less error in diagnosis. Tabes is more widely spread than is commonly supposed, and the mode in which it is often masked constitutes one of the most interesting subjects in pathology.

The patient, C. B——, aged forty-one, came here last December, with symptoms of locomotor ataxia, and although he has in some respects improved, his disease cannot fail to be recognised at a glance. In walking his feet are widely separated, with the toes turned out; and it is evident, from the serious attention which he gives to the process, that it is no longer entirely automatic with him. He never takes his eyes off the ground; his steps are uneven in length, and the natural rhythm of walking is wanting, so that, even without seeing him, if you heard him walk along a passage you would recognise the peculiarity. The fore part of the foot is flexed sharply upwards, sometimes even more than once, whilst the leg is making the step, and then as often as not the heel comes upon the ground with a stamp. This gives a look of insecurity to his walk, which is greatly increased when he turns round. If he places the feet close together, thus narrowing the base upon which he stands, and closes

[3] L'Electrisation Localisée, Paris, 1872.

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his eyes, he totters to and fro, and would fall but for help.

In picking up an object from the table the hand is usually first projected past it, and then you see one or two fingers suddenly over-extended when you would expect them to be flexed. When the hand is closed as often as not he has failed to grasp the object. There is some cutaneous anæsthesia of his legs and arms.

For several years he has suffered from what he calls "rheumatic" pains—pains in the legs and arms, and occasionally a dart through the head. He describes the pains in his limbs as "excruciating." They are sudden, and last perhaps a second or two. He has them in paroxysms, which have often kept him awake all night, and they are sometimes so bad that he has cried with them. He has lately had a sudden scalding or twitching sensation in the perineum, over in an instant. At times he has had double vision, and on one occasion there was ptosis of the left upper eyelid, which lasted some weeks.

His legs occasionally give way in walking. When he came here there was not much loss of power in his legs, but they are not so strong as they were. His pulse is quick. The pupils of the eyes are small, and do not contract to light. They do contract, however, during accommodation of the eyes.

There is total absence of the patellar tendon-reflex in each knee.

The consideration of some of these symptoms and their value for diagnostic purposes is reserved.

ABSTRACT
OF A

Clinical Lecture
ON

BIGELOW'S OPERATION FOR STONE.

BY THOMAS SMITH, F.R.C.S.,
SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

GENTLEMEN,—I am happy to have an opportunity of bringing before you a case now in the hospital on whom I have performed that operation for stone to which we give the name of Bigelow's operation. The proceeding is a new one, founded on principles different from those which have hitherto guided us in the performance of lithotrity, and it is possible, or, rather, highly probable, that it will entirely reform our practice in the treatment of stone in adults.

And, first, I would have you understand what position the operation of lithotrity occupied as a curative measure before Professor Bigelow introduced his proceeding. Lithotrity was used on adults, and for those stones which, if of an oxalate formation, did not exceed one inch in diameter, while in a general way it was pushed somewhat further in the case of those whose calculi were of a softer kind, either lithic acid, lithates, or phosphates; these stones might be crushed even if their longest diameter measured as much as two inches. Stones of larger dimensions than those I have mentioned were generally treated by lithotomy. Of course other circumstances than the age of the patient and the dimensions of the stone have to be taken into consideration in choosing between the two operations, but as these do not bear directly on the subject we have under consideration to-day, I shall not refer to them here.

The object in view in lithotrity has been at all times the removal of the stone with as little damage to the patient as possible, and in pursuit of this object certain rules have been laid down by professed lithotritists, and generally acted on by surgeons. Thus, in speaking of the operation and referring especially to the use of the lithotrite in a fresh case at the first sitting, Sir Henry Thompson, whom I have already quoted, says:—"The mere sojourn of an instrument in the bladder is a source of irritation precisely corresponding to the time, within certain limits, it continues there; anything, therefore, that will diminish the time of the operation and the amount of movement and concussion will necessarily give a greater prospect of success." And, again: "As a rule, then, at first commence with one introduction of the lithotrite, crushing four or five times during a sojourn of, say, two minutes in the bladder."[1] As regards the after-treatment, Sir Henry Thompson tells us:—"You should not encourage the early passing of fragments. They rest at the bottom of the bladder, and I usually keep the patient in bed and pretty much on his back for thirty-six hours or so afterwards; he should, at all events for that period of time, pass urine in that position, so that the sharp angular fragments are left at the bottom of the bladder, and are not forced into the urethra." The object of this delay in the passage of fragments being that they should, by remaining for a time in the bladder, become somewhat water-worn, and so less likely to irritate the urethra.

Mr. Cadge, who from his experience can speak with more authority than any other provincial surgeon, thus expresses himself on the same subject:[2]—"In common with all English lithotritists, it has hitherto been my habit, at the first sitting, to do but little with the instrument, not knowing what the tolerance of the bladder may be, and at subsequent sittings to act more freely. I have of course met with cases, though they are rare, in which one sitting has sufficed to bring about a cure; more frequently there have been five or six, sometimes ten or twelve, and occasionally fifteen or twenty sittings, depending in a great measure on the size of the stone and the power of the patient to void the débris. Speaking generally, the chief principles of English lithotrity, as taught by Brodie and subsequent writers, are first to do as little as possible with the instruments, especially at the first sitting, leaving the extrusion of fragments as much as possible to natural efforts; and, secondly, to use small rather than large instruments."

You may gather from these statements that in the performance of lithotrity instrumental injury was more dreaded than any harm that might arise from the irritation of fragments of stone within the bladder, and that the removal of a moderate-sized stone from the bladder by lithotrity was a process prolonged generally over some days, and not rarely running into weeks.

It is right that I should here tell you that it has recently been a growing habit with surgeons, since the use of anæsthetics in the operation, to remove after a crushing such fragments as could be washed away with this india-rubber apparatus which I here show you. It is called Clover's bottle, having been invented by the gentleman whose name it bears. Its object is to remove well-comminuted fragments after an ordinary lithotrity, where the lithotrite may have been used four or five times, and for this purpose it answers well enough; but it is not adapted for the rapid removal of comparatively large fragments of pulverised stone in considerable quantity.

Professor Bigelow's operation is founded on different principles, and necessitates an entire change in practice. He maintains[3] that the bladder is comparatively tolerant of the presence in its interior of smooth, polished instruments of a large size, even for a considerable time, but exceedingly intolerant of the rough and angular fragments of a broken stone. Thus the object of Professor Bigelow is, if possible, to crush and remove stones at one sitting, believing that the advantage of complete evacuation of fragments is cheaply purchased by an operation prolonged, it may be, for an hour or more. His operation, then, is planned for rapid and complete crushing and immediate evacuation of the fragments, and it has already been applied successfully to stones of far larger dimensions than a prudent lithotritist would have ventured to attack by the old operation. He employs a strong scoop-lithotrite, with a very wide female blade, so constructed that it can scarcely entangle the mucous membrane of the bladder within its blades if used with ordinary care, and having in the female blade an opening just beneath the spur of the male blade, which prevents the instrument from becoming clogged with the débris of the stone, and admits of a thorough pulverisation of the stone without withdrawal of the lithotrite; for you must know that an ordinary scoop-lithotrite, used on a moderately soft stone, soon becomes so choked with débris that the blades will not close, and the in-

[1] Sir H. Thompson: Diseases of Urinary Organs, Fourth edition, p. 188.
[2] THE LANCET, vol. i. 1879, p. 473.
[3] Litholapaxy, by H. J. Bigelow, M.D Boston and New York, 1878.

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strument has to be withdrawn. Bigelow's instrument is said to clear itself in its working, and not to need withdrawal on account of clogging.

For the rapid removal of fragments, Bigelow uses a series of large-sized catheters, running up to No. 20 English scale. These are, as you see, straight, having an eye close to the extremity, well rounded off at its margins, and being exactly the size of the lumen of the catheter. The catheter is connected with this, the exhaust bottle, by means of india-rubber tubing, and is removable at a bayonet joint. The india-rubber exhaust bottle, you will observe, is much stronger than Clover's, and has a glass trap for fragments attached to it below, also fitted with a bayonet joint. The bottle is worked in the same manner as Clover's; being compressed it distends the bladder with water, and on the removal of pressure its elastic recoil sucks out the fragments of stone.

[Here followed a description of the manner in which fragments were sought and removed.]

I now give you the history of the patient on whom you have seen me operate. The notes were taken by Mr. Kendall, his dresser.

Removal of four ounces of vesical calculi by Bigelow's operation, in two sittings.—J. B ——, admitted on Nov. 25th, 1879, under Mr. Smith's care, into Henry ward (a patient of Mr. N. Clifton's), is a well nourished man, sixty-nine years old, and has been for many years a sergeant in the police force. About twenty years ago he noticed that he did not pass his water so freely as he had been accustomed, but this did not cause him uneasiness. About nine years ago he was very much troubled by an uncomfortable pressing feeling at the neck of the bladder. This uncomfortable feeling continued till it became pain in the above situation. About twelve months ago the patient began to suffer from incontinence, which continued for a short time, and then ceased. Three or four months after, however, he again began to suffer with incontinence, which has increased to such an extent that he is obliged to wear a urinal. He complains that his water runs freely from him, and that he has no control over it. He suffers most incontinence at night, and urinates best while lying on his right side. About five or six weeks ago he noticed that his urine was becoming turbid, and as it continued to become more muddy, and the feeling of pain at the neck of the bladder was increasing, he consulted a surgeon, who passed a sound, and thought he detected the presence of a stone. On the withdrawal of the sound the patient bled a little. He has resided for many years in Islington, and has been accustomed to walk about without inconvenience. He experiences no inconvenience when riding in an omnibus or in a railway carriage. He complains greatly of incontinence and a frequent desire to micturate. He is unable to pass water while standing. He tries to pass urine about three times in an hour. He passes it involuntarily while in bed. Urine, sp. gr. 1010, acid, no albumen, no phosphate; his urine is drawn off every morning and tested.—Nov. 26th: Mr. Smith passed a sound, and detected what he took to be phosphatic deposits. — 28th: His urine is still acid, and contains much sediment. He was placed under gas and ether for twenty minutes, and Mr. Smith washed out his bladder with Bigelow's apparatus; about three ounces (dry weight) of stones were removed.—29th: The patient is very well, and feels no ill effects from the operation.—Dec. 4th: His urine is still acid, and contains much sediment; there is much incontinence. He usually passes about a pint and a half of water during the night. He was placed under gas and ether for about twenty-four minutes. Mr. Smith introduced a lithotrite and crushed some stones; he afterwards washed out the bladder; about an ounce (dry weight) was extracted. To facilitate the introduction of a large catheter the meatus of the urethra was enlarged by an incision downwards. — 5th: The patient passed a good night, and feels no ill effects from the operation; is up and about the ward. Temperature normal.—8th: The patient is discharged. He is able to micturate while standing up, and no longer complains of incontinence. Urine acid; very little sediment. The stony matter consists of round small calculi and fragments, which appear to have been composed of similar stones. One of the calculi on section shows a round nucleus surrounded by concentric laminæ. On analysis, the concretion was found to be composed of uric acid in abundance, calcium, magnesium, ammonia (a trace), phosphates (a trace).

Here we have a man in his seventieth year, with more than four ounces of stones in his bladder, suffering from incontinence of urine, leaving the hospital four days after operation in comfort and cured, for the time at least, leaving not only his stone behind him, but his incontinence of urine.

You may observe that though I acted on Bigelow's principles, I did not use his catheters or his lithotrite; I could not procure his instrument, so I used the lithotrite I thought I could employ most to the patient's advantage—a scoop-lithotrite, which was changed for a fresh one each time it became clogged by fragments. The catheter I used for the removal of the fragments was essentially Bigelow's, with a short curved beak to facilitate its introduction in my hands; its size was No. 16 English scale. The first sitting lasted in all twenty minutes, and during that time I was employed a quarter of an hour; in the second sitting, six days later, the patient was half an hour under the influence of the anæsthetic; the washing and crushing taking twenty-five minutes. He suffered no inconvenience of any kind from either operation, and the only blood seen was that which flowed from the incision of the orifice of the urethra at the second operation.

You may think that because on the first occasion I did not remove the whole mass of stones I did not follow out Bigelow's principles; but I would have you observe that the stones and fragments of stone were not of my making. His bladder had become to a great extent used to their presence, and I did not press the operation, as I judged that my proceeding, even if incomplete, would certainly diminish rather than increase the irritation, by diminishing the number of fragments in his bladder, and to that extent relieve his symptoms. As the patient was in the habit of passing small fragments of stone, I deemed it most prudent to remove first with the evacuating apparatus such fragments as would pass without the use of the lithotrite, and then to crush any stone or fragment that might remain behind.

I would draw your attention to the calculous matter removed by the operation. It weighed, when dry, more than four ounces, and consisted of globular stones of all sizes, from the size of a nut (these have been, of course, broken by the lithotrite) down to stones not larger than No. 5 shot. A countless number of these little stones have undergone spontaneous fracture in the bladder, their superficial layers splitting asunder and their nuclei escaping and looking like empty husks. This is a subject that has been studied by Dr. Ord, who attributes the spontaneous rupture of urinary stones to the central part of the stone being of different constitution from the external part; that the central part, containing mucus or other colloid capable of becoming swollen in an alkaline fluid, may burst the external laminæ on the urine changing from an acid to an alkaline condition. The stones in this case are chiefly composed of uric acid in combination with lime and magnesia.

We are not yet in a position to judge accurately of the value of Bigelow's operation as a curative measure; the materials for forming a sound conclusion do not yet exist, at least in a form available for comparison; but I will tell you of all the cases of which I can find a record. They are included in this statistical table; they are twenty-eight in number. Dr. Bigelow gives twelve in his book, and he refers to three others; Mr. Cadge[4] publishes five; Mr. Teevan[5] and Mr. Coulson[6] each one; Mr. Buckston Brown[7] three; Mr. Reginald Harrison[8] one; and I myself have operated on two patients, in each case most successfully—twenty-eight cases in all, with one death. The stones in several of these cases were of such dimensions that, but for Bigelow's operation, the patient would have been subjected to lithotomy. The largest recorded stone removed by the operation has been in one case of Professor Bigelow, where the fragment weighed 1802 grains, and the greatest amount of calculous matter, consisting of whole and broken stones, removed by the operation, has been in the case of one patient on whom you saw me operate; here the fragments weighed 1920 grains.

Though the mortality among these cases has been low, it is probable that some instances where the operation has been less successful remain unpublished. And I would particularly direct your attention to the fact that it is not the mere death-rate of the operation that we want to ascertain. We must let a little time elapse, and, if possible, get some record of the condition these patients are in after the removal of their stones—whether their symptoms are removed, relieved, or

[4] THE LANCET, vol. i. 1879, p. 471.
[5] Ibid., vol. ii. 1879, p. 697.
[6] Ibid., vol. ii. 1879.
[7] Ibid., vol. ii. 1879, p. 611.
[8] Ibid., Dec. 13th, 1879.

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aggravated; for you must know that while lithotrity can be frequently credited with real cures both of the stone and its symptoms, cases do occur in which the irritation set up by the lithotrite gives far more trouble to the patient than his original stone.

It is of great importance to surgery—that is, to those patients who may suffer from stone—to decide which are the principles that should guide us in carrying out a case of lithotrity; those that have hitherto been followed by the leading lithotritists or those advocated by Professor Bigelow.

On the lines we have hitherto followed, the operation has achieved a fair success, I cannot say a brilliant success; but to whatever point we may have arrived in diminishing the mortality, the limit of progress has probably been reached on the old lines. If, however, Bigelow's practice be founded on truer views of the whole subject (as it seems likely that it is), the domain of lithotrity has been greatly enlarged and a real advance will have been made in the treatment of stone in the bladder.

ABSTRACT
OF A

Clinical Lecture

ON

THE EXPRESSION OF THE FACE AND THE EXTERNAL APPEARANCE, AS AN AID TO DIAGNOSIS AND TREATMENT.

Delivered at St. George's Hospital, Nov. 17th, 1879,

BY T. WHIPHAM, M.B., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—In the present age of mechanical and scientific discovery there is a natural tendency (unconscious, doubtless) to disregard older methods of diagnosis, which, in the absence of the stethoscope, sphygmograph, thermometer, &c., were the mainstays of the physicians of bygone ages. Two or three of the more prominent features in the case were, for the most part, the guide of our predecessors in their diagnosis and treatment, such as the expression of the face, the position assumed by the patient, or the pulse. Far be it from me to say that you should in any way discard the invaluable mechanical aids which we are so fortunate in possessing to-day. What I would say, and what I would impress strongly upon you is this, that the methods employed by the old physicians are just as valuable as ever they were, are just as true as ever they were, and consequently ought to receive just as much consideration in the investigation of disease as ever they did. Our modern appliances doubtless amplify older methods of diagnosis, and by their aid alterations in the condition of internal organs are revealed, and in many instances actually demonstrated, which in past generations remained unnoticed or misunderstood. Thus the ear is rendered more capable of discrimination by means of the stethoscope; the touch, upon which the appreciation of the pulse solely depended (the appreciation varying with the acuteness of the sensibility and education of the physician), is supplemented by the sphygmograph, and so two of the special senses are brought to bear upon any departure from health which may exist in the heart or bloodvessels; the thermometer measures accurately variations in temperature which were once but roughly estimated by the hand. So valuable are these modern appliances that we are tempted to rely on them perhaps too much in our investigation of disease. We are not so far wanting in good sense as to despise any or either of them; but we are, I trust, sufficiently enlightened to look upon them as accessories to our art; to regard them as aids to, and not substitutes for, the special senses given to us by nature; to recognise the fact that more information may frequently be gained in one moment by the eye or the touch than could be obtained after much toil by scientific instruments.

The object which I have in view to-day is to direct your attention to the very great value which attaches to the expression of the face and the general appearance of the patient in the diagnosis and treatment of disease. It has been said, and often said, that any physician who relies solely upon such external manifestations draws conclusions from insufficient data, and is therefore very liable to err. Granted. But I would add that he who neglects such prominent landmarks is equally liable to wander from the path which leads to correct diagnosis, or at all events reaches it too often by a needlessly circuitous route. Furthermore, I would insist strongly upon the fact that a due appreciation of the external manifestations of disease may relieve the patient of a protracted examination as to the condition of his internal organs—a matter of no slight importance if he be already much exhausted by his malady. In illustration of my meaning, let me bring to your notice one or two cases which have lately been under our observation in the hospital.

A girl aged twenty-three was admitted into Roseberry ward on Oct. 30th, 1879, with high temperature (101° F.), quick pulse, coated tongue, constipation, a sharp but somewhat anxious expression of face, and with an eruption of herpes on the lips.

Now we have of late had in our wards an unusual amount of enteric fever, and, as so often happens, many of these cases commenced with constipation. Without wearying you with minor details, I may say at once that after careful examination no physical signs of pulmonary disease could be detected in this patient, and that the diagnosis lay between enteric fever and pneumonia.

It has been stated, I think by German physicians, that herpes labialis never accompanies enteric fever. I need scarcely remind you that it is extremely prevalent in pneumonia, and that its occurrence, together with high temperature, rapid breathing, &c., render the diagnosis of that disease extremely probable. These symptoms in the present case, although the physical signs of the disease were at the date of the patient's admission absent, led at once to the exclusion of the fever, and to the presumption of pneumonia. Two days later dulness on percussion and tubular breathing on the right side rendered the suspicion a matter of certainty.

Again, on the same day, a girl aged eighteen was brought to me by a relative who was under my care in the Throat department. She had been ailing for nine days with headache and giddiness; her bowels had not acted for three days; her tongue was red at the tip and edges, but otherwise coated with a thick brownish-white fur. As her temperature was above 104° Fahr., she was at once sent to bed. Examination of her chest failed to reveal anything abnormal, and there was no eruption on the body. Her expression was dull and heavy, and she lay in her bed in a state of semi-stupor, with half-closed eyelids.

I confess that on my first examination of this patient on the evening of her admission I failed to recognise the disease from which she suffered, and it is because I failed to read what was written in her face in tolerably clear characters, that I am induced to urge upon you to-day the necessity for a careful study of the face and general appearances in all cases which come under your observation.

Let us for a moment contrast these appearances in the two cases just related. In the former we noticed the bright though anxious expression, the rapid respiration, the eruption of herpes on the lips; in the latter, above all, the dull heavy look. The senses, as Sir Thomas Watson so happily expresses it, "lose their natural delicacy."[1] The condition in this last case was that known as "febrile depression," in which, to quote again from the writings of that great physician, "the expression of the face is dull and heavy, absent, puzzled, its hue thick and dusky. The patient presents very much the appearance of a person made stupid by drink."

Now, although there were several symptoms, such as high fever and constipation, common to the two cases, it was the appearance of the face rather than anything else which in the former case led to the diagnosis of pneumonia, and in the latter (after a few hours' consideration) to that of continued fever, an opinion which was three days later confirmed by the characteristic eruption and other symptoms of enteric fever. Our suspicions in each case were excited by the facial aspect, and time eventually confirmed them. I might multiply instances of this difference in the facial expression in disease. I might contrast the injected eyes and startled look of encephalitis, or the pinched but unnaturally bright

[1] Vol. ii., p. 796, ed. 1857.

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countenance of tubercle, with the stupid appearance of fever. The two cases already mentioned are, however, sufficient to illustrate the importance of such a general inspection in all cases of disease. I do not say that it is *always* possible to make even an approximate diagnosis from general inspection, but it is no little gain, gentlemen, if we are by this means, in some cases, able to state to the patient's friends the probability or otherwise of his having contracted an infectious disease. While, however, we obtain by this general inspection a certain insight into the nature of the malady before us, we gain from it, perhaps, quite as much assistance in our treatment of the case. And again I will take fever as an illustration of my point. It is familiar to you all that in severe cases of continued fever depression may be extreme, and perhaps the commencement of this depression is better indicated by the expression of the face than even by the quality of the pulse. Sir Thomas Watson exactly describes this condition of muscular weakness, to which I would direct your attention, when he says that the patient "sinks down in the bed." Prostrate, helpless, without the power or the inclination to move, he lies utterly regardless of all that is going on around him. Such depression, however, is not peculiar to fever; it occurs also in other acute diseases, and is especially remarkable when pericarditis supervenes upon an attack of rheumatic fever. It is an extremely grave symptom, inasmuch as it indicates at once that the patient's strength is failing, that our efforts must be directed to the support of that strength. It is under such circumstances that alcohol plays so important a part in fever, and if I can point out to you even one indication for its administration my remarks to-day will not have been in vain.

One case is worth a multitude of precepts; I will therefore call your attention to a patient now lying in No. 4 bed in Williams ward, a man aged thirty, who was admitted on October 3rd, 1879, with enteric fever, and who had a relapse on the thirty-second day. During the primary attack there were no unfavourable symptoms, but on the eighth day of the relapse at the time of our visit we found him "down in the bed," apathetic, with increased duskiness of face and a somewhat anxious expression of countenance. It was at once evident, apart from indications afforded by the quality of the pulse, that the man's strength was failing. Examination of his chest revealed nothing abnormal in the condition of his lungs, a suspicion of which was excited by the increased duskiness of his face. Without altering his medicine (bark and sulphuric acid) and without increasing his diet of beef-tea and milk, I ordered him five ounces of brandy. The effect was immediate, for the next day the face had in great measure lost its dusky appearance, and the patient was in all respects brighter and stronger.

I do not for an instant wish you to suppose that the administration of alcohol was not indicated otherwise than by his external appearance; but I do maintain that outward inspection of this man as he lay weak and prostrate at once suggested stimulating treatment, and, I had almost said, without the necessity for further examination.

ONE YEAR'S SURGICAL OPERATIONS IN THE WESTERN INFIRMARY, GLASGOW.

BY ALEXANDER PATTERSON, M.D.,
SURGEON AND LECTURER ON CLINICAL SURGERY.

AT the meeting of the British Medical Association held in Cork, in the month of August last, Mr. Savory, of St. Bartholomew's, delivered a most eloquent and interesting address on the Prevention of Blood-poisoning in the Practice of Surgery. In the course of his address he made some pointed remarks regarding the absence of statistics from those who practise Lister's method. With much diffidence I take up the glove, and, in the following short paper, shall endeavour to give, on a limited scale, one year's operative work, carried through on the antiseptic principle; and by that is here meant, the Listerian plan of treatment without any change or fancied improvement. Three small surgical wards, always kept scrupulously clean and thoroughly ventilated—two for males and one for females,—on the upper floor of the hospital, are placed under my charge. The beds number only nineteen, although frequently they contain twenty patients.

The following is a list of the operations, performed on resident patients only, during the twelve months extending from October 31st, 1878, till November 1st, 1879.

Summary of Operations on Resident Patients.

Nature of Operation.	Number.	Deaths.
Osteotomy	32	—
Lithotomy	3	—
Herniotomy	5	2*
Taxis	2	—
Ovariotomy	4	1†
Ligature of arteries	2	—
Amputation at hip-joint	1	1‡
,, thigh	3	—
,, ankle	3	—
,, upper arm	1	1§
,, forearm	1	—
Excision of knee-joint	1	—
,, elbow-joint	2	—
,, cervical tumours	6	—
,, mamma	6	—
,, mammary tumour	2	—
,, epithelioma	5	—
,, sarcoma	1	1‖
,, osteoma	3	—
,, uterus	1	1¶
,, tumours of scalp	2	—
Cyst of labium pudendi	1	—
Tracheotomy	1	—
Large abscesses and sinuses opened	16	—
Removal of dead bone	14	—
Radical cure of hydrocele	2	—
Hæmorrhoids removed	5	—
Fistula in ano	8	—
Vesico-vaginal fistulæ	3	—
Castration	4	—
Plastic operation on perineum	1	—
Closure of vagina	1	—
Tenotomy	4	—
Joints opened	2	—
Circumcision	1	—
Dislocations	4	—
Harelip	1	—
Resection of fracture	1	—
Uterine polypi removed	2	—
Condylomata removed	1	—
Attempted closure of artificial anus	1	—
Removal of cuboid and part of astragalus	2	—
Operation for contracted mouth	1	—
	162	7

No case of erysipelas occurred during the year, and since the wards were opened, four years ago, there has not been a single case of pyæmia.

In addition to the above, there were 162 persons treated as out-door patients, upon whom 86 operations were performed without any unfavourable result. Many of these under the old plan of treatment must have been taken into the house, thus taking up beds required for graver cases. Want of space compelled us, and the antiseptic treatment enabled us, to treat them as out-door patients. This fact is of very great importance, and is one of the greatest advantages of the Listerian method.

From Oct. 31st 1877, till Nov. 1st, 1878, there were:—

In-door patients admitted	234
Operations performed	119
Deaths	6

And the first five items were as follows (*Glasgow Medical Journal*, July, 1879):—

	No.	Deaths.
Nephrotomy	1	0
Osteotomy	6	0
Herniotomy	5	0
Ligature of femoral	3	0
Amputation of thigh	9	1

* Collapse. † Peritonitis. ‡ Shock.

§ Operation performed for very acutely destructive disease of elbow-joint in a girl of nineteen. Vomiting set in soon after operation, and continued until death, four days afterwards. Sank exhausted. No post-mortem allowed.

‖ Shock. Large tumours over spine in infant.

¶ Prolonged shock and exhaustion.

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REMARKS.

Herniotomy.—The cutting operation for strangulated hernia I have performed seventy-nine times, and have always opened the sac. We can never be certain that adhesions do not exist within the sac, nor can we form an accurate opinion as to the state of the intestines. In a case of small, acutely-strangulated femoral hernia, we may have gangrene in half a dozen hours, whilst in an old protrusion strangled in an old man (oblique inguinal, I mean) as many days may possibly elapse, and yet the bowel may retain its vitality. It is never the operation, when properly performed, which kills the patient, but the delay which takes place in seeking assistance.

Osteotomy.—In the thirty-two operations forty compound fractures were made, and Mr. Savory will admit that neither he nor any of his colleagues has had the good fortune to treat in one year so many compound fractures without some untoward complications. No doubt the patients' ages ranged from ten to thirty-one years, the best period of life for recovery from injuries, and no doubt also there was little or no injury done to the soft parts. Still the fact remains that nearly all those limbs were put up immediately after the operation, and never disturbed or looked at for some weeks, when bones and skin-wounds were found united, the dressing not being once changed. Many compound fractures from accident can be treated in a similar manner; and will any surgeon venture to affirm that a mode of dressing which ensures perfect rest to the fragments from the beginning to the end of the case, which does away with all constitutional disturbance, and which ensures the patient from all risk of erysipelas or pyæmia, is not superior to any plan of treatment hitherto practised?

Vesico-vaginal fistula outside the vagina.—The patient, a married woman, aged forty-nine, suffered for years from prolapsus of the pelvic viscera, for the support of which she had been recommended to wear a metal pessary. This she continued to wear for about a year, when pain in the lower part of the abdomen compelled her to remove it, and on doing so the protrusion at once recurred. On examination a curious state of matters is presented; a tumour larger than a child's head hangs between the thighs; the growth has a covering like skin, with patches of ulceration here and there, while on its anterior aspect there is to be seen a transverse opening an inch and a half in length, through which urine constantly trickles. On introducing a catheter by the urethra, instead of passing up behind the symphysis pubis, it turned downwards in front of the tumour, and its tip could be passed out of the opening. On introducing the finger into the rectum, it was carried down the posterior side of the mass, thus showing that the entire protrusion consisted of the rectum behind, the bladder in front, with the uterus between. The pessary had eaten its way through the posterior wall of the bladder. The fistula was cured by two operations, and by another the edges of the vaginal orifice were pared, after returning the protrusion, and brought together by deep and superficial sutures. Union was entirely satisfactory.

Removal of uterus for fibro-cystic disease.—Mrs. B——, aged thirty-two, observed for the last five years a gradually growing tumour in the abdomen. During the last twelve months the growth has increased more rapidly. On opening the abdomen, a tumour, not unlike a football in size, shape, and appearance, presented itself. To the touch it gave the idea of a very thick-walled cyst containing fluid, and was adherent to the parietal peritoneum, nearly ascending to the border of the liver, also glued to the small intestines, while below it sprang from the uterine mass by a pedicle as thick as the forearm. The cyst was tapped, giving escape to a quantity of glairy fluid, after which, the globular shape being still retained, the trocar wound was enlarged, the hand introduced, and the semi-solid contents broken up and removed. The pedicle was then transfixed, tied, and severed close to the enlarged uterus. The latter was now observed to be filling the true pelvis, and was jammed in the transverse diameter of the brim. By placing the hand on the anterior and posterior, I was enabled to rotate the uterus slightly and to draw it upwards, then to transfix and divide the thickened cervix. In dressing the case, I employed for the first time Dr. Keith's drainage-tube, and much regret that I was unfamiliar with its management. It was removed on the fourth day, and probably taken away too early. The poor woman made a hard and prolonged struggle for life. Her temperature never rose above 101°; as one of my colleagues said, "she had not strength enough to get up a temperature." She died on the eighth day, and post-mortem examination revealed only very slight traces of inflammation in the neighbourhood of the abdominal wound, while about an ounce of blood-clot, *entirely unchanged*, lay in the bottom of the pelvis. She appeared to have died from prolonged shock.

Ovariotomy.—In the fatal case many adhesions existed, and death occurred from peritonitis.

Tracheotomy.—This case occurred in an infant thirteen months old, who, when creeping along the kitchen floor, contrived to lay its hands on a phial containing a small quantity of oil of vitriol, of which it sucked apparently only a small portion, when it dropped the bottle. The mother found the child lying in great distress, with face red and congested, struggling for breath, and attempting to vomit. A few hours after the accident it was taken to the infirmary, and tracheotomy performed by my late assistant, Mr. T. B. Adam. The case progressed favourably, and, as the baby was able to swallow next morning, it seems probable that none of the acid passed into the œsophagus.

Dislocations.—One of the dislocations was the rare posterior displacement of the humerus with the head of the bone lying on the dorsum of the scapula, below the spine. It was of six months' duration, and the head of the bone could be seen distinctly from behind, and felt rotating under the hand on moving the arm about. The patient, a child a trifle over six months old, held its arm a little from the side and carried forwards; the hand was so turned that the palmar surface looked backwards, exactly in the position in which a swimmer places his arm and hand when giving the stroke. The movements of the arm in relation to the body were very free, the hand always tending towards pronation. The arm could not, without difficulty, be carried backwards beyond the middle line of the body, and the upper arm was, of course, shortened. Reduction was effected with comparative ease, but after six weeks' trial the head of the bone always returned to its abnormal position. Dr. Knox, one of my colleagues, gives in the *Glasgow Medical Journal* for this month, a most interesting account of two cases of the same rare variety of dislocation which came under his notice within a period of three months at the dispensary.

Removal of cuboid and portion of astragalus.—This operation was performed in strongly pronounced talipes varus, for which the tendons had been twice cut, and boots worn for some years with little improvement. The operations were successful, and, small as they may seem, would not, I am inclined to think, be readily undertaken by those who follow the old method of treatment.

Statistics for the twelve months:—

Patients admitted...	280
Operations performed	162
Deaths	7
Death-rate per cent.	4·3
Days resident in hospital of each patient	24·7
Percentage of operations to each bed ...	8·7
Beds	19
Cost of wine and spirits for each patient per annum	7½*d.*

The total number of operations performed by the four surgeons of St. Bartholomew's for 1878, with their results, according to the Report, are—

Operations.	Deaths.	Death-rate.
458	44	9·6

Omitting "for various reasons" as Mr. Savory does in his address, operations involving the peritoneum, the results are as follows:—

Operations.	Deaths.	Death-rate.
416	22	5·28

Dr. Patterson's wards in Western Infirmary, twelve months:—

Operations.	Deaths.	Death-rate.
162	7	4·3

Leaving out "for various reasons" the peritoneal operations, we get—

Operations.	Deaths.	Death-rate.
150	3	2

I shall not refer to the quantity of stimulants consumed in St. Bartholomew's further than to say, that some time ago the registrar was written to, asking for a few details on this and other matters, and hitherto no reply has been vouchsafed.

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Operations per bed per annum.—Let anyone conversant with hospital work think for a moment of the difference as to the probability of blood-poisoning occurring in St. Bartholomew's, where so few operations are performed in proportion to the number of beds, and where erysipelas and pyæmia prevail, compared with small, crowded wards, containing only nineteen beds, with frequently fifteen to seventeen cases operated on in them. All former experience would lead us to expect epidemic outbreaks of blood-poisoning in the latter, yet they never appear.

As Mr. Savory issued the challenge, he will, I trust, pardon me remarking that the antiseptic system has enabled one, with only nineteen beds under his charge, to perform more than one-third as many operations in twelve months as the entire surgical staff of St. Bartholomew's Hospital in the same period, with nearly four hundred beds at their command.

Taking into account the number of operations, the low death-rate, the number of beds, and the small quantity of stimulants used, as a year's operative work, the foregoing has probably never been surpassed in any general hospital. The credit must be ascribed to a system of treatment which enables us to perform operations and to achieve results of which our predecessors never dreamed—a method of treatment which has revolutionised surgery, and which entitles its author to rank among the greatest benefactors of our common race.

India-street, Glasgow.

THE HISTORY OF MENTAL MEDICINE.

Epitome of an Introductory Lecture to the Clinical Course on Mental Diseases, delivered Nov. 16th, 1879,

BY B. BALL,

PROFESSOR OF THE FACULTY OF MEDICINE OF PARIS.

(Concluded from p. 9.)

WE must now go back. As a historian of ideas I have not attempted to follow a chronological order, and in setting face to face the two most diametrically opposed doctrines, I have for a moment let the origin of our French school dwell in the shade, that school which has so long dominated science, not only in France but throughout the world. It is time now to return to it; it is time to analyse the principles at the base of our education, to trace the progressive deviations which have insensibly separated us from it, and to ascertain, lastly, the point which we have reached, and with this study this lecture may conveniently close.

Esquirol and Pinel—these two ever-inseparable names—convey with them to posterity the same ideas, the same system; the master is perfected in the pupil, the philosopher in the clinician, and in spite of a few differences in detail, there is complete harmony on all fundamental points between these two minds, so well fashioned to understand and to complete each other. When one, for the first time, runs through Pinel's treatise, which had only two editions—it was not a literary success you see—one asks how this small work could have brought about so profound a revolution. It is because behind the book there was a man of truly superior mind and of an eminently sympathetic character; a man, in fine, endowed with that precious faculty of forming pupils which constitutes the rarest and noblest means of reaching posterity. It is above all with regard to the treatment of the insane, it is on the humanitarian and practical ground, that the labours of Pinel opened up a new path. The middle ages had an instinctive repulsion for all madmen; when it could not burn them for sorcerers it dreaded them as possessed, and maltreated them as such. The 18th century, freed from the superstitious terrors of preceding epochs, was still under the influence of these vulgar prejudices, which formerly inspired our fathers with so profound an antipathy towards the insane, and, without wishing to ignore the feelings of humanity that do honour to a few of the ancients and many of the moderns, we must admit that Pinel seems to have been the first alienist to have really entertained feelings of affection for his patients, the first to have understood that in spite of their deep misfortune they had not fallen below human worth; and in this regard the great reformer was truly the man of his time, for at the moment when the abuses of ancient society were disappearing on all sides, swept away by a storm-wind, he caused the powerful breath of the French Revolution to penetrate into the domain of mental medicine.

But by the side of the philanthropist there existed in Pinel a physician full of tact, wisdom, and good sense. It has been said, and repeated to satiety, that Pinel struck off the chains from the insane; it is too often forgotten that he rendered them a no less important service in delivering them from phlebotomy, and in preventing them from dying of hunger. Excess in bleeding and insufficiency of food were, in fact, together with the abuse of coercive measures, the chief causes of the pitiable state in which he found the insane, and it will be his eternal honour to have worked in this respect a profound and radical revolution.

But although the practical and medical side outweighs all others in Pinel's work, there is to be found in it a theoretical side, forming a veritable code of mental alienation, and this code, modified in some points by Esquirol, is that which still governs us to-day, for it was long before one could depart from it without running the risk, not only of living under the ban of heresy, but also of passing for an ignoramus, which is infinitely graver. This doctrine may be summed up in a few fundamental propositions:—

1. Insanity, properly so-called, is absolutely distinct from the delirium of acute diseases.

2. There are no anatomical lesions in insanity; those which are met with sometimes are the consequences and not the causes of the disease.

3. The great remedy for diseases of the mind is sequestration, isolation. Ordinary measures applied to the diseases of the affected region only play a very secondary part.[1]

4. The alienist should apply himself to the clinical study of mental diseases, but by following the processes of the psychologists, and by applying the process of medical observation to lesions of the understanding.

5. Lastly, the importance of a methodical classification should be one of the chief preoccupations of the author of a philosophical nosography, who has carried into psychiatry notions borrowed from natural history.

Mania, melancholia, dementia, were the forms nearly universally admitted. To these Pinel adds idiocy, without using this word in the sense we nowadays attach to it. Esquirol completes the series by the creation of monomania, and the system was thus definitively founded.

During many years the doctrines of Esquirol and Pinel have had the power of law, especially in France, and three generations of alienists have arisen under their protection. But the onward march of the human mind could not be indefinitely arrested, and the majestic edifice which has so long sheltered us seems to-day to be subsiding at all points. It was with the anatomists, as might have been expected, that the reaction began. The almost absolute denial of material lesions could not fail to meet with contradictors, and, not to mention the memorable ire of Broussais, researches based on most positive foundations came to destroy one of the fundamental bulwarks of the system. In 1816 Rostan begins at la Salpétrière his studies on cerebral softening; he finds himself surrounded by a valiant band of active, enterprising young men, the most celebrated of whom were Georget, Falret, and Calmiel; at the same time Bayle was entering at Charenton under the auspices of Royer-Collard; meningitis, chronic encephalitis, are ardently studied, and there is soon seen produced the most important scientific event of the century, in psychiatry at least—I mean the discovery of general paralysis. And yet the authors themselves of this great discovery remained profoundly orthodox; general paralysis apart, it was understood that other kinds of insanity did not admit of any lesion; and they proceeded so far in this path that Georget, going beyond the ideas of his masters, declared one day that no form of sympathetic insanity existed, suppressing thus with a single blow one whole series of physical causes of mental alienation. You have been able to measure the progress which since then has been made by the idea of an intimate correlation, of a relation of cause to effect, between

[1] "On doit toujours regarder les médicaments comme des moyens accessoires dont on fait un usage d'autant moins indiscret, qu'on a des vues plus étendues et des ressources plus assurées, dans l'ensemble des autres moyens, moraux et physiques."—Traité de l'Aliénation Mentale, 2nd ed., p. 356. Paris, 1809.

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disorders of the mind and affections of organs most removed from the encephalon.

In France, Lallemand was the first to start this movement. The influence of seminal discharges on certain forms of vesania has perhaps been exaggerated by this celebrated author; he has not, however, the less rendered great service in showing that hypochondria, moral prostration, melancholia even to suicide, were sometimes due to this cause. Numerous works, among which we will specially cite that of M. Lisle, have confirmed the ideas of Lallemand, which may be ranked to-day among established truths. Esquirol, it may be said, created puerperal insanity; but uterine affections, the influence of which had already been indicated by Pinel, are to-day among the best recognised causes of mental alienation, as the researches of Guislain, Bazin, and Azam (of Bordeaux) have proved; and uterine insanity is established beyond all dispute. Esquirol pointed out the possibility of a relation between intestinal lesions and insanity; and it was doubtless under the influence of this idea that the great pyretologist, Louis, the creator of typhoid fever, attributed to the lesions of Peyer's patches the delirium so often occurring in this disease. This idea of Louis would not now find many partisans; but the influence of the stomach and intestinal canal on the development of mental diseases is not contested by anyone at the present day. Then follow, in turn, affections of the liver, heart diseases, pulmonary phthisis; we have seen cardiac insanity and hepatic insanity arise; and we seem to recognise to-day that there is not a single part of the economy lesions of which may not bring about psychical disorder in predisposed subjects. The whole of this great movement will be found summarised in the admirable thesis of M. Ch. Loiseau, and in the discussion to which it gave rise at the Medico-Psychological Society.

This is nothing else, it will be said, than a more complete development of the ideas rudimentally shadowed forth by Esquirol and Pinel. But who does not see how the domain of the pure vesaniæ, of insanities without appreciable lesions, is narrowed by this new method of viewing the subject? If to this rapid and necessarily incomplete enumeration there be added the discovery of the ascending course of diseases of the spinal cord towards the brain, transforming ataxics and paraplegics into general paralytics and the subjects of dementia; if modern researches on the composition of the blood, on the state of the pulse in the insane, on the influence of diathesis and of divers physiological conditions on the manifestation of insanity be considered, it will be doubtless understood that the axis of mental medicine has been entirely displaced, and that we no longer gravitate around psychology. Clinicians and observers, as in the time of our great masters, we more willingly direct attention to the diseases of the body than to the perturbations of the understanding; and we no longer consent, to use Falret's expression, to become the secretaries of our patients, and to write under their dictation.

But there are other points on which contradiction is even more radical. The fundamental axiom, the mother idea of the system, is that true insanity is absolutely independent and distinct from the delirium of acute diseases. Now we see one of the leaders of mental medicine, my excellent master and friend, M. Moreau (of Tours), openly express the idea that no radical distinction exists between delirium and insanity, which he even goes so far as to compare to the perfectly physiological facts of dreaming and sleeping; and yet M. Moreau (of Tours) will not contradict me if I rank him among the orthodox; on this point, however—and it is a point of chief importance—he must be classed with the opposition.

Lastly, we have seen in the doctrines of the school isolation held up as the universal panacea, or at least as the first and most important of all measures of treatment. A reaction against the excess of this principle, the exactitude and wisdom of which at bottom it would be difficult to dispute—a reaction the more active because it has been so long kept back—has been showing itself with an ever-growing intensity for several years past. The modern secular establishment of Gheel has been praised; colonies of the insane, family life, have been extolled; it has been even wished to empty the asylums and maisons de santé. Nowhere has this movement taken deeper root than in England, and Blandford, one of the most accredited alienists of the other side of the Channel, expresses the opinion that many patients would be more happily and wisely controlled in their family than in a special institution.

Thus, you see, there is not a single point of the classical doctrine which has not been discussed, retouched, I should say nearly destroyed, in order to be rebuilt. The classification remains, and yet it is the least solid and most questionable part of the work. Certainly the founders of the French school cannot be reproached with having accepted and retained the names of mania, melancholia, dementia, which go back to the very cradle of medicine. Pinel adds idiocy to them; Esquirol, monomania. Each of these divisions may be the object of discussion. But there is a more general consideration dominating the whole of the subject.

One single and same disease, a sole and same lesion, may give rise to all forms of delirium, whilst preserving its own clinical physiognomy and individuality. Let us take, for instance, general paralysis: it is shown by ambitious insanity, by melancholia, by furor, by hypochondria, by dementia, by intellectual prostration; and yet it always remains general paralysis, and no practised observer will ever experience the least hesitation on this point. Then there are patients who, by reason of cerebral lesion with which they are attacked, do not come under this category. I will assert this of the subjects of alcoholism, of epileptics and hysterics. Is it not plain that these different phenomena of excitation and depression are but symptoms, sometimes permanent, sometimes transitory, and liable to alternation as in circular insanity? If, now dipping into details, we try to discuss each one of the forms of delirium within which it has been desired to circumscribe mental alienation, the insufficiency of such a classification will strike you much more vividly. Let us take that group of different psychical states described under the name of *mania*. Here is one patient in a state of extreme agitation, talking, vociferating, restless, incessantly expectorating; he utters volubly words without sequence; every moment he is repeating the same phrases with breathless and jerking utterance; this man, whose condition seems so near to acute delirium, is a maniac. But I see another patient, whose intellect, instead of being abolished, is manifestly more active than in the normal state; he has a prodigious memory, a remarkable facility of elocution, and the surprising readiness of his conceptions is linked to a morbid activity, to a great disorder of action. He also is a maniac; but how can he be allied to the preceding one, and who would dream of maintaining that both these subjects were attacked with a single and same disease? Other maniacs will exhibit to us a predominance of melancholy ideas; others will offer the spectacle of an intermittent or periodical mania; others, lastly, will be attacked with a double form of mania, and will have regular alternations of excitement and depression. How can affections so diverse be united in a single and same category, and what advantage can be gained from this forced alliance, either from the standpoint of science or from that of instruction?

Criticism would be yet easier with regard to the lypemania of Esquirol; it will suffice us to remember that, thanks to M. Baillarger, we now know that melancholics must be divided into two very distinct groups—the one representing depressive melancholia, sadness, with stupor, and without predominating ideas; the other, of those who in the midst of their sad delirium, preserve great mental activity, and do not show the least tendency to stupor. They are evidently not the same patients. A separate place must equally be claimed for the anxious melancholics, for the "groaners" of Guislain and Morel, who walk about incessantly, up and down, like souls in purgatory, all the time repeating the same phrases. There remains, lastly, conscient lypemania without delirium, which could not be confounded with any of the preceding varieties.

We reach now monomania, one of the most disputable and most disputed of the creations of Esquirol. I shall not stop to discuss whether there exist limited partial deliriums or not, or if it must be said, with Heinroth, "insanity is a disease of the entire being." I shall content myself with telling you that monomania, already greatly compromised by the discovery of general paralysis, received its *coup de grâce* when M. Lasègue created the delirium of persecutions. Read indeed, or rather re-read, Esquirol's work on Monomaniacs, you only find them paralytics, persecuted and impulsive subjects; these three categories once substracted, if there remain a residue, nothing would justify the endeavour to reserve for it a separate place.

Not even dementia itself, when thrown into the crucible of analysis, escapes dissolution and evaporation therein; in fact, a great part of those formerly styled demented are only in reality subjects attacked with organic cerebral dis-

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cases: general paralysis, softening, cerebral hæmorrhage, tumours, cerebral syphilis, each furnish their contingent. As to the acute dementia of Esquirol, it belongs, since M. Baillarger's work, to melancholia with stupor. The ordinary dementia of the insane is only in reality a chronic delirium, and most frequently a delirium of persecution.

There remain, then, at the bottom of the crucible, only the incoherents; they form, indeed, a residue of slight importance; their number is very small relatively to that of the other insane, and moreover when we dip beneath the surface, we nearly always discover traces of an old delirium still persisting.

If the classification of Esquirol and Pinel errs in what it contains, it errs yet more in what it does not contain. There are not to be found there the delirious fevers, so rich and varied, which belong to the convulsive neuroses, nor those resulting from great diatheses, which amongst their direct manifestations include such marked intellectual troubles; nor alcoholism and toxic insanities, which in the present state of our civilisation play a more and more important part; nor, lastly, the great family of hereditary insanities, which constitute at the present day one of the most natural groups in the order of mental diseases. Doubtless the influence of the majority of these causes was recognised, and it found a place by the side of moral causes, to which these illustrious observers always assigned the chief place; but they never dreamt of forming special groups of them, nor of according them, so to speak, an independent existence. It may be even added that this mode of view would have been radically opposed to the general principles which they always enforced in subordinating, in their system, the physical phenomena to disorders of the intellect and feeling. Doubtless it would be extremely unjust to reproach these great men with not having done what no one at their epoch could do; they largely profited by acquired knowledge, they liberally increased it, they drew therefrom conclusions which it was then possible to draw. They were of their time; we should no longer be of ours did we think absolutely as they did. What need to hide the imperfections of their work? It is amply sufficient for their glory, and the glory of their country.

If I have tried, gentlemen, to bring to light the weak side of *la théorie classique*, it is not certainly with a view to propose another to you. We live in an epoch of transition, when no one could attempt such an enterprise without exposing himself to certain defeat; but in showing you the work which has been done in psychiatry during half a century, I have been faithful to my *rôle* of historian, and I have tried to give you, in a rapid sketch, the physiognomy of the time in which we live. Its contours can readily be traced. One of those irresistible currents which it is impossible to sail against is carrying us to seek everywhere for physical lesions, material causes of mental alienation. Doubtless there is not made twice in a century such a discovery as that of general paralysis, but we are forced more and more to narrow the field of insanity without lesions, and we succeed in it undoubtedly in a certain measure. On another side, the advances of physiology, which nowhere have been more rapid than in that which concerns the nervous system, have revealed to us the immense part played by automatic phenomena in all the functions of the economy, and more especially in intellectual life. The terms "cerebral automatism," "unconscious cerebration," are the expression of quite an entire series of facts of vast importance, which are destined to play a great part in psychiatry.

There is another province of our domain which at the present day attracts more sustained attention than ever, I mean morphology. Among the great observers who, from antiquity, have busied themselves with mental diseases, there is not one who has not perceived the importance of the form, size, and anomalies of the encephalon, but the imperfection of knowledge then offered a nearly insurmountable barrier to progress, and it was only in the case of idiots, imbeciles, and the degenerate that this study yielded any serious results. At the present day many distinguished minds, amongst whom I am happy to name M. le Prof. Broca and my old friend Dr. Luys, are applying themselves to these questions with great ardour; to-day when anthropology is founded and a more penetrating analysis than ever tends to acquaint us, even to the smallest details, with the encephalon of all the human races, it is permitted to hope that mental pathology will, in its turn, be able to find in this order of ideas what morbid anatomy has proved powerless to give it.

Lastly, the greater and greater preponderance of heredity in mental alienation leads us to consider insanity in a large number of its tributaries as "a disease that is ending," and not as a disease that is commencing—as a primordial vice of conformation of the intellect, rather than as the result of an accidental crisis; and thereby we only develop one of the most just and fruitful ideas of the masters of the French school.

It is, however, very nearly certain, or, in the language of the mathematicians, it is certain that it is probable, that, in spite of all our efforts, there will always remain an irreducible quantity in the problems of mental alienation, and that complete light will never be shed on all its depths.

But it does not behove me here to assume the part of the prophet, and my *rôle* of historian is finished. Let me, then, sum up in a few words the conclusions which seem to me to flow from this rapid excursion through the ages. They may be reduced to three principal points. In the first place, respect for our ancestors. By appreciation of the difficulties of the subject, we come to understand the worth of their efforts and the greatness of the services they have rendered us. In the second place, devotion to clinical observation. Do we not see that in all epochs the great observers who have studied mental alienation have left us imperishable pictures which will remain eternally true, whilst time has done justice to the different theories which have in succession disputed for the preponderance? Let us labour, then, to observe well; let us be clinicians above all, and in that way shall we be the legitimate heirs of Esquirol and Pinel. Lastly, scepticism; and I do not mean by that that morbid frame of mind which makes us receive all new conceptions with a vulgar irony, and which would become in the long run more destructive to the true interests of science than the most childish credulity. I mean by scepticism that negative virtue which consists in never accepting a fact without verifying it, an idea without discussing it, and which teaches us to yield only when the laden mind comes to bend beneath the burden of proofs; then, but only then, one yields, but with the conviction of not having surrendered to the impulse of imagination, and of being subdued only by truth. In undergoing this discipline one runs the risk of not marching at the head of his age; but one has at least the advantage of not mourning for those hypotheses whose birth is so rapid and whose life is so ephemeral.

Such are, gentlemen, the principles I would have enter your minds, and they will govern all my teaching. I do not disguise from myself the difficulties of the enterprise, but I enter on it with confidence, sustained by the sense of duty, and knowing beforehand all the sympathy which you are accustomed to accord to willing men.

CASE OF SUPRAPUBIC LITHOTOMY.

BY WILLIAM PAUL SWAIN, F.R.C.S.,
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ELIZA G——, aged ten, was admitted into the Royal Albert Hospital on July 21st, 1879. Her symptoms were first noticed fifteen months ago, when her mother discovered that she had incontinence of urine. It was found that she was in the habit of passing a hair-pin into the vagina, probably on account of pain and irritation; and on one occasion she told her mother that a hair-pin had slipped up out of reach, but as one was afterwards found in the chamber vessel, it was supposed that no pin remained in the bladder or vagina. She had considerable pain, and four months later a swelling appeared a little above and to the left of the pubes. She now came under the care of Mr. Hutchison of Camborne, who detected a stone in the bladder, and an attempt was made to crush the stone, but without avail. About eight months ago the swelling broke and discharged, and the pain diminished greatly after this; but a sinus was left through which urine and calculous matter occasionally passed. The incontinence of urine has continued throughout.

On admission, she presented the appearance of a full-grown and well-nourished girl. She looked healthy in the face, complained of but slight pain, and said she felt very well; temperature normal; tongue clean, but a little flabby; pulse soft and weak; bowels acted regularly; urine escaped continually and involuntarily. On examining the abdomen,

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there were, above and a little to the left side of the pubes, two sinuses admitting a probe some distance inwards and downwards towards the bladder, but not leading to anything definitely. The sinuses discharged slightly, but no urine seemed to come from them. On examining the bladder with a sound, and on passing the finger into the vagina, a calculus was felt in the bladder, apparently of large size.

On July 24th, under chloroform, the urethra was first dilated with the blades of a pair of urethral forceps and with the finger. A large lithotrite was then placed on the stone, and an attempt made to crush it, but the screw failed to act owing to the blades being too far apart, on account of the size of the stone. The lithotrite was withdrawn, and on further examination with the finger in the bladder, the points of a hair-pin were felt penetrating the coats of the bladder on the left side. It was decided to open the bladder above the pubes. An incision, about two and a half inches long, was made in the median line from the pubes upwards, and the parts dissected through till the bladder was reached, all bleeding vessels being secured on the way. The bladder was then fixed with a hook and opened, a pair of forceps introduced, and the stone caught. The main part was withdrawn with the hair-pin running through it; a large portion of the stone at one end crumbled down, and the fragments were removed with a scoop. The wound in the bladder was now closed with four or five interrupted catgut sutures, and one or two vessels in its coats were tied. The edges of the wound in the abdominal walls were brought together with catgut sutures, the sutures being passed through the entire thickness of the muscles and integuments, as in the operation for ovariotomy, and a drainage-tube inserted. The operation was done under the carbolic spray, and the wound dressed antiseptically.

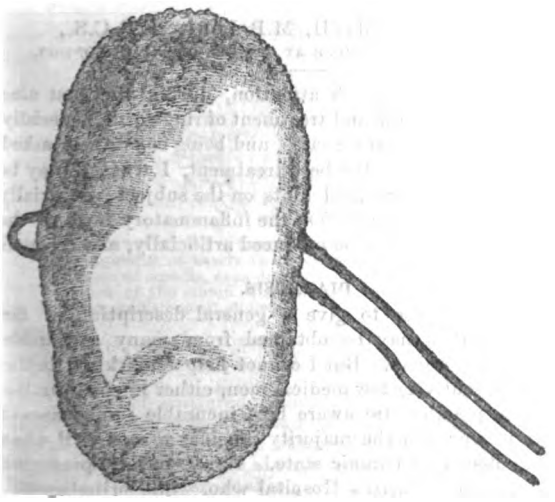
July 26th.—Recovered well from the chloroform, and appears bright and cheerful; has had very little pain, no sickness, or bad symptoms of any kind. Temperature 99·5°. The urine has continued to run away by the urethra, and apparently has not been blood-stained. Wound dressed, as the dressing became urinous.

During the next nine days she continued without a bad symptom; the wound being dressed from time to time, under the spray, and the drainage tube gradually shortened.

On August 6th the wound, which had continued closed throughout, was found all but healed, a small sinus, which the piece of drainage tube still kept open, remaining below. The sinuses, which had never discharged since the operation, had very nearly closed up; she had almost regained the power of retaining the urine. Her temperature the last two nights had been 101·2°, but in every other respect she seemed exceedingly well and bright.

14th.—The wound and sinuses quite healed; very little urine now escapes involuntarily. Temperature still continues above normal, 100° to 101°; but otherwise she appears perfectly well.

20th.—She is apparently quite recovered, and has full control over her urine, which is acid and clear; she has been out of bed. Went out quite well, and has continued so since.



The woodcut represents the calculus in its entirety; the points of the hair-pin are shown in the position in which they were found in the bladder, penetrating its coats to about one inch and a half.

Devonport.

ON SOME POINTS IN THE DIAGNOSIS OF PHTHISIS.

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(Concluded from p. 11.)

I PASS over other collected cases, which, while they would take up too much time, illustrate only the same difficulty, and turn to the records of another master of diagnosis.

Addison[1] has laid down that, "when any form of chronic induration of the pulmonary tissue exists, and especially if attended with dilated bronchial tubes, neither auscultation nor percussion enables us to distinguish such a condition of lung from phthisical disease. If bronchitis be present, and the induration be situated at the apex, the signs are perfectly identical with those of phthisical disorganisation." And he adds, "Our diagnostic resources are to be found in the history and progress of the case, the absence of some of the more ordinary symptoms of phthisis, and some incongruity observable between the local signs and the general aspect and condition of the patient." Again, Dr. Walshe, who in 1848 allowed that cheesy infiltration of a portion of lung may be due to "a fatty transformation of catarrhal and pneumonic inflammation-products, as originally taught by Addison," tells us that "the real difficulty in diagnosis consists in the distinction between certain cases of chronic bronchitis and phthisis, ... especially when dilatation of the bronchi exists;" and some pages further on gives certain marks of difference by which the distinction may be established; at the same time the distinctions asserted in no way contradict the sentence I have just quoted from Addison, representing, I think, most fairly the existing difficulty.

For the difficulty does exist for each one of us. I have made a brief abstract of the notes of a case now under my care in the Victoria Park Hospital, which shows how very nearly it is brought home to myself.

The patient is a labourer, forty-two years of age, admitted into hospital on the 5th of last November, married, of dark complexion, 5 feet 9 inches in height, and then weighing 9st. 5lb. On these last two points it may be remembered that Dr. Brinton in his little book on "Life Assurance" (p. 32), lays down that an adult male in good health, 5 feet 6 inches in stature, ought to weigh rather more than 10st. The patient tells us that since he first became ill, eighteen months ago, he has lost 2 st., which would bring him well above Dr. Brinton's law. The only disease he has had was ague, eighteen years ago. His father is eighty years old, with probably chronic arthritis; his mother is eighty, and healthy. He has two brothers and a sister, all in good health. His present illness began with dry cough and pain in the left side; later the cough was accompanied by expectoration. After violent retching, three months ago, he brought up, he thinks, four ounces of clotted blood, and has occasionally seen streaks since; he has had no night sweats for the last six months, though he had had previously. On admission his pulse is 96; his temperature 98·2° Fahr.; his general functions normal; his finger-nails not curved. There is marked dulness and tubular breathing at the right apex, to fourth rib; intense bronchitis over both lungs. Further notes by my clerk, Mr. Macdonald, to whom I am indebted for what I have read, are these: cavernous respiration and crepitation at right base in front; harsh breathing and small crepitations in supra-spinous fossa, extending to base. On the left side resonance on percussion; harsh breathing and crepitation cleared by cough. All the bronchitic sounds increased; there was from time to time abundant expectoration of greenish or yellowish muco-purulent sputa. Expansion was deficient at right apex, but the vocal fremitus was not altered. The heart-sounds were normal. Not to carry

[1] "On the Difficulties and Fallacies attending Physical Diagnosis in Diseases of the Chest." Guy's Hosp. Reports, series ii., vol. iv., p. 12.

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the signs and symptoms further, they were, according to my colleagues, who ordered his admission, and those of my clerks, the signs and symptoms of phthisis. On the other hand, there was the man's history, and, in spite of continued loss of flesh, the look, if I may be allowed to think so, of a patient with chronic bronchitis. But I am bound to confess that my diagnosis is uncertain. I think if he came, as I do not consider he will come, at any rate yet, to the post-mortem table, we should find dilated bronchi and general bronchitis; but I should not be surprised if my colleagues and my clerks were proved to be more right than I.

I do not like to occupy time by comparing with this other cases. The question, of course, arises, have we nothing whereon to make a certain diagnosis? I am very much afraid we have not. There are certain distinctions laid down by Dr. Walshe and others which do give some aid, but that is very little, so far as my experience goes. In the character of the sputa there is nothing, I think, though streaks of blood occasionally, in the absence of any mitral mischief, may support the fear of phthisis. "The more limited the bronchitis, especially if situated at the apex, the greater the probability of its being associated with phthisis; the more general the bronchitis, especially if it affect both lungs, the greater the hope of an exemption from phthisis. The more abrupt the transition from bronchial obstruction to natural or puerile respiratory murmur in the affected part of a lung, the greater the likelihood of phthisis"[2] These and the fact that the tendency of bronchitis is to enlarge, that of phthisis to contract the chest, are possibly our only safeguards. And this contraction or enlargement is, in the main, antero-posterior.

On this latter point I may lay before you two plans of chest area; one, the larger, taken from the patient I have spoken of: the other from a patient with undoubted phthisis. In the first (R. R.) the lateral through measurement is $12\frac{3}{4}$ inches, the antero-posterior $9\frac{1}{2}$ inches. In the second (J. J.), the lateral $12\frac{5}{16}$, antero-posterior $7\frac{5}{8}$. Between the first measurements is the difference of $\frac{21}{16}$ of an inch; between the second that of $2\frac{1}{8}$ inches. Both are taken at the level of the nipple line. The lung area is decidedly larger in R. R., whose height is 5 feet 9 inches, and weight 9st. 5lb. The height of the phthisical patient (J. J.) is 5 feet 6 inches, and his weight 8st. 11lb. In these two points the two men are fairly comparable.

And now I may be with some reason asked why I spend so much time over a distinction already well-drawn in all the text-books between these two diseases? My answer is, first of all because I believe the treatment by *climate*, especially of the two classes of patient, to be by no means the same; that the sending of a given patient to a certain high region, for example, will depend for the chance of a bettered condition on almost certain diagnosis between the two classes; and, secondly, that the difference and the distinction are often overlooked by some of the most practised among us, as I think the cases I have already quoted from various writers sufficiently prove. And as the result of an inaccurate discrimination, the relief of a bronchitis has led I am sure in no small number of cases to the hasty decision of really phthisical patients, in the absence or in spite of the advice of their medical attendant, to try that same mode of treatment, to their own detriment in the end. As proof of this it is justifiable to take the evidence, not of the medical, but of the general press. In the *Morning Post* of Dec. 26th, 1878, is a by no means feeble or unfair article entitled "A Colony of Consumptives." It covers almost five columns of the newspaper. From THE LANCET I gather that something of the same kind has been published in the *Echo*. The correspondent of the *Morning Post* tells us that in this colony, "on any day half a dozen people of both sexes may be seen skating, who came here a month or two ago with extensive cavities in their lungs; cavities which, according to the local doctors, are fast disappearing" (col. 3.) Lower down the writer says, "the worst of Davos is that the people are always talking of 'cavities' and 'infiltration,' and 'consolidation.'" The loose employment of words which science itself scarcely as yet accurately defines may be but one of the signs of the times, and so far to be defended on newspaper grounds, but it behoves us to decide with ourselves how far this popular knowledge, mischievous certainly in its immediate results, is not the outgrowth of our own want of precision, whether in diagnosis or in terminology.

[2] Addison, loc. cit., 9.

In an article entitled "A Christmas at Davos Platz,"[3] Dr. Theodore Williams tells us that, among other symptoms of improvement in the patients he saw there, "the physical signs in both first and second stage cases of phthisis showed a remarkable diminution of dulness, indicating either the development of emphysema or absorption of pneumonic growth. Contraction of cavities appears to proceed somewhat rapidly here. But the climate seems to tell most on the heart's action, which becomes more and more excited, though, curious to state, the number of cases of hæmoptysis, even in phthisical patients, is very small." This opinion may carry some weight with "the public, who grasp eagerly at any novel idea which holds out any prospect of a cure for this disease."[4]

I may agree to some extent with the writer as to the development of compensatory emphysema, or even as to the absorption of pneumonic products in cases of chronic phthisis. The latter, when it happily occurs, is hardly capable of post-mortem proof; the former, so to say purely mechanical, is certainly a partial, and more or less temporary, relief to the patient. But when it does occur, it again brings the sufferer under the conditions of the persons called in the common language "asthmatic"—under the condition, that is to say, of the man or woman affected with chronic bronchitis and emphysema; and so far, I believe, under the conditions of the patient who has most to gain from the air and surroundings of a place like Davos, that gain being greatest to the marked chronic bronchitic, or to the certainly phthisical patient in whom the existing signs are rather those of bronchitis and emphysema than those of vesicular mischief, whatever be its so-called stage.

To conclude, and at the same time to revert to the first subject of this paper, there is a story told in Sir Astley Cooper's "Life" which ought, I think, to have some interest for, and, so far as I know, may have some bearing on the history of, the Society before which I have the honour to speak. It seems that Sir Astley Cooper[5] was for a long period attached to the Kent Medical Society, which at that time held its meetings at the "Green Man" Hotel at Blackheath. Prevented by increase of professional work from attending, he sent in his resignation, addressed to it by some mistake as the Blackheath Medical Club. Dr. Babington and Professor Coleman proposed, and I suppose the Society unanimously adopted their proposal, that the resignation should not be accepted, on the ground that some other Society than their own must have been intended. The consequence of this very practical joke was that, remaining on the books up to Sept. 1829, he had to pay £43 as arrears of subscription. But it speaks well for the Society, in which he was thus proved to be so popular, that this fine did not prevent him from continuing to be an honorary member of it up to the time of his death.

RINGWORM (OF THE HEAD): DIAGNOSIS AND TREATMENT.

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HAVING devoted much attention, during the last nine years, to the diagnosis and treatment of ringworm, especially of chronic and inveterate cases, and being constantly asked by medical men as to the best treatment, I trust I may be able to give some practical hints on the subject; especially as to the production of *kerion*, the inflammatory form of the disease, which, if it can be produced artificially, always ends in a speedy cure.

DIAGNOSIS.

I do not propose to give a general description of the disease, as this may be obtained from many admirable books on the subject. But I cannot help remarking, in the first place, that very few medical men, either in consultation or private practice, are aware how incurable some cases of ringworm are; and the majority consider a case well when it is in a decidedly chronic state. Many boys are presented for admission to Christ's Hospital who, while bringing cer-

[3] Brit. Med. Jour., Jan. 4, 1879. [4] Ib., p. 10.
[5] Life, vol. ii., p. 140.

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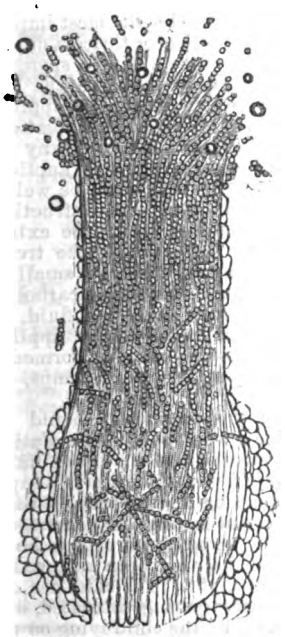
tificates from medical men of the highest professional standing that they are cured, are still suffering from a severe form of the disease. I have often found, on inquiry, that an opinion has been formed, and a certificate given, without any special examination of the scalp, and certainly without the help of a lens or microscope. Most practitioners imagine that a ringworm is cured when the hair is growing freely and firmly again on the part affected. This is a great mistake, as some of the most chronic cases are those in which the hair has grown again, but, on close inspection with a lens, some scurfiness and *many broken hairs or stumps will be seen scattered among the new hairs on the patches.*

Speaking from experience, after the examination of a very large number of children, I have found that in the majority of cases where a boy or girl has had ringworm on the head within a year or two of my seeing them, the disease is not cured. As a rule, the treatment has been continued until some new hair has made its appearance, after which it has been discontinued, although many diseased stumps remained. Besides the usual cases I have mentioned, where there are numerous broken hairs to be seen on old patches, I sometimes find that the stumps have been rubbed down by friction, or partially removed by attempted epilation, just before the examination. Under these circumstances, we see numerous follicles, with no hairs growing from them—a most suspicious sign,—and also some black dots. These black dots are the orifices of diseased follicles, in which the stumps have been broken off on a level with the surface of the scalp by friction, or are the orifices, filled with dirt, left by the retraction of the broken and shortened stump into the follicle after attempted epilation.

Especially would I call attention to a variety I call "disseminated ringworm"—one rarely diagnosed, and the most chronic and difficult to cure. The hair is growing freely and firmly all over the head; there are no patches to be seen now, although probably they have existed at an

FIG. 1.



A stump, very full of fungus, taken from a case of chronic ringworm, of nearly three years' duration, showing the rows of conidia, even down to the root, and the appearance of the stump where it has been broken off, frayed out, and some oil-globules.

earlier stage of the disease; the skin appears generally healthy, and perhaps almost free from scurf, but numerous isolated stumps, or groups of stumps, are seen in every direction, often scattered all over the scalp. This variety is almost always overlooked, and can only be detected by very careful examination. The stumps in old chronic cases are very brittle, and almost always break on attempted epilation, showing, after soaking some little time in liquor potassæ, under the microscope a most extensive implication with fungus, even down to the root of the hair. Rows upon rows of conidia, like strings of beads, are seen splitting the substance of the hair, and causing it to appear almost double the ordinary size. Where the disease has continued for a year or longer the whole thickness of the hair seems to be filled with these rows of conidia. (*Vide* diagram.) Cases like this have certainly existed for many months, or, more likely, for a year or two, and may have given the disease to many other members of a family, while all the time they have been overlooked or thought to be well.

But apart from these varieties, some of which are exceedingly difficult to diagnose, I have had children sent to me, certified as cured, when there were *typical patches* existing as large as a five-shilling piece, itching, and covered with very short, broken, dry, and twisted hairs, often of the usual yellow or ash-grey colour, and with fine scurf, evidently showing that some medical men have no idea what ringworm is like; and even when it is explained to them, they affirm that the disease is dried up and cured, and that the child is quite fit to mix with other children.

It is a great mistake to think that ringworm of the scalp usually presents itself as a red spot of a ring-like form, almost destitute of hairs; the appearance of ordinary ringworm of the skin being seldom seen. At an early stage of the disease, there may be only a very small scurfy spot or two, containing hairs more brittle than usual; but as a rule the doctor does not see the case until one or more of the hairs are broken off short. Local scurfiness, without stumps, does not necessarily imply ringworm; but such spots, especially in light-haired children, or if the disease exists in another part of the head, are very suspicious, and must be carefully examined with a lens, and the scurf placed under the microscope. Often a *single* stump will be discovered. General scurfiness or seborrhœa must not be mistaken for ringworm. At other times actual stumps are not seen, but shortened irregular twisted-looking hairs, sometimes lying quite flat on the scalp, and of a lighter colour, which, on attempted epilation, break off and show the usual fungus. Chronic ringworm may also occur in the form of pustular spots, with a stump in the centre. This appears to be Nature's effort to get rid of the stump, and can be successfully imitated by treatment. A very chronic form is also often observed, where there are one or more large irregular patches, often extending nearly all over the scalp. The surface is very scurfy, and very many of the long hairs remain, together with numerous stumps. This variety is sometimes mistaken for seborrhœa or eczema, but can always be diagnosed by the stumps. Cases are even found where the entire scalp is affected.

Medical men should not consider a case to be cured, or certify a child to be free from ringworm, unless they have most carefully examined the whole scalp in a good light, and specially looked at any suspicious spot with a lens, and are certain that there is not to be seen a single stump (or even the black dots before mentioned), giving evidence of the fungus under the microscope. Sometimes it is extremely difficult to detect the stumps when only a few exist; and often the attention is directed to the short hairs round a treated patch (caused by the hair having been cut), instead of to the diseased stumps, which are frequently concealed by the healthy hairs, and only protrude about a sixteenth part of an inch. Stumps are often of a lighter colour than the rest of the hair, and as long as any remain—and they may exist for years—the disease is not cured, and may continue stationary, or spread again, besides giving the affection to other children.

If all the stumps could be extracted by the roots, the disease might be considered cured; but almost always one or more will break off, allowing the root part, which of course contains the fungus in an active state, to remain behind in the follicle, out of which it will not protrude again for a week or two. It constantly happens that a doctor removes, as he thinks, all the stumps from a patch, and certifies the case to be well. But if the place is watched a few weeks the stumps will be sure to appear again; in fact, I consider it *extremely difficult to certify that a child who has had ringworm is absolutely well.* Time after time stumps will crop up here and there, breaking off when an attempt is made to extract them. They may keep on reappearing for months after the case in other respects seems well. Even specialists will be deceived, and after putting a strong caustic on a single patch, and then getting a bald place apparently quite free from stumps, they will certify the case to be well; but after a week or two up come the stumps again, and prove the certificate wrong. Therefore a bald patch should never be considered well until the new

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downy hair is growing freely, without any stumps. I would also warn against devoting all one's treatment to one or two patches; for while these are being cured, if proper precautions be not taken, other small spots, where the disease has been overlooked in its incipient stage, make their appearance; and the doctor may find when he has cured the first patches, that he has several more to deal with; therefore, the whole scalp should be constantly examined during treatment. Sometimes, when ringworm is cured, especially after the head has been shaved, there are a few *atrophied* stumps seen. These easily come away entire when extracted; they have small atrophied roots, and show no fungus under the microscope, the ends being sharp cut (from shaving) or blunt, and the shaft being of the normal, or less than the normal, thickness.

In old chronic cases the diseased stumps undergo some fatty degeneration, and thus many small oil-globules are seen in and about the stumps, as well as conidia. Again, small oil-globules on a normal hair or atrophied stump must not be mistaken for conidia. To a practised eye there is no difficulty in diagnosing between atrophied and diseased stumps. The regular, equal-sized, and bead-like arrangement of the bright and circular conidia, with their double contoured outline and nuclear contents on or in the substance of the hair, cannot be mistaken when once seen. Ether will also distinguish oil-globules from conidia by dissolving the former; besides, the fractured, faggot-like appearance of the broken end of the stump is most characteristic.

In diagnosis I place but very little reliance on the fact that the hairs come out easily round a suspicious spot, as they may do so with equal facility all over the head in cases that are not ringworm, and be very firm in obstinate forms of the disease. *A very common error* is to take a long hair close to or from a patch of ringworm, and finding no fungus on it under the microscope, to conclude the disease is cured. It is useless, as a rule, to look for conidia on the long hairs taken from or around a treated patch. The whole attention for diagnosis and prognosis must be paid to the short stumps. I have seen a bald place, purposely made by the hair being pulled out, very much resemble a patch of ringworm, but of course it contained no stumps.

Parents and friends, as a rule, will not credit the diagnosis of chronic cases, nor believe the time the ringworm has existed, and the time it will probably take for its cure. Very many children in private families have this disease without its being suspected. We issue strict instructions that children who have ringworm will not be admitted into Christ's Hospital, and yet the average percentage of boys, during the last five years, that have had the disease unknown to their parents, or thought to be quite well when first brought up for admission, is 8·4.

The following table will show the number of boys (age from eight to ten years) coming up for examination here the first time, and the number of cases of ringworm of the head detected among them:—

—	1875.	1876.	1877.	1878.	1879.	Total in 5 years.
The number of boys examined the first time, supposed to be quite free from ringworm	193	190	174	187	205	949
The number of ringworm cases (of the head) detected	15	20	10	19	16	80
Age 8 to 10 years—Average percentage	..	..	..	..	..	8·4

During the five years many of these boys were examined over and over again, so that in all there were 143 more postponements during this time of boys brought up a second, third, or even a ninth, or tenth time.

With regard to girls, very few have been examined here until within the last few years. In 1878 and 1879 27 girls were examined for the first time, and 9 were found to have ringworm—i.e., 33·3 per cent. During these two years there have been 13 more postponements of these cases, when brought up a second or more times. This average of girls I mention, but I trust it is far above what I shall find in future.

Ringworm occurs among the rich as well as the poor, and in all parts of the kingdom; but it is especially frequent in the lower classes that attend school. I once examined a school of this class of boys, and found more than half of them had ringworm of the head. Without going into the reasons for its being so, I may remark that it appears that the disease is much more contagious among children under ten years of age than it is among those who are older, and it is rarely contracted after the age of fourteen.

TREATMENT.

Ordinary recent cases.—A very excellent remedy is a mixture of carbolic acid (the pure crystals melted) and glycerine, in equal proportions, or one part of carbolic acid to two or three parts of glycerine, according to the extent of surface to which it is applied, the age of the patient, or the effect produced. The glycerine penetrates freely, and carries the acid to the conidia. It is cleanly, seldom painful, and though I have used it most freely the last eight years, I have only once seen any toxic effect produced, and that was when applied for some time to the entire shaved scalp of a child about five years old.

It is best to cut the hair very short with scissors all over the head, or to shave it, except, perhaps, a little fringe back and front to show under the cap, if the patches are at all numerous, or half cover the scalp. In other cases it is sufficient to cut the hair off the patches, and for half an inch round them. Then, if there are only a few patches, I blister them freely with liq. epispasticus, and after a day or two begin to apply the carbolic glycerine. Blistering large surfaces is very painful, and not without risk, and, in my opinion, is quite out of the question with young children; in fact, carbolic glycerine soon cures such cases.

If the ringworm be so extensive as to require most of the hair to be removed, the carbolic glycerine may be applied to the entire scalp, as strong as it can be borne without causing much pain or blistering; but it is necessary to exercise more caution, using a weaker solution in the case of young children; and it is also advisable to apply it only to a portion of the scalp the first time, and to note its effect.

In employing this remedy, the most important points are to apply it often, say twice or thrice a day, and to have it well rubbed into the places with a sponge mop.[1] Nurses generally shirk this duty; therefore, the doctor must take care that this preparation is properly applied. It will take two or three months at least of this treatment to produce a complete cure, and to get the new downy hair to grow. At the same time, if the remedy be only applied to the patches, a weaker solution, say 1 in 8, must be well rubbed into the entire scalp at night, to insure the destruction of any conidia that may be about, and to prevent the extension of the disease. During the first part of the treatment, the hair should be kept close cut, and any small patches of ringworm should be painted with strong carbolic acid and glycerine (3 to 1 of glycerine), blistering fluid, or glacial acetic acid. The scabs produced by these applications should be removed with forceps as soon as formed—often bringing away with them many diseased stumps,—and the remedy again used.

Children under this treatment should have their heads well washed twice a week at least; epilation should also be freely and often practised with a broad flat-pointed pair of forceps. The majority of the stumps simply break off, but much good is done by even partially removing them, as the carbolic glycerine is able to penetrate better into the follicles. There is no need for caps to be worn during the day, unless all the hair has been removed; but it is advisable to use them at night. The chief use of caps is to prevent the pillow-cases getting saturated, and thus causing irritation of the face by the child lying on the soiled places. I believe the best way is to put a piece of lint or a linen cap, which must be constantly washed, over the head, and then a black silk one, lined with oil-silk, over that.

Carbolic glycerine is a most excellent remedy, yet where there is a large extent of surface involved, I doubt if it is as good as the following. I have used the undermentioned ointment the last year very freely, with excellent results—viz., carbolic acid (pure), strong citrine ointment and sulphur ointment in equal parts. To be made fresh every week. This can be applied without fear, at any rate to children over ten, to the entire scalp every night, and to the patches again the next morning. In children under this age it is advisable to use a double proportion, or even more, of the sulphur ointment. It causes no pain, and is very

[1] These mops can be made by tying a small piece of sponge on to the end of a penholder.

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effectual. Of course, in accordance with the rule mentioned above, the head will not have been blistered. A cap should be worn as before described, and the head well washed twice a week, all scabs being removed from the patches. The scabs will turn of a blackish colour, especially if the ointment be used after being made a week, as a sulphide of mercury forms. While using this ointment all over the scalp, I often apply strong carbolic glycerine to the small patches. I have sometimes noticed that this preparation, after being used for a while, causes the stumps to become loose in the follicles, so that they can easily be extracted with the roots. I may mention that this ointment often turns the hair of a light golden colour.

It is impossible to notice all the good remedies for simple ringworm, but I may mention that Goa powder or chrysophanic-acid ointment is efficient, but not better, I believe, than the above, and certainly has so many drawbacks that I have discontinued its use. It stains everything with which it comes into contact, even the face and hair, besides often causing great irritation and swelling of the face, and even eczema impetiginodes. Once applied it to a girl of ten with very nice hair, which it turned such a frightful colour that the parents were only too glad to have it all shaved off.

Where there are only two or three small and *recent* patches, one of the best plans is to apply Coster's paste (two drachms of iodine and six drachms of oil of cade) freely, and then a piece of lint on the place. This will produce a scab, which may be removed in a few days, and then some more paste should be applied. This can be repeated till all the diseased stumps are removed; carbolic oil (1 in 8) being also used to the whole head, to prevent the extension of the disease.

Glacial acetic acid is also a very good remedy for recent patches, especially if applied to any of the small ones detected, while others are being treated. It is sometimes necessary to change the remedy, even with ordinary cases, as a parasiticide that will cure one child may fail with another.

During the treatment of ringworm of the head the body should be examined now and then, especially the neck; and this leads me to remark that *a doctor should always thoroughly examine the head of a child who has body ringworm*, as it is very often only secondary to chronic disease of the scalp.

(To be continued.)

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

[THROAT DEPARTMENT.]

SYPHILITIC DISEASE OF THE LARYNX AND LUNGS OF LONG STANDING; GREAT EMACIATION; RAPID IMPROVEMENT UNDER IODIDE OF POTASSIUM; REMARKS.

(Under the care of Dr. POORE.)

A. B——, aged twenty-five, a writing clerk, applied at the Throat department of the hospital on May 4th, 1876. His chief symptoms were hoarseness, cough, and complete loss of voice. He stated that his voice, which had been hoarse for some time, had completely failed him since the previous November, and that since then he had been a patient at the Brompton Hospital for Consumption.

The pharyngeal mucous membrane was of normal colour; the tonsils were the seat of old ulcerations; the uvula was half destroyed by old ulcerations; and there were several old scars scattered over the soft palate. With the laryngoscope the epiglottis was seen to be thickened and infiltrated, of a light-red colour, with a large notch out of the left border, much cramped upon itself, and so pendulous that a view of the glottis could not be obtained. The posterior parts of the aryteno-epiglottidean folds, which were just visible, were swollen and infiltrated. The voice was a hoarse whisper, true phonation being absolutely impossible.

The patient was much emaciated; height 5 ft. 9½ in.; weight 7 st. He stated that fifteen months before his weight was 8 st. 10 lb. The thorax was long and narrow, much flattened (equally on the two sides) in the antero-posterior diameter. The flattening under the clavicles was not so marked as elsewhere. There was hyper-resonance under the clavicles, and normal resonance elsewhere. On auscultation, the breath-sounds everywhere were harsh and blowing. There were no adventitious sounds audible; the condition of the vocal fremitus and vocal resonance could not be obtained, owing to the entire absence of voice; cough was frequent and troublesome; expectoration almost *nil*. There was a big scar beneath the right eye, due to an "abscess," which had lasted eighteen months. There was a small ulcer also on the back of the left forearm.

The patient was not conscious of ever having had syphilis, but the physical appearances left no doubt as to their cause. He was at once accordingly placed upon ten grains of iodide of potassium, subsequently increased to fifteen and twenty grains, three times a day. On the 18th of May there was a marked improvement in general health; cough was much less, the sore on arm was nearly healed; weight 7 st. 3 lb. A week later the weight was 7 st. 5 lb. On June 1st the voice was stronger, and the weight had farther increased to 7 st. 11 lb. On the 8th the weight was 8 st., and in another week it was 8 st. 2 lb. The patient stated that since taking the iodide his appetite had much improved, and was at times ravenous. He had been obliged to have his trousers "let out," owing to his increasing size. On the 22nd the weight was 8 st. 4 lb. The patient had in the interval between the visits suffered from an attack of "erysipelas" above the bridge of the nose. The iodide was omitted and quinine substituted. He was still hoarse. On June 24th the iodide was resumed, but as it apparently caused a return of the "erysipelas," it was discontinued on the following week, and perchloride of iron substituted. On July 13th the iodide was resumed, and was continued, with occasional intermissions. On October 5th the weight was 8 st. 8 lb., and the voice was noted as being stronger. The epiglottis had undergone a slow diminution in size from the first, and on November 9th the posterior part of the right vocal cord was distinctly visible, and presented an appearance of only slight thickening. On November 16th the voice had a true tone, and on the 30th the power of phonation had still further improved. On Dec. 14th the weight was 9 st. 1 lb., and the voice had so far improved that on examining the chest vocal fremitus was found to be normal. The flattening of the chest had undergone a perceptible diminution.

The steady gain in weight, which hitherto had been uniformly continuous, now ceased, and the patient attended at the hospital less regularly. On June 20th, 1877, his weight was found to be 8 st. 10 lb. only, and the patient complained of a return of the "erysipelas." Perchloride of iron was accordingly substituted for the iodide, and a few weeks later cod-liver oil was ordered. The epiglottis, though still crumpled and pendant, was considerably swollen, so that the posterior half of the right cord was clearly visible. All attempts to raise the epiglottis by means of a fine bent spatula caused violent spasmodic coughing. On Oct. 4th the weight was 9 st. 5 lb.; all improvement in other respects was well maintained. On Jan. 2nd, 1878, the weight was found to be 9 st. 5 lb., and on Feb. 28th it had risen to 9 st. 8 lb. (a gain of 36 lb. since the commencement of his treatment twenty-two months previously). It was thought advisable that he should still continue to take iodide, but he found it necessary to discontinue it occasionally, because of his attacks of "erysipelas," which was never visible during any of his visits to the hospital. On Sept. 18th, 1878, the weight was 9 st. 6 lb., and a fortnight later it was again 9 st. 8 lb. In Nov., 1878, all medicine was discontinued, and on Jan. 8th, 1879, the weight was 9 st. 5 lb., and all the improvement in the larynx and in the power of voice was found to have been maintained. When last seen the voice had a good strong bass tone, and the patient was practically well.

Remarks by Dr. POORE.—This case presents many points of interest. The absolute hoarseness, the troublesome cough, and the extreme degree of emaciation, gave one so strong an impression of laryngeal phthisis, that had it not been for the laryngoscopic and other signs of tertiary

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syphilis, which made the diagnosis a certain one, in spite of the patient's ignorance of ever having had the primary disorder, the prognosis would have been absolutely grave. Notwithstanding the great flattening of the chest, and the general harsh blowing respiration, the apices of the lungs appeared to be little affected, a fact which at once placed the case out of the category of ordinary phthisis. The patient was a sensible man, and had no wish to conceal the fact of syphilis, and in a conversation with him not many months ago, it was elicited that the sore or "abscess" under the right eye had followed a scar which had appeared after spending a night in a disreputable house while in a state of intoxication. It seems therefore not improbable that the primary sore was situated beneath the right eye, and that the want of proper treatment was the cause of its long duration. The rapid and continuous gain in weight, and the marked improvement in his general health while taking the iodide, are points of much interest, and the intercurrent attacks of swelling over the bridge of the nose and round the eyes, presumably caused by the administration of the remedy, and which the patient characterised as "erysipelas," are worthy of attention. At no time were there any marked signs of "iodism."

WEST LONDON HOSPITAL.

NON-DILATABLE STRICTURE OF THE URETHRA; INTERNAL URETHROTOMY; GOOD RESULT.

(Under the care of Mr. TEEVAN.)

CASE 1.—Charles B——, a canvasser, forty-six years of age, was admitted into the hospital on June 19th, 1879, having been put under Mr. Teevan's care by Mr. Edgeworth, of Bristol. From notes taken by Mr. Warrilow, the house-surgeon, it appeared that the patient had a gonorrhœa twenty-six years ago, which was treated by medicines. Eleven years ago he had a second attack, for which he had medicines and injections. During its progress he suffered from retention of urine, which was relieved by the catheter. Ten years ago he contracted gonorrhœa for the third time, which was cured by injections and medicines. For the past two years he had often been troubled with retention of urine, and had noticed that the stream had become much smaller. Sometimes he could pass his water continuously, at other times only "guttatim." The stricture was situated at the bulb, four inches and a half from the meatus externus. The calibre of the healthy penile urethra, as ascertained by Dr. Otis's urethrometer, was 22 F. No. 5 F. only could be introduced into the bladder. The urine was acid, and of the specific gravity of 1017; it contained no sugar, albumen, or renal casts.

By continuous and gradual dilatation the stricture was enlarged to 10 F., beyond which point no dilatation could be effected. As Mr. Edgeworth had been arrested in his treatment of the case, at the same point, Mr. Teevan determined to divide the stricture. On July 8th the patient was put under the influence of ether by Mr. T. G. Alderton, and the stricture divided, No. 20 F. silver catheter introduced, and withdrawn as soon as the urine had all flowed out. About a tablespoonful of blood was lost at the operation. At 10 P.M. the temperature was 99°. The patient did not sleep in the night, and suffered much pain when he made water, which was slightly tinged with blood.

On July 10th, 10 A.M., temperature 98·6°; he had not had much sleep; he passed a good stream of water, with less smarting. On July 11th No. 20 F. silver catheter was passed and repeated every third day. On July 30th the patient left the hospital quite well in all respects, and able to pass No. 20 olivary elastic catheter for himself. On Aug. 23rd Mr. Edgeworth wrote to say that the patient remained quite well, and could pass No. 20 F. quite easily. "His relief appears to be perfect."

CASE 2.—Benjamin S——, a coachman, forty-six years old, was admitted into the hospital on Oct. 26th, 1879. Ten years ago it appeared that the patient commenced to experience difficulty in making water. He was at that time a coachman and he often had to dismount to micturate. Seven years ago he had an attack of retention, which was relieved by a cold bath immediately following immersion in a hot one. Five years ago he sought advice at a hospital, and his stricture was dilated to No. 5 E. For two months he had attended the hospital as an out-patient, but his stricture could not be dilated beyond 5 E. When admitted he was in fair health. He stated that he had never had gonorrhœa or syphilis, and that so far as he knew he had never met with any injury to the perineum. The stricture commenced 4½ inches from the meatus externus. The calibre of the penile urethra was 30 F. The length of the urethra was 7¾ in. The urine, which contained much mucus, sometimes dribbled away. The stream was small.

For three weeks continuous dilatation was tried. On ten different occasions a small elastic catheter was tied in for periods varying from twelve to twenty-four hours, but the stricture could not be dilated. On Nov. 18th the patient was put under the influence of ether by Mr. T. G. Alderton, and his stricture divided by Mr. Teevan, who passed successively Nos. 20 and 25 metal catheters. No instrument was left in the bladder.

The variations in the patient's temperature were regularly recorded night and morning for one week after the operation by Mr. George Cumming, the house-surgeon. At 9 P.M. on the day of the operation it rose to 102°, and at 9 P.M. the following day it had still further risen to 104°. It fell, however, as rapidly as it rose, for at 12 A.M. on the 20th it was only 99·8°. On and after Nov. 22nd it was normal. The patient left the hospital in all respects quite well, on Dec. 4th, able to introduce No. 21 olivary elastic catheter with ease for himself.

Mr. Teevan observed that no one had as yet been able to elucidate the causation of rigors after urethrotomy. They were usually ascribed to the passage of urine over the wound, but in both the above cases no catheter had been retained; the urine was allowed to flow over the wound, and no rigors took place.

RADCLIFFE INFIRMARY, OXFORD.

TETANUS AFTER A SEVERE SCALP WOUND; RECOVERY.

(Under the care of Mr. H. P. SYMONDS.)

THE following case, for the notes of which we are indebted to Mr. J. T. Mitchell, M.B., house-surgeon, is interesting from the fact that the patient recovered, though but little was done so far as the administration of drugs is concerned. Indeed, it would seem that the most favourable progress was made when no special drugs were being exhibited, and that these tended rather to retard than accelerate recovery.

G. P——, aged fifteen, was seen on Sept. 1st by Dr. Gosset, of Steventon-hill. A scalp wound, inflicted three days before by a fall upon some loose stones, had nearly healed at the upper part. The whole had been covered over with many layers of strapping, the removal of which was followed by an escape of a large quantity of thin pus from the lower end of the wound, which was the deeper, and was puffy and gaped somewhat. Fresh strapping was applied, and the edges of the wound were drawn together.

On the 13th the boy was again seen by Dr. Gosset, as friends noticed that the jaw had been getting stiff for three days previously. The mouth could be opened a quarter of an inch only. There were no spasms or stiffness elsewhere, and the wound had apparently quite healed, there being an adherent scab at the lower part.

On the 16th hydrate of chloral and tincture of conium were given.

Next day, while sitting in a chair in front of Dr. Gosset, he was seized with a spasm in the back, and fell backwards, stiff and straight, rolling over on to the face. When lifted up he was as straight as a board, and some spasm could be felt in the back while he was being held. After about two minutes he was able to sit down again, and it was seen that he had torn open the whole wound except about an inch and a half at the posterior end, and the left flap was everted a little. The edges were drawn together by a couple of stitches, the insertion of which did not produce any spasm or sign of pain. The mouth could be opened about two-thirds of an inch. The back and back part of the neck had previously been stiff, but no sudden spasm had been before experienced. Subsequently to the accident he had lain a great deal on a brick floor, only a sack or coat being under him.

On the 18th he was admitted into the infirmary, and the following report was made:—"Patient cannot open his mouth wide enough to admit the finger, the left side of the jaw being the more rigid. The belly-wall is hard; the

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angles of the mouth drawn up. The back is arched (opisthotonos), and pain is complained of here. The muscles of the legs and arms, as well as those of the neck and back, are stiff. The breath is fetid; bowels have been opened; there is no headache. Pulse 120. Muscular pain of a catching nature, but no spasmodic jerking. The muscles of the back were very rigid, and the glutei firmly contracted. Although the muscles of the thighs are hard, the patient can draw up his legs. When he turns on to his face his body is like a *rigid rod.*"

On the following day the mouth could not be opened as widely as before; the opisthotonos was very marked, and the belly-wall hard and knotty. The "risus sardonicus" was feebly marked. There was no difficulty in swallowing liquid food. On the 22nd he had passed a comfortable night. The head was more drawn back, but there were no spasms, except a slight stiffening when he was shaken. Constipation had been continuous since admission, and was relieved by enemata. On the 24th the night nurse reported that during the night the boy had had a seizure "like an epileptic fit," in which he bit his tongue. On the nights of Sept. 26th and 27th he did not sleep much, complaining of pain his back.

On Oct. 1st the tenseness and fixation of the jaw still continued, but he slept well, and the pain complained of had left him. He was taking his food well. On the 3rd the abdomen seemed rather harder, and the symptoms altogether retrograde, so bromide of potassium was ordered in doses of half a drachm every six hours. Up to the 9th he bore the bromide well, and said he felt better; but on the 10th, although the facial muscles were less affected, so that he could smile easily, the heart's action was seriously depressed, being slow (44) and irregular, and the pulse very compressible. This drug was therefore discontinued, and carbonate of ammonia and bark were substituted. Under these the pulse gradually improved. By the 16th there was a marked improvement in all his symptoms, although the pulse was still compressible, and from this date there was a rapid recovery. By the end of October the patient could easily walk about, and did not complain of any stiffness, nor could any be detected by manipulation. He still retained the risus sardonicus, which was at times marked, the features being especially distorted when he attempted to smile.

Remarks.—It will be seen that chloral was given for two days only, the symptoms becoming worse during its exhibition. The bromide was given at the rate of two drachms a day for seven days, and during this time the symptoms did not abate nearly so quickly as they did subsequently; but the heart's action was greatly interfered with, and the patient much prostrated. Then, on the substitution of a slight stimulant for the latter drug, the improvement was very rapid.

CHILDREN'S HOSPITAL, NOTTINGHAM.

TWO CASES OF AMPUTATION OF HIP-JOINT BY FURNEAUX JORDAN'S METHOD.

(Under the care of Dr. LEWIS W. MARSHALL.)

CASE 1.—S. P——, aged seven years, was admitted on April 1st, 1878, with morbus coxæ (left) of some few months' standing; a pallid, fair, delicate boy, having, however, no evidence of any visceral disease, but much wasted by long-continued pain and suffering. An abscess was commencing on outer side of thigh, which had to be aspirated on the 21st June. This did not lead to a satisfactory escape of the collection, consequently a counter opening was made at a more dependent point, and hair-drainage substituted for tubing. During September he developed two bed-sores, and was frequently subjected to copious diarrhœa, checked by compound kino powder.

On Oct. 9th, the boy's condition having become much worse in every way, the head of the femur was excised. The head of the bone was found to be partially removed, but the pelvis was the chief seat of disease. A complete perforation of considerable size passed directly through the bottom of acetabulum into the pelvic cavity. Numerous pieces of bone were taken away from the edges and neighbourhood of this opening. All the sinuses were treated with chloride of zinc solution (forty grains to an ounce), hair-drainage and simple dressing of carbolic oil, and a Campbell de Morgan splint were adopted. Although for a time some improvement was noted, still constantly recurring attacks of diarrhœa &c. so reduced him that a speedily fatal termination might fairly have been expected. Under these conditions, and as a last resource, amputation at the hip-joint was determined upon by the method introduced to the notice of the profession by Mr. Furneaux Jordan (see THE LANCET, March 22, 1879).

On April 20th, 1879, the limb was removed at the hip-joint, the vessel being controlled in the groin by Esmarch's india-rubber tourniquet at first; but, as this was ineffectual, by the fingers only. The boy stood the operation very well indeed, considering his unpromising state when placed upon the table, and the amount of blood lost was, as compared with the older method of operation, but little in quantity. The femoral artery was the only vessel secured by catgut; all the smaller vessels, which it was deemed necessary to attend to, were twisted. A loose dressing of carbolic oil and lint was applied, hair being used as a drain.

On the 25th the diarrhœa was much improved, the temperature was falling, the appetite improved, and the boy slept well. The hair-drain was reduced to half the original size. On and after May 1st the wound was dressed daily. There was a very marked improvement in the general state, and the diarrhœa, for which up to this date a starch and opium enema had been used occasionally, was very much better. On the 8th the wounds were healing rapidly, that across the end of stump being but a superficial one. On the 18th the diarrhœa was not so well. Acetate of lead and opium were ordered. The condition of the stump was satisfactory. On July 1st he had been better for the last few days, both as to general condition and diarrhœa. Wound healing. On the 10th there was diarrhœa, with pain in the head and discharge from the left ear.

From this date he gradually went back, becoming comatose, and died on July 24th, 1879.

CASE 2.—Charlotte S——, aged seven years, had suffered from disease of left hip for several years. At the time of admission (Nov. 12th, 1878), she had luxation, with sinuses discharging in the buttock. There was no evidence of any visceral lesion at the time.

On Dec. 11th the hip-joint was excised, when the disease was found to be confined to the head of the bone, the acetabulum being uninvolved beyond slight erosion of cartilage. The great trochanter was affected, and a portion was removed. The sinuses were all treated with chloride of zinc solution, and hair-drains were introduced. The same dressings and splint were used as in Case 1.

From the date of operation up to June 13th, 1879, although for the first month or more her improvement was steady and satisfactory, portions of bone frequently came away and pus re-collected in the thigh. On this date (June 13th), a large abscess was laid open in the middle of the thigh, and much fetid pus was evacuated. On August 1st another collection was opened in the groin, and on the 9th albumen was found in the urine to the amount of one-eighth.

On June 13th the limb was removed at the hip-joint, the main vessel being controlled in the groin by the hand only. Though very much less blood was lost than in the previous case, the shock resulting from the operation was considerable. Besides the femoral, not more than two vessels required tying. Dressings, &c., were exactly similar to those used in Case 1. On the 15th the dressing, which had been kept soaked in carbolic oil, fell off during the night. The patient complained of no pain or inconvenience of any kind. She had slept well during the previous night, and took food well. On the 16th one suture was removed to relieve tension. Ordered fish or fowl. Considerable reduction in temperature. On the 17th the discharge was very fetid. To be dressed twice daily. On the 21st, perchloride of iron was ordered. On the 25th the odour was not unpleasant. The condition of the stump and of the patient was much improved, and the drain was reduced to half its original size. On the 30th the granulations were somewhat pale and flabby. The flaps were drawn together by strapping. On Sept. 4th the albumen was found to be diminishing. On the 6th, tartrate of iron and iodide of potassium were ordered (in place of the perchloride), and cod-liver oil in pancreatine wine. Since pressure had been used, the healing process had improved. Nothing of consequence occurred in this case after this date. The patient made a steady recovery, being discharged on Oct. 8th, with but a trace of albumen in the urine and the stump nearly healed.

Remarks by Dr. MARSHALL.—These cases I deem worthy

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of notice because of the unfavourable condition of each at the time of the operation. The method of operating being a somewhat recent addition to surgery, and from the success attending this procedure; their record cannot fail to be of interest to the profession. Both were practically doomed at the time of operating, and I regret now that No. 1 had not the advantage of an earlier operation, but this was due to the fact that Mr. Jordan's paper had only just then been published, and I shrank from the old method which entailed so much bleeding and shock. No difficulty was encountered in controlling the hæmorrhage, which was done in each case by Mr. Wright, senior surgeon to the General Hospital, by pressure with the thumbs in the groin. It was explained in the notes that owing to Esmarch's band having been first used in No. 1 more blood was lost than in the second case. I cannot conceive, however, that any advantage could have been gained by the use of Mr. Davy's lever or any other instrument for the same purpose, as certainly in the last case two ounces would amply cover the loss of blood.

Although only one of the two ultimately recovered, so far as the operation was concerned, it proved successful in both, as the boy succumbed to visceral lesions, the stump three weeks before death being all but healed. In the second case the shock was considerable in spite of the small quantity of blood lost, still the girl did well ultimately.

This method of operating is certainly a very decided advance in this branch of surgery, as by its adoption lives can be saved which would otherwise be lost to us.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

A large Gall-stone passed per anum, with remarks on the structure and formation of Gall-stones.—Rare Urinary Calculus.—Cyst of Kidney removed by Abdominal Section.—Intra-uterine Cystic Disease of Kidney.—Syphilitic Disease of Fœtal Bones.—Elephantiasis of the Penis.

THE Annual Meeting of the Society was held on the 6th instant, Mr. Hutchinson, President, in the chair. The first hour was devoted to the ordinary business of the Society, the latter part of the time being employed in the more formal work of the election of officers for the ensuing year, and in thanking those who were retiring from their official duties.

Dr. ORD showed a large Gall-stone, which had been passed per anum by a lady under the care of Dr. Carr Roberts. She had been recently confined of a living child, and the only symptoms at all referable to the calculus were excessive pain in the back, and constant diarrhœa of a pale-yellow colour; there was no jaundice. The stone, which was removed by the finger, measured 1⅞ in. in its long diameter, and 1⅛ in. across. It was composed of cholesterine and bile pigments, and was therefore clearly not an enterolith, which consists of hair, concreted indigestible matter, and triple phosphates, lime salts, eleagic or lithofellinic acid, but never of cholesterine. Referring to the structure and composition of gall-stones, Dr. Ord pointed out that they consist chiefly of a mixture of cholesterine with biliary pigment, mucus, lime salts of biliary acids and carbonate of lime being occasionally present. On section, they are seen to consist of four parts: a dark central portion, consisting mainly of pigment, with a small quantity of cholesterine in rhomboidal forms; around this a lighter portion with a distinctly radiated structure, composed of columnar masses of colourless cholesterine, with biliary pigment packed between; surrounding this is a zone, with the laminæ arranged concentrically, and composed of undulating crystalline fibres of cholesterine stained with pigment, more deeply stained towards the surface; the outer surface of the calculus, which is also the most recently formed, is deeply coloured, without any definite structure, and is composed of an intimate mixture of cholesterine in shapeless masses, spheres, or fibres, with biliary pigment. These facts point to a gradual metamorphosis of the calculus, and Dr. Ord suggested that it was the presence of the colloidal pigment which prevented the freshly deposited cholesterine from assuming at once its proper crystalline form; but that, as the pigment tends to become itself crystalline, the two bodies gradually separate, and the cholesterine crystallises. In support of this hypothesis, it was alleged that in the most deeply pigmented calculi the outer layer is abundant, while in the paler ones the crystalline centre predominates. Dr. Ord related some experiments in which he found that cholesterine deposited in albumen or gelatine is at first spherical, and gradually assumes a quasi-crystalline form; and that mixtures of cholesterine and bile pigments, dissolved in hot acetic acid, form, on cooling, homogeneous spheres, which gradually break up into smaller spheres, and then again into needles, which arrange themselves in a mixed laminar and crystalline structure around the centre of each sphere.

Dr. ORD also showed a remarkable Calculus which he had removed from the pelvis of the right kidney of a patient who had died in St. Thomas's Hospital of malignant disease of the bowel. The mucous membrane was very closely adherent to the stone and had to be detached with the knife, but showed no signs of inflammation. The calculus when recent was moist and soft on the surface; when dry and cut across it was seen to consist of a wrinkled black shell loosely surrounding a hard grey kernel. The shell consisted of a chitinous substance—altered mucus and epithelium, deeply stained with a pigment not that of ordinary urine or of blood. The nucleus consisted of uric acid and pigment arranged in concentric laminæ, many of which on the surface were imperfect, portions of them having been eroded. Between the shell and the kernel was some powder composed of large uric-acid crystals mixed with colloid and subcrystalloid pigment. Dr. Ord suggested that the original uric-acid calculus had not set up any irritation in the kidney, the pelvis of which invested it very closely, and then the mucus secreted had concreted on the calculus and eroded it in harmony with Dr. Rainey's law of molecular disintegration. The uric acid being converted into large colourless crystals, the pigment separated into masses.

Mr. HULKE thought there was not complete parallelism between the erosion of glass by the crystallisation of carbonate of lime, and the erosion of the crystalline calculus by the colloid shell.—Dr. ORD replied that he regarded the action of carbonate of lime on glass as an exaggeration of the action of a colloid, and that in this particular case the colloid was mixed with a very active pigment matter. Very perfect spheres of carbonate of lime and triple phosphate can be readily obtained in gum, showing concentric lines, and after a time a radial structure; these are permanent in the same solution or in Canada balsam, but if transferred to a more concentrated solution of gum they rapidly undergo erosion and gradually disintegrate; some of the change in the nucleus of the calculus might be due to the effect of "fresh solution."

Dr. ORD showed a large Calculus of Cystine recently removed by Mr. Reginald Harrison from a man aged twenty-one; its weight was 1050 grs. The urine did not appear to contain cystine before or after the operation of lithotomy.

Dr. ORD also showed an oriental Bezoar composed of eleagic acid, polished brown on the surface, of a stratiform arrangement, with a silky lustre on section. The eleagic acid is the result of the metamorphosis of the food of ruminants in whom this form of bezoar is met with.

Dr. DAY showed a large Cyst of the Left Kidney, removed four days previously by Abdominal Section by Mr. Knowsley Thornton. A little girl, aged seven, was admitted into the Samaritan Hospital in October last with a large abdominal tumour, which was variously diagnosed as a large multilocular cyst, hydatid, and renal cyst. It had been noticed five years. The child was in all respects healthy, but passed only a small quantity of non-albuminous urine. On Nov. 4th Mr. Thornton drew off with the aspirator five to six pints of fluid having all the characters of urine, but containing albumen. In five to six weeks the sac began to refill, and on Jan. 3rd Mr. Thornton removed the tumour by abdominal section. The patient was doing well, and promised a good recovery. Mr. Thornton had noticed that the sac was so thin that it threatened to rupture into the peritoneum; the peculiar way in which the tumour had displaced the colon had rendered its removal, and the separate ligature of the renal vessels, easy, while the recovery was expedited by the way in which the colon fell back into the gap left by the operation.

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Dr. EWART showed a specimen of Cystic Degeneration of the Left Kidney and Ureter in Intrauterine Life. The obstruction appeared to be caused by the lax state of the mucous lining of the ureter where it lay in the wall of the bladder, which was so great that it completely obstructed the passage of fluid or a probe from above, though it offered no obstacle to a probe introduced from below. This valvular obstruction might be the origin of many cases of cystic disease of the kidney.

The PRESIDENT exhibited a specimen of Elephantiasis of the Penis of enormous size which he had recently removed from a native of the West Indies in whom it had existed for many years. His son had detected filaria in the blood.

Mr. EVE showed the bones of a Fœtus supposed to be suffering from congenital syphilis. The mother, aged thirty-one, was a patient in St. Bartholomew's Hospital, suffering from an annular stricture of the rectum, dating three years back, when the patient had passed blood and slime with the motions. She miscarried in the hospital before treatment was begun, the abortion not being due to the condition of the rectum; she was then between five or six months advanced in pregnancy. Only the long bones of the fœtus were affected, and all of these except the left tibia and fibula showed gelatiniform degeneration of the epiphyses, which in many instances were separated from the diaphyses; the ends of these diaphyses were bare, soft, and ragged, uncovered by periosteum for about one-eighth of an inch, and covered with detritus. The left tibia and fibula were brittle and showed separation of epiphyses, irregular thickening of the bone, from which the periosteum was readily separated; the lower end of the tibia had a wormeaten appearance. Several microscopical specimens taken from the bones, and drawings of them, were exhibited. The epiphysial and intermediary cartilage were normal; the calcified cartilage was thickened and contained unusually large marrow spaces choked with granular matter; the lamellæ of the spongy bone were thin and scanty, and showed many of Howship's lacunæ filled with osteoclasts, as if undergoing rapid absorption; the periosteum was thickened, and beneath it was a thick layer of spongoid tissue of Parrot; transverse sections of the thickened bone showed the true shaft surrounded by lamellæ of new bone united into a kind of network. Just as gummata are local hyperplasias of connective tissue, this affection would seem to consist in a local hyperplasia of the elements out of which bone is formed. But at the ends of the diaphyses, which are less vascular, and where endo-cartilaginous ossification is occurring, the tendency is to degeneration; while under the periosteum, where the vascularity was greater and the ossification intra-membranous, there is an excessive formation of the fibrillar matrix of bone; this is the spongoid tissue of M. Parrot. It may remain unossified, or, being ossified, form the subperiosteal thickenings seen in two of the bones shown. The morbid process, as would be expected, attacks the growing parts of the bone. M. Parrot has stated that suppuration only occurs from some irritation after separation of the epiphysis; but the facts that in one case a sequestrum as large as a pea was found surrounded by pus, while in several cases small cavities containing pus and specks of bone were seen, and the existence of caries at the ends of the diaphyses of some of the bones exhibited, in which no separation of the epiphyses had occurred, point to an opposite conclusion. Mr. Eve showed also two "*natiform* skulls" from the St. Bartholomew's Hospital Museum.—Dr. GRAILY HEWITT asked if any examination of the placenta had been made in Mr. Eve's case.—Dr. HOGGAN thought that the specimens under the microscope illustrated exceedingly well the normal process of ossification in fœtal cartilage.—Mr. CRIPPS thought the evidence of syphilis in the mother deficient; only about 10 per cent. of cases of annular stricture of the rectum were syphilitic.—Mr. EVE stated that he had not seen the placenta; he thought there were distinct departures from the normal processes of ossification in his specimens. He had been unable to get a complete history of the mother, but he thought that the presence of a cicatricial stricture of the rectum, the fact of abortion, and the condition of the fœtal bones, were almost conclusive evidence of syphilis.—The PRESIDENT considered cicatricial stricture of the rectum, together with the changes in the bones, strong evidence in favour of the existence of syphilis. He suggested that it would be well to have the specimens examined by a committee, and nominated for that purpose Dr. Barlow and Mr. Butlin.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

THE second meeting of the session 1879–1880 was held at the Royal Kent Dispensary, Greenwich, on Nov. 7th, 1879, Mr. J. P. Purvis (President) in the chair. Dr. Curnow read a paper on "Rest in the Treatment of Medical Cases," in which he said that rest in the treatment of surgical cases had been fully treated of by Mr. J. Hilton, but that rest in the treatment of medical cases had not received the attention it deserved. Dr. Curnow then said that if we turn to our text-books we find that specific diseases, parasites, and gout, are almost the only diseases treated by specific remedies; and that in all other diseases treatment depends upon two principles—(*a*) giving support to the patient; (*b*) giving physiological rest to the organ or organs involved. The first point to be aimed at is to remove the cause of the disease, as no treatment will be of any avail until this is attended to. Dr. Curnow then cited several typical examples of diseases of the brain, lungs, liver, stomach, and kidneys, in proof of the benefit of this mode of treatment.

Reviews and Notices of Books.

Ocular Therapeutics. By L. DE WECKER. Translated and edited by LYTTON FORBES, M.A., M.D. pp. 552. London: Smith, Elder, and Co. 1879.

DR. DE WECKER has written a very interesting volume, and Dr. Lytton Forbes has done good service in rendering it into excellent English. At whatever page it is opened the reader will find something to interest him, something novel, or some new application of old knowledge. In their chatty and agreeable style these lectures remind us strongly of those of Trousseau.

In speaking of the affections of the cornea a good account is given of the rodent ulcer, sometimes also called Saemisch's ulcer, an affection that usually attacks old people, and, commencing in a slight detachment of the epithelium near the margin of the cornea, gradually extends round and over that membrane till it is entirely destroyed. In the treatment of this affection, once so formidable, Dr. Wecker observes ocular therapeutics may boast of one of its most brilliant triumphs. The method of treatment alluded to was suggested by M. Saemisch, and consists in slitting up the ulcer boldly from behind forwards; and it must be admitted that if this operation be performed while the ulcer is small it is generally successful, but, as Saemisch, indeed, himself admits, if the wound has to be made as large as the radius of the cornea, the result is very uncertain. Dr. Wecker strongly recommends the use of eserine as a local application after the division. In regard to its etiology he observes that it is often the result of accident and exposure amongst the poorer classes, but amongst the wealthier it is the outcome of an inflamed lachrymal sac, the secretion of which has been retained and has decomposed.

Dr. Wecker appears to regard sclerotitis and episcleritis as essentially the same disease. He describes sclerotitis as consisting of a series of circumscribed swellings or centres forming bulgings round the cornea, the deep-coloured injection of which is an important diagnostic sign, enabling us to distinguish sclerotitis from other circumscribed inflammations of the conjunctiva, as phlyctenular or pustular conjunctivitis. This account may fairly be demurred to. Pure sclerotitis is not very common, still every ophthalmic surgeon in this country is familiar with a condition of inflammation of the whole sclerotic in which it presents a deep rose-coloured blush, not affecting, as in episcleritis, to which Dr. Wecker's description is applicable, circumscribed spots, but the entire membrane, and unaccompanied either by keratitis or by iritis. It is to this affection that the term "rheumatic ophthalmia" is properly applicable. It is attended with con-

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siderable pain affecting the brow and temple; there is little, if any, intolerance of light, and but slight lachrymation. Dr. Wecker finds much advantage accrue in episcleritis from the subcutaneous injection of pilocarpin (five drops daily of a 10 per cent. solution). This should be done in the morning, in bed, so as to secure copious perspiration with salivation. We somewhat doubt whether the patient might not prefer the episcleritis to the effects of the treatment, especially as the disease does not appear to yield to less than eight or ten of these injections. In addition he orders potassium iodide, sometimes with iron. He does not, however, allude to the plan of treatment in which colchicum is combined with quinine and with aconite, and which in many instances acts with great rapidity and certainty.

Dr. Wecker speaks highly of the duboisia as a mydriatic, and therefore applicable in the treatment of iritis. He states that solutions of duboisia of equal percentage with atropine are by far the more powerful. Maximum dilatation and paralysis of accommodation are attained very quickly. We would just note, in passing, that it is a powerful agent, and should be administered with caution, especially in children. The use of mercury is recommended particularly in plastic iritis, and he employs the bichloride; in the practice of some surgeons, however, calomel has appeared to act more energetically. He believes that a remission of all symptoms may be brought about with almost absolute certainty by paracentesis, the injection of morphia at night, and by a few grammes of chloral.

The treatment of posterior synechiæ is fairly and sensibly discussed. Dr. Wecker thinks that in many instances they may be broken down by the alternate use of eserine and atropine; but if this is found to be impossible, and the adhesions are clearly giving rise to pain and recurrent iritis, operative procedures must be resorted to, and of them he prefers that of M. Passavant, which consists in making a peripheral opening, and drawing out the fold of iris corresponding to the synechia; when the synechia has been once freed, the fold is to be released. By this means, he thinks, the capsule of the lens is less endangered than by the proceeding of Streatfeild and Weber, whose operations, he considers, have played a much larger part in books than in actual practice.

In treating of the difficult subject of choroiditis Dr. Wecker makes several important observations. He considers that in the greater number of cases it commences with iritis, and that in four cases out of five syphilis is the important factor; hence he recommends mercury in small doses, and iodide of potassium, which he states have answered well in his hands. As the attack often spreads to the retina, he advises rest in a darkened room, though he fully recognises the evil effect of too long immurement in darkness. He gives a word of caution in regard to operations necessitating the opening of the capsule of the lens, where dacryocystitis exists, as he considers them to be very likely to give rise to panophthalmitis. In choroiditis from wounds of the cornea or lens, he directs a gentle stream of a weak solution of hydrochlorate of quinine to be passed between the eyelids every hour or two.

The following story, recently told by so eminent an ophthalmic surgeon as Dr. Wecker, is a warning that should be laid to heart by every practitioner:—

"Some twelve years ago a patient entered my consulting-room, and stated that while crossing the boulevard, a very large fly had entered his right eye, inflicting a regular blow on the eyeball. I found the eye considerably irritated, and watering, and everting the upper lid made a careful examination several times, neglecting, however, to sweep with my probe the upper cul-de-sac. I found nothing, and attributed the irritation of the eye to the blow given by the insect, which had evidently been severe. Finally, I dismissed the patient. Next day he returned, and on once more everting the lid, I perceived near the inner extremity of the tarsus an enormous fly. I straightway removed it from its prison in the superior cul-de-sac, where it had escaped discovery the day before, simply because the patient under the influence of pain had closed his lids very tightly. I was obliged to listen to his reflection, and a very just one too, that removal twenty-four hours sooner would have been very much more to his liking."

St. George's Hospital Reports. Edited by W. H. DICKINSON, M.D., and T. P. PICK, F.R.C.S. Vol. IX., 1877-78. London: J. & A. Churchill. 1879.

THIS is a bulky volume of some 820 pages, three-fourths of which are devoted strictly to Reports, thereby marking a new departure in works of this class, one which fulfils the primary object of such publications, and one, too, which, on the scale here presented, will compare with those leading examples of hospital statistics issued annually from the great Berlin and Vienna institutions. For in the volume before us the papers or memoirs by members of the hospital staff take a subsidiary place. They are neither elaborate nor exhaustive, and are obviously intended to be merely supplementary. If, then, in what follows, we dwell especially upon the Reports, it will be simply because they do occupy the chief place. Looking at them generally we see to its full extent the value of careful and complete records of registration, and St. George's Hospital must be congratulated as much for the thoroughness of its system in this respect, as for the painstaking manner in which the records have been analysed. We have here not only the reports of the medical and surgical registrars for the years 1877 and 1878, drawn up respectively by Dr. Isambard Owen and Mr. W. H. Bennett, but there is also a pathological report by Dr. Ewart, and reports of the obstetrical, ophthalmic, throat, orthopædic, aural, and dental departments, compiled by the officers in charge of each of these special branches. They testify to the utility of such special departments in general hospitals; and a reflection naturally arises in regard both to these specialties and to the other branches of the Reports—namely, how great would be the gain were all our metropolitan hospitals to do likewise. For it must be pointed out that the information here given is not merely statistical. Many classes of disease are fully analysed, so that the work of the hospital is fairly set before the reader.

The memoirs which close the volume are, as we have said, neither exhaustive nor elaborate. But most of them are interesting and of practical utility. Some consist merely in records of cases—as that on a case of Diabetes by Drs. Cavafy and Bartalocci, where the results obtained by treatment by ergot, Calabar bean, thymol, salicylate of soda, salicylic acid, quinine, and lastly, codeia, are respectively analysed, the case terminating fatally from acetonæmia, whilst apparently progressing favourably under codeia. Dr. Cheadle gives an account of cases of Exophthalmic Goitre, one especially valuable for its record of the morbid appearances found after death. Dr. Barclay contributes a paper on Salicylic Acid in Gout, but his cases are too few from which to draw just conclusions as to the remedy. Mr. Holmes, in a paper on the Treatment of Compound Fractures, sums up his experience in favour of the antiseptic method in most, but not in all cases, especially in the first period, but he holds that if continued after three weeks healing is retarded from the irritation caused by the antiseptics. The concluding paragraph of his paper contains the following:—"There has been too much of the character of a 'speciality' given to the antiseptic treatment. There is nothing really mysterious or difficult about that treatment, though if it could only be carried out by adepts it would *ipso facto* be unfitted for general use." Dr. Ogle contributes a careful paper on Diphtheria in Rural Districts, from which we gather that he has

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met with cases of non-membranous sore-throat of diphtheritic nature.

In conclusion, the editors may be congratulated in determining to make the reports a chief feature of the volume. By doing so they entail the maintenance of a high standard of registration of the cases treated in the hospital; but at the same time it ought by no means to happen that any system of this sort should deter members of the staff from presenting to the profession in other ways the results of their personal observation of the many instructive cases falling under their charge.

ENGLISH MORTALITY IN 1879.

THE proportional relation between the rate of mortality in the twenty largest English towns and that in the whole country is tolerably constant. The annual death-rate in these twenty towns during the last quarter of the year 1879 averaged 24·6 per 1000 of the population, against 22·4, 22·8, and 25·1 in the corresponding periods of the three preceding years. Assuming the usual proportion between the mortality in these towns and in the whole country to have been maintained, it may be estimated that the general death-rate in England and Wales last quarter was equal to 22·4 per 1000. This rate is slightly lower than that which prevailed in the last three months of 1878, but, as might be expected to result from the severe and long-continued frost, exceeds the average rate for the season. The mortality during the first three quarters of 1879 having been reported on by the Registrar General, this estimate of the mortality in the last three months enables us approximately to calculate the death-rate for the whole year at 21·3 per 1000, or 0·5 below the average rate in the preceding ten years. Notwithstanding an excess of mortality in the first and last quarters of the year, due to climatic causes, the rate for the whole year was below the average, mainly owing to the exceptionally low death-rate in the summer quarter. The decline in the English death-rate noticeable since sanitary reform and progress was stimulated by the Public Health Acts of 1872 and 1875, was fully maintained last year. The average death-rate in England and Wales during the nine past years of the current decade has not exceeded 21·6 per 1000, against 22·4, 22·2, and 22·5 respectively in the three decades of the thirty years 1841-70. The average decline of English mortality during the past nine years has been equal to 0·8 per 1000 of the population annually. At first sight this fractional decline of mortality seems but a slight result to claim as evidence of sanitary progress. It signifies, however, that in the nine years more than 150,000 persons have survived in England and Wales, whose deaths would have been registered if the average death-rate of the preceding thirty years had been maintained. This fact should afford no slight encouragement to those who are fighting the hard fight for public health and improved sanitary condition.

HEALTH OF LARGE ENGLISH TOWNS.

FIFTY-THIRD WEEK OF 1879.

THE week ending last Saturday constituted the fifty-third of 1879, according to the ruling of the Registrar-General, because four of its seven days belonged to last year. In twenty of the largest English towns, containing nearly a third of the entire population of England and Wales, 5889 births and 4120 deaths were registered during last week. The births exceeded by 805, and the deaths by 750, the average weekly numbers during 1878. This marked excess of births and deaths was in great measure due to the delay of registration in the previous week caused by the Christmas holidays. The deaths exceeded those in the previous week by 243; they were equal to an annual rate of 29.1 per 1000 in the twenty towns, against 30·5 and 27·4 in the two preceding weeks. During the thirteen weeks ending on 27th ult., the death-rate in these towns averaged 24·2 per 1000, against 22·8 and 25·0 in the corresponding periods of 1877 and 1878. The lowest death-rates in the twenty towns last week were 19·6 per 1000 in Sunderland, 21·0 in Portsmouth, 22·0 in Oldham, and 22·7 in Norwich. The rates in the other towns ranged upwards to 30·6 in Liverpool and Brighton, 31·5 in London, 32·0 in Salford, and 35·1 in Plymouth.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 627 and 574 in the two preceding weeks, rose again to 607 last week; they included 241 from whooping-cough, 128 from scarlet fever, and 125 from measles. Whooping-cough fatality showed a further general increase last week, and was proportionally largest in Salford, London, and Newcastle-upon-Tyne. The death-rate from scarlet fever was greatest last week in Newcastle-upon-Tyne, Leicester, and Bristol; and that from measles in Plymouth, Hull, Liverpool, and Bristol. The 27 deaths from diphtheria in the twenty towns included 16 in London, 3 in Birmingham, 3 in Liverpool, and 3 in Manchester. Small-pox caused 4 more deaths in London, but not one in any of the nineteen large provincial towns. The Metropolitan Asylum Hospitals contained 56 small-pox patients on Saturday last, against 48 at the end of each of the two preceding weeks; no less than twenty-two new cases were admitted to these hospitals during last week, a higher number than in any week since August last.

Notwithstanding the increase of registered mortality in London last week, the deaths referred to diseases of the respiratory organs were but slightly more numerous; they were 672 last week, against 799 and 652 in the two preceding weeks, and included 426 from bronchitis and 154 from pneumonia. The deaths from these diseases exceeded, however, the corrected average weekly number by 152. The annual death-rate in London last week from diseases of the respiratory organs and phthisis was equal to 12·2 per 1000; the rate from the same causes in Liverpool did not exceed 10·5.

THE SUCTION TUBE IN CATARACT.

To the Editor of THE LANCET.

SIR,—In the last week's number of THE LANCET, Mr. Pridgin Teale, in a letter on the suction of cataract, refers to my opinion and experience, as published in 1875. Will you allow me to say that since the date in question I have continued to employ suction, both in hospital and in private practice, and that I am entirely satisfied with the results obtained. The statistics of the Ophthalmic department of St. George's Hospital were not accurately kept prior to the appointment of an ophthalmic registrar in December, 1877; so that I can only appeal to records for two years. In those years, 1878-79, twenty-seven opaque lenses were removed, either entirely or partially, by suction. Four patients with laminar cataract had both eyes treated at once. Three cases were complicated with advanced interstitial keratitis. In one case opacity of the lens followed acute cyclitis with dropsy of the vitreous. Five were traumatic cases, and in three instances suction was applied for the removal of cortical débris left behind in extraction.

With one exception, the whole of these cases did perfectly well; and the exception had nothing to do with the use of suction. The patient was a man fifty-five years old, who had been wounded near the ciliary region by a pointed stick. His traumatic cataract was removed, a week after the injury, mainly by a downward iridectomy and a scoop, but some small portions were taken out by suction. The eye remained irritable, and the appearance of threatening symptoms in the other led me to perform enucleation.

Permit me to add that, in the main, I cordially agree with what Mr. Pridgin Teale has written; but that I employ, and in my own hands do not share his objection to, a curette with notches at the margin of its opening.

Your obedient servant,

Wimpole-street, Jan. 6th, 1880. R. BRUDENELL CARTER.

BELFAST HOSPITAL SUNDAY.—Collections for this purpose were held in most of the Belfast churches on the last Sunday in 1879, but the result will not be known for some time. The total amount obtained will go to the funds of the Belfast Royal Hospital.

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THE LANCET.

LONDON: SATURDAY, JANUARY 10, 1880.

IF it be a fact, as some allege, that the Government is beginning to set its house in order with a view to the trials and contingencies of a general election, the claims of the medical profession to a pacific, if not genial, policy may be recognised. At the moment of writing we do not remember how many names the British Medical Register includes, and it is not now necessary to inquire. The total must be a large one, and perhaps half is composed of men whose good feeling it would be worth while to secure. There is this peculiarity about the constituency of medical practitioners: they not only form a considerable body in the numerical aggregate, but the individual members of our profession are well scattered over the country, and an acute political agent would scarcely fail to perceive that they possess, and may at any crisis exercise, a certain amount of influence. We are aware that the Government of the day does not entertain the most cordial feelings towards medical men, and it probably sets small value on their support, and would not be greatly moved by their antagonism; but we question whether these sentiments are as practical as they might be rendered by a little more inquiry. It sometimes happens that danger and difficulty threaten a cause from quarters whence neither good nor evil is anticipated. We do not assert that this is likely to be illustrated with the influence exerted by medical practitioners during the approaching struggle. It will suffice to point out a *possible* contingency, and to urge that, laying aside the evident feeling of dislike with which the Government regards the profession, it might be politic to reflect whether it is too late to make at least one attempt to smooth away some of the asperity which has been produced by the manner in which the general body of practitioners have been treated during the last five or six years, and the scant respect which has been paid to repeated and urgent remonstrances. We can have no scruple in adopting the *argumentum ad hominem*, because it is not for ourselves as a class or for class interests we plead, but for the people, and those public interests which are directly affected by the success or failure of the ministry of Health.

The grievances of which the medical profession has to complain are many, and the manner in which its appeals have been treated has been vexatious; but we do not propose to do more than call to mind one or two matters that demand prompt and grave consideration. First, there is the obstinacy with which the refusal to recognise a pressing need of medical counsel in regard to matters of social and domestic reform and reconstruction has been maintained. Wise in their own conceits, great officers of State and public administrative bodies—from the Privy Council itself down to the Metropolitan Board of Works and those troublers of the social peace, the local school boards—have rejected every entreaty and remonstrance submitted in the interests of scientific progress and even common expediency. The Privy Council still relies on quarantine as a mode of protecting the home country from imported disease, thus clinging to a policy which has been not inaptly characterised as "grandmotherly"; while the Metropolitan Board of Works, in sublime ignorance of the rudimentary principles of sanitary work, inflicts suffering on the poor and expense on the ratepayers; and school boards, blindly carrying out the letter of the law in violation of its spirit, have already done much to convert institutions which were intended for the good of the rising generation into nests and foci of disease. One important source of all this folly and mismanagement is the refusal to seek and act upon medical advice. The departments of public administration are neither organised so as to work together for the public advantage, nor set wholly apart with independent spheres of authority. Serious conflict must ensue if epidemic disease should invade the country, and it will then be too late to take counsel, because there will barely be time to act. A Minister of Public Health, aided by competent medical advisers, or even a Medical Board composed of officers attached to each department, from the Privy Council to the Board of Works—which is *practically*, and ought to be in form, a Government department,—would remove all difficulties; but before any central medical authority can be constituted the Government must be convinced that the preservation of health should play a prominent *rôle* in legislation and administration, and this the present Government, we see too great cause to fear, is either not able or is unprepared to recognise.

If the Government of the day is acting on advice in its present policy with regard to public health, its counsellors are not in the confidence of the profession, or competent to shape its policy. The grounds of this presumption are abundantly evident. Take for example the manner in which Mr. SIMON, the greatest living authority on sanitary science, was permitted to retire a few years ago, and the persistent refusal to fill his place. Again, the strangely discourteous and unfair treatment received by Dr. FARR is not likely to strengthen the confidence of the profession; and there is too little reason to hope that the elevation of Dr. BUCHANAN to the office of chief medical adviser of the Local Government Board is to be the signal for a much-needed and timely development of the functions and powers of that department of the public service. Consider, too, the difficulty which has beset the task of extorting a minimum of justice for the medical officers of the army, and the doubts that still exist as to the value of a Warrant which does not improve on acquaintance, and only part of which is probably meant to be carried out. When will even so much as may have been conceded to the Army be wrung from the stolid indifference of the Admiralty for the Navy? The Arctic expedition was ruined by the refusal to serve out lime-juice in compliance with the instructions of the medical authority; the service, as a whole, may be ruined for want of a little common sense in dealing with the medical officers of the fleet. As the matter now stands, we strongly counsel intending candidates to hold back from the examination announced to take place in February. Let the authorities at Whitehall produce the terms of the contract, and enable the profession to see that henceforward the Medical Service is to stand on an improved footing, before the younger

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members of our profession commit themselves. If the Navy is in want of surgeons, the Admiralty must come forward with a clear offer fairly drawn and finally sealed. The Local Government Board has declared its inability to grapple remedially with the grievances of the Poor-law officers. It remains to hope that hereafter the place of authority in local government may be ceded to a stronger and wiser administration. We do not care to extend the survey or to lengthen the catalogue of complaints. The result of the circumspect is simply this: if the Government has wisdom commensurate with its love of longevity, it will not overlook the need of doing something before the approaching day of vicissitude arrives.

To the west of the great mountain range which divides the main island of Japan into two halves, an endemic disease annually prevails at certain places during the time of the greatest summer heat, and is, on account of its danger, a source of terror to the inhabitants. These regions are in the vicinity of three large rivers, and each is sharply circumscribed, being part of the area over which the spring floods extend. But although the disease occurs only where the inundation has been, regions are flooded where the disease is not found; and in the east coast, where the floods are regular, it is unknown. That the immediate cause of the disease is a parasite is a popular belief even among Japanese doctors, suggested by the facts that it appears to arise by a sort of wound, that only those persons who are specially exposed to wounds from small animals—as reapers—suffer, and that the native name for the disease is in part that applied indiscriminately to small insects and worms. The native surgeons formerly asserted that a worm could be drawn from the wound, but it was apparently only a small thread of tissue adherent to the plaster by which the wound was covered. Later surgeons, unable to find a worm, thought they had discovered the cause of the disease in a small insect found upon the skin of the patients, but this, being brought to Tokio, proved to be the Leptus autumnalis or a congener. The better-informed practitioners in Tokio were inclined to regard the malady as an ill-described form of typhus or else true plague. Nothing more was known of it until, in 1877, KAWAKAMI, a medical student of Tokio, whose home was near the affected regions, studied the disease in his vacation, and brought an account so interesting that the following August was devoted by Professor BAELZ, of Tokio, to the study of the disease at the spot, assisted by KAWAKAMI; a temple being placed at their disposal as a hospital, the better to observe the affection. The result of this investigation is published in a most interesting article in the current number of VIRCHOW'S *Archiv*. The difficulties they encountered were not small, and had previously baffled several Dutch surgeons who had tried to study the disease. The natives had a profound distrust of European doctors, and at first refused to come into the hospital, and it was only by the help of the authorities that they were taken from the dim huts in which they lay in suffering heaps, a prey to myriads of fleas and mosquitoes, and in a state of dirt which defies description.

The definition which authors give of the malady—the "Japanese river- or flood-fever"—is that it is an acute, infectious disease, not contagious, appearing during the months of July and August in certain previously flooded places, of typical febrile course, beginning with circumscribed sloughing of the skin, and leading to swelling of the lymphatic glands and a cutaneous exanthem. The symptoms are, as a rule, most characteristic. The period of incubation is apparently four to seven days. Prodromata are always absent, or consist merely in malaise for a day or two. The disease manifests itself commonly on the sixth day after coming to the infected region, or after handling the hemp brought thence. The first symptom is a severe rigor followed by fever, and repeated in the course of the first day, with headache, throbbing in the temples, loss of appetite, and prostration, which knocks down even the strong, energetic natives at once. The first characteristic symptom appears on the second day, and consists of tenderness in some lymphatic glands, inguinal, axillary, or cervical. If the periphery of the region in which the glands are affected is then examined, there will with certainty be found a more or less dusky spot covered with a dry scale or scab. This circumscribed slough, resulting from a slight preceding ulcer, is the pathognomonic sign of the river fever, never absent. By this time the sufferers are scarcely able to stand. In their huts they huddle together as if for warmth. The face is red in the recumbent posture, pale in the erect. The patients whimper unceasingly throughout the attack, although they are unable to give any reason for doing so except the headache. They have an intense horror of the slightest breath of air, or of a drop of water being brought in contact with the skin. (The latter, however, is common with the Japanese in illness; when well, even the peasants bathe daily.) The temperature varies between 101° and 103° F. The pulse is relatively infrequent—80 in men, 100 in women. The skin is dry. In some part of the body, especially where the skin is moist, as the scrotum, axilla, hypochondrium, or elsewhere, is a round blackish spot, from 2 mm. to 4 mm. in diameter, with a slight depression in the centre. It is sharply limited from the adjacent skin, which is soft, livid-red, scarcely infiltrated. The black part is a dry, scaly slough, hard, and difficult to remove. The tissues near are not raised or tender. A few days later the crust can be removed, and a round crater-like ulcer is left, the bottom of which is not covered with pus, but with a consistent, tough, fatty mass. Suppuration thus plays little part in the process; there is rather a dry, granular destruction of the tissues.

No distinctly inflamed lymphatics can be traced up to the nearest glands, which are, however, invariably swollen and tender, as also are, in a short time, all the accessible superficial glands. Catarrhal conjunctivitis commonly occurs. The throat is normal. Cough, with catarrhal râles, is frequent. The spleen is constantly enlarged; the urine free from albumen; the bowels obstinately constipated. During the next two days the fever increases constantly, reaching 104° by the evening of the fifth or sixth day; it is commonly continuous, rarely remittent. The frequency of the pulse is always relatively low. On the sixth or seventh day there is an increase in the fever and restlessness; and the exanthem appears, commonly first on the temples and cheeks, in the form of large flat papules of dark-red colour, similar to the spots of measles. Simultaneously, or a few

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hours later, similar spots appear on the forearms, legs, and back. The eruption is indistinct on the thighs and upper arms; the throat and neck commonly remain free. Between the larger papules small lichen-like spots appear. The eruption lasts from four to seven days, and gradually becomes indistinct. In slight cases it may be visible for a day only. It marks the height of the disease, and then there is frequently delirium at night, deafness, dry lips and tongue. The ulcer now suppurates; cough is common and is sometimes severe; bronchial râles are heard, but no dulness is found; the enlargement of the spleen is commonly moderate, the constipation permanent, the urine scanty but still free from albumen. About the end of the second week morning remissions appear in the pyrexia, the patient's condition gradually improves, slight diarrhœa replaces the constipation; convalescence is rapid. Slight cases, in which the patients are confined to bed for a day or two only, constitute about 25 per cent. of those observed, and do not appear to be associated with slightness of the local affection, since in one patient who was not confined to bed at all, the ulcer was two centimetres in diameter. The most severe cases, often fatal, are accompanied with high fever, acute parotitis, copious bloody stools, coma, mania, cardiac failure, or œdema of the lungs. Pregnant women usually miscarry and die. The average duration of the disease is about three weeks, of which time the febrile period occupies the greater part, convalescence only a few days. Rarely the fever lasts a month, and convalescence is then slower. The common mortality of the disease appeared to be about 15 per cent., although no case which was treated by the observers died. The number affected is about 8 per cent. annually of the population of the affected districts, the total annual number of cases being about three hundred.

Professor BAELZ did not succeed in obtaining a single post-mortem. In 1877 KAWAKAMI made two, but was able to find no characteristic lesion in the internal organs. The blood was fluid, the heart soft, the spleen enlarged, and its capsule slightly inflamed; the mucous membrane of the small intestine presented here and there red, injected, raised spots, not always corresponding to Peyer's patches, and wholly unlike the appearances in typhoid. The mesenteric glands were swollen, and the peritoneum injected.

Regarding the etiology of the disease, the authors discuss at length the theory that it is connected with the mite mentioned above, but reject it on the ground that this, although capable of burying itself in the skin, is extremely common, and that in many instances which came under their notice, in which the insect was not extracted, no disease followed. In not one case of the disease, on the other hand, did the microscopical examination or any ascertained facts support the theory. They are inclined to regard it as a miasmatic affection, the poison differing, however, from ordinary miasma in its slight volatility and limited action, attaining its development only in the greatest heat of summer and in certain localities. Hemp is chiefly grown on the land where the disease occurs, and only those persons who cut the hemp suffer; very rarely those who draw the boats. The former stand all day bent, exposing their bodies to the exhalation from the ground. In the first two or three years after land has been reclaimed it is relatively innocuous, and so also are parts where the land has been long in cultivation, although the floods still cover it annually. In the first year or two only reeds grow on the sand, then come pampas grass and other herbaceous plants, which, by their decay, fertilise the ground and form a soil, and while this is soft and porous the disease appears. When the soil has attained a considerable thickness the disease disappears again. The poison is, however, transportable, although in limited quantity, by the hemp, perhaps by fragments of soil adhering to it. The nature of the poison is unknown. Bacteria could be found neither in the blood nor in the wound, but the examination was scarcely exhaustive. It is conjectured that the poison obtains entrance through an abrasion in the skin, which occurs most readily in the softest and moistest part, where the local lesion most frequently presents itself, and by producing such an abrasion the mite referred to may perhaps play a part in its production. The disease is distinctly not contagious from person to person. Experiments to inoculate animals with the disease failed entirely. One attack affords no protection against another, and neither age nor sex influences the tendency to suffer from it.

The treatment of the cases which came under observation was chiefly symptomatic and all recovered. Salicylate of soda had a distinct influence over the fever—more marked than that of quinine.

The pathological interest of the disease is very great. It apparently stands nearer to such diseases as anthrax than to the ordinary malarial fevers, and it can hardly be doubted, from our present knowledge of such affections, that it owes its origin to a saprophyte. But in its apparent mode of origin, of infection, and in relation to the symptoms, it is a malady of the greatest interest. Prophylactic measures—the growth of the eucalyptus, &c.—have been suggested and are to be adopted, and it is to be hoped that this last addition to the diseases to which humanity is heir may be the first to disappear. Meanwhile our thanks are due to the investigators, who have given us such important facts regarding it, and who, we may hope, will investigate still further the exact nature of its cause.

MR. SECRETARY CROSS has addressed a letter to the Metropolitan Board of Works on the subject of their administration of the Metropolitan Streets Improvement Act of 1877, which is of far wider interest than the immediate matter to which it refers. It deals, indeed, with a fundamental principle which, according to the Home Secretary, should govern the action of local authorities who have to put in force the special law as to artisans and labourers' dwelling-houses, and which, in the metropolis at least, was in danger of being lost sight of. A short time since a deputation of the Metropolitan Board of Works waited upon Mr. CROSS, and asked to be relieved from certain difficulties which they had experienced in carrying out the Improvement Act to which we have referred. In some instances they found that it would be more convenient and economical if they might provide house-accommodation for persons displaced by contemplated improvements in other places than in the area to be subjected to improvement. In other instances they wished to be allowed to clear the houses from certain areas acquired for improvement before making provision for the shelter of the families occu-

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pying those houses, postponing such provision until an indefinite future. To each of these propositions Mr. CROSS has given an answer which will commend itself to the public at large, but which must tend to diminish the confidence of the metropolitan ratepayers both in the wisdom and business capacity of the Board of Works.

Mr. CROSS insists and requires (as he may) that the future housing of the families to be displaced shall be a primary consideration in improvement schemes to be submitted for his sanction. He is prepared (consistently with the principle of the Artisans and Labourers' Dwellings Improvement Act, 1877) to concede to the Metropolitan Board the substitution of one site for workmen's dwellings for another, if it be made clearly evident to him that the substitution will not involve a diminution of the house-accommodation to be provided, or inflict hardship on the people to be displaced. For example, it may be of little consequence to the unskilled labourer whether he live in Holborn or in Westminster; but there are many handicraftsmen to whom it might be of serious consequence to be compelled to move from the district where they at present reside, owing to its contiguity to the works they are engaged in; and all have serious interest in being located near to cheap markets. The Metropolitan Board proposes to displace a population numbering 7224, but to provide house-accommodation for only 5623; moreover, the Board has given no specific information, apparently, to the Home Secretary as to the industrial requirements of the persons to be displaced, in view of the proposed substitution of sites. Mr. CROSS observes that, before assenting to the proposal of the Board in regard to substituted sites, he must have "clear proof that the substitution would not cause practical inconvenience to the class of persons displaced." Again, as to the proposition of clearing sites before house-accommodation is found for the people who would be displaced, the Board seeks to show that the amount of inconvenience to which the displaced people would be subjected might be less than anticipated, for a site already cleared by them has never been actually used, and the persons sent adrift have, in reality without their assistance, found accommodation elsewhere—with what difficulties and injuries to themselves is not told; but obviously their dispersion gave no trouble or anxiety to the Board. Upon this Mr. CROSS justly observes: "Such a plea, it is plain, amounts to an admission that the Board have been unable to carry out the provisions made by Parliament in the Streets Improvement Act (1872); and the Secretary of State would not be justified in sanctioning an arrangement by which the non-performance by the Board of their obligations under one Act would be used to facilitate the performance of obligations under another Act." Mr. CROSS, acknowledging the difficulty of administering the Streets Improvement Act, suggests a certain and more reasonable mode of procedure to the Board, by which the municipal and public health advantages of the law may equally be secured.

It seems to be quite clear from Mr. CROSS's letter that the Metropolitan Board were prepared to secure desirable street improvements with the least amount of trouble to themselves and forethought as to the evils they might be creating elsewhere in the metropolis. Of what avail to clear away unhealthy areas in one part of the metropolis if the clearance is to determine unhealthy areas in other parts? Yet this would appear to have been the (unrecognised, perhaps) policy of the Board until now checked by the Home Secretary's letter. In truth, the Board appear to have been gradually losing sight of the fact that the clearances in which they have been engaged and wish further to engage are fully as much questions of public health as municipal convenience. The advantages from the municipal side are obvious, but the advantages to be obtained on the public health side involve complicated considerations which are as difficult of apprehension as of solution. The advantages of getting rid of an unhealthy area are apparent, but to get rid of it without creating another unhealthy area by the crowding of the displaced population into places already overburdened with people is a question of the greatest complexity, and one with which the Board is unprovided with the means of dealing properly. It is a question which peculiarly requires the sustained attention of a competent medical man, but the Board does not possess a Medical Officer. And this is not the only question where the Board fails of a just apprehension of its duties from want of a medical adviser.

CONSIDERABLE astonishment is from time to time excited in professional circles by the strange impressions produced in the public mind by newspaper paragraphs describing medical work. There is nothing new in the phenomenon. A few years ago there were certain statements which seemed to form the stock-in-trade of newsmongers, and, the supply being limited, the same material reappeared at short intervals scarcely under a new guise. For example, it used to be announced about every six months as a discovery that ether and chloroform combined in certain proportions formed an anæsthetic which was free from the alleged injurious properties of pure chloroform. With a distinct class of equally hackneyed assertions this particular paragraph has ceased to reappear. Unhappily we are threatened with a new eruption. It would seem that electricity is to form the topic of revived interest. A contemporary not given to napping has placed its columns at the disposal of some one who appears to think that the medical profession is very much in the dark as to the value of electricity as a remedial agent, and is likely to remain so, because, forsooth, the use of the remedy is "troublesome and tedious, requiring patience and sacrifice of time." Because this is the fact "the belief in its efficacy is theoretical rather than practical with the great majority of the medical profession"! The assertion does not, obviously, call for contradiction. Those who know anything of medical work will not need to be informed that the measure of usefulness to be credited to electricity as an agent, both in diagnosis and in treatment, has been most carefully estimated. It has been tested, expounded, discussed, and to a certain extent exposed, in all its varieties. The medical profession has bestowed and is still bestowing fully as much attention on the subject as it claims. The knowledge of its uses and abuses has been, and still is, being extended; and at every hospital in the kingdom, medical men have recourse to electricity in each and every one of its forms in cases which seem to require it. So far from its being a fact that the "medical value" of electricity "has never yet been fairly and exhaustively tested," the practice of every

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general hospital bears witness to its use; while our own columns show the great, almost excessive, attention which has been given to the subject. It is greatly to be regretted that erroneous impressions of professional work should be created by statements which could not fail to be corrected if they were examined in the light of simple facts. We should not have alluded to the matter but that the assertion with respect to electricity, to which our attention has been called, is an aspersion on the work of every intelligent practitioner in the land.

Annotations.

"Ne quid nimis."

TRICHINOSIS ON BOARD THE SCHOOL-SHIP "CORNWALL" IN THE THAMES.

WE learn that a somewhat considerable outbreak of trichinosis has occurred on board the reformatory school-ship *Cornwall*, lying off Purfleet, on the Thames. The disease first manifested itself several weeks ago, and was at first believed to be enteric fever, for which disease trichinosis is, in the beginning, very apt to be mistaken. The persistence of the malady among the boys, and certain anomalies, as it seemed, in its progress, induced the Committee of the ship to apply to the Home Secretary for additional skilled assistance in investigating the outbreak. He applied to the Local Government Board for the help of one of their medical inspectors, and Mr. W. H. Power was directed to visit the ship. This gentleman, after careful inquiry, became suspicious that the disease among the boys was trichinosis, and application was made to the Home Secretary for permission to exhume the body of the only youth who had died of the malady. Permission was granted, and it was ascertained beyond a doubt that the lad had died from the disease named; and Mr. Power's suspicion was thus confirmed. It is understood that the malady was caused by the consumption of certain American pork. Mr. Power's inquiry is, we believe, not yet fully completed, and until his report appears the details of the outbreak will not be accessible. We trust that the report will be issued as early as practicable to the public, for it cannot fail to give much and most valuable information concerning a disease from which the people in this country have hitherto had a remarkable immunity in its acute form—an immunity which, it is to be feared, since the large and increasing importation of foreign pork, is becoming a thing of the past.

THE ZULU WAR: SECCOCOÈNI EXPEDITION.

WE have received a letter from our correspondent at Fort Webber, dated the 20th November, a few days before the storming of Seccocoeni's stronghold, describing the further medical arrangements planned for the expedition by Surgeon-Major B. C. Kerr, the Senior Medical Officer in the Transvaal. As previously determined, Fort Middleburgh remained the base, the badly wounded and serious cases of illness being removed there till fit to be transported to Pietermaritzburgh. The lady superintendent and two of the trained Netley nurses had arrived for duty, and brought a welcome addition to the medical stores in the shape of a waggon-load of medical comforts and supplies provided by Mr. Young, through the liberality of the National Aid Society. Surgeon-Major W. Johnston had been placed in medical charge of the Field Hospitals at Fort Webber. These had been rendered complete by the arrival of pharmacy and surgery waggons from Natal. The Bearer Company had made considerable progress during the last month, owing to the indefatigable exertions of Surgeon-Major Hector and Surgeon Lloyd in drilling and instructing the raw material placed at their disposal. The Company consists of a detachment of Europeans 52 strong, taken from the 21st and 94th Regiments, 25 men of the Army Hospital Corps, and 70 Kaffirs. In action the men are told off in parties of four to a stretcher, a private of the Army Hospital Corps, who carries a field dressing-bag, and who will act as dresser, accompanying each. Prior to the assault, dressing stations or the second line of surgical assistance were fixed by the senior medical officer in conjunction with the military authorities; at these the Army Hospital Corps men, with water, medical comforts, and the necessary surgical appliances, were stationed, medical officers supervising the arrangements. The natural difficulties of the country in which the operations were carried on forbad the use to any extent of the heavy four-wheeled ambulances; the native stretcher-bearers, therefore, took their place in the first line of assistance. Sir Garnet Wolseley, accompanied by his personal staff, inspected the Bearer Company on the 19th, and expressed himself greatly pleased at the careful and efficient manner in which they went through stretcher drill, lifting and carrying wounded, dressing and applying splints and tourniquets, &c. The weather had been unusually stormy and wet—heavy thunder showers of daily occurrence. The troops were, however, in good health, and in capital spirits at the expected brush with Seccocoeni's warriors.

ARM-TO-ARM VACCINATION.

IT has been curious to note how largely the recent discussion in the general press on the merits, or rashly assumed demerits, of arm-to-arm vaccination has been a mere revival of former—and, as it was hoped, ended—discussions on the subject. It has not been less curious to note how little the parties to the discussion appear to have been aware of this fact. But the strangest aspect of the discussion has been the obvious unfamiliarity of the depreciators of arm-to-arm vaccination with the principles guiding its public administration in England. So true is it that prophets (public benefactors) have little honour in their own country. The doubts which have been so freely expressed by a few persons on this question of late have, in the main, arisen from misapprehension, and it would seem that much of this misapprehension has occurred from want of ready information, or of a means to get at information, relative to the principles and practice of the operation in this country. We are appealed to by numerous individuals to indicate some easily accessible source whence may be obtained a trustworthy knowledge relating to vaccination and the practice of vaccination in this country. We have great pleasure in responding to this appeal. There is, happily, an English work which fully meets the requirements of our correspondents, and which should be in the hands of all persons who take an interest in the discussions on vaccination which have recently occupied so much attention in the general as well as the medical press. We refer to the "Handbook of Vaccination," by Dr. Edward C. Seaton, the late Medical Officer of the Local Government Board. This compendious work, published by Messrs. Macmillan and Co., contains a masterly summary of our knowledge respecting vaccination, and a most perspicuous statement of the principles which govern the administration of public vaccination in this kingdom. Dr. Seaton treats in succession of cow-pox as observed in animals and man, and of the relation of cow-pox in animals to small-pox in man; of the history of vaccination and the method of vaccinating; of the arrangements for the maintenance of lymph-supply and the conveyance and storage of lymph; of skill in vaccinating; of the alleged degeneration of lymph and of recurrence to the cow; of revaccination; of stamping out local outbreaks of

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small-pox; of objections to vaccination and the alleged dangers of the practice, and of the laws relating to vaccination. Clearly and tersely written, this work is a model text-book.

PATHOLOGICAL SOCIETY.

AT the annual meeting of this Society, held on Tuesday last, the following gentlemen were duly elected its officers for the ensuing year:—President: Mr. Jonathan Hutchinson. Vice-Presidents: Drs. Geo. Buchanan, Geo. Harley, J. E. Pollock, Hermann Weber; Messrs. Christopher Heath, T. W. Nunn, S. J. A. Salter, S. W. Sibley. Treasurer: Mr. J. W. Hulke. Honorary Secretaries: Dr. J. F. Payne, Mr. W. Morrant Baker. Council: Sir J. Fayrer, M.D.; Drs. T. Barlow, E. B. Baxter, Sidney Coupland, W. S. Greenfield, J. Pearson Irvine, W. M. Ord, F. Taylor, T. T. Whipham, J. Williams, W. B. Kesteven; Messrs. J. N. Davies-Colley, R. J. Godlee, J. W. Haward, H. G. Howse, J. Lister, J. McCarthy, W. MacCormac, W. J. Smith, W. W. Wagstaffe.

The annual report was read by the secretary, and, on the motion of Mr. Robinson and Dr. Mahomed, was adopted, and ordered to be printed and circulated. Dr. Savage proposed a vote of thanks to Dr. Douglas Powell, the retiring secretary, and spoke in high terms of the value of his services, and particularly referred to his work as editor of the three last volumes of the Society's Transactions. Mr. Butlin, in seconding the motion, alluded to the marked courtesy which Dr. Powell had always shown to all the members of the Society, and the President added that he was personally greatly indebted to Dr. Powell. The motion was carried by acclamation, and briefly acknowledged by Dr. Powell. A vote of thanks to the retiring vice-president (Mr. Bryant) and the retiring members of the Council was moved and seconded by Dr. Thin and Mr. Parker, and acknowledged by Dr. Green. In future the specimens shown by card will be taken alternately with the other specimens, and not all together at the end of the meeting, as has been the custom hitherto.

THE HEALTH OF THE NAVY.

THE Director-General of the Medical Department of the Navy has just issued his Report on the Health of the Navy in 1878. It appears that the main strength of the force afloat during the year was 46,000, among whom the average number of men daily sick was 47·15 per 1000, showing an increase of 4·34 per 1000 upon the sick-rate that prevailed in 1877. The sick-rate at the various stations ranged from 24·94 on the south-east coast of America, to 60·33 on the China station. The number invalided during the year was 1662, equal to 35·81 per 1000 of the force, which scarcely differed from the rate in the preceding year. The total number of deaths reported during the year was 669, including 247 from disease, and 422 from drowning and other forms of violence. The death-rate from all causes was equal to 14·41 per 1000 of the mean strength of the Navy; of this 5·32 was attributed to disease, and 9·09 to violence. No less than 311 of the deaths in the year were due to the loss of the *Eurydice*, exclusive of which the death-rate of the navy from all causes during the year did not exceed 7·71 per 1000, and was but 0·66 higher than the rate in 1877. The value of these sickness and mortality rates, as a true test of the health of the navy, is seriously disturbed, if not destroyed, by the large proportion of invaliding recorded; this prevents the possibility of comparing these rates with those that rule among men of similar ages engaged in other occupations. It is evident that but for this invaliding, which amounted in 1878 to 35·81 per 1000, both the sickness and the mortality rates would have been far higher. Any change, moreover, in the conditions which govern the invaliding of men in the navy would destroy the value of any comparison between the rates of sickness and mortality prevailing in different years. In proof of this it is only necessary to point out that the sickness and death-rates at the ages fifteen to twenty-five were higher than at any of the three other age periods, twenty-five to thirty-five, thirty-five to forty-five, or forty-five and upwards. The true explanation of this is that the invaliding rate ranged from 33·09 per 1000 in the earliest, to 54·33 in the latest of these four age periods. Making due allowance, however, for this disturbing element of invaliding, the comparatively high sickness-rate among the force aged between fifteen and twenty-five years is deservedly worthy of note, being more than double that which prevailed at the ages of forty-five years and upwards. This excess of sickness-rate among the younger sailors is mainly due to the greater prevalence of venereal disorders, and the apparently greater liability to wounds and injuries. The value of the statistics in the report is seriously impaired by the omission of any summary tables admitting of the comparison of results for a series of years. This omission has been noted in previous Reports, and we regret to find it repeated on the present occasion.

THE PLAGUE.

ALTHOUGH there has been no serious alarm of plague in the East since the cessation of the outbreak on the Lower Volga in February last, the disease, it would appear, has not been altogether inactive. Rumours from time to time spread through the Levant, in the course of the past summer, that plague had shown itself again in more than one spot of Persian Kurdestan, on the Ottoman frontier, but these rumours died out, and there does not seem to have been any substantial ground for their existence. But we now learn that a circumscribed outbreak did occur in the course of last year in the western highlands of Arabia. The scene of this outbreak was the Assyr district, Yemen, where plague, according to the Parliamentary paper on the subject published last year, appeared in 1853 and in 1873-74. The outbreak of last year is believed to have begun in February, and had not ended at the time of the latest news, November. It would almost seem as if plague were endemic in this mountainous district of Arabia, as it appears to be among the mountains of Kumaon, North-Western India, and the mountains of Yunnan, Western China.

In the Russian Society of Public Health, on the 29th ult., a paper was read relating to a project for the formation of a scientific expedition, having for its object the examination of the districts on the Lower Volga from a sanitary point of view. On the termination of the outbreak of plague in these districts early last year, it was understood that the Russian Government proposed to subject these districts to an exhaustive investigation, and particularly the delta of the Volga, with the view of elucidating, if possible, certain obscure facts relating to that outbreak, and investigating generally the sanitary condition of the towns, villages, and peoples on the Lower Volga. It does not appear whether the scheme considered by the Society of Public Health is the Government project referred to, or another proposal. The cost of the measures taken by the Russian Government in the winter of 1878-79 to arrest the progress of plague on the Volga is returned at 2,000,000 roubles or thereabouts.

We learn that the Plague Committee of the Royal College of Physicians has not been called together since Surgeon-Major Colvill's and Dr. Payne's report of their mission to Astrakan has been published; and we are informed that copies of that report have not even been furnished to the members of the Committee. The momentous questions as to plague in its relation to this country nevertheless exist,

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although the outbreak on the Lower Volga may be at an end; and it is not easy to explain the collapse of interest in the subject on the part of the Royal College of Physicians, after the extraordinary parade of an assumed public mission to be fulfilled, with which the profession and the people generally were favoured by that body last year.

SPLENOTOMY IN LEUCOCYTHÆMIA.

EXCISION of the spleen has been proposed as a remedy for splenic leucocythæmia. The operation has, in other morbid states, been performed several times with good result, but in leucocythæmia it has always hitherto been fatal. The cause of death has, in most cases, been that which a study of the symptoms of the disease would suggest, hæmorrhage. The tendency to bleeding, in cases of pronounced leucocythæmia, is very strong, and Professor Mosler, of Greifswald, has lately, in an article in the *Zeitschrift für Klin. Med.*, discussed this tendency in its relation to the proposed operation. He describes at length a case of the disease in which the patient was anxious to undergo splenotomy but was dissuaded, and, as the result proved, wisely. He had manifested no tendency to hæmorrhage, but had had several perineal abscesses, and after one had been opened, profuse bleeding occurred, only arrested by the thermo-cautery, renewed a few days later, and again arrested with difficulty by digital compression and plugs of perchloride of iron. Recovery took place for a time, but the patient died some time afterwards from spontaneous retroperitoneal hæmorrhage. The hæmorrhagic tendency is illustrated by the cases Mosler has himself watched, twenty-five in number, in thirteen of which hæmorrhages occurred, and which show that in every form of the disease, without relation to age or sex, or duration of disease, the hæmorrhagic tendency exists, and may cause bleeding either at the surface or into organs. These facts lead Mosler to the conclusion that neither in the early nor in the late stage of leucocythæmia is splenotomy justifiable, and, indeed, that operations even of the most trifling character are to be as far as possible avoided. Moreover, he believes that even in simple enlargement of the spleen, after intermittent fever, the operation is unjustifiable, since there is often, in these cases, also a strong tendency to hæmorrhage. But in some cases of this character the operation has been successful, and the tendency to hæmorrhage probably depends on the actual state of the blood, which we are now able to ascertain with more exactness than was formerly the case.

MEDICO-SANITARY NEWS FROM RUSSIA: DIPHTHERIA AND TRICHINOSIS.

A COMMITTEE of the Red-Cross Society has been engaged in preparing a scheme of action for the sanitary detachment which is about to be sent to Poltava, to aid in arresting the ravages of diphtheria there. The Committee consists of Drs. Zdekauer, (chairman), N. Bystrow, N. Kozlow, C. Rauchfuss, B. Reutz, N. Rozow, B. Petrow, and L. Tomaschevsky. Drs. Tsytsarine, Zablotsky-Desiatovsky, and Manonow (vice-directors of the medical department of the Ministry of the Interior) have also given aid to the Committee in its labours. The Committee has held three sittings. In the first Dr. Bystrow proposed that the sanitary detachment should be formed of thirty medical men and three hundred sisters of charity. Dr. Rauchfuss objected that a detachment of the magnitude here contemplated would be unmanageable, and suggested that it should consist of a principal medical officer, ten other medical men, a veterinary surgeon, and one hundred sisters of charity, the work of the detachment to be limited to one district only. Dr. Reutz proposed that in place of establishing hospitals for young children in infected localities, it would be well to separate the healthy, and distribute them in places beyond the range of the epidemic activity of the disease. This proposition led to an animated discussion, but eventually it was determined that the question should be left open for the chief of the detachment to decide on the spot. The medical men are to receive 200 roubles pay per month; the sisters of charity 100 roubles, the former being also given an allowance of 300 roubles for personal expenses, and the latter 100 roubles, of which 50 roubles are for cost of travelling. The Princess Maximilianovna of Oldenburg has undertaken the organisation of the female element of the detachment.

The *Messager Officiel* publishes statistics of the mortality from diphtheria in the district of Mirgorod during the four years from November, 1875, to November, 1879. In 1875 the disease broke out in one of the villages of the district, attacking 141 persons and killing 30 (12 per cent.) In 1876 94 villages suffered from diphtheria, 5033 individuals having the malady and 1789 dying from it, the mortality in the several places ranging from 17·9 to 67·0 per cent. of the seizures. The greatest mortality was recorded in the months of April, May, October, and December. In 1877 the disease extended to 138 localities, the sick numbering 6459, and the mortality being 3024 (at rates in different places of from 40·0 to 58·6 per cent.) In 1877 the localities attacked numbered 135, the seizures 4487, and the deaths 1757 (28·0 to 55·6 per cent.) In 1879 the number of places attacked fell to 101, the seizures to 1555, and the deaths to 406 (range, 15·4 to 48 per cent.)

There has been an alarm of trichinosis in St. Petersburg, and it has been held necessary to place, for the moment, the sale of pork under supervision.

An inquiry into the health of the troops in St. Petersburg has disclosed the fact that the Guards have been more unhealthy than the troops of the line. This has occasioned some surprise, but, perhaps, needlessly so. It is not long since our own Guards were found to be more liable to sickness than the line, and the investigation which made known the conditions under which they lived in barracks showed also that this unenviable distinction was inevitable.

YELLOW FEVER.

IN the course of last summer the United States National Board of Health appointed a Commission to visit Cuba, and investigate certain points connected with the prevalence of yellow fever in that island. The Commission (styled the Havana Commission) consisted of Dr. G. M. Sternberg (secretary), Dr. S. E. Chaillé (chairman), T. S. Hardree, C.E., and Dr. J. Guiteras. The Commission visited Havana, Matanzas, and other Cuban ports; and an auxiliary Commission, consisting of the most distinguished medical men in the island, was appointed by the Spanish authorities to co-operate with them. The Commission having completed their work of inspection, a preliminary Report of results, by the chairman and secretary, is published as a supplement to the bulletin of the National Board of Health for Dec. 6th (No. 23). This Report states briefly the proceedings of the Commission, and then gives in some detail the principal results of the Commission's work. These are for the most part negative, but full of interest; and they afford clear indication of the great impulse the National Board will give to the comprehensive study of questions such as those involved in a consideration of the endemicity and propagation of yellow fever. The Report, indeed, may be described as the shadow of good things to come rather than as the good things themselves. We must crawl before we leap; but the method of crawling is an important item in estimating the probable success of the leap which is to follow, and the method taken is a very sound one, and such as will surely link a not infertile past to a more fertile future. The parts of the Report of more immediate interest are those relating to the insanitary condition of the ports of Cuba and the causes thereof, and the

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origin of yellow fever in ships and harbours. The part played by the ship as a carrier of yellow fever infection, and the relation of the vessel to an infective locality in becoming infected, are points of cardinal importance, of which the line of inquiry for a full elucidation is indicated. With this sample of the Commission's work, the full report of its results will be looked for with much interest.

THE PARKES MUSEUM OF HYGIENE.

ON Saturday, Jan. 3rd, a series of practical demonstrations of the uses of sanitary appliances, as exhibited in this museum, was commenced. Mr. Mark H. Judge (Curator), in introducing Prof. Corfield, explained that these demonstrations had been arranged for by the Committee of the Museum and the Council of the Working Men's Club and Institute Union. The address that day would be on "House Drainage"; this would be followed on alternate Saturdays by others on "Ventilation, Lighting, and Warming," by Prof. Corfield; "Food," by Dr. G. V. Poore; "The Hospital and Sick-room," by Dr. J. C. Steele. Admission to these demonstrations would be by tickets issued by the Club and Institute Union.

Professor Corfield, in his address, called the attention of his audience to the principal sanitary appliances connected with house drainage, commencing with the various kinds of drain-pipes, and leading up to the large variety of water-closets which were in the museum. He spoke with approval of Stamford's patent drain-pipe joints, syphon gullies, Field's self-flushing tank, and several kinds of disconnecting traps, made expressly for the purpose of cutting off the air communication between house sewers and public sewers. Specimens of defective plumbing were shown and explained. The address was listened to with considerable interest, and at the close the professor received the hearty thanks of those present.

UNQUALIFIED DISPENSERS.

A RECENT case of poisoning by misadventure recalls to memory a long series of similar "accidents" of the most painful character. It is more than time the Legislature expressly prohibited the sale of medicines by women and boys, whether acting under the personal direction or in the absence of the responsible keepers of chemists' shops. If drugs were classed as dangerous articles, and their sale without a medical prescription were interdicted, there would be some guarantee for safety. As it is, the lives of the public are at the mercy of chance. Certain qualifications are required to entitle a man to practise medicine, but any one who can obtain employment in a druggist's shop may compound and sell medicines. If it suits the retail trader in poisons to save the expense of a competent assistant, he may leave some female member of his household or a shop boy in charge; and while he has "just stepped out," an unsuspecting customer may be victimised. This is a difficulty in view of which the law should be strengthened. It is abundantly evident that, except under the pressure of might, right will not prevail where trade interests are affected.

THE CABUL CAMPAIGN.

OUR correspondent with the 2nd Division Cabul Field Force, writing last mail, describes the working of the field medical arrangements, under the "general system," as most satisfactory. The sick carriage is placed under the control of the Principal Medical Officer and concentrated in one camp, the doolie bearers are suitably housed, clothed, and fed, and provision can be made at any moment for transporting sick and wounded to the base. A proof of the efficiency of the system was given on the 23rd November, when a large convoy of invalids from Cabul were noted to arrive at Sei Baba *en route* to the base hospital at Peshawur. Carriage was required for eight officers, sixty-one European, and one hundred and seventy native soldiers and followers. The strain was met without difficulty, doolies, hill dandies, and ponies, with extra bearers, on account of the bad roads, being despatched without delay. Dr. Hassard has organised field hospitals for native regiments and camp followers at Lundi Kotal, Jellalabad, and Gundamak, the one at Jellalabad, placed under the charge of Surgeon-Major Tippets, accommodating two hundred sick. When not engaged in transporting sick, the doolie bearers are most usefully employed in cleaning camp grounds, levelling roads, &c., a systematic distribution of them daily being made to the commissariat and quartermaster's departments. Sections of the field hospital are ready to start at a few hours' notice complete in *matériel, personnel*, and transport. At Cabul itself the cold weather has set in early and with great severity, a thermometer inside a tent registering 24°. Surgeon-Major S. B. Roe, 92nd Highlanders, has been appointed to the charge of the Field Hospital in the Shurper cantonment. Supplies of warm hospital clothing were being despatched from Peshawur, to Cabul, as quickly as transport could be procured.

AN ANOMALY.

IN the licences required by the Inland Revenue and the exemptions which are allowed there is not a little to occasion wonder. The medical man to whom a coachman or groom is practically indispensable, not as a matter of luxury, but for the simple conduct of the laborious business by which he earns his livelihood, is required to pay a tax of fifteen shillings annually for each man so employed. And if he keeps a man or boy to open the door to his patients there is another fifteen shillings to be paid. But the "retailer of *intoxicating* liquor" (we quote the exact phraseology) has nothing to pay "for any servant wholly employed by him for the purpose of his business." One would suppose, to see the pothouses elbowing each other in every street, that our legislators hardly needed to exhibit such anxious care to facilitate the sale of intoxicating liquor. Nor can it possibly be necessary to remind them that to "intoxicate" signifies (according to Webster) to "make drunk." But drink is not the only luxury upon which the Commissioners of Inland Revenue look with a favouring eye. No licence is required for game-watchers, who do not carry guns or act as gamekeepers, nor for grooms in public racing stables, employed solely in taking care of race-horses!

THE TREATMENT OF SEWAGE.

A REPORT has been prepared for the Local Government Board by Dr. Angus Smith, F.R.S., on the results of certain processes for the purification of sewage water, a contribution, as it would appear, to a larger work on the treatment of sewage in the course of preparation, by Mr. Robert Rawlinson, C.B. Dr. Smith's report is entirely confined to an examination of effluent waters as observed at the sewage works of Aldershot, where irrigation alone is used; Coventry, where precipitation by alum and iron is used first, and irrigation afterwards; Birmingham, where precipitation by lime is employed; Burnley, where also lime is employed; and Aylesbury, where the A. B. C. process is used, a precipitant of alum being employed, also clay. The details of the report are of considerable interest, but the general results as regards the several effluents were as follows:—None of them could be called sewer water in the ordinary sense. The best result was obtained by irrigation, when the weather was not so wet as to cause overflowing. Still it was not found very successful after lime at Birmingham. Precipitation with alum and iron compounds comes

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next. In wet weather there was an advantage in precipitation, because the action was largely, if not wholly, independent of dilution. The lime process was valuable, but not equal to the above precipitation processes.

DEATH OF MR. HENRY HANCOCK, F.R.C.S.

WE regret to announce the death of Mr. Henry Hancock, F.R.C.S., in his sixty-eighth year. The funeral took place on Tuesday last, at Chute Standen, Wilts. It was very numerously attended by all classes, both rich and poor, and by many of his professional colleagues from London. Amongst the principal mourners were Captain Heaton, Mr. Hancock, Rev. —— Horton, the President of the College of Surgeons (Mr. Holden), Mr. Trimmer, Dr. W. J. Lush, and others. At the meeting of the Council of the College of Surgeons, on Wednesday last, the President referred in feeling terms to the serious loss they had sustained in the death of Mr. Hancock, who was one of the senior members of the Council. An obituary notice will appear in our next issue.

DR. ANDREW DUNCAN.

WE are glad to hear that this distinguished young surgeon is convalescent from the effects of his severe wound received at Cherasiab. A bullet struck Dr. Duncan in the back, and passed out in front of the chest. It was feared that the lungs had been seriously injured; fortunately for him, however, the bullet was diverted from its course, and passed round between the integuments of the chest-wall. A severe attack of pleuro-pneumonia subsequently supervened. When our advices left India, Dr. Duncan was in a fit state to travel, and he was ordered down to India, as it was feared that the cold in Afghanistan would be too extreme for him to bear.

VIOLENT DEATHS AT CHRISTMAS-TIDE.

THE Registrar-General's last Weekly Return affords, from a sombre point of view, evidence of some of the results of recent Christmas festivities in London. During last week no less than 93 of the deaths registered were caused by various forms of violence, 87 being referred to negligence or accident; 32 resulted from fractures and contusions, 16 from burns and scalds, 5 from drowning, and no less than 28 were of infants or children under five years of age from suffocation. Seven persons were killed in the streets of London, and five on different railways; six died in consequence of falling downstairs. The cases of infant suffocation are always excessive at Christmas time, and the recent excess has been greater than usual. So with the deaths of children from burns and scalds, which were last week nearly double the corrected average weekly number.

The constant recurrence of this increase of violent deaths at Christmas time places their connexion with the festivities incidental to the season beyond question. The indirect influence of this annual celebration of Christmas upon public health in England it is impossible to calculate.

ILLNESS OF SIR DOMINIC CORRIGAN, BART., M.D.

THIS distinguished physician is, we regret to learn, in an extremely precarious condition. He is attended by Drs. Banks and Cruise.

DEATH FROM CHLOROFORM.

A PATIENT died recently in the Royal Infirmary, Liverpool, while under chloroform, for removal of bone from the leg. We are informed that the post-mortem revealed extensive adhesion of the pericardium. It is said that the patient desired to have chloroform, and had inhaled it on three previous occasions.

A PARAGRAPH is going the round of the Indian papers relative to the suicide of a young surgeon, Dr. Dumbleton, on his way with a detachment of troops from Peshawur to join the Kurram Valley force. It would seem that he was attacked with severe fever on the march, and, exhausted by the combined effects of the disease and protracted riding (he being an indifferent horseman), when called upon to resume the march one morning, he shot himself. There are certain inconsistencies about the statement in the paragraph which lead us to hope that the version given of the circumstances under which Dr. Dumbleton came to an untimely end may be, in fact, founded on misapprehension. He was a student of St. Bartholomew's Hospital, and joined the Indian Medical Service in March last.

AT a special meeting of the Council of the Royal College of Surgeons on Wednesday last, the 7th instant, Mr. Hulke, F.R.S., was elected a member of the Court of Examiners in the vacancy occasioned by the resignation of Mr. Curling, F.R.S. Mr. Hulke and Mr. Wood have resigned their seats at the Board of Examiners. The President, Mr. Luther Holden, has, at the request of the Council, undertaken to deliver the next Hunterian Oration.

IN connexion with the Sanitary Institute of Great Britain, the Wyatt-Edgell Prize of £200 is offered for an Essay on "The Range of Hereditary Tendencies in Health and Disease." The award will be subject to the conditions usual in such cases. The essays must be sent in on or before Aug. 1st, 1880. Dr. B. W. Richardson and Dr. William Farr are appointed adjudicators.

SURGEON-GENERAL THOMAS CRAWFORD, M.D., has arrived at Madras, and relieved Surgeon-General C. Gordon, C.B., as Principal Medical Officer of the Madras Presidency. The latter officer, having completed a five years' tour of service, returns to England by mail steamer.

Correspondence.

"Audi alteram partem."

"THE SUNNY SOUTH."

To the Editor of THE LANCET.

SIR,—Very exaggerated statements having found their way into some of the English journals respecting the weather at San Remo and other parts of the Riviera, I ask your permission to make known the real facts in relation thereto.

No doubt the winter season here, so far as it has yet advanced, has been an exceptionally cold one; but, on the other hand, it has been remarkable for dryness and sunshine, and even the degree of cold reached has been but trifling compared with that which has prevailed in England and most continental countries.

Referring to my register for the month of November, I find that the mean minimum temperature—which, be it remembered, is for the most part a night temperature—was 48·4°, it having fallen below 40° once only during the month; and the mean maximum, or day temperature, 59·4°—the mean of both being 53·9°; that rain fell during that month on five days, the rainfall amounting to 2·4 inches; and that the sun shone for 182 hours out of a possible sunshine of 287 hours. It further appears that, to the 28th December inclusive, the mean minimum temperature was 39·0°, the thermometer having fallen below 40° on fourteen occasions and below the freezing point on three, the lowest point 27·9°, or 4° of frost only, being reached once only; that the mean maximum temperature was 51·6° and the mean of both the minimum and maximum 45·3°; that rain fell on three days only, the rainfall amounting to 1·6 inches; and that sun

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shone during 201 hours out of a possible sunshine of 244 hours.

Now let anyone compare these figures with those for London or any part of Great Britain and they cannot fail to be greatly impressed with the remarkable difference shown in temperature, rainfall, and sunshine, in favour of the Riviera and of San Remo, to which place my observations more particularly apply. I may state that the instruments with which the observations were taken were of Negretti and Zambra's best, that they were placed in a north shade, and that they were freely suspended in the air, not being allowed to touch shutters, stone walls, or other cold substances. No doubt when so placed, or on the ground, the instruments would indicate lower temperature than those referred to above, but then they do not denote, as they should do, the temperature of the air itself.

About an inch and a half of snow fell on 1st December, and part of this remained on the ground and on the trees all night, a very unusual circumstance, and did not wholly disappear until eleven o'clock the following morning, when it quickly melted in the bright beams of the morning sun. It was the long continuance of the snow on the trees and flowers during the night of the 2nd December which injured the vegetation; but the injury in and near San Remo was mainly confined to the leaves of geranium, plumbago, heliotrope, and other tender plants, such as are usually found in England in greenhouses, the plants themselves being killed only in very few instances. In some situations the olives and lemons have no doubt suffered, but not the trees; although in San Remo itself I fail to discover any material injury even to the fruit. In my own garden, and in those of my neighbours, the lemon trees do not appear to have been damaged beyond the loss of a very few leaves.

Without entering into further details, I think I have now stated enough to show that, having regard to the extraordinary severity of the weather which has prevailed elsewhere, it has been at San Remo and some of the more sheltered parts of the Riviera surprisingly mild, dry, bright, and sunny; indeed, in this latter respect the Riviera has fully maintained its title to the appellation of the "Sunny South;" and visitors and invalids here have much to be thankful for in having been almost wholly spared the rigours of a winter which, in most other countries, has been almost Arctic. I am, Sir, yours &c.,

ARTHUR HILL HASSALL, M.D.

San Remo, Dec. 29th, 1879.

NERVE-STRETCHING IN TETANUS.

To the Editor of THE LANCET.

SIR,—As Mr. Morris, in his interesting letter in your last issue, mentions a case reported by me in the *Glasgow Medical Journal* for July, 1879, and quotes from my report, I trust you will allow me space for a few remarks to correct certain conclusions which Mr. Morris seems to me to have arrived at rather hastily.

I must take exception to his classifying my case with that reported by Verneuil, as the two have really very little in common, the latter being very chronic in character, and limited almost entirely to the upper extremity, whereas, in mine, nearly the whole of the muscles of the body were involved in the spasm.

In what sense does Mr. Morris use the word "chronic" as descriptive of the affection in my patient? If he uses it as indicating the period of onset of the spasms, I concur with him, but if he intends it to be applied to the character of seizure, I think a re-perusal of my report will convince him that the history of the case does not bear out his application of the term. He will notice that the spasms often recurred at intervals of two or three minutes, and involved the whole of the muscles of the trunk, including even the muscles of deglutition, and that the temperature reached 103°, and the pulse was for many days above 120; these points should, I think, remove it from the category of chronic tetanus.

Mr. Morris lays particular stress on the spasm which occurred soon after the operation, as showing that no good had been effected. Such a spasm has been noticeable in nearly every case which has been operated on, and the explanation of the phenomenon is so simple that I wonder Mr. Morris has overlooked it. The act of nerve-stretching must necessarily produce some disturbance in the nerve centre, and if the patient were not under the influence of an anæsthetic this would be at once shown by violent tetanic spasm; but the anæsthetic prevents this manifestation for a time, and it is only as its influence passes off that the spasm is felt.

My patient had no spasm, excepting the one which I consider due to the nerve-stretching, for about twenty hours after the operation; and the conclusion which I draw in the paper referred to is, "that nerve-stretching may for many hours arrest the progress of the symptoms in traumatic tetanus." My case "would therefore encourage further trials of an operation which is in itself harmless, in a disease the treatment of which has been hitherto most unsatisfactory and discouraging."—I am, Sir, yours very truly,

HENRY E. CLARK,
Lecturer on Anatomy, Glasgow Royal Infirmary School of Medicine.

Glasgow, Dec. 31st, 1879.

THE EFFECTS OF A FIXED IDEA.

To the Editor of THE LANCET.

SIR,—The following case, showing the curious effect of the imagination on a healthy and strong man, may be interesting to your readers, and throw some light on several cases of hydrophobia lately reported.

A gentleman, aged fifty-six, was away from home, and was dressing in the morning, when his mouth and nose suddenly filled with blood. He then became aware that his false teeth, which he seldom removed at night, were missing. He fancied he felt them in his pharynx, and imagined he had swallowed them during sleep. He became greatly alarmed, and immediately sent for my partner, Mr. Atkins, to whom he told the above story, and drew his attention to a hard swelling behind the larynx. Mr. Atkins examined this, which was certainly suspicious, and thrust his finger as far down the throat as possible without feeling anything internally. The patient persisting that the teeth were in the pharynx, I was telegraphed for, to bring instruments, &c.

When I arrived I found the patient in bed, with intense anxiety depicted on his countenance, with a rapid, small pulse; and, when I asked him a question, he motioned for pen and paper to communicate with me. Neither I nor Mr. Atkins could now discover any external swelling, though the patient implied by gesture that it was apparent to his own touch. I examined him with the laryngoscope with difficulty, the throat being very sensitive; and, seeing no signs of the missing teeth, I asked him why he could not speak, when he replied, "Oh! I can speak; but Mr. Atkins told me not to talk." I now introduced a probang into the throat, and the patient said he felt me touch the teeth, just behind the cricoid cartilage. I was afraid to attempt to push the probang forward, as the teeth were described as almost a complete set of lower molars; so I bent a 10-inch military silver probe and hoped to hook the teeth up. I once or twice struck something which felt hard, and the patient then said that I moved them, but the spasms both of pharynx and larynx were so severe, and the amount of glairy mucus ejected was so great, I had scarcely got the probe down before I had to withdraw it. After a few more explorations I came to the conclusion that it was an elongated horn of the hyoid bone and no foreign body that I struck against, and I was confirmed in this opinion by finding that the patient could swallow fluids without any difficulty. I told him I thought he was mistaken, and ordered a search of the room, when shortly the missing teeth were found on the top of a chest of drawers.

The patient's surprise may be imagined. All his symptoms immediately disappeared; he dressed and ate an excellent lunch.

My explanation of this curious case is that the patient's nose commenced bleeding when he was dressing; this first drew his attention to the absence of his teeth. He forgot he removed them the night before; being in a strange house did not know where to look for them. There was probably a clot of blood in the pharynx, and this imagination magnified into the teeth. Some spasm of the pharynx produced the hardness he and Mr. Atkins felt on arrival. The rest was purely the effect of a fixed idea, which in this case was fortunately removable by the production of the supposed cause; had that not been possible, I can quite understand, from the nervous condition of the patient, that even the dreadful symptoms of hydrophobia might (had that been the fixed idea) have been produced, the excessive secretion from the pharynx having already commenced.—Yours obediently,

E. M. WRENCH, F.R.C.S. Exam.

Baslow Dec. 20th, 1879.

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ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—Though unwilling to trouble you so soon again, I should like to ask space for a few lines in reply to "Verax," whose letter in your pages of the 3rd instant brings numerous charges against those whose opinions happen to differ from his own, such as being captious, illogical, &c., culminating in an accusation of "bad taste."

Now, it would not be difficult to show that Verax's letter is not a model of close reasoning. Allow me a brief analysis of it.

It has been agreed on all hands that pay and pension have been increased (the former unasked for), and, in the case of several grades, liberally. Even as regards those items, however, all have not the same occasion for showing "gushing gratitude."

What are the pecuniary benefits received by surgeons-major of twenty years' service and upwards, should they not happen to be among the chosen ones for whom "selection" has been re-invented? Answer—One shilling a day of additional pay, and two shillings and sixpence a day increase of pension, after a quarter of a century's service. The latter is granted subject to the condition of its recipient not being free, even on retirement, but still subject to Whitehall-yard; restricted, so far as we know, to residence in these islands, and debarred from the privilege of commuting pension—a loss greater, in the opinion of many, than the gain.

Sick leave has been, nominally, extended. A medical officer cannot claim the privilege on the decision of a Medical Board. It may be a matter of favour, and we have good reason to dread any weakness in definition of the privileges conferred by Warrant. Besides, we are not treated as other officers, whose sick leave is not thus carefully hedged.

Exchanges were allowed before, and there is nothing in the Warrant to make them more or less subject to favour than they were.

The terms of Indian service qualifying for promotion were known before, though known too late for the unfortunate victims of previous official injustice.

Forage granted is an undoubted grievance remedied.

Soldier servants were allowed before, though not from the Army Hospital Corps. This concession now is only nominal. The men have to forfeit the extra pay of their corps, which no soldier worth having as a servant can be expected to do, unless the medical officer, in addition to giving the usual servant's wage, makes up to him the difference of pay. This is not putting us on a par with other officers.

So much for the summary of "Verax"; but there is much in the Warrant, besides, open to adverse comment, such as our brigade depôts being given to half-pay officers and militia surgeons, confining the Army Medical Department to large stations at home, and thus greatly increasing the proportion of foreign service, &c., for which I cannot expect to find space in your correspondence columns.

The quotation about Cæsar of this logician seems to be "*apropos* of nothing"; but our Warrant has certainly introduced a more pronounced form of Cæsarism into the department than has prevailed since the time of Mr. Alexander's great "selection," which stopped the flow of regular promotion, and produced as great a "carping spirit of distrust" as that of which "Verax" and his friends complain.

What would be thought of a Warrant instituting selection in the other scientific corps, and making the promotion of field officers of the Royal Artillery and Royal Engineers to depend on favour, instead of on seniority and right?

But I fear my letter is already too long.

I am, Sir, yours, &c.,

Y.

To the Editor of THE LANCET.

SIR,—I can hardly expect you to open your columns to a controversy between myself and your correspondent "G.," but I should like to inform him that social position has never yet been and never can be conferred by Royal Warrant. It must be and can be only earned by the personal acquirements and merits of medical officers of the army, as the social position of combatant officers has been well and gallantly earned. The latter position, however, differs essentially in kind, though not in degree, from that to which medical officers should aspire, and in striving after purely military status medical officers simply render themselves ridiculous, and reduce themselves to the condition of the "Military Medical Snob" so graphically described by Thackeray.

"G.," if he be a military medical officer at all, can hardly fail to remember the bickerings and heart-burnings to which the aspirations of regimental medical officers for acknowledgment of the privileges which they claimed on the strength of their relative rank gave rise, and how jealously every position of precedence was hedged in by the "happy family" regimental system.

By his statement that in the new Warrant the head-quarters staff have taken good care of themselves, "Y." plainly shows that his dislike to the head-quarter staff is more powerful than is the accuracy of his estimate of the results of the so-called money Warrant. He will probably be surprised to hear that under the new Warrant the senior members of the head-quarter staff are serving at an actual loss as compared with the amount of their pay and allowances at any of the home military stations, and that the junior members draw a very slightly increased rate of pay quite incommensurate with the greater expenses of house-rent, and travelling on duty through London and its outskirts.

I may add that the Director-General is not only the best-abused but for so far the worst-paid man in the Army Medical Department.—I am, Sir, yours, &c.,

December 31st, 1879. SURGEON-MAJOR.

THE CHILDREN'S HOSPITAL, PENDLEBURY.

To the Editor of THE LANCET.

SIR,—The resignation of Dr. Humphreys, and the extraordinary action of a section of the Board of the Children's Hospital, Pendlebury, Manchester, towards him, as reported in his letter in your columns of Dec. 20th, reopen the question of the management of that hospital, which was discussed by myself and others in letters published in your journal about three years ago. The management of the hospital, whilst producing a feeling of dissatisfaction amongst the subscribers, is of still greater importance to those members of the medical prosession who are tempted to accept office there.

The lists of vice-presidents (about twenty), honorary surgeons, and the like, are purely ornamental, the gentlemen so named having really nothing to do with the institution, and most of them having probably forgotten even that they have allowed their names to be thus made use of.

I am, Sir, yours obediently,

CH. A. RAYNE, M.B. Lond.

Stoke, Devonport, Jan. 6th, 1880.

SANITARY CONDITION OF DUBLIN.

To the Editor of THE LANCET.

SIR,—The mortality of the city of Dublin has risen to 48·9 per thousand, to the great discredit of the public and local authorities. It is idle to appoint Royal Commissions to inquire into that which is known to all and is apparent to the meanest capacity. Ill-paved and dirty streets, bad sewers, and a large portion of the population living in cellars, underground kitchens, and habitations not fit for any human being to dwell in, represent features fraught with danger to Dublin. The Corporation should long since have removed these evils, but they plead that they have not the funds, whilst they expend upwards of £20,000 per annum in the paying and pensioning of numerous officials, and have within the last few years raised the salaries of some of these from 50 to 100 per cent. There appears no remedy for this state of things; it is vain to apply to the authorities. There is but one resource—namely, the public press, and especially THE LANCET, the veteran reformer.

Yours obediently,

Jan. 3rd, 1880. ALPHA.

ON the 1st inst. the Medical Board of the Meath Hospital, Dublin, presented a valuable gold watch to Wm. E. Crozier, L.R.C.S.I., the house-surgeon and resident medical officer to the hospital, as a token of their esteem and regard.

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EDINBURGH.

(From our own Correspondent.)

So far as it has gone, the present session at Edinburgh has been eminently successful, the splendid series of pavilions at Lauriston, which constitute the new infirmary, doubtless contributing to swell the annual increase in the number of students. In the hospital there have been many interesting operations, and, I regret to add, one unfortunate death under chloroform. The large airy wards, well-ventilated corridors, and lavatories, present a marked contrast to the dingy low roofs, whitewashed walls, and stone floors, that witnessed so many of the greatest triumphs of surgery and medicine in the venerable pile of buildings so lately vacated. A lock ward will be thrown open next week, and the Pathological department is being pushed forward rapidly towards completion. Already it is found that some of the clinical class-rooms in the new hospital are much too small; and one must own that the large operating theatre is decidedly inferior to that of the old infirmary.

If the lecture-rooms in the new hospital are too small, it is easy to imagine the cramped state of affairs in the University. Here we find that the Professor of Physiology, like his botanical colleague last summer, has had to redeliver his lecture daily; however, after the holidays this will be obviated, since the class will then meet in the large lecture hall of the Museum of Science and Art, and I also learn that the Government purpose building a new class-room in the Botanical Gardens. In the Anatomical department the same crowding is visible; several students who joined the dissecting rooms in November only received parts a week ago, while the Professor of Midwifery is at present lecturing to his largest class. The same activity prevails in some departments of the extra-mural school. In this state of affairs it is encouraging to know that the new university buildings, which lie alongside the new infirmary, are rapidly progressing, so that it is probable they may be occupied by the medical faculty before another winter session begins, and thus even the rush of enthusiastic medicals along the various short cuts and crowded thoroughfares on their road to hospital will in future give place to a smart walk of a few hundred yards.

THE LAST OF THE ZULU WAR.

(From our own Correspondent.)

IN continuation of my short medical history of the Zulu people, I now add that, besides the scarification of the skin over the seat of suffering, live charcoal is sometimes applied to the surface—e. g.: Chief Jantzie's son and heir came under my notice at Fort Chelmsford. He was suffering from violent delirium, and, from what I could gather from this native prince's father, he had been in this state two or three days. The patient had been scarified about the forehead, neck, back, loins, arms, and legs—about a dozen cuts at various intervals; into these had been rubbed gunpowder and clay; the clay was of a reddish colour. A small spot about the size of a two-shilling-piece had been shaved on the crown of the head, and on to this spot had been placed a piece of live charcoal; the scalp was burned deeply. The medicine administered consisted of powdered roots—bark and earth. This was prepared as follows:—A clay pan is made red-hot, the powder is placed in the centre, and water is poured little by little upon the powder, the whole boiling up together, the muti man gravely stirring the same; the medicine presenting the appearance of burned sugar frothing up when heated. Into this hot liquid the patient's fingers were dipped—the tips only; they were then conveyed quickly to the tongue, which the patient was induced to protrude. This was repeated many times, until the patient was bathed in perspiration. The doctor was employed stirring up the medicine and directing its use, &c. This finished, the patient was placed in the sun, lightly covered with a blanket. The efforts of the native muti man having failed to produce any satisfactory effect the case was placed by direction of the father under the care of a white muti man; but, in spite of this change, the barbarous treatment was again and again introduced. It seemed as though there was a feeling of distrust, and that it would be better for the patient to have the mixture of the white and black doctors, as the chief said, "It gives my son a double chance, and my tribe will be more satisfied." Although assured to the contrary, as might be expected, the patient died between them. One knowing fellow observed that death was caused by the white muti[1] and black muti fighting in the deceased's body.

Another proceeding was followed besides the treatment mentioned above, and this practice amongst the Zulus here and in Zululand is very common indeed. A cow's horn, which has the smaller end cut off and rounded, with a small hole about the size of a quill communicating with the interior, is inserted into the anus; the mouth of the horn being held up, water, or salt-and-water, or sea-water, is poured into the horn. The patient is usually in a kneeling posture resting upon the elbows; in the case described above the patient was placed upon his face. The practice is commonly carried out on the sea-shore. Frequently the patient gets up directly the full amount of water is introduced, which in some cases is two quarts or even more, and, holding the parts (the horn being previously withdrawn), rushes wildly up and down the sands jumping and sometimes standing upon his head; the water, &c., is then allowed to escape. This proceeding is repeated two or three times.

Emesis is also largely used by the Zulu people; it is practised as follows:—A man will swallow as much water as possible; the quantity is enormous. He will then kneel down and introduce his finger as far down the throat as possible, thus exciting vomiting. This is again and again repeated.

I have learned with much regret that my statement as regards the efficiency of the native cot-bearers, employed to remove the wounded at and after the fight at Ulundi, was erroneous, and I trust you will give me space to correct the error. I now learn that these natives behaved shamefully, and had to be kicked into doing their duty. I hope that my explanation will satisfy you that I had done my best to report the truth of the actual facts, as I then believed, in the first instance, but I was imperfectly informed. This matter is all the more serious, because these men were the only free available force to remove the wounded at the immediate disposal of the Army Medical Staff upon a battle-field.

At Ulundi but three cases of wounded Zulus were attended by the Army Medical Department's officers present. One case underwent amputation, but died soon after; the others recovered.

The Pine Town Convalescent Military Hospital is about to be broken up. The Officer Hospital at Durban was closed last week.

Durban, Nov. 5th, 1879.

[1] Muti, medicine.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on Wednesday:—

Thomas R. Mulreny, Bombay; S. Crawshaw, H. Mitchell, J. W. A. Wood, and C. B. Voisey, Manchester; C. A. Wolrige, Bristol; J. H. Wilson, Aberdeen; R. Brown, Newcastle-on-Tyne; F. E. Musgrave, Cambridge; W. O. Maher, Dublin; G. Fox, Leeds; H. Hudson, Sheffield; and F. O. Hodson, Cambridge.

DR. CURTIS, Professor of Natural Philosophy and Registrar in the Queen's College, Galway, has been appointed an Assistant Paid Commissioner of Intermediate Education in Ireland. Dr. Curtis has been an Examiner for Degrees in the Queen's University in Ireland for nearly twenty years, and is also a member of the Endowed School Commission.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.—The report of the Committee of Management of this institution, presented at the last general meeting, announces the contemplated extension of the hospital to double its former size, and accommodation thus provided for 300 inmates. During the year 1879, 1444 in-patients were admitted, and 199 out-patients received the benefits of the charity. A good practice adopted at this hospital is the giving to every patient on leaving the wards a form printed on a postal card, to be returned, filled up, with information as to the progress of the case. Of these self-reported results, 1065 were received during the year; 765 reported as improved, 305 as no better, and 5 as having terminated fatally.

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BEQUESTS ETC. TO MEDICAL CHARITIES.—The executors of the will of Miss Harriet Hurst, of Stamford, have, in the exercise of the discretion vested in them, distributed a large amount in the Three per Cent. Consols, bequeathed by her for the purpose, among various charities, including £5000 to the London Hospital; £3500 to the Middlesex Hospital; £3000 each to University College Hospital, St. George's Hospital, and the Stamford, Rutland, and General Infirmary; £2000 to the Westminster Hospital; £1000 each to the Cancer Hospital, Brompton; Charing-cross Hospital; St. Mary's Hospital; the General Infirmary at Hertford; the Hertfordshire Seaside Convalescent Home; the Wolverhampton and Staffordshire General Hospital; the National Hospital for the Paralysed and Epileptic; the Asylum for Idiots, Earlswood; the Hospital for Sick Children, Great Ormond-street; the Hospital for Consumption, Brompton; and the City of London Truss Society. £500 each to the Huntingdon County Hospital; St. Peter's Hospital for Stone, the Royal Medical Benevolent College; the Royal Free Hospital; the London Lock Hospital; Lincoln Hospital; Kent and Canterbury Hospital; Royal London Ophthalmic Hospital; Metropolitan Convalescent Institution, Walton-on-Thames; Hospital for Women; Evelina Hospital for Sick Children; and the Hitchin Infirmary. £300 each to the Hospital for Diseases of the Skin, Samaritan Free Hospital for Women and Children, and the National Orthopædic Hospital.

Medical Appointments.

ANGIER, G. A., M.D., M.R.C.S.E., L.S.A.L., has been appointed Acting Medical Officer for the Preston District of the Brighton, Hove, and Preston Provident Dispensary, vice Wooldridge, resigned.

ARMSTRONG, J., M.B., L.R.C.S.Ed., has been appointed a Physician to the Liverpool Infirmary for Children, vice Stephens, resigned.

BACOT, W. G., M.D., F.R.C.S.E., has been appointed Public Vaccinator for the No. 1 District of the Blandford Union, vice Ingram, resigned.

BAMPTON, A. H., M.D., C.M., has been appointed House-Surgeon to the South Devon and East Cornwall Hospital, Plymouth, vice Sylvester, resigned.

BERRY, F. H., M.R.C.S.E., has been appointed Second House-Physician to Guy's Hospital, for January.

BLUNT, Mr. T. P., has been appointed Public Analyst for the County of Merioneth, at 21s. per analysis.

BROMLEY, F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Presteigne District of the Knighton Union, Radnorshire, vice Hanson, resigned.

BROWNE, J. W., M.B., M.R.C.S.E., has been appointed Medical Registrar to the Middlesex Hospital, vice Finlay, resigned on being appointed an Assistant-Physician.

BUCK, J. R., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer to the Worcester Union Workhouse, vice Jeffery, resigned.

BURNET, R. W., M.D., M.R.C.P.L., has been appointed a Physician for Out-patients to the Great Northern Hospital, vice Crucknell, resigned.

CHILCOT, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Mere Union Workhouse, and Medical Officer of Health for the Mere Rural Sanitary District, vice Watson, resigned.

ELLIOT, G. S., M.R.C.P.Ed., F.R.C.S.Ed., has been appointed Medical Superintendent of the Metropolitan Asylum District Asylum, Caterham, at £500 per annum, unfurnished residence, &c., vice Adam, appointed to the Crichton Royal Institution, Dumfries.

FULLER, T. W., M.B., has been appointed Senior House-Physician to Guy's Hospital, for January.

GABBETT, H. S., M.B., L.R.C.S.I., has been appointed Medical Registrar to the London Hospital, vice Warner, appointed an Assistant-Physician.

GAGE, R. C., M.B., C.M., has been appointed Medical Officer, Public Vaccinator, &c., for the Scotstown Dispensary District of the Monaghan Union, at £120 per annum and fees, and £15 per annum as Medical Officer of Health, vice Hall, resigned.

GRIFFITH, W. B., L.R.C.P.Ed., L.R.C.S.Ed., has been reappointed Medical Officer of Health for the Bootle Rural Sanitary District, at £25 for one year.

HALL, C. S., M.R.C.S.E. & L.M., L.S.A.L., has been appointed Medical Officer for the Harraby-hill Workhouse of the Carlisle Union, vice Hay, deceased.

HETHERINGTON G. H., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Workhouse and No. 8 District of the Woodbridge Union, Suffolk, vice Owen, resigned.

KNIPE, W. M., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Melbourne District of the Shardlow Union, vice Tasker, deceased.

LOWE, H. G., M.R.C.S.E. L.S.A.L., has been appointed Resident Surgical Officer to the General Hospital, Birmingham, vice Hawkins, resigned.

MACKIE, J., junr., M.D., L.R.C.S.Ed., has been appointed Certifying Factory Surgeon for the District of Brechin, Fifeshire, vice J. Mackie, L.R.C.S.Ed., resigned.

MCLAREN, C., M.B., C.M., has been appointed House-Surgeon to the Bury Dispensary, Lancashire, vice Sparrow, resigned.

MACNAB, J., L.R.C.S.Ed. & L.M., has been appointed Certifying Factory Surgeon for the District of Stirling, vice Beath, deceased.

MANSELL, E. R., M.R.C.S.E., has been appointed Second House-Surgeon to Guy's Hospital, for January.

MOFFATT, P., M.D., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the St. Cuthbert District of the Carlisle Union, vice Hay, deceased.

MOULLIN, C. W. M., M.B., M.A., M.R.C.S.E., has been appointed Surgical Registrar to the London Hospital, vice Treves, appointed an Assistant Surgeon.

NOAD, G. W., M.D., M.R.C.S.E., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Wokingham, Berks, vice Barford, resigned.

ORMEROD, J. A., M.B., M.R.C.P.L., has been appointed a Physician for Out-patients to the Great Northern Hospital, vice Leared, deceased.

PADDISON, E. H., M.B., has been appointed Junior House-Surgeon to Guy's Hospital, for January.

PAGE, E. S., L.F.P.S.G. & L.M., L.S.A.L., has been reappointed Medical Officer to the Infection Hospital, Solihull Union, Warwickshire, at £60 for one year.

PHILLIPS, S. P., M.B., M.R.C.S.E., has been appointed Surgical Registrar to the Middlesex Hospital, vice Lyell, resigned on being appointed an Assistant-Surgeon.

POLAND, J., L.R.C.P.L., M.R.C.S.E., has been appointed Senior House-Physician to Guy's Hospital, for January.

RUSSELL, G. H., M.B., has been appointed Junior House-Physician to Guy's Hospital, for January.

SHANN, W. A., L.R.C.P.L., M.R.C.S.E., has been appointed Resident House-Physician to Addenbrooke's Hospital, Cambridge, vice Fowler, appointed Pathologist and Curator of the Museum, Westminster Hospital.

SHEILD, A. M., M.R.C.S., L.R.C.P.L., has been appointed House-Surgeon to St. George's Hospital, vice Margerison, resigned.

SNELL, E., F.R.C.S.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 1 District, and Medical Officer to the Workhouse, Radford Union, Notts, vice Hatherly, resigned.

WAINEWRIGHT, R. S., M.R.C.S.E., has been appointed Junior Obstetric Assistant to Guy's Hospital, for January.

WEISS, H. F., L.R.C.P.L., M.R.C.S.E., has been appointed House-Surgeon to the Male and Out-patient Department of the London Lock Hospital, vice Vivian, resigned.

WHITE, W. H., M.B., has been appointed Senior Obstetric Assistant to Guy's Hospital, for January.

WITZ, J. F., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Coxwold District of the Easingwold Union, vice Smith, resigned.

Births, Marriages, and Deaths.

BIRTHS.

CLOUTING.—On the 2nd inst., at Thetford, the wife of J. R. Clouting, M.R.C.S.E., of a daughter.

CRAIG.—On the 27th ult., at Pathhead, Ford, Midlothian, the wife of Archibald Craig, M.D., of a son.

EVANS.—On the 26th ult., at West Bromwich, the wife of Alfred Paget Evans, M.R.C.S.E., of a son, still-born.

HARLEY.—On the 2nd inst., at Brook-street, Grosvenor-square, the wife of John Harley, M.D., of a son.

HUDSON.—On the 29th ult., at Clytha-square, Newport, Monmouthshire, the wife of Henry R. Hudson, L.K.Q.C.P.I., of a daughter.

NICHOLLS.—On the 5th ult., at Dominica, West Indies, the wife of H. A. Alford Nicholls, M.D., of a daughter.

SANDILAND.—On the 20th ult., at 191, Southgate-road, N., the wife of A. H. Sandiland, M.R.C.S. & L.R.C.P.L., of a son.

MARRIAGES.

CAPON—ROBERTSON.—On the 30th ult., at St. John's, Paddington, Herbert James Capon, M.D., to Harriet, daughter of the late William Robertson, Esq.

HURFORD—HAYLOCK.—On the 5th inst., at Holy Trinity Church, Paddington, by the Rev. P. Stanley, Cedric Herbert Hurford, B.A., M.D. Trin. Coll. Dub., to Ethel Mary Haylock, youngest daughter of the late John Haylock, of Balsham-place, Cambs.

DEATHS.

FREUND.—On the 29th ult., at 7, West-street, Finsbury-circus, of chronic bronchitis, Jonas Charles Hermann Freund, M.D., Deputy Inspector-General of Hospitals during the Crimean War, Surgeon in the Army, originator of the German Hospital, Dalston, London, eminent as a physician both for rich and poor, deeply regretted, aged 71.

HANCOCK.—On the 1st inst., at Standen House, Chute, Wilts, Henry Hancock, F.R.C.S.E., aged 70.

MAINWARING.—On the 22nd ult., at Dudley, William Mainwaring, L.S.A.L., aged 80.

PONSFORD.—On the 30th ult., at University College Hospital, from blood-poisoning contracted in the discharge of his duties as Physician's-Assistant, Leicester, Cuthbertson Ponsford, aged 23.

POWELL.—On the 27th ult., at Parkmore, Roscrea, co. Tipperary, John Allman Powell, L.K.Q.C.P.I.

SCOTT.—On the 2nd inst., at Clifton House, Beeston-hill, Holbeck, Leeds, William Scott, M.R.C.S.E.

SHIRRES.—On the 20th ult., at Gateshead, David Shirres, L.R.C.P.Ed., aged 35.

TAYLOR.—On the 28th ult., at Easton, Elgin, Dr. James Taylor, formerly of the Hon. East India Company's Service, aged 76.

WOLLETT.—On the 18th ult., at Monmouth, John Moore Wollett, Surgeon, J.P., aged 66. R.I.P.

YONGE.—On the 25th ult., at Liskeard, John Francis Duke Yonge, M.D., aged 65.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Jan. 8th, 1880.

Date.		Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jan.	2	30·07	W.	52	50	..	53	48	..	Cloudy
,,	3	30·49	S.W.	41	40	..	49	38	..	Fine
,,	4	30·59	N.W.	42	40	..	45	38	..	Fine
,,	5	30·50	S.	39	38	..	43	36	..	Foggy
,,	6	30·57	S.	35	33	..	38	33	..	Overcast
,,	7	30·66	S.	36	35	..	39	32	..	Overcast
,,	8	30·58	S.	34	33	..	35	31	..	Raining

Notes, Short Comments, and Answers to Correspondents.

DIRT AND BODILY HEAT.

THE part which the skin plays in the regulation of bodily heat is not adequately estimated. The envelope of complicated structure and vital function which covers the body, and which nature has destined to perform a large share of the labour of health-preserving, is practically thrown out of use by our habit of loading it with clothes. It is needless to complicate matters by allowing it to be choked and encumbered with dirt. If the skin of an animal be coated with an impervious varnish, death must ensue. A covering of dirt is only less inimical to life. We are not now speaking of dirt such as offends the sense of decency, but of those accumulations of exuded matter with which the skin must become loaded if it is habitually covered and not thoroughly cleansed. The cold bath is *not* a cleansing agent. A man may bathe daily and use his bath-towel even roughly, but remain as dirty to all practical intents as though he eschewed cleanliness; indeed the physical evil of dirt is more likely to ensue because, if wholly neglected, the skin would cast off its excrementitious matter by periodic perspirations with desquamation of the cuticle. Nothing but a frequent washing in water of, at least, equal temperature with the skin and soap can ensure a free and healthy surface. The feet require especial care, and it is too much the practice to neglect them. The omission of daily washings with soap and the wearing of foot-coverings so tight as to compress the bloodvessels and retard the circulation of the blood through the extremities, are the most common causes of cold feet. The remedy is obvious: dress loosely and wash frequently.

Legal.—The question is a complicated and a legal one, on which we are scarcely prepared to express an opinion before hearing all the facts of the case and the argument thereupon.

Mr. J. A. Ormerod.—We shall be glad to see the paper proposed. Yes.

INTUSSUSCEPTION OF THE CÆCUM.

To the Editor of THE LANCET.

SIR,—A week ago I received a communication (for which I beg to return thanks to my anonymous correspondent), to the effect that in vol. x. of the Transactions of the Pathological Society of London, at page 160, there would be found recorded a case similar to that of Intussusception of the Cæcum &c., published in your number of Dec. 20th, 1879. Having since procured the volume in question, kindly lent me from the library of the Leeds School of Medicine, it might not be without interest to some of your readers were I, with your permission, to recall the principal features of that case, as they differ in certain respects from mine.

The patient was a boy, five years of age, under the care of Mr. Hesilrige Buckby, of Sutton-on-Trent, and the portion of bowel discharged, as exhibited before the Society by Dr. Quain, consisted, besides the cæcum, of about eight inches of the ileum and four of the colon; whereas in my case there were only the extremities of these viscera at their junction with the cæcum. The boy had been ill four months, presenting at first symptoms of simple fever, followed by severe pain of an intermittent character, chiefly in the region of the bladder. This pain was somewhat relieved by pressure, but not entirely removed, when most severe, even by grain doses of opium every four hours. The urine was at times suppressed for forty-eight hours, sometimes passed freely and copiously, sometimes with pain. The bowels were very much confined, but he passed no blood; there was sickness, but no stercoraceous vomiting, and the sickness was checked by the internal use of chloroform. His appetite was sometimes voracious. The discharge of the portions of bowel was preceded and followed by diarrhœa, and there was then an end to all the distressing symptoms, the urine being passed freely and painlessly, and the bowels passing natural motions once a day; so that at the end of six weeks the little patient seemed in perfectly good health, and continued so at least up to August, 1859.

I remain, Sir, yours &c.,

Bramley, Jan. 3rd, 1880. CHARLES SLESSER.

"TIGHT-LACING" AGAIN.

SURELY enough has been written and said on the subject of tight-lacing to make it plain to everyone gifted with common sense that danger must attend the process. The notion of "improving" nature by forcing the feet into tight boots and the divers other devices with which fashion beguiles the love of personal embellishment are sufficiently monstrous; but the audacity of attempting to compress the trunk, which contains the central organs of life, "for the sake of appearances," surpasses belief. We are not greatly interested to impress the minds of beings so unreasoning and unreasonable as those who resort to this artifice in the face of all that has been done to warn the public. Perhaps the recent death from tight-lacing, in which the heart was found to be so impeded in its action as to render life impracticable, may have some deterrent effect; but we doubt it. Fashion will prevail and wasp-like waists will be cultivated in defiance of nature and art. The flat-headed Indians compress their heads; but they allow for a compensating expansion in one direction while they restrain in another. It is still open to the fashion-loving women of England to try the experiment of enclosing the heads of female children in rigid caps when young; albeit there can be no need to adopt artificial measures for the repression of feminine brains.

DR. T. HUNTER'S OPERATION ON SIR W. WYNNE.

To the Editor of THE LANCET.

SIR,—Through the kindness of D. E. Kirkby, Esq., J.P., I have had the pleasure of reading the original letter of the late Dr. T. Hunter (of which the enclosed is a copy), and also of examining the grape-shot therein described. Such a severe operation, so difficult and so protracted—undertaken, too, long before the discovery of chloroform and the antiseptic treatment,—presents numerous points of interest; and I feel sure that if this account has not appeared in THE LANCET, you will be pleased to insert it. I may add that Lieut. (afterwards Sir) W. Wynne lived to the ripe old age of eighty-four years.

I am, Sir, yours &c.,

Aberdovey, Dec. 1879. F. H. V. GROSHOLZ, L.K.Q.C.P.I., &c.

Dr. Hunter's Report of the Operation on Sir Wm. Wynne on Dec. 12th, 1799.

Hull, Dec. 30th, 1799.

I do hereby certify that I first visited Lt. Wynne on Dec. 2nd, who was considered as a dying man by all the physicians and surgeons of this place who had seen him, and it was only in consequence of his being in the 17th Regiment, many of the officers of which I had known very intimately while in St. Domingo, that I was induced to visit him, rather from motives of politeness than the hope of being serviceable to him. I found him in the most deplorable state of debility and emaciation, coughing up at least a pint of purulent matter daily from his lungs, attended by violent hectic fever and other symptoms, which but too clearly denoted his approaching dissolution. All these symptoms appeared evidently to me to be the consequence of a wound in his side, received, as he informed me, on the 2nd October in Holland. After examining the wound, which externally was now nearly healed up, I judged it proper to lay it open, thus endeavouring to trace the progress of the ball, but without effect. A few days after I made another incision into his side; but I was still unsuccessful in my attempt to detect the cause of so much mischief. On the 11th, however, the matter, which passing through his lungs had ceased to flow out at the external wound, now made its appearance there, and a probe being introduced at the orifice from whence it issued, a ball was discovered at the depth of several inches. On the 12th I proceeded to extract the ball. After making a large and deep incision into the cavity of the chest, I found the ball, much too large to pass between the interstices of the ribs. Two of the ribs had evidently been fractured by the ball in its passage into the lungs, but were now healed; besides it is easy to imagine that the force of gunpowder will put in what mere manual force cannot take out. I was thus under the necessity of sawing away a large portion of the rib to make room for the passage of the ball, which, being composed of iron, rendered the operation much more tedious from its very frequently eluding the grasp of the extracting instrument. After much practice during the present war in gunshot wounds, I can without hesitation pronounce Mr. Wynne's case to be the most important I have ever had under my care, and the operation to be one of the most difficult I ever performed, which but for the unshaken fortitude of the unfortunate sufferer could not have been effected. Those who know the high importance of the lungs to animal life, and are capable of appreciating the great injury they must have sustained by the lodgment of so large a substance so deeply seated, and for such a length of time, will be more capable of conceiving than I of describing the acute sufferings both of the mind and body which Mr. Wynne has of necessity undergone. As Mr. Wynne has frequently asked me my real opinion of his actual situation, and as he has appeared to me to possess a firm mind capable of hearing truth, I have not attempted to conceal from him that, though he is now much better, and I fervently hope likely to recover, yet he is still, and must for a considerable time be, in a dangerous and precarious state.

T. HUNTER, M.D., Surgeon to the Forces.

The grape-shot that was extracted from Lt. Wynne's lungs weighs three ounces and a half and three grains; it was weighed in the presence of Lt.-Colonel Cooke, of the 5th West York. T. H.

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THE ABORIGINES OF AUSTRALIA.

THE *Argus* (Melbourne) gives a most melancholy account of the present state of the aborigines in Victoria. It would appear from our contemporary that the attention which has of late been given to them by the Government to arrest their rapid decadence has been futile. Nay more, it is even suggested that, much as drink and debauchery may have contributed towards the degeneration of the native race, the "greatest mischief has been worked by the blanket and the potato." In other words, the very care which the Government has given to the aborigines with a view of arresting degeneration has accelerated it. This paradoxical statement of a painful subject is, no doubt, susceptible of a clear explanation. The *Argus* notes with approval that the Board for the Protection of the Aborigines proposes to ask Mr. W. Thomson, F.R.C.S., of South Yarra, to investigate the causes of the progressive degeneration of the native race. Mr. Thomson is the author of a work on "Typhoid Fever in Melbourne," which we had occasion to review very favourably a short time ago; he is also the author of a work entitled "Phthisis, and the supposed Influence of Climate in Australia." Phthisis would appear to be the chief cause of death among the aborigines, hence Mr. Thomson would bring special qualifications to the task of investigating their decadence. It does not appear that Mr. Thomson had at the date of the latest news accepted the duty required of him; but we may express a hope that he has done so. In that case we shall look with much interest for the results of his investigation of a difficult question.

Mr. J. Dutta.—We do not recommend any physician or surgeon in particular. Our correspondent should consult his own medical adviser on the matter.

INTRAVENOUS INJECTION OF MILK.

To the Editor of THE LANCET.

SIR,—I have lately published five cases[1] in which I transfused milk into the veins. I now add the short notes of three other cases, in the hope that other members of the profession may be led to try its effects, at least in cases for which there is no other hope.

M. C——, aged seventy years, residing at Moynalty, county Meath, came under my care on the 15th of last August. I found her suffering from well-marked pernicious anæmia, complicated with chronic eczema. She was so feeble that she was unable to stand without assistance. Her friends told me they had no hopes of her recovery. On August 19th I injected four and a half ounces of goat's milk at a temperature of 100°. There was some slight difficulty of respiration, and she complained of a sensation of tightness in the head, with severe palpitations. These symptoms subsided in a few hours, and she gradually improved until September 1st, when she was able to leave the London Hotel, where the operation was performed, and return home. She has continued to improve, and is now quite strong.

M. W——, the subject of spinal disease, and phthisis in its last stage. Her case had long since been considered hopeless, and her only anxiety was to be able to be removed home to Carrigallen, county Leitrim, a distance of some fifty miles. Yielding to the earnest entreaties of her friends, I, on the 19th of August, injected four ounces of milk into the median basilic vein of the left arm. The operation stopped the diarrhœa from which she suffered, and she improved much in strength, and a week later she was able to be removed home.

L. N——, the subject of well-marked phthisis in the last stage, came to Dublin from Ballinasloe with the object of having milk transfused into her veins. Hectic fever and diarrhœa had reduced her to the utmost extent. On the 25th of September I transfused four ounces of goat's milk. There was little or no disturbance of respiration, but the temperature rose four degrees. The diarrhœa was completely checked, and did not return for three weeks after the operation. She has considerably improved, and I intend repeating the operation at a later period.

I remain, Sir, yours truly,

AUSTIN MELDON, F.R.C.S.I., &c.,
Surgeon to Jervis-street Hospital.

Merrion-square North, Dublin, 1879.

D. D., (Sandwich.)—Perhaps a little book on the Colonies, published by Silver and Co., of Cornhill, would be useful to our correspondent. Several letters bearing on the subject mentioned appeared in our last volume.

WHAT IS A NUISANCE?

To the Editor of THE LANCET.

SIR,—Are putrid bones in a decomposing mass of some hundreds of tons to be considered a nuisance dangerous to health? Into Ramsgate Harbour a damaged vessel was brought early last week from some foreign port, and on Wednesday, Dec. 31st, the work of transmitting the bones into a hulk was commenced. Clouds of steam ascended from the hold, and the stench may be imagined better than described. This has been continued to the present time. Your opinion will oblige,

Yours obediently,

The Elms, Ramsgate, Jan. 7th, 1880. HENRY JAMES, F.R.C.S.

*** Certainly, and, according to a recent decision of the judges, it would be competent for the local authority to deal with the matter, either as a nuisance or as injurious to public health.—ED. L.

[1] I shall be happy to supply any member of the profession interested in the subject with a copy of the report of the above cases.

W. B. W.—The amount of water present in good ordinary milk is 86 parts in 100, and the percentage of water in the best samples of condensed milk ranges from 19·2 to 21·8. To restore the natural percentage, four pints of water should be added to every pint of condensed milk.

THE NOXIOUS GASES BILL.

To the Editor of THE LANCET.

SIR,—In your interesting leader of the 29th November upon this subject there are some statements which appear to me calculated to convey a wrong impression with respect to one or two matters in which alkali manufacturers are much interested.

The first point, and one of much importance to sanitarians, is the effect upon health of the gases evolved during the manufacture, by the "Le Blanc" process, of soda in its various forms, together with its necessary adjuncts, sulphuric, hydrochloric, and nitric acids, and hypochlorite of lime or bleaching powder. Upon this part of the subject there was, as you are aware, much evidence, medical and otherwise, given before the Royal Commission on Noxious Vapours (which began its sittings in 1876); but this evidence, as a whole, did not show that these gases, as now evolved, are prejudicial to human life, and that this was the opinion of the Commissioners will appear from page 26, lines 32 to 37, of their Report, which reads as follows:—"The evidence given as to the alleged high death-rates in certain parts of Liverpool and in towns on the banks of the Tyne is encountered in the case of Widnes and Swansea by equally specific evidence as to the low death-rates and general healthy character of the population of these towns, and especially of that portion of the population engaged in the works or residing in their immediate neighbourhood."

Secondly. You speak of the gases evolved in the manufacture of sulphuric acid and from the deposit of alkali "waste" as being "two widespread and intolerable evils." With respect to the gas evolved in the manufacture of sulphuric acid, it was abundantly shown before the Royal Commission that in well-conducted works the escape of such gases is extremely small, not to be compared to the amount given off, even in the same works, by the combustion of coal. It must be remembered that the object of the manufacturer is to catch and use these gases, and that he will naturally strive to reduce the loss to a low point. The Act of 1874 provides that the "best practicable means" for the condensation of these gases should be used in all works, and, in the opinion of most manufacturers, this provision is sufficient for the purpose. However, the Bill of last session went further, and for the first time proposed that a maximum limit of escape should be fixed. To this in principle the alkali trade made no objection. With respect to the second—that is, sulphuretted hydrogen,—all are agreed that the escape of this gas from "waste" deposits *outside* works should be brought under the inspector's control. Waste deposits *inside* works are so now, and why the outside ones were omitted from the Act of 1874 is difficult to understand. It is this unfortunate omission that has led to the "widespread and intolerable evil" of which you speak. Sulphuretted hydrogen travels a long way, and is most unpleasant even when extremely dilute. "Waste," however, can be deposited so as to avoid this nuisance, and it should be the duty of the inspector to see that it is so deposited. When this is done, the second of the "intolerable evils" will have vanished. I may remark that the gases escaping from these waste heaps, disgusting as they are, have not been shown to have any injurious effect upon the public health.

After describing the four parts of the Bill, which were really developments and extensions of the present Alkali Acts, you go on to speak of the particulars in which this Bill went beyond its predecessors, and speak of these provisions as "of vital moment, and not to be surrendered." These provisions were two—the one, the 27th, which proposed to set the local authority in motion; the other, the 29th, which had for its object the establishing of "collective liability" of manufacturers. The first of these two is objectionable, chiefly from the fact that local authorities are generally composed of persons too directly interested in the case to act with impartiality. If the local body is composed of men hostile to the manufacturers, the action taken would be liable to be vexatious; if the local body is friendly to the manufacturers, the clause might become a dead letter, as the Smoke Act is now in many towns. The manufacturers have for this and other reasons always insisted that the inspector alone should set the law in action, and that the inspector should be a scientific man, of independent position, employed by, and responsible only to, the central authority. The second of these two clauses deals with the question of "collective liability." This subject is really a legal one, and is of no special interest to sanitarians. I will, therefore, content myself with saying that it is in direct defiance of the deliberate recommendation of the Royal Commissioners, and that, in my opinion, its tendency would be prejudicial to the interests of the public, and ruinous to the manufacturer.

One word in conclusion. The alkali trade has abundantly shown by its action in 1862 and in 1874, and by the evidence given before the Royal Commissioners, that its object is not to obstruct, but to assist, legislation in the minimising of the evils complained of. Manufacturers are, as you justly say, anxious that inspection should be *thorough*; in short, they wish for all reasonable regulations to be fully and impartially enforced; but they will always protest against legislation such as that embodied in the 29th clause of the recent Bill as tending to ruin their trade, and as hostile to the true interests of the country.

Yours truly,

Widnes, Dec. 29th, 1879. EUSTACE CAREY.

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THE GLASGOW MORTALITY TABLES.

THE quarterly observations of the medical officer of health for Glasgow, Dr. Jas. B. Russell, on the mortality tables of the city, now reach us in a form which must greatly enhance their utility and the ease of reference to them. Previously the tables appeared, detached from the medical officer's "remarks," in Brobdingnagian sheets, unmanageable by mortals of the present prevailing stature. We took occasion more than once to protest against the unhandiness of this form of publication—a form, moreover, exceedingly inconvenient for the library. The "remarks" of the medical officer on the mortality tables for the quarter ending the 30th September, 1879, now lie before us, and we are glad to observe that the tables are printed with them in a form convenient for reference, and which will enable them to be bound up with the "remarks."

A COMMUNICATION from *Dr. Cameron, M.P.*, arrived as we were going to press. It shall receive attention next week.

THERAPEUTIC EFFECTS OF LIGHTNING UPON CANCER.

To the Editor of THE LANCET.

SIR,—As I am not aware that the records of the healing art furnish any case of cancer having yielded to the influence of lightning, I venture to draw the attention of the numerous readers of THE LANCET to the following remarkable case, which may awaken due interest in the curative value of electricity in diseases of a malignant type. Many years ago I heard the late Dr. Golding Bird express an opinion to the effect that electrical sparks drawn from a cancerous structure until an eruption is produced was the only reliable means of cure which he could endorse. In confirmation of the theory of the celebrated electrician, I beg to submit an extraordinary instance of the therapeutic freaks of atmospherical electricity in the cure of cancer. The case loses none of its interest on the plea of antiquity.

About thirty years ago, I attended Reuben S——, a farm labourer, residing at Langtoft, on the Yorkshire Wolds, who suffered from cancer of the inferior lip and part of the chin for about a year, and who had agreed to an operation for their removal. In the meantime he undertook to assist a poor farmer for a day in ploughing his land. During this occupation he was struck down by lightning, and carried home in a state of insensibility. Both of his horses were killed, and the wooden beam of the plough was split and reduced to considerable fragments. Soon after the occurrence I visited, and found the ploughman in a state of great prostration, and emitting a strong odour of ozone, indicating electrical condensation of the adherent oxygen. As soon as reaction took place I bled him from the arm, which act constituted the whole of the treatment. What seems to be the most astonishing feature in the case is the healing process which was set up in the lip and chin soon after the accident. The cancer gradually lessened, and in a few weeks every trace of the diseased structure disappeared, and for ten years he enjoyed complete freedom from his former suffering and signs of the disease. In proof of the specific and hereditary character of the disorder, I may state that the patient's granddaughter, Mrs. P——, of Driffield, lately became the subject of a cancerous tumour over the larynx, which growth, assisted by Dr. Eames, I removed successfully a few weeks ago, and under the persistent use of arsenical treatment the cure seems to be satisfactory. In S——'s case the electrical fluid seemed to form and pass through two small holes in the head-band of his trousers, and to make its exit by corresponding apertures. After this remarkable exemption from all cancerous development for so long a period, the disease reappeared, and, after a year of intense suffering, proved fatal; still leaving the inference unaffected, that the imponderable element secured for the patient an extension of life, and ten years' relief from the distressing consequences of carcinoma, which circumstance establishes my faith in the therapeutic power of electricity in scirrhous indurations.

From the foregoing representation, it is evident that frictional electricity may in good hands become one of the most powerful therapeutic agents in the dispersion of cancerous formations. When cellular hypertrophy takes place in localities favourable to the development of epithelial disease, frictional electricity might be employed for the purpose of destroying the morbid cells, whether in their incipient or advanced stages of progression. The authorities of the London Cancer Hospital will be unfaithful to their honourable trust should they decline to test to the fullest extent the curative effects of frictional electricity in some of the most hopeless variety of diseases to which humanity is exposed.

I shall not venture upon any theory of the specific action of electricity on morbid depositions, but consign the whole question to the abler readers of your incomparable journal.

I remain, Sir, yours &c.,

A. ALLISON, M.D.,
Senior Surgeon to the Lloyd Cottage Hospital,
Bridlington.

Bridlington.

Africa.—"*Life on the Gold Coast*," by Surgeon-General Gordon, C.B., a small work of about 100 pages, published in 1874 by Messrs. Baillière, Tindall, and Cox.

Mr. C. G. Leacock.—The conduct complained of by our correspondent could scarcely be too severely condemned; but he has not quite proved that it occurred.

L.R.C.P. Land.—Not aware. The inquiry might be addressed to the Deputy Grand Master.

MEDICAL CERTIFICATES TO CLUB MEMBERS, SCHOOL BOARDS, ETC.

"A HOSPITAL SURGEON," complains of the time and trouble he requires to spend in writing certificates for members of clubs, and asks, if the clubs think it necessary to have these certificates, why do they not provide a medical officer of their own to undertake the duty of giving them? The grievance is genuine. Almost a more frequent one is the constant demand for certificates that School Board children, with one complaint or another, are unfit to attend school. Considering how much Board schools may be hindered in their work and efficiency by infectious disease, it is seriously worth the consideration of the Board whether each school should not have its medical adviser to see doubtful cases and advise as to the best course to be taken with a view to the general health of the school.

WOUNDS OF TENDONS.

To the Editor of THE LANCET.

SIR,—The following case may be of interest, showing as it does the perfect way in which tendons are repaired after division, without affecting movement.

During the evening of March 23rd, 1879, one of the officers of this ship fell, his left hand going through a pane of glass. The result was a clean cut wound extending across the front of the forearm, about an inch and a half above the wrist. The tendons of the superficial layer of muscles (the pronator radii teres being, of course, excepted) were completely divided, the distal ends bulging through the wound, the proximal ends being retracted. The radial and ulnar arteries were seen pulsating, but were intact. With the assistance of Dr. Walsh, of the ss. *Gwalior*, I returned, with much difficulty, the protruding tendons to their sheaths, and brought the edges of the wound together with silver sutures. A pad of dry lint was applied over the arm, and the whole hand and forearm was bandaged, the hand being kept fully flexed.

Result.—The wound healed up rapidly without any constitutional symptoms. Passive movement was commenced after a fortnight, and in three months the patient reported his hand as "nearly as strong as ever it was." At this date there is *not the least* impairment of movement, and the left hand and forearm are as well developed as the right.

Your obedient servant,
SAYER NICKOLL, M.R.C.S.E.

P & O.S.S. *Siam*, Bombay, Nov. 11th, 1879.

Phthisis.—The quantity named in our annotation is that recommended—viz., one per mille of the body weight, and it is to be inhaled as a five per cent. solution twice daily. The vertical pipe of the Siegle's pulveriser must be considerably widened so that the atomising may be facilitated. There is no reference to the plan of treatment in any French or English work. If our correspondent can read German, let him refer to the *Vienna Med. Presse*, 1879, Nos. 37 and 42. The most recent experiences (see *Berliner Klinischen Wochenschrift*, 1879, Nos. 49 and 51) are not favourable.

HÆMORRHAGE DURING PREGNANCY.

To the Editor of THE LANCET.

SIR,—Will you kindly allow me to make the following remarks on the action of ergot on the uterus in connexion with the report of my case published in THE LANCET of Dec. 13th, under the heading of "Hæmorrhage during Pregnancy." Ergot should never be administered to a woman in natural labour, except the os uteri is at the time fully dilated, as, if it is not, its administration has the effect of retarding labour, and, if persisted in, the natural action of the uterus, which is of a clonic character, is superseded by the action of the ergot, and the contractile force becomes tonic, the circulation between the mother and child is stopped, and the child dies. Now, in a case of hæmorrhage during pregnancy the administration of a dose of ergot has the effect of stimulating the uterus to contract sufficiently to control the hæmorrhage, but not to the extent of stopping the circulation between the uterus and fœtus, which, if persisted in, it would do; the fœtus would die, and nature would then step in, and, treating the fœtus as a foreign body, would set up natural uterine action and expel it. Medicines, such as tartar emetic, morphia, &c., have different actions according to the dose given, and this fact has led me to venture upon the above remarks.

I am, Sir, yours faithfully,

Patterdale, Dec. 15th, 1879. F. C. MACNALTY, M.B., &c.

Mr. T. Hall Redwood.—We regret that it is not in our power to supply the information desired.

Mr. W. S. Byrne.—The paper is marked for early insertion. The drawing is in the hands of the engraver.

RETENTION OF CATHETER IN THE BLADDER.

To the Editor of THE LANCET.

SIR,—I would venture to suggest to Dr. Woodward that an even better and certainly more easy way of retaining the catheter in the bladder is by a mode taught me by Mr. T. Smith when I was dresser for him at Bartholomew's—viz., to tie a string round the butt end of the catheter, then to pass one end along each side of the penis, retaining them *in situ* by passing loosely round the penis a strip of adhesive plaster. The above is a plan I always follow, and with success.

Yours faithfully,

Bradford, Dec. 17th, 1879. W. GILCHRIST BURNIE, M.R.C.S.

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A NEW DANGER IN RAILWAY TRAVELLING.

To the Editor of THE LANCET.

SIR,—You may have seen mirrors in railway carriages on both sides for reflecting advertisements. I spoke recently to a station-master on the subject, and he agreed with me that a slight collision would bring down with great force a large shower of broken glass on any passengers. I understand a Company has been formed on purpose to supply these mirrors; and as Railway Companies derive a large profit yearly from advertisements, we may expect the mirrors will be generally adopted, and the danger increased. Slight collisions are not unfrequent, and permanent injury to the eyes would be ruin to the majority of passengers. I have noticed these mirrors in first, second, and third class compartments on the Metropolitan, and the London, Brighton, and South Coast Railways.

Trusting that this will not seem unimportant,

I am, Sir, yours faithfully,

Laleham, South Norwood-park, Jan. 5th, 1880. R. VARLEY.

IT is requested that provincial papers sent for the information of the Editor may be marked so as to direct attention to the medical or sanitary matters it is desired to notice.

LETTERS not noticed in the current week will be dealt with in the next issue of THE LANCET.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Buzzard, London; Mr. Teevan, London; Mr. Leach, Aberdeen; Mr. Ormerod, London; Mr. Cobbe, Greenwich; Dr. Byrne, London; Dr. Patterson, Glasgow; Mr. Sutherland, South Shields, Mr. Whiteford, London; Mr. Allingham, London; Mr. Chubbe, Hull; Mr. Lucas, London; Mr. Amphlett, London; Dr. Barnardo, London; Mrs. Terre, Norwich; Dr. A. Wise, London; Mr. F. Jordan, Birmingham; Mr. Moorhead, Tullamore; Mr. James, Tounghoo, Burmah; Dr. Murphy, Bombay; Dr. Frazer, Azamgarh, India; Mr. Francis, Swansea; Mr. Oglesby, Leeds; Dr. Rayne, Devonport; Dr. J. Williams, London; Mr. Grant, Birmingham; Mr. R. B. Carter, London; Dr. Burnett, London; Mr. Kearney, York; Mr. Goldney, Birkenhead; Mr. Fairbank, Maidenhead; Mr. Dutta, London; Mr. Stride, Brighton; Mr. Fox, Bristol; Mr. M'Hardy; Mr. Larmer; Mr. Haywood, Liverpool; Mr. Croghan, Dublin; Mr. Marks; Mr. Oswald, London; Mr. Cecil, London; Mr. Mallett, London; Mr. M'Coy, London: Mr. Satchell, Tunbridge Wells; Mr. Wigner, London; Mr. Tallack, London; Mr. Cullamore, London; Messrs. Fry and Sons, Bristol; Mr. A. Smith, London; Mr. Saxby, Leominster; Mr. Hubbard, London; Mr. H. James, Ramsgate; Mr. Conolly, Stockbridge; Dr. Pratt, Newport; Mr. Astley, Hungerford; Surgeon Shirley Deakin, Allahabad; Mr. Bradburgh, Brighton; Mr. Shield, London; Dr. Slesser, Bramley; Mr. Johnson, Winchester; Mr. Barley, Norwood; Surgeon-Major Thompson, Warley; Dr. Hollis, Ipswich; Mr. Beyers, Belfast; Mr. Austin, London; Mr. Martin, Ventnor; Mr. Wilson, Eastbourne; Dr. Allison, Bridlington; Dr. Prowse, London; Mr. Brown, Byfield; Mr. Gabe; Mr. Armstrong, Newcastle-on-Tyne; Mr. Stedman; Mr. Cole, Bath; Dr. Whiteford, New York; Non-Medico; Surgeon; Phthisis; Argol, Grantham; M. D. E.; R. H. G., Caterham; E. G. S.; M. T.; R. W. C.; Alpha; Medical, Putney; D. D.; Practitioner; M.D.; A former Resident at the Cape of Good Hope; Resurgam; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Machin, Bicker; Dr. Hall, London; Mr. Glaisher, Brighton; Mr. Beaman, Wigan; Mr. Wilkins, Scarborough; Mr. Ross, Alderney; Dr. Gill, Stratford-on-Avon; Mr. Baron, Ulceby; Mr. Epworth, Kidderminster; Mr. Grime, Blackburn; Dr. Clapaton, Broughton; Mr. Carlyle, Liverpool; Dr. Johnson, Kirkby Overblow; Mr. Essex, Pontypool; Mr. Buckby, Leicester; Mr. Brown, Tredegar; Messrs. Cadbury and Co., Birmingham; Dr. Jones, Netley; Messrs. Paternoster and Co.; Dr. Hardwicke, Sheffield; Messrs. Maclachlan and Co., Edinburgh; Mr. Vernon, Frome; Dr. Burnett, Mottram; Messrs. Nicholls and Sons, London; Mr. Elmslie, Westbury; Mr. Farrow, Ingham; Mr. Cauldwell, Shotts; X. Y., Brighton; P. A., Torquay; Surgeon, Harborne; A. Z., Amersham; M.D., London; Alpha, London; S. S.; W. E. Cardigan; H. F., Chobham; Surgeon, Bristol; D. B., London; Medicus, London; Omega, Ramsgate; H. C.; A. H., Farningham; P. I. F., London; M.R.C.S.; M.D., Blackburn; A. B., London; Veritas, Newport; M.D., Bristol.

Cambridge Independent Press, Truth, Investment Circular, Colonies and India, Queensland Government Gazette, Nottingham Daily Guardian, Daily Picayune, Runcorn Guardian, North-Eastern Independent, Paper and Print, &c., have been received.

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Medical Diary for the ensuing Week.

Monday, Jan. 12.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.; and on Wednesday, 1½ P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. G. C. Coles will exhibit and demonstrate the Laryngo-phantom. — Dr. Hughlings Jackson, "On a Case of Tumour of the Cerebellum." — Mr. Thomas Bryant, "On the Value of Parallelism of the Lower Extremities in the Treatment of Disease or Injury of the Hip-joint, with the best means of securing it."

Tuesday, Jan. 13.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Schäfer, "On the Physiology of Muscle."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Adjourned Discussion on Mr. Morris's and Dr. Thin's papers, "On the Connexion of Eczema of the Nipple with Cancer of the Breast."—Mr. F. S. Eve, "On two Cases of direct Dislocation Backwards of the Femur."—Mr. Christopher Heath, "On Aneurism of the Subclavian Artery treated by Amputation at the Shoulder-joint and the Introduction of Needles into the Sac."

Wednesday, Jan. 14.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
HUNTERIAN SOCIETY.—7½ P.M. Council Meeting.—8 P.M. Dr. Herman, "On a Class of Cases in which Relief may be given by the Use of Vaginal Pessaries."—Dr. Braxton Hicks, "On Lateral Obliquity of the Pregnant Uterus."—Dr. Galabin, "On a Case of unusual Pelvic Deformity."
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens: Ruptured Fallopian Tube, by Dr. Godson; New Instruments, by Dr. Heywood Smith; One-headed Twin Monster, by Dr. Hilliard.—Paper: Dr. Champneys, "On the Pain in Pelvic Cancer, and its Relief by Morphia."

Thursday, Jan. 15.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION.—3 P.M. Mr. H. H. Statham, "On Modern Architecture since the Renaissance."
HARVEIAN SOCIETY.—8½ P.M. Dr. Goodhart, "On Anæmia as a Cause of Heart Disease."—Dr. Broadbent, "On Venesection."

Friday, Jan. 16.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—8 P.M. Evening Meeting.—9 P.M. Professor Dewar: "Investigations at High Temperatures."

Saturday, Jan. 17.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Rupert Jones, "On Coal."

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Clinical Lecture
ON
LITHOTRITY AT A SINGLE SITTING.

Delivered at University College Hospital, Dec. 9th, 1879,

BY SIR HENRY THOMPSON,

SURGEON EXTRAORDINARY TO HIS MAJESTY THE KING OF THE BELGIANS; CONSULTING SURGEON TO UNIVERSITY COLLEGE HOSPITAL; AND EMERITUS PROFESSOR OF CLINICAL SURGERY.

[AFTER illustrating on a patient the mode of employing a small beaked sound for the detection of stone in the bladder, and also giving a practical illustration of the method of passing a lithotrite with facility, of seizing the stone without waste of time or movement, and crushing efficiently, the lecturer proceeded to discuss the question of how much work should be done at a single sitting.]

The principle pursued by those who at an early period adopted the operation of crushing the stone, instead of cutting for it, was to proceed, little by little, to feel their way cautiously with the new proceeding, and accomplish as much progress as they could, but always subject to one important condition — namely, that the operator should do no mischief to the organs by any undue manipulation on his part. This was the practice long before anæsthesia was allied with surgery, and the lithotritist made it part of his business to watch the patient closely during the proceeding to ascertain whether he was distressed by it, and to modify it according to his sensibility and power of endurance. So much had this become a natural condition of the operation that, long after the use of ether and chloroform had become indispensable in all other operations, lithotrity was performed by many without an anæsthetic agent. Hence it was the aim of the operator to cultivate a light and gentle but quick hand. To do as much as possible in a short space of time, but also as gently and delicately as he could. Thus several sittings, varying in number from three or four to ten or twelve, were commonly necessary according to the size of the stone.

In time, however, anæsthesia became adopted also for lithotrity, and since employing it myself I have gradually diminished the number of sittings, and removed more débris on each occasion, so that from one sitting to four or five became at length as productive as the numbers before-named. This progress was naturally in part the result of familiarity with the instruments and their use, acquired by many years of practice. I also employed more and more, during the last six or seven years, for the same purpose, and especially when the presence of irritation or inflammation made the removal of all the fragments particularly desirable, the aspirator of Clover. At the same time I have been in the habit of saying to younger men, who, as so many have done, accompanied me to my operations for the sake of studying the process, "Do not attempt on first beginning to do as much as you see that I venture myself to do." Such, at all events, was my practice until about two years ago; and in Paris the mode of operating then was, as I think, for the most part, it still is, based on the original "cautious" style, or many-sitting system.

About this time Mr. Bigelow, of Harvard, U.S., having tried the experiment in a few cases, proposed, as a general rule, that the stone should, if possible, be all crushed at one sitting, and removed entirely by a large aspirator and evacuating catheters, no matter how prolonged the time which might be necessary in order to accomplish the task. He believed that less damage would really accrue to the bladder and associated organs by a long, and even somewhat hazardous, sitting, provided the viscus was emptied of the débris, than by the old process of taking away a little and often, but leaving always hard and broken fragments in the cavity, to produce continued and sometimes serious irritation there during much of the period necessary for repeated sittings.

This was a bold, but I believe it was also a happy, idea. My mind was already prepared by past experience to receive it favourably, although the means Bigelow employed in the shape of instruments, especially the lithotrites he proposed to use for the purpose, it was impossible for me to approve; and I at once tried the plan, and have to a very great extent carried it out during the past twelve months. I am bound to say that, as far as I can judge, as far as now thirty-one consecutive cases thus managed enable me to determine, I think the principle a decided step of progress for lithotrity. Let the stone as to size be within the limit of the surgeon's powers, and let all be removed, or at all events the greater part of it, at the first trial. In attempting this, he should commence by crushing freely with a light but strong lithotrite, removing débris by the aspirator-current afterwards. This done, the lithotrite is again introduced, if necessary, to deal with the remainder, and is again followed by the aspirator. If the rattle of fragments in the bladder against the end of the evacuating catheter still exists after its use, the lithotrite is to be again introduced to break them down, and another employment of the aspirator will perhaps complete the task. If only a few small pieces still remain, it is better perhaps to leave them than to subject the parts to repeated manipulations in order to remove some tiny portion. Such will do no harm, and may be removed at a second sitting.

By this method, instead of limiting the sitting, as at one period was my practice, to a term of two or three minutes, it may extend from five or seven to twenty-five or thirty minutes, although a watchful caution must control the period as it becomes extended to the longer term named. The longest sitting I have as yet ventured on is twenty-five minutes, during which I removed 329 grains of a hard uric-acid stone from a gentleman of seventy-eight years of age. Three days after I removed 192 grains more in thirteen minutes, completing the case, and the result was quite successful; and when I last heard of him, he was enjoying greatly improved health at the seaside. This and all the other cases referred to have been seen by many of my brethren both in town and country. It is worthy of remark that at present not one of the thirty-one cases has been fatal, but this number is insufficient to prove anything, as I once had an unbroken series of forty-eight cases by the old system without a death. All experienced operators know how large must be the numbers in order to furnish tabular results of a trustworthy nature. In reference to the time occupied in operating, I find I have hitherto removed on the average from 150 grains to 200 grains in ten minutes, of hard calculus (uric-acid or oxalate of lime). Of course, when the stone is friable, as in the case of phosphatic formations, a larger quantity may be removed in a given time.

For the purpose of this mode of operating, I have modified my instruments somewhat. I have used one lithotrite when necessary slightly stronger than before, making the male blade more wedge-shaped, or rather like the prow of a ship, in part angular, in part more bluff or obtuse; this male blade protrudes through a small opening at the bottom of the female blade, so as to make blocking up impossible. And the original aspirator of Clover, the principle of which is maintained in its entirety, I have considerably modified in a manner so that my new form of it offers three advantageous conditions: first, there is no possibility of air entering it; secondly, it ensures the shortest possible route into it from the bladder; and thirdly, it has a globular trap at the bottom, into which the fragments enter, but which they cannot leave. I explain the principle here and will show you the action after the lecture.

The annexed woodcuts and following explanations will demonstrate the mechanism and action of the new aspirator. The apparatus consists of a stout india-rubber bottle (Fig. 1, A.) On the upper part is a tap (B), and above it a small funnel through which to fill the bottle. At the lower end is a tube, and attached to it are the lower tap (C) and the glass receiver. The tap is constructed thus:—Through the tube is fixed another metallic tube with a large opening on the under side, toward the receiver. The tube projects a short distance at D (Figs. 1, 2, 3), to receive the end of the evacuating catheter placed in the bladder. The tap (C) is contained in the interior of this tube, and is hollow; it is provided with a large opening in one of its sides, so that when once the tap is *in situ*, this opening faces that of the fixed tube containing it, and the end faces the opening D (Figs. 1, 2, 3), which fits the evacuating catheter. Next there is a spherical glass receiver (Figs. 1, 2, and 3 E); the metallic tube to which the receiver is fastened goes down

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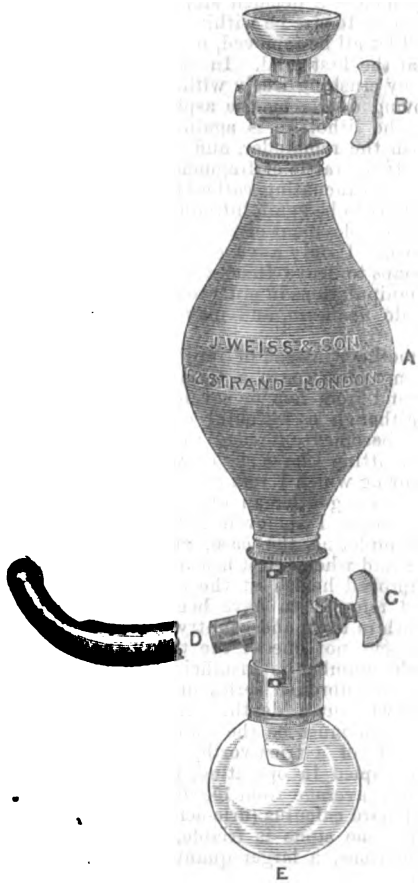
into it about two-thirds of an inch. The spherical receiver is about two and a quarter inches in diameter. When the operator compresses the india-rubber bottle the fragments enter and rise between the glass sides and the tube, and cannot mount again into the apparatus, in consequence of the pro-

Fig. 1



jection of the tube into the glass receiver. The apparatus acts thus:—The evacuating catheter being in the bladder, the tube at D (Figs. 1 and 2) is easily adapted. If the tap is now turned, as in Fig. 1 (C), communication is established between the bladder and the apparatus. If, on the con-

Fig. 2

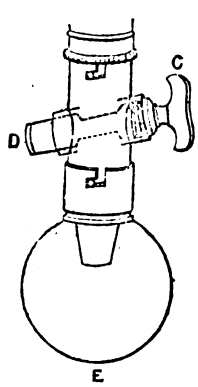
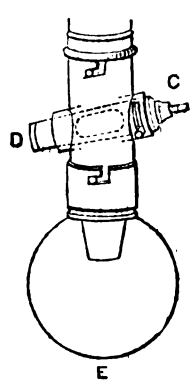


Fig. 3



trary, the same tap is turned as at Fig. 3 (C), all communication is closed, and the apparatus can be removed without spilling a drop of water. Nothing is easier than to fill the instrument. The upper tap B (Fig. 1) is opened, the lower tap (C) closed, and water poured in by the funnel at the top. The water fills it directly and drives the air completely out; the upper tap (B) is then closed, and the instrument is ready for use.

The change in the situation and form of the lower tap shortens the distance many inches for the fragments to traverse, which thus reach the glass receiver by the shortest possible route. The current having less distance to travel, has a more powerful action on the fragments, consequently the aspiration is more perfectly made than it has hitherto been. The entry of air into the bladder is impossible, since the current leaves the lower part of the apparatus, and the air bubbles, if any, must rise to the upper part. In consequence, also, of its small size and portability, this instrument can be very easily adapted to an evacuating catheter, without necessitating any change in the position of the patient to be operated on. Lastly, for those who prefer a portion of flexible tube between the aspirator and the evacuating catheter, a portion is provided; two inches thus interposed, at D, will ensure freedom from any jar to the bladder in using the instrument, and will only lengthen the route *pro tanto*. For myself, I prefer the absolutely direct and shortest route; having no more fear of hurting the bladder with the inflexible evacuating catheter than I have with the inflexible lithotrite.

Clinical Lecture

ON

PULMONARY PHTHISIS, WITH FIBROID CONTRACTION OF THE RIGHT LUNG;

DISPLACEMENT OF THE HEART UPWARDS AND TO THE RIGHT; ANGULAR BENDING OF THE AORTA, AND DILATATION OF THE ANGLE, SIMULATING A CONSIDERABLE ANEURISM; DEATH FROM MALIGNANT DISEASE OF THE COLON AND PERITONITIS, ETC. ETC.

BY DAVID JAS. BRAKENRIDGE, M.D., F.R.C.P.E.

PHYSICIAN TO THE ROYAL INFIRMARY, AND LECTURER ON CLINICAL MEDICINE, EDINBURGH.

GENTLEMEN,—I have selected as the subject of my lecture to-day a case which was for three months under my care this winter in Ward 7,—a case which during life presented numerous and complex groups of clinical phenomena, and which has, not long since, had thrown upon it the searching light of a post-mortem examination. Under any circumstances this case would be one of no ordinary interest, for it affords illustrations of diseases sufficient in number to fill a ward; but it has this additional interest attaching to it, that in one very important respect the post-mortem evidence failed, in a sense, to sustain the diagnosis arrived at, while it demonstrated that the well-marked signs upon which the diagnosis on that point was founded depended upon, and were fully accounted for by, an interesting and hitherto undescribed displacement of certain organs. As no previous description of this displacement had been published, it could not, I believe, have been recognised during life. Even with the evidence I have before me to-day, its diagnosis in a similar case would be extremely difficult, if not impossible. In every other respect the post-mortem examination confirmed the views expressed during life.

The following list of the more important diseases present in this case will convince you that, in the short time at my disposal, I can do no more than discuss some features of these various morbid conditions which specially claim attention. This unfortunate man certainly enjoyed a rich legacy in the form of "the ills that flesh is heir to." He had (1) pleurisy; (2) phthisis pulmonalis; (3) pulmonary emphysema; (4) displacement of the heart upwards to the right, with consequent doubling and aneurismal dilatation of the aorta; (5) persistent diarrhœa from phthisical ulceration of the intestines; (6) fæcal obstruction of the bowels, due to a malignant fungating growth; (7) peritonitis, with rapid and abundant effusion of fluid; (8) cirrhosis of the liver; not to mention some diseases of less importance.

As I purpose to take up a number of the diseases present in this case, I think I can make the remarks I have to offer

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clearer and more profitable to you, if instead of discussing the clinical history of the case as a whole, and thus mixing up the various conditions present, as they doubtless were mixed up during life, I rather take each disease separately, point out the special clinical phenomena which indicated its presence during life, and trace these to their anatomical foundation, as observed after death. In doing this, I will at the same time endeavour to preserve the links of the chain which bound them together as a whole, and to show where necessary their interdependence.

The chief interest in such a case always attaches, not, I think, to those points in which our diagnosis has been verified by post-mortem evidence, but rather to those points in which the conclusions arrived at during life are modified, and the difficulties experienced during life are answered by the examination made after death, especially if the conditions on which the signs and symptoms have depended are either very exceptional or altogether previously unknown. While in the former field it is unquestionably pleasant to feel that we have trodden the well-beaten paths safely, in the latter field we are brought face to face with new or rare facts, by the careful study of which the science of diagnosis may be at once extended and rendered more accurate.

First of all, then, we will consider the phthisis, which was the earliest disease manifested in this case. We will do so more particularly in relation to its bearing on the aneurism which was diagnosed in this case, and believed to be present by every physician who examined the patient after the disease was fully developed. Then I will discuss at some length the question of the aneurism itself, because on this point the clinical facts and the post-mortem evidence present just such an apparent want of accordance as I have referred to. A careful study of the condition of the organs will, however, I think, amply account for the signs present.

The case to which I refer was that of J. M——, aged twenty-seven, who was admitted in October, 1877, into Ward 7, complaining of cough and want of breath. He had been ill eighteen months.

History.—He had served twelve years in the Royal Engineers, during the last seven of which he was engaged in surveying in the Highlands of Scotland, frequently ascending high hills, and sometimes carrying a heavy weight. He left the service twelve months ago, and since then has been employed as a porter and signalman on the Caledonian railway.

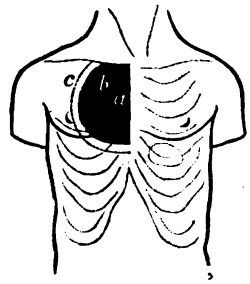
Previous illnesses.—He had an attack of bronchitis twelve months ago, from which he has never completely recovered, cough and spitting continuing. Is frequently troubled with sickness and diarrhœa in the morning. Has been a pretty heavy drinker.

The following was the report of his condition on admission. There was marked flattening, on both sides of the chest, in the infra-clavicular region. This was very decided on the right side, and was accompanied with very deficient expansion. Percussion on the right side above the nipple yielded a very flat and high-pitched note. On auscultation the breathing was tubular, with copious moist sounds; the vocal resonance was bronchophonic. There were present, in short, the indubitable signs and symptoms of phthisis.

It does not specially concern us in this lecture to trace in detail the changes which these signs underwent during the next three months. I have, however, stated the exact condition which this area presented on physical examination when the patient first came under observation, for it is with the rapid development of an entirely new set of phenomena in this space, the right side above the nipple, that we have next to deal. The post-mortem examination showed that the right lung was extremely small and puckered, and strongly bound down by pleuritic adhesions. The substance of the lung was infiltrated with nodules of catarrhal pneumonia, and some smaller grey gelatinous nodules. The bronchi were in a state of catarrh, and their mucous membrane was congested. Anteriorly and superiorly, in the space corresponding to that mapped out on the diagram *Fig. 3, a b c*, the upper lobe of the right lung, which in the normal condition should completely fill that space, is replaced by other displaced structures to which we shall now have occasion to refer.

At the period of the first examination, in the aortic area and over the adjacent part of the right lung, a systolic murmur was heard, and the aortic second sound was accentuated. About a fortnight after the date of the first examination the systolic murmur and accentuated second sound were found to have become more marked. At the same time a small rounded area of dulness was discovered, having its centre in the second intercostal space, and extending for about one inch to the right of the sternum (Fig. 1, *a*). Over this area a slight systolic pulsation could be felt, accompanied by a thrill, and

FIG. 1.



followed by a short jerking impulse. A fortnight after this examination was made, on inspection, the second interspace on the right side was found wider than the corresponding one on the left, and there was marked pulsation visible in it, greatest about an inch and a half from the right edge of the sternum. Slight pulsation was also visible in the first and third, and sometimes even in the fourth right interspaces. Thus we had visible pulsation from the first to the fourth ribs. On palpation, in the first and second interspaces on the right side distinct expansile pulsation could be felt, accompanied by marked fremitus, and followed by an abrupt shock or sudden check to contraction—a true impulse of arrest. The pulsation over the third and fourth intercostal spaces was distinctly feebler and more flickering. On percussion, the small rounded area of dulness, which a fortnight ago measured only an inch across, was now greatly enlarged, extending from the lower border of the first rib to the lower border of the third, and having a transverse diameter of two inches and a half. It was of an oval shape (see Fig. 1, *b*). Around and beyond this oval area there was a zone of about one inch in width, in which the percussion note was decidedly impaired, although not markedly dull (see Fig. 1, *c*). On auscultation there was heard over the area of dulness to the right of the sternum a loud systolic murmur; the second sound was very markedly accentuated, and sometimes reduplicated. The murmur and accentuation were distinctly audible all over the dull area, but were loudest, in the *second* interspace, two inches from mid-sternum, and in the *first* interspace two inches and a half from mid-sternum. On comparing, with the binaural stethoscope, the sounds heard over this area with those heard in the aortic area, the former were found to be much louder and more booming in character than in the aortic area, but less clear and distinct.

The following, which are, as you are aware, the intrinsic or "direct" signs of aneurism, were all present and well-marked in this case:—1st, Percussion dulness over a well-defined area; 2nd, well-marked distensile pulsation and double impulse; 3rd, two sounds—viz., a systolic murmur and an accentuated second sound; 4th, thrill.

A careful consideration of all the known conditions which might give rise to similar phenomena made it impossible to come to any other conclusion than that we had to deal with an aneurism of the ascending portion of the arch of the aorta. One negative fact in particular was, however, carefully noted and considered unaccountable—viz., the absence of any obstruction to the vena cava superior.

Now, gentlemen, for some weeks the case remained in very much the same condition, in so far as the aneurismal signs were concerned. Within a few days before death, coincidently with an attack of peritonitis with very copious effusion into the peritoneal sac, the area of percussion dulness underwent a very considerable change in position and form, so that instead of presenting, as hitherto, an oval shape, it assumed the form and position which is represented in the diagram (Fig. 2, *a*), which was carefully mapped out on the surface during life by Dr. Lamb. It was also noted that the point of maximum intensity of the impulse and sounds after this change was in the first intercostal space about three inches and a half from mid-sternum. (Fig. 2, *b*.)

I believe we shall best arrive at the true explanation of this case if we first take up the anatomical facts found at the post-mortem examination, and analyse them on their

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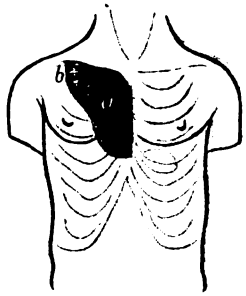
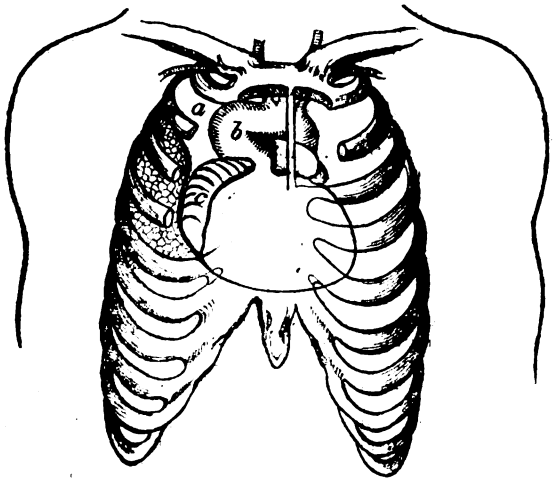
own merits; afterwards place the conclusions so arrived at side by side with the clinical phenomena observed and carefully recorded during life; and, finally, consider the relation in which they stand to one another.

FIG. 2.



The post-mortem examination revealed the following conditions of the organs. On removing the sternum and costal cartilages, it was found that the heart was *much uncovered*, owing to extreme contraction of the *right* lung. Corresponding accurately in position and outline with the pulsating dulness mapped out on the surface of the body during life (Fig. 2) was a membranous sac (Fig. 3, *a*), quite uncovered

FIG. 3.



anteriorly by lung or any other structure, except the walls of the chest, with which it was in direct contact. This sac was continuous below with the pericardium, and was, in fact, the right upper portion of the pericardium, displaced upwards, outwards, and towards the right side. It occupied the space left anteriorly by the contracted upper lobe of the right lung. Evidently to the behaviour of this sac and its contents were due the phenomena observed during life. On opening the sac the following was found to be the condition of the included parts. Firstly, the base of the heart was drawn upwards and towards the right. Secondly, the right auricle in particular was enlarged, and somewhat displaced upwards and outwards (Fig. 3, *c*); it occupied the lower division of the area of dulness mapped out during life, and of the displaced pericardial sac. Thirdly, it was found that, as a result of the displacement of the heart upwards and the contraction of the area of the right lung, the aorta was displaced towards the right, and was bent upon itself, so as to present what Dr. Hamilton very appropriately termed a "knuckle-shaped angle (Fig. 3, *b*); this angle pointed towards the upper portion of the pericardial prolongation, on a level with the first intercostal space. Fourthly, at the convexity of this angle there was a well-marked, although not large, hemispherical dilatation of the aorta, the coats of which were, however, perfectly healthy.

These conditions, gentlemen, furnish us with the data from which we must draw our conclusions as to how the signs of a considerable aneurism were produced during life. I think they will be found amply sufficient for the purpose.

The pulsating tumour in this case evidently consisted, as I have said, of the pericardial sac displaced in the manner described already, and represented in the diagram Fig. 3. Its contents were—First, the angular bend of the aorta. Second, the displaced and dilated right auricle. The former partially occupied the upper division, and the latter wholly occupied the lower division of the sac. The aorta is, as you are aware, the most elastic portion of the whole arterial system. It serves, like the reservoir or second india-rubber ball in the ordinary hand spray-producer, to render the interrupted force of the heart equable and continuous, as Hunter first pointed out. With each systole of the heart it undergoes very considerable dilatation and elongation. In the normal condition this systolic dilatation, over and above what represents the degree of arterial tension present, is, after each pulsation, completely recovered from. The forcible amount of blood expelled from the ventricle during its systole would, in this case, strike upon an angle, instead of passing along the perfect curve of the normal aorta. It would thus encounter much greater resistance at the angle, and would certainly dilate that portion of the aorta and propel it towards the right to a much greater extent than under ordinary circumstances. Again, when a very elastic tube, such as the aorta, is bent upon itself, as in this case, the sudden distension of the first portion will tend to press upon and diminish the lumen of the second portion, and thus, by presenting a temporary obstacle to the onward flow of the blood beyond the angle, will favour the dilatation of the vessel at that point. That some such hindrance was present in this case was almost certain, for, although the aorta was greatly displaced upwards, and presented so exaggerated a distensile pulsation towards the right, no pulsation could be felt with the finger pressed deeply into the episternal notch. Further, the contraction of the apex of the right lung, which had led to the displacement upwards and to the right of the pericardium, would, by loss of support to, as well as actual traction upon, the aorta on the right side, favour its abnormal expansion in that direction.

That some or all of these factors exercised more than a mere probable influence in favouring the outward pulsation of the aorta towards the right side is, however, placed beyond the possibility of a doubt by the manifest dilatation which the aorta presented at the convexity of the angular bend. In an atheromatous artery permanent dilatation is not uncommon; but even then it is the result of great force, and takes place comparatively slowly. Permanent dilatation of an aorta, all the coats of which are perfectly healthy, is quite impossible, unless under the operation of repeated and very greatly exaggerated distensile force. Hence in this permanent dilatation of the aorta at the angular projection we have anatomical proof which is quite conclusive that great distensile force, negative from without and positive from within, *was* actually exerted on this point for a considerable period during life. Such a pulsation would be quite sufficient to cause the artery during the cardiac systole to fill the upper portion of the sac. Indeed, it is more than probable that it contributed considerably to effect the displacement of the pericardium. The angle of the aorta pointed exactly to the spot in the first intercostal space, three inches and a half from midsternum, where the impulse was most distinctly felt during the latter days of life.

(To be concluded.)

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mr. W. Tattersall has given £525 additional, making £535 10*s.*; Mr. Daniel Thwaites, M.P., £105; Mr. A. Dugdale, the Mayor of Blackburn, £52 10*s.*; and Mr. Eli Hepworth, £50, to the Royal Albert Hospital for Idiots and Imbeciles of the Northern Counties, at Lancaster. The Charing-cross Hospital has received £100 under the will of Mr. James Fellows. Mrs. Ellen Hope, of Upper Seymour-street, bequeathed £300 each to the Middlesex Hospital, St. Mary's Hospital, the National Hospital for the Paralysed and Epileptic, the Samaritan Free Hospital for Women and Children, the Royal Hospital for Incurables, and the Royal Orthopædic Hospital. Mr. William Winthrop of Brighton bequeathed £200 each to St. Mary's Hospital, the Charing-cross Hospital, and the Brompton Hospital for Consumption. The Walsall Cottage Hospital has become entitled to £1000 under the will of Mrs. Thomas Harvey, of Leamington. Mr. Edward Greaves bequeathed £100 each to the Warnefield Hospital at Leamington, and the Queen's Hospital at Birmingham.

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Lectures
ON SOME
RECENT INVESTIGATIONS
INTO THE
PATHOLOGY OF INFECTIVE AND CONTAGIOUS DISEASES.

Delivered in connexion with the Brown Institution, at the University of London, Dec. 1879,

BY W. S. GREENFIELD, M.D. LOND., F.R.C.P.,
PROFESSOR SUPERINTENDENT OF THE BROWN INSTITUTION, ASSISTANT-PHYSICIAN AND LECTURER ON PATHOLOGICAL ANATOMY TO ST. THOMAS'S HOSPITAL.

LECTURE I.
INTRODUCTION.

GENTLEMEN,—The task which devolves upon me of delivering a course of lectures founded on work done at the Brown Institution is one which on many grounds one might gladly avoid, but, seeing that it is a duty, I venture to ask your indulgence in its performance. You will not expect that I should attempt to emulate my predecessor in the post which I occupy, and which he so worthily filled. No one regrets more than myself that one who stands in the first rank of pathologists—I had almost said stands alone in the branch of work to which for so many years he devoted himself—should no longer address to you those masterly and lucid expositions of modern investigations of which you had an example in the lectures on the Infective Process which he delivered in this place. You will not expect me to attempt to place myself by his side, or to be able to survey with comprehensive glance or marshal in such orderly array the recent acquisitions of science; that I should hold the balance between truth and error, or be able in one masterly generalisation to give you some new clue wherewith to unravel the intricacies of disease. I can only endeavour, with halting steps, to follow in his track, trusting that, though far behind, there may be for me yet some discovery of truth, some worthy and attainable end.

Nor can I hope to emulate the careful and accurate researches of one whose name is indissolubly connected with the Brown Institution in the minds of all who are acquainted with its past history, or who have at heart the advancement of histological and pathological science, whose name is as a household word in the literature of pathology, and ignorance of whose work argues ignorance of some of the most important investigations of modern times. If there is one thing which, more than all others, I feel to be a matter of regret, it is that I have not enjoyed the advantage of the teachings of Dr. Klein, of a teacher who has secured the admiration and esteem of all his pupils, and to whom we owe a greater stimulus to real histological and pathological study than, perhaps, to any other modern teacher; an investigator whose already published researches will bear fruit a hundredfold, and to whom we may yet look for still greater discoveries.

I shall hardly attempt, therefore, either to present you with a summary of investigations by others, supplemented at all needful points by original observation, in such wise as to weld them into one complete whole, and consolidate them into a bridge by which to pass from conjecture and hypothesis to established truth, or to bring before you any new discovery or completed research. For in truth it falls to the lot of the few to be the discoverers, though many are the researchers. Very few discoveries, almost no scientific discovery, are made by one man alone. The wave of discovery advances like a besieging army: there are multitudes of eager skirmishers pressing forward to the assault, but of the many, one or two, more earnest or more fortunate than the rest, are the first to attain the summit of the breach made for them by others, and are hailed as the earliest victors. Speedily they are joined by others who have followed the same or a slightly different path, and by their united efforts they make the victory sure. Hence for anyone who is engaged in investigation and research to claim for himself the right to speak only of his own observations is at least hazardous, and savours of presumption, more especially if his work runs in the same line as that of any others. If, then, I venture on a consideration of some subjects which to many of you are already well worn, and if I seem to be following in the track of others, let me ask for indulgence on the ground that they have been matters of personal investigation, that the results attained by others have been in many cases independently observed by myself, and that they are therefore in some sense original.

Of all the topics on which I might address you, none seemed of greater interest and importance at the present time than that of the infective and contagious diseases, and some of the various topics arising out of the intercommunication of disease between animals and man and between the various classes of animals. I might indeed have chosen a far easier and less intricate subject, such as some one disease or class of diseases amongst the lower animals, its symptoms, morbid anatomy, and treatment. Of several diseases which I have been investigating, I might have selected one and given you in full detail such information as I could respecting it. But many reasons urged me to attempt the more difficult task of trying in some measure to follow in the footsteps of my predecessor, Dr. Sanderson, and try to aid in the spread of knowledge concerning this most vital question of contagion.

The Brown Institution is established for the purpose of studying, investigating, and endeavouring to cure the diseases, injuries, and distempers to which animals useful to man may be subject. It therefore not only contemplates the benefit of individual animals, but of the whole animal race useful to man; and this limitation of utility to man leads us directly to believe that those diseases which affect in the highest degree that utility to man, which destroy large numbers of animals yearly, or which are communicable from animals to man or man to animals, must be amongst the most fit objects of study.

I do not think that the enormous and constant prevalence of epidemic and contagious diseases amongst animals, especially those used for food, is at all commonly appreciated. From time to time an epidemic of cattle plague, or pleuro-pneumonia, sweeping off whole herds of cattle, raises an alarm; but those diseases which, like splenic fever, are constantly present, do not attract so much attention, nor are they recognised as sources of danger to human as well as animal life.

Every year our knowledge of the intimate nexus which binds together our domestic animals and man seems to become closer, and we are slowly becoming aware that the presence of such diseases in animals is fraught with evil consequences to ourselves.

That hydrophobia and malignant pustule and some other diseases might be communicated to man has long been known, but it is only lately that we have come to know how often this may occur. Glanders, foot-and-mouth disease, and many other diseases are now known to be thus transmitted.

Of late we have begun to suspect that typhoid fever and diphtheria may be in some cases communicated to the human subject, not merely by milk, but through the cow by some modified disease which we do not yet know.

Tuberculosis is another fatal scourge of the human as well as the bovine race, and modern investigations into that disease seem to point in the direction of its possible communication by contagion, or by abnormal nutrition, rendering it a highly important question whether milk may not be in some cases a channel of communication of the infection, especially as in the better classes of milch cows, which are those most subject to the disease, a very large percentage are affected by it. Mr. Simon has recently added the weight of his authority to the belief that tuberculosis may thus be transmitted.

At the present time, when the subject of animal vaccination is receiving so much attention, and it is proposed to establish a new channel of possible communication of disease from animals to man, it behoves us especially to consider how far diseases common in the bovine race may be capable of being transmitted together with vaccinia, and what other risks their prevalence may give rise to in the establishment of a national system of animal vaccination.

At every point of the inquiry into such disease we meet with practical suggestions, which should be of value in enforcing the necessity for a more thorough inspection and control of diseased animals, and calling the attention of the Government to the national importance of such an inspection of animals, especially of those used for food, as is in

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operation abroad. And, on the other hand, the transmission of disease from man to animals is a topic which may well be more studied than it has been. Very few attempts have been made to inoculate human epidemic diseases in animals as a prophylactic measure; indeed, I know of none, except vaccination of dogs with humanised lymph for the prevention of distemper—not, it would seem to me, a very hopeful procedure.

Although I shall not attempt to give any *résumé* of the work of investigation carried on during the past year at the Brown Institution, it is right that I should mention some of the more important subjects of inquiry.

The work of the Committee on Pyæmia and Septicæmia led me to make use of any opportunities for the investigation of these diseases amongst the lower animals. Although comparatively rare in the higher classes of domestic animals, they are not by any means unknown, specimens from two cases of pyæmia in the horse having been forwarded to me during the last twelve months. But when we have to study disease by means of artificial transmission or inoculation we are necessarily brought face to face with the subject of blood-poisoning, and it becomes essential that we should be fully acquainted with its phenomena, and be able to eliminate these accidental products if we would arrive at any sound conclusion. For this, if for no other reason, the study of these diseases is highly important. The diseases known as "anthracoid"—i.e., allied to anthrax—are those which I have been more especially engaged in studying, and on which I shall chiefly dwell in these lectures. Hydrophobia and glanders have also been subjects of work, but at present the work is not sufficiently advanced for me to bring it before your notice. And here I must not omit to mention how effectively I have been aided in this work by the able assistance of my colleague, Mr. Banham, the veterinary surgeon to the institution, by the kind counsel of Dr. Burdon Sanderson, and by the material from abroad contributed through the courtesy of Mr. George Fleming.

Turning now to the special subject of my lectures, the pathology of infective and contagious diseases, it will be necessary for me to assume on your part an acquaintance with many of the special investigations into the pathology of contagion, which time will forbid my mentioning. At the present moment it seems to me that the relation of lower organisms, especially of bacteria, to contagion, is a topic of especial interest. And, to say the least, there is much confusion in the minds of many as to the bearing of modern discoveries on the life history of bacteria upon the causation and propagation of contagious disease. Perhaps, starting from some elementary facts, I may be able to place some of these problems in a clearer light, and to show what is theory and what ascertained fact.

Moreover, the methods by which these diseases are studied, and should be studied in order to arrive at a sound scientific conclusion, though known to many of you, are, perhaps, not familiar to all; and if in this first course of lectures I endeavour to place before you some of the commoner methods of investigation, it may, I hope, render it unnecessary to refer to these methods in future, except in so far as they are modified by experience.

In speaking of the diseases which I have selected, it is impossible to avoid the consideration of the subject of contagion in general, for not only do we continually meet with illustrations of the general laws which govern the transmission and action of contagia, but these diseases furnish us with a starting point for the investigation of the problems involved in the transmission of diseases from one individual to another, and their study is therefore of the greatest importance.

I am glad that at the present moment the subject of contagion is being treated by one who is not only profoundly versed in it, having devoted to it a life-long study, and able to illustrate it by examples from all the fields of pathological observation, but one who is a master in the art of clear and forcible expression—I mean Mr. Simon.[1] But although this fact will absolve me from the necessity of occupying so much of your time as I had intended in the general consideration of the subject, I must say a few words as explanatory of my purpose, and introductory to what I have to say further.

In the practical study of contagion and contagious disease we have to investigate the nature of the contagium, the mode in which it produces the phenomena of disease, and the method in which it is reproduced and conveyed from one individual to another.

We may indeed study the general pathology of contagion apart from the actual nature of the contagious element or virus. We may, for instance, become acquainted with the facts that in a particular disease some product or disease germ, given off in some way from the body, enters another body by a particular channel, after a period of latency of longer or shorter duration, produces the same phenomena as in the previous case, sets up similar changes in the tissues or organs, whether an eruption or morbid growth or some other change, and that again it is reproduced and transmitted from one to another in an indefinite series. We may ascertain the modes of conveyance possible to the poison, the influences which prevent or accelerate its action, the modifications due to individual constitution or to race and species, and the conditions of susceptibility or insusceptibility either of individuals or of classes. In the working out of the morbid process in the body we may be able to trace to some degree the intimate vital reactions on which it depends, and thus to approach more nearly to the discovery of the cause. All the facts thus known may be grouped together as the general pathology of contagion, and may, as I said, be studied for each disease independently, and by the summation of the series certain general laws of contagion may be ascertained.

But we must go further than this—to study the nature of the contagium, and the mode in which it exerts its morbific action, and is reproduced in the body—the intimate pathology of contagion. Nor in this study must we forget the investigation of the phenomena of preservation of the contagious property, external to the body, through long periods of time, or within the body during the period of latency or incubation.

And in relation to all these subjects, let us bear in mind that we must consider each particular disease apart; that although it may be useful for purposes of hypothesis, and as a guide to experimental study, to make use of analogy, and to make deductions from a number of instances, we must, above all things, avoid considering our analogies and hypotheses as actual facts in dealing with any new case. Each disease and each contagium must be investigated on its own merits.

Contagious diseases, apart from those known to be due to animal and vegetable parasites, may be divided into those which are specifically contagious and those which, though contagious, are variable in their action. I shall speak only of those diseases which are not merely locally contagious, like some skin diseases, or propagations of a particular morbid growth, as tuberculosis appears to be, but are general diseases, such as the zymotic diseases or acute specific fevers, and the contagious blood poisons, such as septicæmia and pyæmia.

It is generally agreed amongst pathologists to separate the true specific contagious diseases from such diseases as pyæmia, septicæmia, and traumatic erysipelas,—from which they are distinguished by several peculiarities. These are, that the specific contagia are not known to arise *de novo;* cases always arise by transmission of the virus from a previous case. The diseases are, within certain limits, "like the father that begat them"—have a similar course, similar symptoms and morbid processes, and reproduce similar cases, which, however modified or lessened by individual proclivity, are always liable to revert to the original type of severity. Moreover, the virus is often specially limited to, or most intense in, some particular tissue or fluid; often that which forms the specific lesion—as the vesicle in vaccinia, the eruption or nodule in glanders,—though not absolutely confined to that part. Many of these, especially those most specific in their peculiar lesion, have, moreover, the peculiarity that, having once affected an individual, they are far less liable to recur than in one who has not suffered from them. At any rate a period of freedom must elapse, which varies in different diseases. Their virus is also usually destroyed by putrescence of the fluid containing it.

The other class, though they may be specifically contagious

[1] Brit. Med. Jour., Dec. 13th and 20th, 1879. It is necessary for me to point out that this lecture was written some time before the first part of Mr. Simon's article, "An Essay on Contagion" appeared, and that it was delivered before the second part of that article was published. In delivering the lecture I therefore omitted much which I had written upon the subject, which went over similar ground. Finding, however, subsequently that I had employed some terms, especially "parasitic," "metabolic," and "catalytic," in a somewhat more restricted and rather different sense from that in which the same terms were defined by Mr. Simon, I have endeavoured to rewrite this part so as to exclude these words. I have thought it better to do this rather than to introduce any new element of confusion depending on a different use of words.

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or inoculable, as some forms of septicæmia, erysipelas, and perhaps diphtheria, can be originated without infection from a previous case, and very commonly arise in this way. They have no period of latency or incubation except such as results from the time needful for entry of the poison into the system, and no specific lesion at all comparable to that of the acute specific diseases. Moreover, they not only usually originate in processes of the nature of decomposition, but their tendency is to cause decomposition of the tissues and fluids, both during life and rapidly after death. They arise at a certain spot, usually in wounds, and thence infect the system, and hence are distinguished as *infective*. They are usually readily intercommunicable by inoculation to widely different classes of animals, and are not strictly limited to certain classes, as is generally the case with specific infections.

It is clear therefore that, whatever these classes of disease may have in common, they must be regarded as essentially separate, and both their contagium and the mode of its action must be held to be distinct. It is true that we cannot draw an absolute line of demarcation between these classes; for some diseases, such as erysipelas and diphtheria, appear to be on the border-land between, partaking to some extent of the characters of each.

You are all probably convinced that the contagium, in the case of the acute specific fevers, is particulate—that is, consists of definite particles of organic nature,—some of these contagia being capable of long preservation and of conveyance to long distances. But there are two classes of disease in which the evidence as to this particulate nature is less generally recognised: the one, the inoculable diseases, syphilis, hydrophobia, and glanders, and similar diseases known as animal poisons; and the other the large class of diseases which have their apparent origin in conditions of the soil, such as malarial fevers. The latter class does not properly belong to the contagious diseases; but the malarial virus or contagium has so many analogies with these that it is conveniently studied with them. For these diseases, however, there is a very large mass of evidence, into which I will not now enter, that in these cases also the material carriers of the disease consist of solid particles.

ON THE MODE OF PROPAGATION OF NERVOUS IMPULSES.

BY EDWARD MERYON, M.D., F.R.C.P.

AN interesting paper on the above subject, written by Dr. J. J. Charles, Professor of Anatomy and Physiology, Queen's College, Cork, was read in the section of Physiology at the annual meeting of the British Medical Association in Cork, August, 1879, and a question is therein raised which bears so directly on some physiological phenomena which I have been investigating for some years past, in relation to the special functions of the sympathetic system of nerves, that I trust Dr. Charles will not deem me insensible to the value of his paper if I do not, in the following observations, refer to it as much as it deserves, or if, in referring to it, I venture to criticise some part of it.

What is the nature of nerve-force? and by what means is it transmitted from periphery to centre, and, *vice versâ*, from centre to periphery?

Two hypotheses have been suggested by Dr. Charles—the vibratory and the chemical.

By the vibratory hypothesis is understood a displacement or vibration of the nerve-molecules, just as atmospheric atoms undergo displacement or oscillations in the transmission of sound; and it has been suggested that sensorial impressions, transmitted to the nervous centres, may be taken up and reproduced by those organs in the same manner that the diaphragm of the telephone receives and reproduces the respective motions impressed upon it.

By the chemical hypothesis is understood an absolute chemical change in the particles of the nerve-substance when in a state of activity, by virtue of which change nervous impulses are propagated, just as chemical mutations occur in other animal organs during their physical activity.

To these two hypotheses I would add a third, the electrical, of which Dr. Charles is evidently not unmindful, for he alludes to a force *as in some respects resembling electricity, generated by, but distinct from, chemical action.* By the electrical hypothesis is understood the development of electrical action in every nerve-particle by virtue of a dipolar attribute, by which every nervous molecule adds its quota to the evolution of a force closely allied to, if not identical with, electricity.

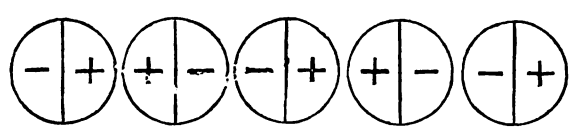
In favour of the vibratory hypothesis it may be alleged that it throws light upon many phenomena of nervous activity. The several senses, for example, may be regarded as modifications of the sense of touch; and as such may be explained by the simple impact of vibrations of nerve-molecules. It is intelligible that muscular action may be incited by vibrations of nervous particles communicated to the ultimate muscular fibre in the sarcolemma; but it is difficult to imagine how nervous exhaustion, from simple backward and forward motion, can be restored more quickly by an impulse in an opposite direction, as by an inverse electrical current, than by absolute rest.

There is much to be said in favour of the chemical hypothesis. It explains the fact that a large amount of waste nervous material results from nervous activity, and that the formation of morbid principles, such as lactic acid, urea, and cholesterin, may correspond with such waste. It exemplifies, too, the production of disease by the accumulation and retention of such morbid principles in the system, and how that many a constitution may have broken down under the weight of intense mental activity; but it fails to explain many phenomena, chiefly those of reflex action and the rapidity with which nervous inpressions are conveyed, and the long-continued resistance of nerve-tissue to the destructive decomposition supposed by the chemical theory.

In favour of the electrical hypothesis, it is well known that the galvanic current can be made, not only to imitate the natural nerve-force, but that it may also replace it by producing many of the phenomena of life; that the galvanic current affects both sensory and motor nerves to a greater degree when made to pass through either in a direct or natural course—centripetal in sensory nerves, centrifugal in motor nerves—than when it is transmitted in the opposite direction; that the galvanometer is deflected by muscular contraction incited by a galvanic current, the superinduced current being just so much added to the original nerve-force, and that the needle shows a decrease of deflection if the current be made to pass through a nerve in an opposite direction to that of the natural nerve-force, this latter being just so much neutralised by the inverse galvanic current.

Those curious peripheral terminations of sensory nerves, the Pacinian bodies, seem to reveal themselves as the agents of propagating electrical action. Consisting, as they do, of a series of concentric capsules of extreme delicacy, in the centre of which the ultimate nerve-fibre is implanted, and containing a fluid which resists external pressure, and protects the elementary nerve-tube, they closely resemble the delicate capsules in the electric organs of the torpedo, and are probably conducive to the same purpose. Their absence from the peripheral extremities of the motor nerves is suggestive of their being, in some manner, connected with the function of sensation; whilst the amorphous granular matter in the cells of the cerebral hemispheres, from which motor fibres take their origin, closely resembling the fluid matter in the Pacinian capsules, favours the supposition that those cells may suscitate a corresponding activity.

With such presumptive evidence as to the *nature* of nerve-force, M. Du Bois Reymond has supplied us with a rational hypothesis as to its action. He assumes that nerve-tissue consists of dipolar molecules arranged in couplets, and that in a state of rest the similar poles are turned towards each other so as to represent a closed current, the negative poles being turned towards the extremity of the nerve, thus—



In the active state he supposes that an electrolytic process takes place, and that the molecules arrange themselves so that the opposite poles are turned towards each other, the negative pole being directed towards the extremity at which

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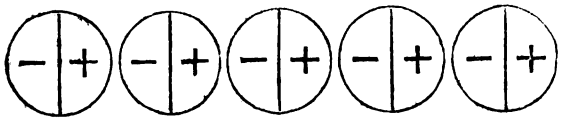
the current enters, the positive pole towards the point at which the current leaves the nerve, thus—



The several arguments which have been adduced in favour of this electrical hypothesis of nerve-force, chiefly from the experiments of Du Bois Reymond and Pflüger, I have concisely set forth in my work "On the various forms of Paralysis," and although they greatly overbalance the vibratory and chemical hypotheses, yet since the time when Sir William Grove demonstrated *the correlation of physical forces*, the reciprocal dependence of electricity, magnetism, chemical affinity, and motion, the determination of the precise nature of nerve-force is rendered more difficult because of the possible transmutation of either one of these physical forces into another. The acknowledged relationship, however, may make the distinction of less importance, seeing that the one represents the other, and the same influence which incites or restrains the one may incite or restrain the other; moreover, the same laws which govern the one also govern the others. Chemical action is the source of electricity in the Voltaic pile, and mechanical action is the source of electricity in Gramme's machine, both being forms of molecular motion; whilst the galvanic machine may be the source of chemical action and molecular motion. Therefore, abstractedly speaking, what one physiologist may regard as chemical action another may attribute to some form of electricity, whilst a third may see nothing more in the phenomenon than the result of vibratory motion.

The structure of a ganglion, consisting as it does of an aggregation of smaller ganglia, each one being connected with a nerve-fibre of Remak and a motor and sensory nerve, is suggestive rather of a galvanic battery than of a test-tube or projectile; and when the nature of the granular matter contained in every ganglionic cell is considered as analogous to that contained in each individual cell of the electrical organ of the torpedo, and, moreover, that such granular matter gradually assumes the form of a nerve-fibre, surely all this may be regarded as inchoate evidence that the evolution of nerve-force is closely allied to that of electricity, and that it is irreconcilable with chemical affinity or simple mechanical motion. I say *closely allied* because there are circumstances which render it improbable that electricity and nerve-force in all cases are entirely identical with each other, the imperfect power of nerves as conductors of electricity being the principal; and it is just here that a suggestion made by the late Professor Faraday comes to our aid. He supposed that magnetism might be a force of a higher relative nature than electricity; and Sir William Grove describes it as directive in its power, but not motive—capable of changing the course of other forces, but not of initiating them, and that it is in itself static, needing something more to produce dynamic force. Together with all this, we should not lose sight of the fact that in no instance that we know of, from the lowest animal in which a nervous system can be traced up to man, do we recognise nerve-force without the connexion of nerve-cell with nerve-fibre, and the autonomy of every ganglionic centre is conceivable as, in its own sphere, capable of receiving, originating, and reflecting nervous impulses on which the functions of those organs to which its nerves are distributed depend.

The functional peculiarities of the ganglionic system of nerves should have some weight in reasoning on the nature of nerve-force. These different nerves have their special modes of action, by reason of which they do not respond in the same manner to a given stimulus, but act and react according to their respective natures, and produce, out of precisely the same mode of stimulation, qualitatively different results. The efferent nerves, like the rheophores of an electric battery, propagate different impulses, according to the nature of apparatus from which they start, and produce different results. The inciting nerves lose their special attributes, the sensory fibres no longer impart common sensation or impressions of pain, and the motor nerves induce motion which is no longer dependent on volition. The course and nature of their forces are changed, and, for aught we know, the change may be akin to that of electricity by induction (Matteucci has so named it in his experiments on the galvanoscopic frog), or perhaps to that modification of electricity known as magnetism. I take refuge in a "perhaps" rather than assert that things are certain which men more competent than myself cannot agree about; but I do not admit that the doubt is a tacit confession of the inadequacy of the electrical hypothesis, modified as I have suggested, to explain the nature of nerve-force.

I admit that the electricity which is generated by virtue of the nutrition of organs may possibly owe its origin to chemical affinity between the arterial blood and the organic matter with which it comes in contact; but it is a radical power for all that, and the following observation by Matteucci, founded on very careful experiments, illustrates this. "The passage of the electric current," says he, "through a mixed nerve, modifies the excitability of the nerve in a very different manner, according to its direction; the nerve traversed by the direct current loses its excitability much more rapidly than that which is traversed by the inverse current."[1] If it be supposed, as is probably the case, that the strength of current generated by such chemical action is extremely weak, one of the objections, "that a ligature round a nerve arrests the passage of a force which electricity passes through," is answered. Notwithstanding that nerves may be very imperfect conductors of electricity, it is nevertheless the fact that the pulpy nerve-substance conducts better than the neurilemma, and, so far, the nerve-matter may be said to be insulated and to be divided as to its continuity by the ligature. At all events, the nerves *do* conduct the mandates of the will from the brain to the muscles for volitional motion; and the question is, What is the nature of the nerve power? That it is not a simple mechanical stimulus Matteucci proved by applying the nerve of a galvanoscopic frog on plates of metal and glass, upon stretched membranes and upon cords of catgut while they were vibrating, and there was never any sign of contraction in the muscles supplied by the nerve. To the chemical hypothesis an equally cogent objection exists in the fact already alluded to, that when nervous exhaustion occurs from nervous activity—say by a direct current—it is more quickly restored by an inverse current than by absolute rest. Would superadded chemical action explain this result?

Clarges-street, W.

[1] Matteucci: The Physiological Action of the Electric Current.—Philosophical Transactions, 1846, p. 487.

GANGRENE OF THE LUNG TREATED BY INCISION.

BY SOLOMON CHARLES SMITH,
SURGEON TO THE HALIFAX INFIRMARY.

I AM tempted to put on record the following notes because the case is one which breaks into somewhat fresh ground, and suggests new possibilities in the treatment of a very fatal disease.

On Oct. 14th, I was asked by Dr. Lawson, of Hebden Bridge, to see with him a case of gangrene of the lung. The patient was a gentleman a little over sixty years old, who had enjoyed good health up to the time of his illness, except that for a few months he had been a little short of breath in going up-hill. A fortnight before I saw him he had been attacked suddenly with right pneumonia, beginning with a rigor, attended with pain in the right side, pneumonic crepitus, and rusty sputa. The case was not very severe, the temperature never being noted above 102°, and in about a week he got up. After two days, however, the cough became worse, and, feeling very weak, he returned to his bed, and it was noticed that his breath was very offensive. On the evening of Oct. 13th he suddenly expectorated half a pint or more of horribly fetid grey fluid, and sank rapidly into the collapsed condition in which I found him the next day. He was then in a clammy perspiration, with panting breath and loud tracheal râles; he had an extremely feeble pulse of 130, and could not lie down because of the cough. The air of the whole room was made horribly offensive by the gangrenous odour of the breath and expectoration. This last was of two sorts; sometimes it would be thick, tenacious, and muco-purulent,

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but frequently alternating with this it was a thin, grey, stinking fluid, which seemed to gush suddenly into his throat in such quantity that he would spit out mouthful after mouthful of about half an ounce each, for three or four times in succession. The right side was slightly less resonant than the left, especially at the base, and under the right nipple, but it was not really dull anywhere. There was less respiratory sound on the right side and less vocal vibration, but all the sounds were greatly masked by the tracheal râles, which were loudly conducted to the ear. A soft systolic bruit was audible over the apex of the heart. He made no complaint of pain, but his tongue was black-brown and dry, and he was altogether in so intensely adynamic a condition that it was impossible to give any but the gravest prognosis.

Liquid food, brandy, and bark with ammonia, were given him; and for two days he did seem to mend a little, but then the expectoration diminished, and he again became desperately ill, though somewhat relieved early on the 18th by getting rid of a quantity of the same thin stinking fluid as before; but it was obvious that there was no free vent to the cavity, wherever it might be, and he again, with somewhat diminished expectoration, subsided into a worse condition than ever, for his powers were now failing under the constant strain and want of sleep. Dr. Lawson and I felt convinced that the gangrenous process had resulted in the formation of a cavity of some size, and we thought it must be situated near the root of the lung, from the great suddenness with which such quantities of fluid were poured out; but we were unable for many days to find any auscultatory evidence which would point to its position. We noticed, however, that there was tubular respiration just about and below the spine of the scapula and outside and below the nipple. On Nov. 20th, however, we were able to assure ourselves of the existence of a decidedly cavernous breath-sound at these points, not heard with every respiration, but occurring occasionally, as if air only now and then entered the cavity.

Believing, then, that there was a large cavern extending deeply through the middle lobe of the right lung, hoping, also, that the adynamic condition of the patient was due mainly to a process of poisoning by its fetid contents, and feeling sure, from the intermittent manner in which this fluid came away, that it had no efficient outlet, we felt that the only chance of doing good lay in making a better exit for it by surgical means, but before adopting so radical a measure we asked Dr. Clifford Allbutt to meet us in consultation.

The result of our deliberations amounted to this—(1) That as the patient was he was sure to die, and that very speedily; (2) that there would be some chance if the cavity could be found and an opening made; (3) that it would be justifiable to explore with the aspirator, and, if we could enter the cavity, to enlarge the opening and put in a tube. On explaining matters to the patient he decided to undergo the operation. It seemed probable that the necrosed patch approached nearer to the front than the back of the chest, but in view of the much more efficient outlet which would result from a posterior incision, I chose a point near the angle of the scapula, where I inserted an aspirator needle for three or four inches. No fluid escaped, but very bad-smelling air was drawn through the tube, and on holding a candle opposite the open cannula the flame was blown to and fro during respiration, so that we were satisfied that a cavity had been reached. Using the cannula as a director, I then inserted a knife between the ribs, and slipped in by its side a pair of dressing forceps, by opening which I dilated the wound sufficiently to introduce a strong india-rubber tube, through which a little carbolic lotion was then introduced; this seemed to set up a coughing fit, when about half a pint of fetid pus of the same character as the thin offensive expectoration was forcibly ejected. The tube was left in, and the wound covered by a large pad of a dozen folds of coarse muslin wrung out of a solution of carbolic acid, which was ordered to be changed every three hours.

For the first week after the operation the improvement was very decided; for six days the expectoration was so much diminished that he gave up the use of the spitting cup and contented himself with a handkerchief; the fetor also became much less except at the times when the dressing was changed; he enjoyed his food better, and was altogether more comfortable. The respiration became much clearer in the left lung and the unaffected parts of the right, the moist sounds being much fewer and the tracheal râles only occasional. But the discharge from the wound continued intensely offensive notwithstanding daily irrigation of the cavity by a syphon. The tube, however, acted very well as a drain; whenever the dressings were changed they were found to be soaked in discharge over an area of five or six inches in diameter, and the water which escaped on washing out the cavity was but little stained, so that we could not attribute the offensiveness to decomposition of the pus, but rather to the sloughy condition within the lung.

On Oct. 28th the discharge lessened a good deal, the expectoration increased and became offensive again, and the pulse, which had previously stood between 90 and 100, ran up to 112. The temperature, however, was only 100°.

On the morning of Oct. 29th he was a good deal better again; pulse 98, less cough and expectoration, and he was taking food well; the wound, however, was beginning to be sloughy, and a few gangrenous black shreds were discharged through the tube. In the afternoon he became very ill, with laboured breathing, orthopnœa, very quick pulse and profuse cold sweats, probably from cardiac failure. After being in a very desperate condition for several hours he partly recovered, but never got back to what he had been before. He gradually became weaker, less willing to take food, and less able to help himself, and on Nov. 2nd he died, apparently from simple asthenia. Unfortunately there was no necropsy.

Gangrene of the lung occurs in several forms, and seems to be produced by many causes, but the interest of this case is clinical rather than pathological, and centres on the possibility of giving relief by surgical means. One's justification for doing a serious operation often lies in the gravity of the condition for the relief of which it is undertaken. Now it will be understood at once that the proposal here is a most serious one. It is no small thing to wound the lung, and it is not possible to feel certain that the opposed pleural surfaces are adherent, and that one will not, by an incision, lead to the production of an ichorous empyema; but, on the other hand, the prognosis of gangrene of the lung is exceedingly grave, so grave as to justify anything which affords the slightest hope of obtaining relief. Dr. Walshe says, on the question of prognosis, "Recovery has been calculated to occur in one-twelfth of cases. This, however, I regard as altogether too high an estimate of the favourable chances, unless it be understood to include the most trivial cases, as, for instance, partial sloughing of the walls of a cavity." And there can be no doubt in my case that the patient was sinking when interference was proposed.

In estimating the possibility of doing good by operation one has to bear in mind the physical condition of the gangrenous lung. Dr. Walshe quotes Laennec to the effect that the gangrene is very much more frequently circumscribed than diffused—"of sixty-eight cases sixty-two are represented to have been of the circumscribed, six of the diffused form." Now, when gangrene of this form has resulted in a cavity of such a size as at all to suggest the possibility of an operation, that cavity is not the primary result of the gangrenous process, but has been produced by an ulcerative action in the "exudation matter of low plastic type," by which the sphacelated parts were surrounded. We must not then expect to find a cavity stuffed full of sloughy lung-tissue, for what exists is an excavated chasm containing semi-purulent ichor, and a small, fetid, shaggy mass corresponding to the original gangrenous portion. "The size of the gangrenous portion at its commencement varies from that of a bean to that of a hen's egg; it is most commonly not smaller than a hazle-nut or larger than a walnut" (Rokitansky). This eschar becomes separated from the surrounding lung, which remains in a state of reactive inflammation; but, from a want of energy in this process of reaction, the primary gangrenous abscess may extend in various directions by a process of infiltration and softening, analogous, apparently, to sloughing phagedæna.

I cannot find any definite statement as to the frequency with which the pleural surfaces are likely to be found adherent, but on consideration of the physical conditions requisite for the production of physical signs, I should feel inclined to say that, in an acute inflammatory disease like this, where auscultatory evidence of a cavity can be heard, such a cavity is likely to be accessible. It either must be close to the surface or must be surrounded by such an amount of solidified lung-tissue as to form an uninterrupted conducting medium from within to without, in either of which cases it is probable that the pleural surfaces will be adherent.

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To tap through solid lung and adherent pleura does not seem so very serious a matter, and if a gangrenous cavity is advancing towards the surface of the lung surrounded by so feeble a zone of inflammation as not to set up adhesion of the pleural surfaces, tapping would seem only to hasten by a little what would inevitably soon occur of itself, with this compensatory advantage, that, instead of a closed empyema, an open one would result; the incision which caused the empyema being also the most essential thing for its relief.

I think, then, that, although many observations are required before the indications for the operation of incision in gangrene of the lung can be definitely laid down, it is probable that the following will be found a fair tentative proposition:—That when (1) the opening through the bronchi seems to be inefficient as an exit for the fluid, or the passage of the gangrenous ichor seems to be setting up irritation in the bronchial mucous membrane, (2) the patient appearing to sink rather than to rally, and (3) auscultatory evidence of a cavity can be heard, an incision with a view to drainage is justifiable.

Halifax, Yorkshire.

A CASE OF POISONING BY DRINKING "CAMPHORATED OIL."

By H. BENDELACK HEWETSON, M.R.C.S.

MY object in reporting the details of the following case is to draw attention to the sale of a decidedly poisonous and frequently used liniment, in *ordinary bottles*, without any other label than that which states what the bottle contains, without regard to its poisonous properties; besides the interest attaching to the relation of the clinical aspects and symptoms of a rare kind of poisoning.

On Sunday, November 23rd last, at 2.30 A.M., I was called to attend Miss B——, aged twenty-five, whose violent cries and wild delirium had already roused the neighbours, she having retired quietly to bed at 11.45 on Saturday night with the intention of taking a dose of castor oil. On reaching the house a quarter of an hour later, I found the patient in bed delirious and vomiting, her eyes staring wildly around, without power to recognise even the nearest relative, whom she accused of doing her injury. Her only occasional complaints were that she felt sick and cold, and that her cheeks tingled very much. These expressions were given vent to at intervals. In the meantime the breathing appeared laboured; pulse 104, firm and good. The extremities did not feel cold to the touch. The vomit and breath smelt strongly of camphor, and a corked, two-ounce, clear-glass, medicine bottle, upon the dressing-table, out of which she was supposed by her relatives to have taken her intended dose of castor oil, also smelt of camphor. I quickly gave her the only emetic at hand, strong hot mustard and water, which made her vomit considerably, after which there was no further vomiting; and by 3.30 she had almost regained sufficient consciousness to enable me to talk to her, and corroborate the evidence (which she did) given by the relatives in the following story.

On Saturday evening she and a younger sister called at a chemist's shop, taking with them a two-ounce bottle, which the family were accustomed to keep filled with castor oil. Both the patient and her sister assert that they asked for castor oil. On getting outside the shop the patient noticed that what was in the bottle, half filling it, "did not look like castor oil"; "it was thinner." Making no further remark, and not noticing the new white label with the name of the chemist, and simply "Camphorated oil" printed upon it, she retired to bed at a quarter to twelve, and took half the bottleful of what she understood to be castor oil. She says that she noticed the altered name upon the label, but in her ignorance thought that because it did not say "Not to be taken" upon the bottle, or "Poison," it was all right, and that this was only a new name for a "*better kind*" of castor oil. In answer to my question as to the taste, she replied that that confirmed her idea that it was a dose of "*improved* castor oil," because it "felt sharp." After taking the dose she appears to have gone to bed and slept until 1.30, at which time she roused a sister, who slept with her, by her delirium and wandering conversation. For the next half hour the delirium increased, rousing the neighbourhood by her shouts and violence, but she did not endeavour to get out of bed, merely throwing herself about in bed. The delirious symptoms were distinctly diminished by the vomiting until 2.40, when I saw her myself.

By 4 o'clock she had become quite clear-headed and rational, only complaining of headache and feeling cold and sickly. During the day she became convalescent, and the improvement continues, although she is still confined to bed.

In consequence of this case I was led to look through the Pharmacy Act relating to the sale of poisons, and found that "camphor liniment" does not come under the head of *poisons*, and that it can be sold with an ordinary label, without even the warning "not to be taken." From this it would appear that, although this accident is of rare possibility, yet as the law now stands an ignorant person may be supplied with "camphor liniment" without a warning as to the nature of the drug or any hint that, should they feel so inclined, it may be swallowed with impunity. Doubtless the risk is rare, but so long as it exists it would be wiser to provide against the possibility of its occurrence, which may lead to the production of symptoms of an alarming, if not absolutely fatal, nature.

Leeds.

CASE OF DYSMENORRHŒA, ACCOMPANIED BY FITS OF A TETANIC NATURE.

By JAMES LATTEY, L.R.C.P., &c.

THE following case may be interesting as showing how severe painful obstruction will sometimes yield to perseverance in treatment.

The subject of this note, Mrs. H. R——, aged twenty-one, a well-developed brunette, arrived at Southampton from Natal on the evening of December 19th, 1878, and came up to London the next day, when I was sent for to see her. She had been very well during the passage home. She commenced to menstruate on the 19th. I found her sitting doubled up on the bed, with a large hot-water tin pressed as closely as possible to the lower part of the abdomen, the only arrangement, she said, that gave her relief. The discharge was scanty, light-coloured, and mixed with small clots and shreds like membrane. The pain was intense—agony she called it—especially when a clot was passing. I ordered her twenty grains of choral, with an equal quantity of bromide of potassium every four hours till the pain stopped; and I am bound to say it did her no good whatever. I may as well mention here that, although I tried all kinds of sedatives by the mouth and even by the rectum, when she was menstruating, they seemed to have no effect.

The next morning I heard the following particulars. She was born and lived in Natal. Had been married two years and eight months; never been pregnant; menstruated first when fourteen and a half years old, and always suffered severely for the first two or three days. Once she had a slight fit, similar to those I saw later on; this was when she was unwell during an attack of measles; otherwise she is always healthy and strong, and laughs at the idea of hysteria, and indeed there is nothing in her appearance or manner suggestive of that peculiarity; she has not suffered from fever of any kind. Since her marriage the symptoms have been increasing in severity. At the beginning of last year she became much worse, and went to Pretoria, to see if she could get some relief. She was under a medical man there for several months, who dilated the os uteri with tents, having to use chloroform and subcutaneous injections of morphia very freely; he wished to make incisions, but she was so weak she could hardly stand, and could not make up her mind to bear it. Just at this time she had to leave for England.

On Dec. 21st she was turning and twisting herself, on and off the bed, in extreme pain. I injected half a grain of morphia and one-eightieth of a grain of atropine under the skin; and she commenced inhaling chloroform till the sedative took effect, but before she could have taken more than a few drops her eyes turned inwards, a horrible grin came over her face, and her body was strongly arched backwards, her head being so turned under her shoulders as to be resting almost on her forehead; no amount of pressure would get her body down, and I was obliged to hold her up, for fear she should get smothered in the bedclothes. She re-

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mained in this state for two or three minutes, and then the muscles relaxed, but she was unconscious for about a quarter of an hour. This attack was repeated several times, and during three different periods afterwards. I thought perhaps the remedies had something to do with it, but the fits occurred later on before any drug had been used. She was kept more or less under morphia and chloroform for three days, when the pain ceased; and after some sickness she was perfectly well.

Subsequently I found the os uteri extremely small, and could only pass a tent the size of a No. 1 gum catheter. When this commenced to swell the pain became intense, and morphia and chloroform were brought into action freely. The next day I divided the lower half of the neck of the womb in four directions, and passed a sound into the cavity itself. I noticed in doing so that there was a spot about two-thirds of the way through, which was intensely painful when touched, but there was no obstruction from it. I passed the sound several times at intervals of three or four days, but contraction gradually took place, except at the lower segment; and on the 21st, when she was unwell, the former scenes of misery were repeated.

During the early part of February I kept the passage dilated every other day with tents, and at the end of the month there was very little suffering — so little that I thought she was safe; but on March 25th she relapsed, and had some of the former fits, though the pain did not continue for so many days. I dilated again with the sound and tents during April, but with no better result. She had suffered so much that her near relations tried to dissuade me, and did up till this time, from operating any further; but the patient herself was anxious that everything possible should be tried, and accordingly, after consulting with my partner, Mr. Hume, who had watched the case all through, and given me many valuable hints, I determined to divide the whole canal up to the internal os; I did so on May 9th, cutting in two directions, and passed the sound every other day without the old pain, till the 26th, when she was unwell. She suffered slight pain for one day, and I was afraid contraction might take place again.

On June 6th, I divided the internal os thoroughly in three directions, passing the knife quite into the uterus, and afterwards plugged the neck throughout with a piece of elastic catheter, wound round with lint soaked in carbolised oil. On the 24th she menstruated quite naturally; there were no clots, and the discharge was of a proper colour and quantity. I took the precaution of passing the sound periodically for a month afterwards, and then inserted a divided stem pessary with a spring outwards, but it would not stay in more than a week. From June till the present time she has had no pain whatever, and the sound passes very freely, almost without her knowing it.

My impression, on seeing this case at first, was that the obstruction confined itself, most likely, to the lower segment of the neck, and especially to the os uteri; and I was unwilling to divide it throughout its course for fear of exciting inflammation; as it was, directly after the operation of May 9th the abdomen became intensely tender, there was great pain in the back and down the legs, and for three or four days some amount of fever. The symptoms gradually passed off in the course of ten days under the free use of opium, but I consider they justified the caution used in not dividing the internal os till every other means had been tried and failed, and nothing but a life of misery remained for my patient to contemplate.

Kensington.

CASE OF GANGRENE OF RIGHT LUNG WITH CARIES OF SPINAL COLUMN,

FROM PASSAGE OF HEAD OF GRASS INTO BRONCHUS.

BY JOHN MAGRATH, M.D.,

LATE PHYSICIAN TO THE EAST LONDON HOSPITAL FOR CHILDREN, ETC.

THE following case appears to me to be worthy of record, as offering several points of interest in the clinical history of pulmonary gangrene, besides being an additional illustration of the lecture by Dr. George Johnson, as lately published in THE LANCET.

J. S——, aged seven years, was brought to me on July 8th, 1878, with the following history:—Some hours previously he accidentally "swallowed" a head of grass. A violent fit of coughing, with lividity of face, immediately followed, but the urgency soon subsided, and when the patient was seen by me, there was no physical sign of obstructed respiration. An occasional dry rhonchus was the only auscultatory sound, and the patient complained merely of dryness of throat and a slight pain to right of epigastrium. Large doses of ipecacuanha were administered, and afterwards purgatives, but though the evacuations were carefully examined, nothing was discovered. It was hoped (from the slight symptoms), notwithstanding, that the grass was actually swallowed, and that if it entered the larynx at all, it was got rid of immediately by the violent respiratory efforts.

After an interval of about a month, the patient was again brought to me. Now a good deal of pain was complained of on the right side, rather indefinite as to position, but soon becoming tolerably well localised, and described as starting from the right infra-mammary region, and going through to the back. A hacking cough followed, and some elevation of temperature, with harsh breathing and some dry rhonchus as the only physical signs. The cough gradually became more troublesome and the pain distressing, being now referred more particularly to an area of a few square inches below the angle of the scapula and approaching the spinal column. Evidence of consolidation of lung over the site of pain manifested itself about eight weeks after the accident. The dulness, at first very slight, became complete in about a fortnight, or ten weeks after the date of "swallowing" the grass. The area of dulness was quite circumscribed, and was confined to the posterior base below the scapula. The breath-sounds, at first weak, became distinctly tubular, and afterwards cavernous, with a good deal of coarse bubbling rhonchus, after the tenth week. This was over the region of consolidation; elsewhere the respiration was not far from normal.

About the tenth week the patient was distressed with pain and could lie on right side only. Rigors followed. The expectoration, at first very scanty and tinged with blood, was now profuse, purulent, and most foul. It soon became dark, and the stench of the breath almost intolerable. At this time also pressure over the area of dulness caused considerable pain, and two of the dorsal vertebral spines were noticed to be very prominent.

Profuse sweats set in, with delirium, and death followed twelve weeks after the accident.

Autopsy, eighteen hours after death.—In this I was assisted by Mr. Mahony, a neighbouring practitioner, who also saw the case during life. About one-third of lower lobe of right lung was found to be completely gangrenous, the pulmonary tissue breaking down under the least pressure. The centre of this gangrenous mass was riddled by cavities, and in one of these lay a head of grass, blackened, but scarcely altered in consistence, and about three-quarters of an inch long. The apex of the grass was pointed downwards, the grain thus aiding the inspiratory efforts, but resisting the expiratory efforts to expel. The gangrenous lung was inseparably adherent to surrounding tissues. The diaphragm was perforated, and the upper surface of the liver was inflamed, and in parts beginning to soften. The bodies of two contiguous dorsal vertebræ on the right side were excavated and carious, breaking down under very gentle pressure. This condition was suspected during life, and accounted for the angular curvature which developed so rapidly in the last few weeks of life.

East Grinstead.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—At the Annual General Meeting of this Society, held Jan. 12th, 1880, the following members were elected as officers and councillors for the year 1880:—President: Mr. Alfred J. Woodhouse. Vice-Presidents: Mr. Charles James Fox, Mr. T. A. Rogers, Dr. J. Walker, Mr. David Hepburn (Edinburgh), Mr. Alfred Meara (India), Mr. J. E. Rose (Liverpool). Treasurer: Mr. James Parkinson. Librarian: Mr. Felix-Weiss. Curator: Mr. C. S. Tomes, F.R.S. Honorary Secretaries: Mr. Ashley Barrett, Mr. S. J. Hutchinson, Mr. F. Canton. Councillors: Messrs. E. B. West, J. S. Turner, T. Underwood, Oakley Coles, W. H. Woodhouse, Edwin Saunders, T. C. White, G. Wallis, W. F. Henry, J. Doherty (Dublin), W. R. Wood (Brighton), W. Hunt (Yeovil), T. W. G. Palmer (Cheltenham), T. J. Brown Mason (Exeter), W. Williamson (Aberdeen).

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A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

CASE OF VENTRAL HERNIA WITH EXTENSIVE GANGRENE OF INTESTINE; REMOVAL OF GANGRENOUS PART; DEATH TWENTY-SIX DAYS AFTER OPERATION; NECROPSY.

(Under the care of Mr. WALTER PYE.)

FOR the following notes we are indebted to Mr. Thornton, the dresser of the case.

M. T——, aged about forty, was admitted at 8.30 P.M. on May 17th, 1879. Her history was as follows. She became ruptured, apparently on both sides, nine years before, in consequence of a fall, but only the rupture on the left side gave her any trouble. It used to come down pretty often, but was easily reduced. She had never worn a truss, and from her description of the tumour, it was not in the position of an inguinal or femoral rupture. On the morning of the day before her admission the rupture came down, and she could not reduce it. She sent for medical assistance, but the gut could not be returned. Violent and persistent vomiting soon came on, and on the afternoon of the following day (17th) she was advised to apply at the hospital. On the evening of the same day, being much worse, she did so.

When seen at 9 P.M. she presented all the constitutional signs of a person with an acute strangulation. Her history was difficult to elucidate, but apparently the bowels had not been moved for four days. On examination, a painful brawny swelling, four inches in diameter, was found in the left iliac region, evidently being neither an inguinal nor a femoral hernia, but lying very much in the position of a femoral one which had forced its way up so as to lie above Poupart's ligament. The physical signs resembled closely those of an abscess in the abdominal walls in this situation.

An incision about four inches and a half long was made over the tumour, and a considerable length of small intestine was found in a gangrenous condition, being tightly strangulated apparently by the edges of an opening in the transversalis fascia. The structures of the abdominal wall, however, were so altered by inflammatory infiltration and adhesion, that it was difficult to make out the precise anatomical conditions. The whole mass was horribly offensive and quite soft, and easily broke down under the finger. On slightly enlarging the aperture, and drawing the coil of intestine out, the gangrene was seen to cease abruptly, and each end of the intestine behind the strangulation was apparently quite healthy. It was therefore determined to stitch half the circumference of the healthy gut above the gangrene to a similar part of the gut below it, the two portions being in contact at the ventral aperture. When this was done the whole of the gangrenous portion, about eight inches, was cut away, leaving a large artificial anus, formed by stitching the healthy intestine to the abdominal walls. When this was done the finger was passed into the intestine upwards and downwards to see that all was clear, and this was followed by a free escape of fæcal matter from the upper end. During the operation the finger had to be passed into the abdominal cavity, but every care was taken to prevent the passage into it of the decomposing fluids about the wound. When the operation was completed the wound was well swabbed out with carbolic acid (1 in 20) and dressed with carbolic oil lint. No other antiseptic precautions were taken. The patient was then given one-third of a grain of morphia hypodermically, and put to bed. She had a good night and very little pain. Next morning fæcal matter passed from the upper opening of the gut; the wound looked healthy; temperature 98°; no signs of peritonitis. Morphia to be continued, one-sixth of a grain three times a day. On the 19th the temperature was 98·4°; pulse 72. There was no abdominal tenderness, except that of the abdominal walls over the wound; free fæcal discharge. There had been two or three fluid motions passed per anum since the operation. A pill of one-third of a grain of opium was ordered to be taken twice a day. On the 21st the temperature was 98°; pulse 97. There was a constant discharge of fæcal matter of a greenish colour and thin; its passage caused a good deal of pain. There was no pain or tenderness in the belly.

For the next ten days she went on very well, and on June 2nd the artificial anus ceased to discharge. She complained of pain and flatus, and sickness came on. Examination of the upper opening of the gut showed that the finger could be passed up with slight force, but that it was rather firmly gripped by the intestinal walls. Temperature 97·8°.

On June 3rd fæcal matter was again passed by the wound. The patient felt much relieved, and the sickness ceased. This improvement was maintained till June 6th, when it was noted that she was not so well. Since the previous night there had been constant vomiting (bilious). There was no discharge from the gut, and the patient was depressed. From this time to June 10th she steadily grew worse; sickness persisted, and there was very little fæcal matter passed. The temperature remained low till the morning of June 11th, when it suddenly rose to 103°, and signs of peritonitis appeared. In the evening of the same day she died, twenty-six days after the operation.

At the post-mortem examination the hernia was found to be a ventral one, the aperture being placed just above the canal of Nuck. The ileum had been opened about twenty-four inches above the ileo-cæcal valve. The abdominal cavity generally was the seat of diffuse subacute peritonitis, and there was a localised purulent collection in the neighbourhood of the artificial anus. The lower intestinal opening was found firmly united to the wound, but the upper one was, as it were, dragged away from the abdominal wall in part of its circumference by a tense band of the mesentery. The gut was also so placed in the wound that the more tense this band became (e.g., through flatus) the more the intestine became twisted on itself, so as to produce an imperfect volvulus.

Remarks by Mr. PYE.—The reasons for removing the gangrenous intestine and stitching the ends together, instead of leaving the mass to separate of itself, were the extent and the degree of the gangrene; it seemed that to leave such a large decomposing mass in the wound could not but be the greater danger of the two. Probably the most remarkable feature in the case is the complete absence of constitutional disturbance for the fortnight following the operation. Had the operation been conducted with rigid antiseptic precautions, that would have been held to be the explanation; but this was not the case. And since, in the course of the operations, the fingers, and therefore some of the products of decomposition, were passed into the abdominal cavity, it is surprising that acute peritonitis did not occur. The cause of her death was made clear enough by the post-mortem examination. It was evidently due to an incomplete volvulus, caused by the mesentery being somewhat stretched by the attachment of the gut to the abdominal walls. Further, this volvulus was not sufficient to produce obstruction while the intestines were tolerably empty, but any slight increase of flatus gave enough distension to cause partial obstruction, and this again, working in a vicious circle, produced still greater distension, vomiting, &c.: and, finally, was sufficient to tear down the adhesions between the intestine and the abdominal walls, and thus to set up fatal peritonitis. Had the mesentery been but half an inch longer, it seems not improbable that the patient would have recovered; indeed, so well was she at one time that the question of attempting to restore the continuity of the canal was raised.

It seems likely that by manipulation inside the abdominal cavity the condition of the mesentery could have been discovered, and the volvulus which it caused averted by adjusting differently the intestinal walls before fastening them to each other and to the abdominal parietes.

GLASGOW ROYAL INFIRMARY.

RUPTURE OF THE RIGHT KIDNEY, PERINEPHRITIC ABSCESS; DEATH.

(Under the care of Dr. CHARTERIS.)

FOR the following notes we are indebted to Mr. G. W. Till, resident assistant.

Robert McD——, aged forty-five years, was admitted on June 7th, 1879, with the following history. He had been a

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healthy, fairly temperate man, with the exception of occasional outbreaks on Saturday nights. On the evening of Saturday, May 24th, a fortnight before admission, he had been indulging freely, and on returning home he tripped and fell, and by doing so his right side came in contact with the corner of a table. About an hour afterwards he was seized with violent vomiting, and there was considerable soreness over the side. This vomiting continued daily after taking food. It occasioned no pain, and he was able to walk about the house without uneasiness. The persistent nature of the vomiting however, alarmed him, and it was in consequence of this he applied at the infirmary.

The patient was observed to be thin and careworn, and expressed great anxiety to be free from vomiting and subsequent thirst. Some of the vomited matter was seen in a vessel. It was of a yellowish-green colour, fluid consistence, and in appearance was not unlike that seen after a prolonged alcoholic debauch, when the stomach refuses everything. A careful examination was made, and no pain was experienced on pressure over any part of the body, nor was there any sign of discolouration at the supposed seat of injury. The respiratory and cardiac systems were found to be healthy, and on examination of the urine both with heat and nitric acid, no trace of albumen was observed then or afterwards, neither was any sediment detected. Its colour was orange-yellow, sp. gr. 1018. His temperature on the day of admission was 100°, but it fell on the second day to 98·6°, and so continued.

The patient lingered for sixteen days, gradually becoming weaker and more exhausted by constant retching, whether food was taken or not. He complained of no pain, and obtained some sleep at nights. Ice, effervescing draughts, hypodermic injection of morphia, in no way alleviated the chief, and, in fact, his only, symptom—vomiting, though temporary relief was experienced by a pill containing creasote and opium. During the last two days of his illness hiccup supervened, and prevented sleep. In the end he died, thirty days after the injury, without delirium or coma, and was able to thank nurses and others for their care and attention.

The obscurity attendant on the case during life was solved by the post-mortem examination made by Dr. Foulis two days afterwards. Dr. Foulis's report is as follows :—

Necropsy, thirty-six hours after death.—Lungs contain minute miliary tubercles, more especially the right, being present only in one small patch near the apex of the left lung. The right pleura is everywhere adherent to the walls of the thorax. On opening the abdomen, the omentum, mesentery, and other parts of the peritoneum have an extremely dark-purple colour, apparently the result of ecchymosis into the subperitoneal tissue. The peritoneum covering the right kidney bulges out considerably, pushing forwards and to one side the small intestines; and on opening into the swelling the peritoneum is found to be very much thickened. Between the kidney and the peritoneal covering, and extending around the kidney, there is an abscess which contains about sixteen ounces of a peculiar, blood-tinged purulent fluid. The right kidney itself is rather large, weighing seven ounces and a half, and is ruptured completely but very irregularly along its transverse diameter, rather below the centre, the upper fragment having attached the ureter and renal vessels. This upper fragment is paler and more friable than normal, and the capsule is easily torn off, leaving a smooth surface. The lower fragment has an extremely dark and congested appearance, the capsule of this portion being in places separated from the cortex by extravasated blood. Both fragments readily tear, and break down under very slight force being used. The renal vessels appear uninjured, but the ureter is very much dilated, and completely filled with a large quantity of white purulent fluid, very much thicker in consistence than that contained within the abscess itself. The pus in the ureter does not extend below the brim of the true pelvis, the passage being impervious to pus from that point outwards. The left kidney is large, weighing seven ounces, and on section appears white and anæmic, the cortical portion being rather thickened, and the capsule readily torn off, leaving a smooth pale surface. The stomach was very much dilated, and contained a small quantity of greenish-yellow, sour-smelling fluid. The brain very large, weighing fifty-nine ounces, but otherwise normal. All the other organs of the body were perfectly healthy.

Remarks by Dr. CHARTERIS.—There are many points of interest in this case, perhaps the most remarkable of which was the obscurity, or rather the absence of any symptoms during life to arouse the least suspicion as to the nature of the case, or to assist in the diagnosis. Other points were the normal condition of the temperature throughout, the absence of pain and swelling in the lumbar region, considering the extent and quantity of pus-formation. Another interesting fact was the normal condition of the urine throughout his illness.

Dr. Dunlop, one of my colleagues at Anderson's College and the Royal Infirmary, has furnished me with the following notes of cases of ruptured kidney, which have been observed by him in the exercise of his duties as one of the medico-legal examiners for Lanarkshire. The publication of these may form a fitting sequel to the case.

THREE CASES OF RUPTURED KIDNEY,

Which had been made the subject of Post-mortem Examination by direction of the Crown.

The first case was that of a man, aged twenty-nine years, who was found lying dead in Glasgow-green. From the position in which the body was found and the circumstances connected with the death as subsequently ascertained, it was concluded that the deceased while in a state of intoxication may have been thrown with some violence against an iron railing, over which he was ultimately pitched, and thereafter rolled down the embankment. As he was seen alive at a late hour at night and on the Green, and as his body was found about five or six hours afterwards with rigor mortis well marked, there was a strong probability that the deceased did not live long, possibly not more than two hours after the injury had been inflicted. With the exception of some bruising about the face and scratching of the hands, which may have been received in the fall or in rolling down the bank, there were no marks of violence observed. On laying open the cavity of the abdomen there was found a large quantity of blood, fluid and clotted. On the removal of the blood the right kidney was seen to be flattened and very much lacerated throughout its entire extent, the rents in its structure being numerous and deep. There was blood also extravasated in the tissue behind the peritoneum. There was no blood in the urine in the bladder, and there was no injury to the liver or other organs within the abdominal cavity. The lungs were pale and bloodless. Death had taken place from shock and hæmorrhage.

The second case was that of a boy, aged six years, who was struck on the side by a sack of flour. He had been following closely a cart loaded with flour, when one of the sacks fell off the cart, and in its descent the corner of a sack struck the boy on his left side, knocking him down. On the sack being removed from the prostrate boy, he was carried home, where he lay very pale and suffering much from shock. He only lived two hours. The left kidney was lacerated, but the pieces were not entirely separate, though they were much flattened and torn. There was blood effused in large quantity both behind and in front of the peritoneum. There was no other organ injured.

The third case was different from the other two, in that he survived for sixty hours after the injuries had been received. The patient was a man of forty years of age, who had been in a street row, and had been violently kicked upon the side. After the infliction of the injury, though suffering very much from pain in his side, he walked to his home, a distance of about a mile. There was blood in his urine. His sufferings were very great. Not only were the pains deep in his belly corresponding with the situation of the kidney, but soon there appeared to be set up symptoms of general peritonitis. There was evidence of bruising on the left side, and, in addition to extravasation of blood, there was abrasion of the skin. On post-mortem examination there was found, in the abdomen, much serous fluid, in addition to large clots of blood, and there was evidence of acute peritonitis. The left kidney was torn almost completely through at the hilum, and some urine had been escaping.

DUBLIN HOSPITAL SUNDAY FUND.—The total sum obtained by the collections made last November for this purpose has now been published, and amounts to £4319 18*s.*, which includes not only the sums collected in the various churches, but also some special donations not contributed through places of worship. The total obtained in the previous year amounted to £4232 10*s.* 11*d.*, so that an increase of £87 7*s.* 1*d.* has on the last occasion been received, when compared with that of 1878.

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Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Eczema of the Nipple.—Direct Dislocation of the Femur backwards.

THE ordinary meeting of the Royal Medical and Chirurgical Society was held on Tuesday, the 13th inst.; the President, J. E. Erichsen, Esq., in the chair. Dr. Munk, Dr. Champneys, Mr. Noble Smith, Mr. Eve, Mr. Cheyne, and Mr. Clutton were admitted Fellows of the Society. The adjourned discussion on "so called" Eczema of the Nipple and Cancer of the Breast was resumed, and was followed by a paper on Direct Dislocation of the Femur Backwards, by Mr. Eve, which elicited a spirited reply from Mr. H. Morris.

Mr. BUTLIN said that there were only two points in Dr. Thin's paper which were of special interest to him at the present moment. The first of these was the nature of the disease of the superficial parts and of the deeper parts of the breast; the second, the connexion and relation existing between the two diseases. He was glad to find that Dr. Thin agreed with him in believing the deeper disease to be cancerous. The form of cancer was a matter of secondary importance, and Mr. Butlin was quite ready to admit that in some cases it might arise from the tubes, in other cases from the acini. Of the nature of the superficial disease he had just as little doubt. He was sure in the large majority of cases it was inflammatory, both on microscopical and clinical grounds: microscopically, because the changes in the epithelium do not spread into the cutis or suboutaneous tissue, or from the interior of the main ducts into the surrounding parts; clinically, all the appearances were those of inflammation, not of cancer. In one case which Mr. Butlin had mentioned at the Clinical Society they were rather those of psoriasis than of eczema; in other cases they might fairly be called eczematous, for the nipple and areola were raw, discharging, and often the seat of superficial ulcers; in other cases, again, there was destruction, either partial or complete, of the nipple and areola, but that destruction was due rather to the remedies (caustics and nitric acid) which had been employed than to the disease itself. With regard to the connexion and relation existing between the superficial and deep disease, Mr. Butlin was glad to find that Dr. Thin confirmed his observations respecting proliferation of the epithelium lining the ducts between the two seats of disease. On the relation between the two Dr. Thin's investigations did not tend to throw any light, for they were made on breasts in which the disease was too advanced to be of use for the purpose. Dr. Thin's observations were therefore worthless on this point, because they were founded on data which were insufficient, and because they were opposed to the dictates of sound sense. Mr. Butlin was of opinion that the superficial disease is not a mere sign of the deeper cancerous disease, nor even a mere precursor of it, but that it is an actual cause of that disease.—The PRESIDENT thought the questions raised in this discussion of great importance from a clinical and therapeutical point of view. It was important to determine the real nature of the disease of the nipple. Sir James Paget, with characteristic scientific caution, had spoken of it as a "so-called eczema," and even after the careful and minute investigations that have been made into its nature, we are still in doubt as to its true character. There is no longer any doubt that eczema and other conditions of the nipple are connected with cancer of the breast; but are these conditions inflammatory or special — *sui generis?* Apparently they are not like ordinary skin cancers—epithelioma and rodent cancer—and are often different from ordinary eczema in both their clinical and histological characters. He believed that it would be better to call the disease by a special name, and suggested that none could be better than "Paget's disease of the nipple." It was still more important to determine the exact relation between this disease and mammary cancer. Does it occur independently of the cancer, or may it be taken as evidence of the existence of cancer in the breast, or is it a precursor of that condition? Usually surgeons attack cancerous disease too late, and their treatment is unsuccessful on that account. If this disease of the nipple, however, is certainly followed by cancer of the breast, then any patient suffering from it should have the breast removed when there would be a good prospect of ultimate success. He thought that at present surgeons were not prepared to consider this relation as absolute and constant. A parallel point had been raised by Dr. Thin in reference to so-called adenomata of the mamma, which, after remaining a long while small, indolent, and chronic, afterwards assumed distinctly cancerous characters. The question arose how far these cases were cancerous from the first.—Dr. THIN gave the particulars of another case which had been communicated to him, since the last meeting of the Society, by Mr. Reeve Manby, of East Rudham. The patient, a woman aged forty-seven, had observed, when suckling her last three children, that blood came frequently through the nipple. After some time the surface of the nipple became diseased. When this disease of the surface had lasted about a year, a tumour formed in the breast under the nipple. The tumour, which had been removed by Mr. Manby, was sent by him to Dr. Thin. On microscopical examination it was found to be of the same nature as the tumours which had been described in the paper, being a typical case of duct cancer (or so-called adenoma mammæ). The woman died two years afterwards, with obscure symptoms. Dr. Thin remarked that this constituted the fourth case of which he had direct knowledge from personal examination. Of the four patients, three had died—two certainly from internal cancer, and the third (Mr. Manby's case), two years after operation, without local relapse. From the surviving patient cancerous glands had been removed from the axilla at the time of operation, not many months ago. These facts showed the serious nature of the affection. Dr. Thin attached great importance to the fact that in these cases the disease took its origin from the epithelium of the ducts, and considered that it was not a matter of indifference whether the disease began in the acini or travelled downwards to the acini through the ducts. On the contrary, the starting point made all the difference as to the kind of cancer which developed. When the disease began in the ducts the cancer that followed was throughout characterised by the features of duct-cancer, or so-called adenoma. When it began in the acini we had a scirrhus cancer. These cancers were distinguishable, and to distinguish them was not only necessary from a scientific point of view, but clinically, and with reference to prognosis and treatment. All the cases he had examined, and, so far as he could judge from the published descriptions and drawings, all the cases which had been published by other observers, of this peculiar condition of the nipple, had been associated with duct-cancer. This peculiar affection of the nipple, which, as had been happily suggested by the President, might very well be known as Paget's disease, although not cancerous in itself, was yet very different from a simple inflammation. The tendency of inflammatory change, when not kept up by some specific cause, is to heal; but this disease of the nipple persists, and shows therefore a constant cause in operation which destroys the vitality of the tissues. This effect Dr. Thin attributes to the discharge of fluid through the ducts from accumulation near their mouths of cancerous epithelium. The diagnosis he considers to be of great importance, because he believes that at the very outset of the superficial affection there is already cancerous change in the duct epithelium, and that nothing short of its removal can save the patient, and, if the diagnosis is certain, that operative measures should at once be adopted. To delay until a tumour can be felt in the breast is to delay until cancer elements too minute to be felt have been probably deposited beyond the reach of the surgeon's touch. He did not consider that either in Mr. Morris's case or in Mr. Lawson's the diagnosis was impossible. He saw Mr. Morris's patient before operation. The affected skin was moist, red, and discharging, but yet sharply bounded by a clear border. When grasped between the thumb and forefinger the induration could be felt in the superficial part of the skin, the sensation produced being much the same as if a penny were laid on a soft elastic substance and grasped through a piece of cloth. In Mr. Lawson's case the diseased portion was covered with ragged epidermis and bounded by a well-marked ridge of raised epidermis, very like an appearance that is some-

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times found on the margin of a rodent ulcer. Even less than in Mr. Morris's case would he have considered the case to be one of eczema. These diagnostic points were of much importance, as cases of true eczema of the nipple of an obstinate nature did occur and eventually recovered, and were apt to be confounded with the condition described by Sir J. Paget.—Mr. MORRIS referred to the fact that after Sir J. Paget and Mr. Hulke had pointed out the connexion between ichthyosis of the tongue and epithelioma, many surgeons recalled illustrative cases in which the relationship had escaped observation; doubtless it would be the same in reference to cancer of the breast following disease of the nipple. The disease of the nipple was certainly a special disease and would be aptly called Paget's disease. Although unable to distinguish it from ordinary eczema by its appearance, he thought that the facts of its occurring in women who were neither pregnant nor suckling, that it was limited to the nipple and areola and attended with induration of the subjacent tissue, and that it was almost incurable, marked it out as distinct from eczema. He said "almost incurable" because he knew of one case, under the care of the late Dr. Tilbury Fox, which recovered after persistent treatment for twelve months. He was glad to find that all observers agreed in their description of the minute changes in the breast—proliferation of the epithelium on the surface, that lining the ducts, and that in the acini, with subsequent rupture of the acini and extravasation of the epithelium with development of well-marked cancer. But in his opinion only the latter condition was cancerous. As he would hesitate to say that ichthyosis of the tongue is necessarily followed by cancer, he would also pause before making such a statement in regard to Paget's disease of the nipple. The right time at which to interfere surgically and to remove the breast was when small diffused hard nodules were to be felt in the gland; he had felt these nodules in each of his own cases, had demonstrated them after removal, and they had been found on minute examination to be connected in a chain with the superficial disease.

Mr. FREDERIC S. EVE gave a description of two Cases of Direct Dislocation backwards, and Fracture of the Rim of the Acetabulum, with Remarks on the Mode of Production of Dislocations backwards. The first case was that of a middle-aged man who threw himself from an upper storey window, and in addition to fatal injuries to the head, sustained a sciatic dislocation of the right femur, which presented the usual appearances. On dissection the head of the femur was found on a level with the lesser sciatic notch. The tendon of the obturator internus crossed the upper part of the articular surface, binding the head tightly down, and thus occasioning extreme rigidity of the limb. The posterior portion of the rim of the acetabulum was torn up. Only the posterior segment of the capsule was lacerated. Of the muscles the gemellus inferior alone was torn. After the dissection was completed, the femur was readily reduced through the cotyloid notch. The second case was that of a man aged fifty-five years, who had his left femur dislocated in the neighbourhood of the great sciatic notch, by a fall of earth upon his back while he was stooping at work. The dislocation presented no unusual characters. Reduction was effected by traction on the slightly flexed and adducted thigh, the ordinary manipulation having failed. He died from a rupture of the intestine. On dissection, the head of the femur was found to have passed through the posterior portion of the capsule on a level with the great sciatic notch, and apparently above the obturator internus. The posterior portion of the rim of the acetabulum was torn up, as in the first case. The pyriformis, gemellus superior, and obturator externus were lacerated. The author remarked that the cases to some extent supported Mr. Morris's view, "that direct dorsal dislocations are always associated with fracture of the acetabulum or head of the femur, or both." In order to ascertain the absolute correctness of this statement, he tabulated all the dislocations backwards in the London museums, with the following results: Direct dislocations, 8; indirect, 1. A dislocation is described as direct when the head of the femur passes directly backwards through the posterior portion of the capsule; indirect when by abduction it passes out through the cotyloid notch, and is drawn backwards by inversion. In three of the eight dislocations, there was no fracture of the posterior portion of the acetabulum; in four the acetabulum was fractured, and in the remaining case the head of the femur was fractured. Cases of direct dislocation with fracture of the acetabulum appear from the table and records of cases to be comparatively common. Various considerations as to the position in which the two forms of dislocation mentioned occurred, rendered it probable that the indirect did not so greatly preponderate in frequency as Mr. Morris maintained. The author found by experiment that the head of the femur could by manipulation in direct dislocations "above the tendon" be returned to the socket through the opening in the capsule by which it escaped, if in circumduction the thigh was somewhat widely abducted. Therefore the reduction of a direct dislocation by the ordinary manipulation "would not be difficult and destructive." The untorn inferior portion of the capsule further did not obstruct reduction through the cotyloid notch after division of the obturator tendon. A direct dislocation could not be produced experimentally, because it was impossible to apply sufficient force in the right manner. For example, in falling from a height on the outer side of the knee, the thigh would be adducted, and the weight of the falling body thrown in an opposite direction; thus a great strain would be brought to bear on the posterior portion of the capsule, which would either be torn from the acetabulum or tear up the margin with it. With regard to the cases first related, in one the dislocation was above the tendon, in the other beneath and below it. Mr. Wormald's and Mr. William Adams' cases were also instances of direct dislocation below the tendon. The distinction is important owing to some difference in reduction. In dislocation "above the tendon" reduction was effected either by manipulation, or, if the acetabulum were fractured, more easily by extension through the opening in the capsule by which it escaped. In dislocation "below the tendon" the femur could be reduced through the cotyloid notch, as in indirect. The principal conclusions arrived at may be stated as follows:—(*a*) That direct dislocation backwards does occur without fracture of the acetabulum. (*b*) It is probable that direct dislocation backwards is comparatively common. (*c*) That a direct dislocation "above the tendon" can be reduced by manipulation through the opening in the capsule by which the head of the femur escaped. (*d*) That the untorn inferior portion of the capsule is no obstacle to reduction.—Mr. H. MORRIS regarded Mr. Eve's paper as a good illustration of the saying *Tempora mutantur et nos in illis mutamur*, for when he read his paper to which Mr. Eve had referred it was with the avowed object of correcting a common error in the teaching on the production of dorsal dislocation of the hip-joint—viz., that it was produced when the limb was in a position of adduction,—and to show that the limb was really in a state of abduction; and he was met by Mr. Willett, who stated that this doctrine was by no means novel, but well known and universally taught at St. Bartholomew's Hospital. Now, Mr. Eve comes from that same hospital, and, renouncing all the teaching he had received, states that direct dorsal dislocations are common, and that this deformity is produced when the limb is adducted. He was glad of this opportunity of referring to the subject, for it allowed him to answer many questions and objections to his view that had been raised in the medical periodicals since his paper was read, which he was not desirous of doing until he was in possession of fuller knowledge and further evidence. He was glad to state that nothing had so fully supported his published views as Mr. Eve's paper and the specimens shown to-night; for of the eight examples of what Mr. Eve calls direct dorsal dislocation that are to be met with in the museums of London, five show fracture of the acetabulum or femur, as he had stated to occur invariably in this injury. The three cases in which there was no such fracture he would examine separately. Mr. Wormald's case was described by him as a dislocation "down and back," and by Bigelow as "below the obturator internus" and "secondary," occurring primarily downwards, the head of the bone then passing up and back. Bigelow also mentions two other similar cases; the preparation will be seen to illustrate his views exactly. Mr. Eve was mistaken when he stated that he spoke of the head of the bone escaping at the cotyloid notch; indeed, that was impossible—an opening limited to that part of the capsule would be too narrow to permit of it. His statement was that the thin part of the capsule was torn and stripped off from the neck of the femur. Mr. Quain, in his well-known paper on the subject, referred to this specimen, and classed it along with three others, one of which (Todd's) is described by Bigelow as "secondary," and as showing laceration of the quadratus femoris. How could this laceration be produced

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by a direct dislocation backwards? The second of these three cases was a dried specimen in St. George's Hospital museum, which he had not referred to in his paper because he considered that no sound inference could be drawn from it, but as far as it went it supported him, for it showed the laceration to be through the thin portion of the capsule. He quoted from a letter from Mr. Holmes to him, written in February, 1878, in which he referred to this specimen as fully bearing out the statements of his paper. But the most important of the cases was that of Mr. MacCormac's, from the St. Thomas's Hospital museum, which might be looked upon as unique. Mr. MacCormac's description of it, which was not quite accurate, supported his theory. On careful examination of the specimen out of the bottle he found a large laceration in the lower and inner part of the capsule, which was peeled off from the femur; the strong ischio-femoral ligament was untorn, while above it, in the posterior part of the capsule, was a second rent, which allowed the bone to escape between the obturator internus and the pyriformis. The accident was caused by a very severe injury; 10 cwt. of iron fell upon the man and knocked him over on to his belly, and when it was remembered that the violence was such as to cause the escape of the intestines from a scrotal hernia, it will be evident that the force was above the ordinary. He considered that there had been really a double dislocation, that at first the head was forced out through the lower part of the capsule during abduction of the limb, and that afterwards when the limb was flexed and the weight applied to the back, the head, having more play owing to the tear in the capsule, was forced directly but secondarily through the back of the capsule. He reminded Mr. Eve that these specimens were all taken from cases of fatal injury, but in the majority of these dislocations the patients recover, and the parts cannot be dissected. He could not agree with Mr. Eve that the lower part of the capsule, if unruptured, was no bar to reduction; the difficulty it occasioned had been mentioned by many surgeons, and Bigelow gave special directions for the way in which the untorn part of the capsule and obturator internus might be lacerated.—Mr. EVE, in reply, stated that his contentions were that dislocation backward occurred when the limb was adducted, flexed, and rotated in; that the head of the femur did not pass out through the cotyloid notch; and that it could pass directly upwards and forwards to above the obturator internus, while Mr. Morris had stated this to be impossible without fracture. Mr. Morris had apparently failed to see that he divided dislocations backwards into those above and those below the obturator internus.

The meeting then adjourned.

CLINICAL SOCIETY OF LONDON.

Report of Committee on Effects of long-continued Use of Chloral.—Case of Rheumatic Fever treated with Salicylate of Soda, and terminating fatally.

THE annual general meeting of this Society was held on the 9th inst.; the President, Dr. E. H. Greenhow, F.R.S., in the chair. The proceedings of the meeting with reference to the election of officers, &c., will be found elsewhere. The report of the committee appointed in December, 1876, to inquire into the deleterious effects of long-continued use of chloral was read by the secretary to the committee, Dr. Farquharson. The other members of the committee were: Sir Wm. Jenner, Dr. A. Clark, Dr. Barlow, Dr. Buzzard, and Dr. John Harley. An interesting discussion upon sudden death in acute rheumatism, and the use of salicylic acid and the salicylates, arose out of a case contributed by Dr. Goodhart.

In the ante-room, Mr. Brodhurst exhibited his case of Genu Valgum, shown last session; Mr. Thomas Smith, a case of Spontaneous Gangrene, two cases of Cystic Hygroma, and a large Nævus.

Dr. FARQUHARSON read the Report of the Committee appointed to ascertain what deleterious effects follow the prolonged and continued use of Chloral in ordinary doses. It stated that seventy special replies and three printed papers had been received in reply to nearly 1000 circulars distributed throughout the profession, followed a few months later by a second appeal, made public through the freely accorded medium of the medical press. Twenty-nine answers state that, after extensive experience of chloral in long-continued doses, no ill effects have been observed. Ten of these correspondents enjoy the special opportunities for observation afforded by asylum practice, and Mr. Curgenven, Dr. C. T. Williams, Dr. W. Squire, Dr. Buzzard, Dr. Clifford Allbutt, and others, furnish casse in which chloral had been regularly and beneficially taken for periods varying from two to ten years. Before proceeding to analyse the replies received from those who had observed inconvenient effects to follow the use of chloral, the committee drew up a brief summary of what has already been recorded on the subject. Their special information has been arranged under the various headings of the schedule, thus:—*A. Nervous System.* Fourteen answers record cases in which nervous debility, mental enfeeblement, and convulsive seizures appeared to follow the use of chloral, Dr. Maudsley, Dr. Clouston, and Dr. Lindsay expressing themselves as strongly opposed to its employment in insanity.—*B. Circulatory System.* Two answers under this heading note some cardiac enfeeblement.—*C. Digestive System.* Six replies mention digestive disturbance as occasionally following the administration of alcohol.—*D. Cutaneous.* Nine correspondents give details of cases in which they observed itching of the skin, lichenous eruption, with deep flushing of face and head, following the taking of stimulants.—*E.* Two replies indicate the possibility of urinary irritation being produced by chloral.—Inquiry amongst some of the leading druggists of the metropolis has not established the probability that there is any remarkable abuse by the public of the facilities which they enjoy of purchasing for themselves any quantity of chloral. The drug, it may be mentioned, is not included by the Legislature amongst those the sale of which is guarded by the name and address of the purchaser being required to be registered by the vendor. In conclusion, the committee expressed regret that, in spite of repeated appeals to individuals generally and to the profession by circular, and through the medical press, they have failed to obtain any more definite information than that contained in the preceding report; and, although the opinions expressed by numerous gentlemen of experience will, doubtless, be received with the respect which is their due, the committee would have been glad if more facts, from which definite conclusions might have been drawn, had been placed at their disposal.—Dr. BRISTOWE remarked upon the absence from the report of any statement of personal observation on the part of the members of a committee which included such names as Sir W. Jenner, and Dr. Andrew Clark.—Dr. HEWAN mentioned the occurrence of an erythematous eruption following the administration of chloral.—Dr. FRANCIS TAYLER related an instance known to him, of an old gentleman, aged eighty-four, the subject of enlarged prostate and chronic cystitis, who had taken nightly doses of 25 to 50 grains of chloral with benefit over a long time without any bad symptoms or interference with digestion. He regretted that the ages of patients were not recorded in the report.—Dr. FARQUHARSON, in reply, said that if all the cases were detailed it would add too much to the bulk of the report, but the ages could be stated. Sir W. Jenner had no personal experience to give in the matter; but Dr. Andrew Clark had promised records of five or six cases, which could be incorporated in an appendix to the report.

Dr. GOODHART read notes of a case of Acute Rheumatism treated by Salicylic Acid, and terminating fatally. The patient was a servant girl aged seventeen, with a history of gout and rheumatism on the father's side; but she had always been healthy, except that she suffered from nasal polypi, and had been three times operated on for that affection, the last time fourteen days before her fatal illness. She had had scarlatina long ago. After the last operation for the removal of the nasal polypus, she felt faint and weak, but continued at work for a week, when one morning she complained of pain and stiffness of joints, and had headache, anorexia, but no rigor or vomiting. She was treated for rheumatic fever and got better, but relapsed in two days and came to the hospital. She was a dark-complexioned girl with flushed face and bright eyes; tongue was red at edges, with a white fur on the dorsum and rather dry. The ankles, knees, wrists, and elbows were much swollen, the skin pinkish. The phalangeal joints were also swollen. Precordial dulness increased; apex beat normal; pericardial subsultus at base; temperature 103°; pulse 120. Bicarbonate

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of potash was administered in half-drachm doses, in acetate of ammonia, every three hours; with five grains of Dover's powder night and morning; and milk diet. Next day the area of precordial dulness reached to second intercostal space, across from sternum to nipple, and downwards to the sixth cartilage. The impulse was in its normal position; the action regular; the sounds very distant and thick at the base, but there was no bruit. The lungs were normal; urine of specific gravity 1021, not albuminous. She appeared to have a good deal of precordial distress; was sweating freely, and the joints were still painful. The temperature had gradually fallen from 103° to 100°. The alkaline mixture was continued, but at 6 P.M., as she still seemed in much pain and the temperature was rising again, though very slightly (100·4°), she was ordered fifteen grains of salicylic acid every three hours in its place. She was seen by Dr. Goodhart at 9 P.M., and though still in a good deal of pain and restless, the pulse was still at 120, and there were no particularly serious symptoms. But after this the pulse became much accelerated, reaching 160, and the patient died quietly and suddenly at 3.45 A.M. She had taken four doses of salicylic acid, sixty grains in all, the last dose three-quarters of an hour before death. She passed a restless moaning night, but did not seem unusually ill, nor was anything unusual noticed till her death. On inspection the heart weighed nine ounces and a half; there was much ecchymosis of the pericardium, and patches of recent lymph in several places, but NO fluid. The muscular tissue of the ventricle showed one or two points of fatty degeneration, but was otherwise healthy, and the ventricle was not dilated. The valves were practically healthy, beyond a grain or two of lymph on the mitral. The right ventricle was distended by clots of post-mortem formation continuous with similar clots in the pulmonary artery. The small intestine was much ecchymosed and congested, and the joints all contained abundant yellow synovia with coagula of yellow lymph, especially the knees and hips. All the bones were normal, special search being directed to the sphenoidal, ethnoidal, and frontal sinuses in the region of the recent operation. The first appearance of the patient, her dry skin and her restlessness, argued badly for her recovery, and suggested the possible event of hyperpyrexia, but as the temperature progressively fell, and rheumatic sweating became established, these apprehensions subsided, and the case assumed the characters of an ordinary attack of acute rheumatism of by no means severe type. Sudden death was therefore an unexpected event, and the question was, Is the result to be attributed in any degree to the salicylic acid treatment? Dr. Goodhart thought this possible, but did not wish to press that opinion unduly in the face of facts, which rendered the question a very open one. 1. An early pericarditis was present, and this with the fatty change, though slight, might have sufficed to determine the cessation of the heart's function. 2. It might be suggested as possible that in the four hours' interval between being seen by any skilled assistant and her death, the temperature might have risen rapidly and death occurred from hyperpyrexia. 3. The clot in the pulmonary artery might have been embolic. But as to the first view, the change in the heart-wall, and especially the absence of dilatation, did not seem sufficient to explain sudden death; as to the second, the temperature chart was one of almost progressive fall; and thirdly, the character of the clot and its continuity with that in the ventricle justified the rejection of any hypothesis of pulmonary embolism. Dr. Goodhart then discussed the possibility of death being due to the rheumatic *materies morbi*, or to the sixty grains of salicylic acid, which had been administered. Acute rheumatism was a very treacherous disease, especially in young adults; but before the introduction of the salicylic treatment his post-mortem experience led him to the conclusion that death was associated in some cases with hyperpyrexia, without obvious tissue change; in others with pleuro-pneumonia, pulmonary œdema, and *severe* cardiac complications; occasionally, and comparatively rarely, with acute dilatation of the heart. Since the introduction of salicylic acid he had seen three cases where death was sudden, unexpected by the physician in charge, and in which the inspection did not discover any changes in the viscera sufficient to cause death. Was it a coincidence that these cases had occurred since? All the three were girls or young women, and in all it was a first attack. Coming, as this case did, the last of three, determined him to bring it forward, as one, possibly, in which salicylic acid had acted prejudicially in a manner and with a rapidity hitherto unrecognised. This was the more necessary because the mode of death had no special symptoms attaching to it which pointed decidedly to the drug as a harmful agent; and under similar circumstances, supposing that death was caused by the drug, it is quite possible that the ill result might be attributed wrongly to other causes. Death in such cases must, if ascribed to salicylic acid, be attributed to sudden collapse and failure of the heart's action, symptoms known to be produced by salicylic acid, and some such cases of sudden collapse have already been observed and recorded by others, though perhaps rather in association with a more sudden fall of temperature. Such cases have led to the recommendation of caution in the size of the dose of the drug in cases where there should be any sign of a failing heart, or towards the end of an attack. But in the case under consideration there was no such indication for caution. Moreover, caution was never overstepped; so that the result, if it be a result, could only be averted, if at all, by commencing with a very small dose and gradually increasing it. Dr. Goodhart thought that, in dealing with a drug which so quickly and so completely saturates the system, which, in some cases, and one could hardly foretell when, produces severe nervous symptoms, in others sudden collapse, this is always the wiser plan to adopt, and in many cases the smaller doses seemed to him to be all that are required for the relief of pain.

Dr. BUZZARD then read notes of a Case characterised by Symptoms of Acute Rheumatism, which terminated fatally on the tenth day. The patient was a previously healthy lady, aged forty-two, who got a chill coming out of the opera on July 26th, and four days afterwards was taken with shivering, "queerness" in her head, noises in her ears, and sleeplessness. When seen by Dr. Buzzard on Aug. 3rd, in consultation with her own medical attendant, Mr. Airey, she lay in bed complaining of these symptoms—of deafness in the right ear and imperfect hearing in the left, with constant nausea and aversion from food. The pulse had been at times as low as 56, and there was much prostration. The temperature was normal, there was no paralysis, diplopia, or change in the fundus oculi; the heart-sounds and breathing were normal. She had never had otorrhœa, and the deafness had only been coincident with her illness. Restorative food and remedies were prescribed. On Aug. 5th a great change had taken place. The temperature was 103° F.; pulse 106; face flushed; left knee-joint swollen, very painful and powerless. There had been much sweating. Urine acid. Heart-sounds normal. She was ordered fifteen grains of salicylate of soda every three hours. On Aug. 7th Dr. Buzzard found the temperature 99°, the pulse 108, the respiration 38, the heart-sounds normal; the state of the lungs behind could not be ascertained. The swelling of the left knee was considerably reduced, but the right knee was now greatly swollen and painful, and also one of the finger-joints. Careful inquiry and examination failed to discover any wound or sore. There was great prostration. Brandy in frequent doses was prescribed, and the salicylate ordered to be given at longer intervals. The patient sank next day. Dr. Buzzard remarked that he saw the patient upon three occasions. On the first the symptoms were entirely cerebral in character; on the second, although they pointed strongly in the direction of acute rheumatism, yet he could not help a strong feeling that the case was one of pyæmia, the cause of which, however, could not be ascertained. No doubt pyæmia did occasionally occur without any discoverable wound; he had known it happen in connexion with a simple fracture, and in another case from an ulcer of intestine, found after death. In the present case all efforts to procure an autopsy were fruitless. He had not the slightest belief that the salicylate had been of injurious influence, as the patient's condition from the first was exceedingly grave. Not more than twelve doses were taken.

Dr. BRISTOWE called to mind two cases of sudden death in acute rheumatism. One was a case of a previously healthy young woman, who died in syncope, without any explanation; and post-mortem examination showed nothing beyond the articular inflammation. This was long before salicylic acid came into vogue. The other case occurred two or three years ago, and was also not treated by this drug. The subject was a young woman, with no very marked symptoms, freely sweating, a high but not excessive temperature. She died suddenly at the end of a few days. There was a trace of pericarditis found, and also some partial fatty degeneration of the myocardium, which did

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not, however, show any obvious inflammatory change. The case related by Dr. Buzzard was probably one of pyæmia. Quite recently, at St. Thomas's Hospital, he (Dr. Bristowe) saw a girl thought to be suffering from acute rheumatism, with a hot skin; but she had had rigors; complained of pain in the course of the humerus. She was transferred to the care of a surgical colleague, who, suspecting some acute necrosis, excised the shoulder-joint, when his surmise was found to be correct. The case ended fatally, and, after death, pus was also found in the elbow-joint. There was suppurative (pyæmic)) pericarditis, and the lungs were studded with infarcts.—Mr. H. LEE could not admit that either of the cases read were acute rheumatism. Surgeons were well acquainted with instances of septic poisoning simulating this disease, and following even the slightest injuries. Some of these cases presented an eruption on the skin like scarlet fever. In Dr. Goodhart's case the febrile attack ensued upon the removal of a polypus, and the post-mortem evidence favoured the view of the septic nature of the disease in the material alteration found to exist in the blood and the ecchymoses under the pericardium.—Dr. GREEN could not feel sure that the cause of death in Dr. Goodhart's case might not have been due to changes in the muscular tissue. One or two patches of fatty degeneration were found, and the contracted condition of the ventricle could well be explained if rigor mortis had not passed off; for there is no doubt that rigor mortis might exist in very degenerate hearts, so that an organ greatly diseased would yet appear fairly well contracted. The sudden death pointed strongly to its cause being due to changes in the muscular wall.—Dr. GLOVER did not think the case had much bearing upon the question of the toxic effect of salicylic acid, and it would not be right to draw any unfavourable inference upon this drug from an isolated case. He thought Dr. Bristowe's suggestion as to Dr. Buzzard's case to be probably the correct one.—Dr. MACLAGAN said there was no question as to Dr. Goodhart's case being one of acute rheumatism, and he thought with Dr. Green that it would be well if more information had been afforded as to the state of the heart. As to the whole subject of the share taken in the ill result by salicylic acid, it must be remembered that it was now given very largely in many febrile and non-febrile diseases, but yet disastrous results were only recorded in connexion with acute rheumatism. Dr. Bristowe's remarks pointed to the fact that, quite apart from salicylic acid, the rheumatic poison alone would in some cases lead to sudden death. Myocarditis, too, was a more frequent complication of acute rheumatism than was generally thought. There was no doubt that inflammation extended from the pericardium to the muscular substance; but such extension could not take place in endocarditis, which is always limited to the valves; and he thought that the inflammation might primarily involve the fibrous structures of the heart, as those of other parts in acute rheumatism. Thus it might extend from the fibrous rings at the orifices to the muscular substance. Senator's views as to the conversion of salicin into salicylic acid in the blood involved an error. Dr. Maclagan mentioned a case where the pulse increased in rapidity, and became weak under salicylate of soda, but improved when salicin was substituted for this.—Dr. MAHOMED had seen Dr. Goodhart's case, which was undoubtedly one of acute rheumatism. He had been struck with the frequency with which the first sound of the heart failed, and even disappeared, during convalescence after a prolonged course of salicylate of soda in acute rheumatism. He was much struck by this in a case of typhoid fever, where the salicylate was given; the pulse-rate rose from 120 to 160 within thirty-six hours, and so feeble was it that death seemed impending. The drug was discontinued forthwith, and in twenty-four hours the pulse fell to 120, and the case subsequently improved. He had not the least doubt that had the patient had one more dose of the salicylate he would have died. He added that he had never observed so marked a degree of failure of the first cardiac sound in fever, as in these cases treated by the salicylate.—Dr. BARLOW asked if the tympanic membrane had been examined in Dr. Buzzard's case. The first symptoms were shivering and pain in the ears, and he suggested that possibly the case was one of suppurative internal otitis (without rupture of the membrane) giving rise to pyæmia. The fact that the effusion passed away from one joint and appeared in another did not tell against pyæmia; for he had seen this occur in two or three cases. — Dr. DOWSE had prescribed salicylate of soda largely, not only in rheumatism, but in other painful affections—e. g., the pains of ataxy,—always with relief to pain, but sometimes with alarming symptoms of depression. But he had found that salicylic acid alone (which was quite as valuable in painful affections) did not have such depressing effects. He doubted if Dr. Goodhart's case was one of rheumatic fever; and he referred to a case with high temperature and profuse sweating (not of an acid character), which, at first thought to be acute rheumatism, turned out to be due to phlebitis.—Dr. GOODHART, in reply, said there was no question at all that his case *was* acute rheumatism. The fact of the patient having had a nasal polypus removed so shortly before the fever set in made him search carefully for any evidence of blood-poisoning, and he still admitted the remote possibility of its being of such a nature. But he submitted that it was just these obscure cases of septic poisoning that came under the cognisance of physicians rather than of surgeons, as Mr. Lee had said. In reply to Dr. Green, he said that the muscular substance of the heart was carefully examined microscopically, but only with the result he had stated. Still, the heart might fail and its muscular structure not be diseased. He had looked through the literature of the subject as to the distinction between salicin, salicylic acid, and salicylate of soda, and confessed that it threw no light upon the matter. He agreed that, until cases of this kind were brought forward and discussed, it would be impossible to draw conclusions as to the part played by salicylic acid in the fatal result.—Dr. BUZZARD, in reply, said that he was careful not to describe his case as one of rheumatic fever; but at the same time careful examination had failed to reveal any source of pyæmia. Against Dr. Barlow's view was the fact that the deafness was at first complete in one ear, and then the other ear became slightly deaf. The case showed rather cerebral exhaustion than acute inflammation. He did not attribute the fatal issue in the least degree to the salicylate of soda.

Mr. NORTON having exhibited the portions of Necrosed Frontal Bone, &c., from the patient whose case he related at a recent meeting, the Society adjourned.

Reviews and Notices of Books.

Lectures on Diseases of Women. By CHARLES WEST, M.D., and J. MATTHEWS DUNCAN, M.D. J. and A. Churchill.

A FOURTH edition of a work so well known, and which has occupied such a prominent position, as Dr. West's, would in ordinary circumstances demand but very short notice. Appearing, however, fifteen years after the third edition, and those years prolific in new methods of treatment, good or bad, of some of the diseases of women, and appearing also as the conjoint work of Dr. Duncan and Dr. West, we must make some observations upon its publication which, in other circumstances, would be uncalled for. Dr. West's book was for years the best and most complete work upon the subject. This, together with its style and its lofty tone, ensured for it all an author could desire. It is, however, in the main, a *medical* work. The author is a physician, and belongs to that class of physicians who have not cultivated an intimate acquaintance with surgical proceedings. During the period which has elapsed since the appearance of the third edition of the work before us the tendency of treatment in diseases of women has been much more towards the use of surgical than medical means. Whether this be good or bad it is not our business here to inquire. Now the present edition does not give us an account of the changes which have taken place in this respect during the last fifteen or twenty years, and in so far it consequently fails to be an adequate representation of the ideas of the day upon gynæcology. So far as Dr. West goes, his work is excellent; but we want more—we want a safe guide, when so many unsafe ones offer themselves. In relation to the medical treatment of the diseases of women, the road is pretty clear; but when we turn to the surgical and mechanical, we find no highway, but a number of by-paths with a guide on each inviting us to his special walk as the

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safe and straight road to the desired goal. We regret that the work stops short where we most want aid; for it scarcely enters the domain of uterine surgery.

The chief changes in the present edition are in the lectures on Chronic Inflammation of the Uterus and on Ovarian Tumours; Dr. West, who long opposed ovariotomy, having accepted it *toto animo* as a legitimate operation. Dr. Duncan contributes little, and that little is within brackets. He does not appear to have room to turn in, and has done himself scant justice. The present edition cannot be considered satisfactory, because, as we have said, it does not fairly and fully represent the gynæcology of the day, which the previous ones did at the time of their publication.

Essai de Mécanique Chimique. Fondée sur la Thermochimie. Par M. BERTHELOT, Membre de l'Institut, Professeur au Collége de France. Tome i., Calorimétrie; Tome ii., Mécanique. Paris: Dunod. 1879.

THE illustrious French chemist and physicist, to whom more than to any other single man we owe the modern methods of organic synthesis, has of late years devoted himself almost exclusively to thermo-chemistry, and his researches, published from time to time in the French scientific journals, have enriched science with an almost countless mass of new observations and generalisations. He has now accomplished a task of almost equal value by collecting, in the elaborate monograph now before us, the whole of our scattered knowledge upon the subject, collating and unifying his own discoveries with those of other observers. So lucid is his style, and so admirable his arrangement, that every one who is acquainted with the rudiments of science will read his book with profit, while to the advanced chemist, the physicist, and the physiologist, it will be literally invaluable.

A short introduction describes the general plan of the work, supplies definitions, and explains the views, in some respects peculiar, of the author. M. Berthelot adheres, as is well known, to the old atomic weights, calling them equivalents, and the fact must be borne in mind in considering his results. His statement of the fundamental principles of thermo-chemistry is so lucid that we translate it entire:—

"1. *Principle of molecular work.*—The quantity of heat disengaged in any reaction is a measure of the sum of the chemical and physical work accomplished in this reaction.

"2. *Principle of the calorific equivalence of chemical transformations, otherwise called, Principle of the initial state and the final state.*—If a system of simple or compound bodies, taken in fixed conditions, experiences physical or chemical changes capable of leading to a new state, without giving rise to any mechanical effect exterior to the system, the quantity of heat disengaged or absorbed by the effect of these changes depends solely on the initial and final state of the system; it is the same, whatever the nature and order of the intermediate states.

"3. *Principle of greatest work.*—Every chemical change accomplished without the intervention of external energy tends towards the production of the body, or the system of bodies, which disengage the most heat."

To the establishment and application of these principles the work is devoted. It must be understood that they were not discovered by M. Berthelot, although his researches have done so much to establish them. The previous labours of Dulong, Andrews, Favre and Silbermann, and many others, had already done much in this direction, while J. Thomsen, of Copenhagen, and others in France and Germany, still prosecute the inquiry with zeal and success. To no one, indeed, is thermo-chemistry more indebted than to Thomsen.

Book I. is devoted to chemical affinity and calorimetry. The term affinity, formerly so vague, has by these modern researches gained a definite meaning, the energy of a chemical action being measured by the heat evolved during its continuance. The book contains eight chapters, each presenting a series of theorems amply illustrated by examples. Chap. 7, on the heat of living beings, will be of especial value to many of our readers.

Book II. describes the experimental methods of calorimetry, giving minute directions and full details as to calculations. The very simple and satisfactory air thermometer devised by the author for taking temperatures above the boiling point of mercury is fully described.

Book III., which occupies the rest of the first volume, consists of numerical data. Tables of heats of combination in the gaseous, liquid, and solid states, of specific heats, of heats of fusion, volatilization, solution, &c., are given in profusion; the evidence on which the figures depend is stated, and the use of them explained. In a large number of cases the names of the observers are appended, and at the end of the first chapter an excellent bibliography is given.

The second volume, which is much larger than the first, and extends to 774 large octavo pages, consists of two books only, entitled respectively, "Chemical Combination and Decomposition" and "Chemical Statics." Space forbids us from giving any adequate synopsis of them. As an example may be quoted the account in the fourth chapter of the so-called exothermic and endothermic compounds. These convenient phrases are equivalent to the current words "stable" and "unstable." Compounds of the first class are formed with ease, and heat is evolved during their formation; while those of the second can only be formed by the absorption of heat. Water is an example of the one class, and nitrous oxide of the other. When an endothermic compound, such as nitrobenzine, is formed, an exothermic compound, such as water, is commonly formed simultaneously, the latter yielding the energy which is afterwards potential in the former.

We leave this admirable and in the highest sense scientific work with regret, and can only commend it most heartily to our readers. Its study will give more insight into the depths of chemical phenomena than could be obtained elsewhere without the greatest labour.

ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—It is perhaps right that I should thank "Surgeon-Major" for the varied information he has been good enough to supply in his letter, though the bulk of it is not new, and requires no comment. He would create a further obligation if, at his leisure, he would make the following point clear: If the head-quarter staff receive no special benefit from the new arrangement, and if the income of any of them be practically reduced (which I am more than "surprised" to learn), by their being placed in a different class, why the invidious distinction thereby made between them and the other officers of the Department? Should the "junior members" find their "very slightly increased rate of pay quite incommensurate" with their "greater expenses," the remedy is so obvious as scarcely to require suggestion. After all, it will be allowed that official life in London has its advantages, even should they be counterbalanced by the necessity of an occasional journey on duty as far as the suburbs, and now and then an extra cab fare.

I am, Sir, yours, &c., Y.

12th January, 1880.

THE Governors of the Great Yarmouth Hospital have passed a resolution to increase the number of Surgeons from three to four.

DR. THOMAS BRITTON has applied for and obtained permission to practise as a physician during the remainder of his term of office as Medical Officer of Health for the Halifax rural, and Barkisland and several other urban districts, combined.

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THE LANCET.

LONDON: SATURDAY, JANUARY 17, 1880.

DR. CAMERON has favoured us with a letter on vaccine lymph with the kindly intention of preventing our readers being led astray by our recent criticisms of the line of argument he has thought fit to prosecute in his efforts to promote "animal vaccination," so-called, in this country. This letter will be found in another column, and our readers will themselves judge of the assistance it will give them in endeavouring to come to a clear understanding of the questions to which it relates. These questions are not new ones to vaccinators in this country. They were discussed in Mr. SIMON'S celebrated Report of 1857, to which Dr. CAMERON refers; and since that time at least it may be averred they have been present to the mind of all who have had to take a responsible interest in the public vaccination of this country. It is not unimportant that this should be kept in mind in dealing with the subjects at issue, as showing that the conclusions which the most trustworthy authorities maintain here on this subject have been arrived at not hastily, but after mature consideration.

Dr. CAMERON first demurs to the official statement, given at the recent conference, as the results of Dr. SEATON'S late inquiry—the inquiry of 1878—as to "animal vaccination" on the Continent, that in proportion to number of points of insertion, animal lymph does not produce the same number of vesicles as the humanised lymph. He proffers to quote a dozen authorities to prove that this inferiority does not exist; and holds it "puerile" to enter into details as to the number of vesicles produced. But the opinion of any number of authorities will be of no avail unless accompanied by precise accounts of what is actually meant by the term "success," a meaning as defined as that which attaches to it here. Such accounts do not appear to have been forthcoming for Dr. SEATON'S use at the time of his inquiry, and he had seemingly to derive what information he could on the subject from his own observation. The results of that observation were given at the recent Conference by Dr. BALLARD, and as yet the "success" claimed by the promoters of "animal vaccination" appears to be quite an inderminate quantity. Again, with respect to relative protection from small-pox conferred by the two methods of vaccination, we have the highest respect for the opinion of Dr. WARLOMONT and Dr. MARTIN on the subject, and are only too willing to believe it accurate, but the question, as they estimate it, is one capable of being submitted to a precise examination, and until it is so the opinion of neither gentleman on the matter can be accepted without reserve, particularly, as may well be surmised, in view of public administrative arrangements. Dr. CAMERON quotes figures from which he infers a progressive deterioration of the efficiency of humanised lymph in the interval between an early period of the century and the present time. He quotes cases of post-vaccinal small-pox, for example, happening in this country, and in France and Copenhagen, between 1818 and 1830, in which the rate of mortality was 1 per cent. of the cases; during the epidemic of small-pox of 1870–73 in London, the death-rate of post-vaccinal small-pox was (or, as Dr. CAMERON phrases it, "had risen" to) 10·4 per cent. of the cases. But that this augmented mortality indicates necessarily, or even obviously, a degeneracy of vaccine lymph, in the sense in which that term is employed by Dr. CAMERON, does not follow. Mr. SIMON, in the work already referred to, gives a table of mortality from post-vaccinal small-pox, showing rates varying from 1 per cent. to 12½ per cent., which should have suggested to Dr. CAMERON that it would need other evidence than he advances to give reasonable probability to his theory. Mr. SIMON certainly said of this subject twenty years ago that from the facts relating to it, *analogically* considered, a degenerated state of the vaccine contagion seemed a reasonable inference. But, he added, "more than this I will not venture to say ..... the subject is one that deserves full and patient inquiry." For twenty years after these sentences were written Mr. SIMON had unrivalled opportunities for conducting such inquiry, and we know these opportunities were not neglected; but, as responsible administrator of the National Vaccine Establishment, he had not felt himself called upon to do more than make provision against these accidental deteriorations of lymph, arising from carelessness in the performance of the operation, and incidental degenerations. This course proved that he, in common with the vaccinators of largest knowledge in this country, had seen no sufficient reason from their experience to believe in a progressive general deterioration of vaccine lymph.

Coming now to the question of variolo-vaccine lymph, we notice with some surprise the line of argument which Dr. CAMERON now takes on the subject. He suggested in *The Times* of Nov. 24th, 1879, that this lymph was a source of dissemination of small-pox—was, in fact, inoculated small-pox. Notwithstanding the large amount of this lymph which has been used in this country, he has not produced one particle of evidence to show that in any single instance small-pox was ever even suspected to have been produced by infection from a case of so-called variolo-vaccine. The dilemma he now sees is insuperable, and he proceeds to argue in effect that this modified small-pox has lost its infective qualities, and, if not dangerous as inoculated small-pox, it has become useless as a protective against the natural disease! He discards his first line of argument as to the mischievousness of this variolo-vaccine lymph in disseminating contagion, and substitutes another sort of argument which is equally against all experience. But what are we to say of Dr. CAMERON in this year of grace 1880, describing BOUSQUET'S inaccurate account of CEELY'S experiments as "clear," and asking through our pages for information as to that writer's well-known absolutely unfounded statement that the variolo-vaccine lymph produced in England had occasioned cases of small-pox, and that the authorities had interfered to prevent its use? It is this statement of BOUSQUET'S especially which characterises the worthlessness of his work on this particular subject, and shows the extreme imperfection of the knowledge then existing in France of CEELY'S experiments and English experience on the subject. BOUSQUET'S work, moreover, may have much to do with the subsequent funda-

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mental defects of CHAUVEAU'S investigations, if that observer derived his knowledge of CEELY'S work from its pages. Dr. CAMERON has an advantage which neither BOUSQUET nor CHAUVEAU had, of studying the English experimental data at the fountain-head, and with the aid of the English experimenter chiefly concerned, but he does not appear to have availed himself of it. He must not be surprised if writers guilty of the inaccuracies of BOUSQUET and experimenters only partially acquainted with the subject they proposed to investigate, as CHAUVEAU, are not estimated here as he would have them. He has foregone his argument that the variolo-vaccine lymph in use in England is spreading small-pox, and his substituted argument, that because it does not do so it affords no protection against the natural disease, does not deserve serious attention. He is not in accord with the principal promoters of animal vaccination in this country in his endeavours to secure its introduction by weakening the faith of the public generally in arm-to-arm vaccination. We believe that this line of argument will not help to such an introduction as we would willingly see effected, but must tend, however unwittingly on the part of Dr. CAMERON, to destroy faith in any form of vaccination whatever.

Is it idle to hope that the approaching session of Parliament will witness a reconstruction of the medico-legal system of provision and protection for sufferers from mental disease on a basis satisfactory alike to society and the profession. It is useless to deny the need of a substantial, and even sweeping measure of reform. Construe the agitation which has been maintained during the last few years as we may, it is certain that grounds exist for disquietude. Those who deprecate any considerable change in the law because the conditions of life in asylums are not as bad as they were a quarter of a century ago cannot, surely, expect to stay the progress of reform by so feeble an argument. As well might we object to cure a malady because it had been somewhat relieved! Reform must come, and those are not wise, even in their own counsels, who strive to postpone it.

The particular changes which will have to be made before this vexed question is finally set at rest may not be precisely those we desire to see carried out, but more than a mere "consolidation of the lunacy laws" is required to allay widespread anxiety. The points in respect to which the public mind is ill at ease are three—1, the method of deciding whether an alleged or supposed lunatic is actually insane, and therefore ought to be suspended from social privileges and deprived of personal liberty; 2, the existing securities for the proper treatment and an earnest endeavour to promote the recovery of the insane in asylums; 3, and the grounds of public confidence that no patient will be unduly detained in confinement after convalescence. On each of these topics there has long been a feeling of anxiety which every now and again—sometimes, it must be confessed, without even a colourable excuse for special solicitude—finds warm expression. The misgiving will continue to harass the minds of those who have any sympathy with the insane and the eccentric so long as the law remains unaltered; and while the disquietude exists it will give rise to inconvenient and unfair aspersions on the conduct of a class of practitioners who have a strong claim on the kindly fellowship and protection of the whole profession.

The proofs that patients bereft of reason, from any cause, cannot be treated or trusted in private families are oft-recurring and exceedingly painful. There must needs be asylums of some class, and we may take it for granted that the friends of the insane have a right to select the place of residence, the custodian, and the physician, they approve, provided always that the interests of public safety, the obligations of expediency, and social prudence are satisfied. It may, therefore, we think, be conceded that there must always be *private* asylums, or in other words institutions carried on exclusively for those who can afford to pay for the care and treatment of their friends. It is not correct to say that we have affirmed the advisability of abolishing all private asylums. We differ widely from those who seek to bring about such a change. What we have said, and do say, is that it is not morally or in a legal sense right to arm private speculators or their representatives with the power of imprisonment. We would not abolish the "licensed houses" in which paying patients are received, or render them less private than they now are. The reform we desire to see accomplished is simply the conversion of what is at present private property into public property, in which private persons may hold shares, but which they shall not administer irresponsibly for their own advantage. If asylums are worth owning they must form a fairly profitable investment, and we simply suggest that the title-deeds of such property should be converted into public bonds, the proprietors being henceforth shareholders, and the managers servants of some public authority, receiving their pay from the State, instead of from the friends of patients. There is no need to go to Parliament for the right to raise money for the purchase of "vested interests." Compensation will be out of the question unless the present proprietors desire to retire, and in that case other capitalists will purchase their bonds, if the law is so altered as to place the shares in the stock market.

The reform we recommend, with a view to the decision whether or not an alleged lunatic is really insane, is to appoint public officials as examiners, in such way as to secure that they shall have nothing to gain or lose by the judgments they pronounce. The "officers of health" in their districts would furnish a ready-made corps of examiners, and it would be easy to require that gentlemen seeking appointment to one of these offices shall produce evidence of having specially studied mental disease. Such a requirement would give a much-needed impulse to the study of insanity throughout the country. The examiners could be paid either by fee or salary, the money being handed to some public functionary—say a justice of the peace—by the friends when applying for a certificate, and there being no monetary transaction between the friends and the examiner. When the official examined a patient, he would send a report *direct* to the Commissioners in Lunacy, and they would instruct him, or some other officer in whose district the asylum to which the patient was sent might be situated, to visit that patient once in every two months for a year, or a little longer. This would have the effect of securing for each case a personal watching by a public official who could

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recognise the patient. It is obvious that the Commissioners in Lunacy cannot know, even by sight, a tithe of the inmates of asylums; and the relation of these persons with certain names appearing on a list is, so far as the Visitors from Whitehall are concerned, hypothetical. The services rendered by the Commissioners in Lunacy have been very great, but the influence they exert with regard to the protection of the insane is necessarily collateral. It is not requisite to enlarge on this topic; the facts and possibilities are self-evident. As regards a guarantee for the prompt treatment of inmates, and their discharge in due course, the effect of such a system of periodic inspection by the official who has certified a case of insanity as we have suggested would be necessarily effective.

WE have so repeatedly and urgently warned the profession upon the growing tendency there is amongst the general public to the secret abuse of powerful narcotics that we are not surprised to find the subject taken up in the columns of a daily journal. The prominence there given to it, and the almost simultaneous appearance of a Report on the deleterious effects of the long-continued use of Chloral in ordinary doses, justify us in returning to a matter which is of such grave importance to the community. It would have added much to the force of the lesson conveyed by the recent correspondence and comments in *The Times* had more definite information been forthcoming upon the ill-effects of chloral in this Report. But, like all similar drugs, including tobacco, it is difficult to fix upon the precise part played by its abuse in the symptoms presented by the subject of it; and although there may be cause for regret that the Committee of the Clinical Society were unable to formulate any definite conclusions, it will be seen that their cautious reluctance was only natural in face of the evidence before them. At the same time, it is to be feared that the influence of this authoritative *non possumus* will not strengthen the hands of those who believe most strongly that the ill-effects of chloral-drinking are as obvious as the evil of its abuse is widespread.

On the subject of morphia- or opium-drinking there can be no reasonable doubt. It has been linked with chloral in the letters alluded to, and it has been forcibly pointed out that the protection afforded to this habit fosters the morbid craving. Nor is there any question as to the ill-effects produced by opium. This being so, it is imperative that the restrictions applied to the retail sale of preparations of opium and chloral (in common with other poisons) should be enforced. There is no reason why patent medicines should not be included under the Sale of Poisons Act, and those who purchase them be required—as in the case of officinal preparations—to submit to the restrictions imposed on purchasers of poisons. If "patent" poisons are to be exempt from these restrictions, the Act in question becomes a dead letter. The case is quite as strong as regards chloral, which, similarly, should not be sold except under the restrictions of the Act. It is clearly illegal for vendors so to dispose of it, since it was declared three years ago by the Privy Council, at the instance of the Pharmaceutical Society, to be a "poison" under the Pharmacy Act of 1868; and it can only be in consequence of a lax interpretation of the law that its sale is, as alleged, still unrestricted. Unfortunately, even were the Sale of Poisons Act as rigidly enforced as it was intended to be, there is reason to believe that its evasion is possible through the too ready facility with which people can get medicines made up many times by means of a single prescription. Prescriptions containing powerful drugs (it might even be said all prescriptions whatsoever) should never be dispensed a second time unless the repetition is distinctly authorised by the prescriber. It is well known that the practice is far otherwise.

In the face of such statements as those made by "F. R. C. S." and "F. R. C. P.," in the columns of *The Times*, it would hardly be credited that the Clinical Society's Committee, on inquiry among druggists, failed to establish the fact that its sale was abused, although it was admitted that, not being understood to be included under the Sale of Poisons Act, such a view could not be substantiated. Indeed, that very fact is enough to show that the vendors cannot have any definite ground for the implied conclusion that its sale was only in accordance with legitimate demand. If the statement of one of the above writers be any way near the truth—viz., that the weekly consumption of chloral in England alone exceeded two tons!—the amount would be far in excess of anything like that which could arise from its free prescription by every member of the profession every day in the week.

Admitting its abuse, let us turn to the report of the Committee for information upon the ill effects which may arise out of this. It would be vain to disguise the feeling of disappointment at the results of the investigation arrived at by this Committee. Their report was based upon a summary of previously published facts, and upon statements received from various quarters as to the effects observed by the drug in question when its administration is carried on for long periods. In the first place came statements and opinions tending to show a remarkable immunity from any ill effects whatever, and in this category some rather surprising facts were given. But these statements and opinions were counterbalanced by testimony quite as strong from other quarters, detailing some of the ill results observed on the nervous system generally, others on the circulatory system, others again on the cutaneous and on the urinary systems, although it must be confessed the evidence in most of these respects was fragmentary, and in many little else than opinions. It is not to be wondered at that the Committee should decline to draw conclusions from such meagre and irreconcilable data. At the same time Dr. BRISTOWE expressed fairly the general feeling of surprise that the members of the Committee themselves should have abstained from giving their own experience, which in two notable instances at least, must be large. Dr. FARQUHARSON, who, as Secretary, read the report, said that Sir W. JENNER had no experience to offer on the point, and that Dr. A. CLARK had promised details of five cases observed by him.

The causes which have led to the somewhat impotent conclusion are multifarious. In the first place, it was significant how few of those appealed to for information offered any replies to the circulars so widely disseminated. Let us hope that this was due less to inability or inertia than to the fact that but few feel themselves possessed of sufficient and trustworthy evidence upon the question. For there is no doubt that chloral is most extensively prescribed, and

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that for long periods; and either its ill effects have not been noted, or these do not exist in the majority of cases. At any rate—and this may be well deemed an important factor in the inconclusiveness of the inquiry—the ill effects may be of so insidious a nature as to escape observation; they may be overshadowed by the greater ills for which the drug is given; and yet, on the other hand, the drug may intensify and prolong the mischief it is intended to remove. Then there was a very striking conflict of opinion between those who of all men have largest opportunities of observation in this matter—namely, the alienists. Some, as Drs. MAUDSLEY and SAVAGE, maintained strongly that they had observed undoubted mischief from its use in insanity, the former declaring that it increased the severity of the type of the disease; but others gave as strong evidence to the contrary, and had never seen any ill effects produced. How could the Committee be expected to reconcile such statements? We would urge, then, that the subject should not be allowed to rest here. Let the Clinical Society continue the work it has commenced. The Committee might well be asked to resume their labours, and they might again appeal for careful records to be taken of all cases in which the administration of chloral is had recourse to for long periods. More data must be forthcoming, but they must be facts, and not opinions merely, before due reliance can be placed on them.

Taking it as proved that there is a growing demand for narcotics, and leaving aside for the moment the question whether these be taken to an undue extent surreptitiously, rather than after legitimate prescription, it may well be asked, what is the cause for this? Is it, as Dr. BEARD says, because we are becoming more and more developed on the nervous side, that the nervous system is becoming more finely balanced, so that it can only be kept in order by resort to such calmatives as these? Or is it due to the abuse of alcohol, as some of those who have drawn public attention to the matter believe, calling forth a fresh craving which it is increasingly difficult to satisfy? It is more probable that these latter causes depend on the former, and all upon the conditions of modern life. The age is one of restless activity; we live fast, and there can be no doubt that in so doing we throw great strain upon the nervous system, for the struggle for existence has more and more come to be, not a mere matter of physical endurance, but of intellectual effort. We live sadly too, and, in consequence of this mental disquiet, recourse is had to artificial means to procure that rest which nature, outraged by the efforts demanded of her, refuses to give. In spite of any views or opinions to the contrary, it must be manifest that those who have recourse to such measures must deteriorate physically, mentally, and morally.

THE Poor-law legislation of 1866, providing for, or rather meant to provide for, the more humane treatment of the pauper sick, was really the beginning of a time in which new views of poverty and sickness are to dominate the action both of the State and of local bodies. It may appear that since then public opinion on poverty and its deserts has undergone a change in the direction of greater severity and greater determination to be critical, but it will still be found that where sickness enters materially into the causation of any individual case of poverty or pauperism there is the same determination as existed in 1866 that the case should be treated humanely and even generously. One effect, indeed, of GATHORNE HARDY'S Act has been to emphasise the distinction between the sick poor and the able-bodied poor. But we are only at the very beginning of the difficulties which arise when we proceed to classify paupers in this sense. Anyone interested in the complicated subject of pauperism, and poverty that can scarcely be distinguished from pauperism, the intricate relations to sickness which such a state involves, and the difficulties of administration with which the Local Government Board and the local authorities are often beset, should read a Report on Poor-law Relief in St. Pancras, with special reference to the necessity for increased workhouse accommodation, by Mr. T. ECCLESTON GIBB, the Vestry Clerk. The Report is full of information and suggestion, though it seems to show rather a serious want of concord between the central and the local body. The central body is in favour of an entirely new workhouse away from the site of the present one. The Guardians of St. Pancras are in favour of an entire reconstruction of the workhouse on the present site. The guardians urge that their plan would be materially cheaper, inasmuch as a block of buildings containing kitchens, dining-halls, &c., erected recently at a considerable cost, could be retained; that the present site is central, as healthy as any in London, and not likely to be encroached upon. We cannot pretend to judge in this matter at present between the central and the local body, though Mr. GIBB makes out a strong case in favour of the existing site. The Local Government Board said, three or four years ago, that the failure of the guardians of St. Pancras as regards the administration of out-door relief was *obviously* due to the deficiency of workhouse accommodation. Mr. GIBB says that in the last ten or fifteen years the existing institution has been enlarged and improved. But the Local Government Board has, notwithstanding, reduced the number the workhouse was originally certified to be capable of accommodating, and of course the amount also of the grant to which the guardians were entitled from the metropolitan common fund. We shall watch the progress of this dispute with considerable interest. Meantime we are more concerned in noticing a few points which emerge in the controversy, which we have discussed on other occasions, but which cannot be too frequently recalled at the present time, when poverty is so critically regarded and so wisely considered.

Mr. GIBB gives prominence to the fact that the asylums which were provided in 1866 under Mr. GATHORNE HARDY'S Act, for paupers affected with infectious diseases, have been almost monopolised by a class of persons not paupers, or only paupers in the sense and for the purpose of reception into such asylums during a temporary sickness. Still more importantly, Mr. GIBB shows that this result has come about by the neglect of the thirty-nine sanitary authorities, acting for the most part over relatively very small areas, to make any adequate local provision for non-paupers suffering from infectious diseases. The attempt made in the last session to alter this pauper character of these asylums for infectious cases, by enabling the sanitary authorities to send the better class of

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persons to the pauper hospitals by contract, has no praise from Mr. GIBB. He declares that it would have been as easy to have removed these hospitals from a poor-law to a sanitary authority, and that there will be a practical difficulty in the Metropolitan Asylums Board using their new power. If 90 per cent. of the beds are wanted for non-paupers, it is clearly more reasonable to regard them from the standpoint of the general community than from that of the guardians, who might easily contract for the treatment of the 10 per cent. of the cases which they supply. As the Act is worded, it is probable that things will remain very much as they are. Vestries *may* contract, but then they *may not*. They have shown complete inefficiency as bodies for isolating dangerous infectious cases, and the Government has shown a lamentable want of spirit in leaving the vestries practically at liberty to neglect one of their most urgent duties. Only at the last fortnightly meeting of the Metropolitan Asylums Board serious complaints were made by Sir EDMUND CURRIE on behalf of the East-end parishes that small-pox cases had to be sent to the Fulham or Deptford Hospitals because the Homerton Hospital was closed against small-pox cases by reason of the pressure of cases of enteric fever. Sir EDMUND is to bring forward a motion at the next meeting, when we hope he will show clearly the inefficiency of the existing provisions for infectious sickness, the inextricable confusion of authorities, and the demoralising effect of pauperising persons on account of an isolation which they undergo in their own interest and that of the community.

Mr. GIBB proves that the more humane treatment of the sick in workhouses—initiated by the legislation of 1866, brought about, we are glad to think, largely by our exposures of disgraceful defects previous to that time—has had no bad effect. Pauperism has decreased since it was practised. The difficulties of metropolitan workhouse management have been greatly reduced by separate infirmaries for the sick in-door paupers, and the provision of special and separate institutions for infectious diseases and imbeciles. There can be no retrogression in the accommodation for the sick poor, though it is most desirable that a temporary sickness should be so dealt with that it shall not pauperise its victim. As regards the out-door poor, one-third of them are widows with children. Mr. GIBB strongly urges that such widows, instead of being sent to the workhouse, should be relieved of the cost of their superfluous children by sending them to pauper schools, leaving the mothers to work independently for themselves and one or two children that a sober woman should be able to provide for. As regards able-bodied applicants for relief, Mr. GIBB is of the opinion that workhouses should be so constructed and administered as to provide means for classifying and employing such applicants. They should be *work*-houses and not *alms*-houses. At the same time he looks rather to a close and intelligent investigation into individual cases, and to a proper co-operation with the Charity Organisation Society, than to the "workhouse test," for the repression of improvidence and imposture.

THE temperate letter from Mr. EUSTACE CAREY, of Widnes, which we published last week, discusses, from the manufacturers' standpoint, the Noxious Gases Bill, which fell through last session, only, as we trust, to pass into law in the next. The letter confirms the belief that we have all along expressed, that there are but few important points of disagreement between chemical manufacturers and the public. A great majority of the manufacturers are honestly anxious to avoid nuisance to their neighbours, and are prepared to welcome any measure which, without inflicting serious injury upon them, shall place them all on an equal footing, and compel them to reduce to a minimum the evils complained of. On the other hand, no sensible person wishes such important branches of industry to be crippled. Lord BEACONSFIELD was laughed at for quoting the increased demand for chemicals as evidence of revival of trade. In truth, no better evidence could be adduced, for there is hardly a branch of manufacture which does not depend in some degree upon chemical products. Increased demand for chemicals for home consumption means, therefore, increased activity in many important departments of trade.

Dealing with Mr. CAREY'S objections as he states them, we must submit to him that he has hardly quoted fairly from the Report of the Royal Commission in regard to the effect on health of the fumes from alkali works. The Commissioners failed indeed, as we ourselves failed after careful inquiry a few years ago, in obtaining definite evidence in the matter; but in the passage following that which Mr. CAREY quotes they express a strong opinion, fortified by the evidence of many witnesses, and particularly by that of Mr. SIMON, that such emanations are, to some unknown extent, injurious to health. The point is, however, hardly worth arguing, as all sides agree that such emanations should be diminished as much as possible, and we cheerfully concede that they cannot at present be entirely avoided.

With regard to the manufacture of sulphuric acid, Mr. CAREY states, with perfect truth, that in well-conducted works the escape of gas is extremely small. When condensing towers are used and the burners properly managed, there is practically no nuisance to complain of. Such works need never fear the visits of the inspector. But some works are not well conducted. We are glad to find Mr. CAREY agreeing with us about that well-known offender, alkali-waste.

There are two clauses in the Bill of 1879 which we regard as valuable, but to which our correspondent strongly objects. The first is Clause 27, which provides that any sanitary authority may, after unsuccessful application to the chief inspector, take proceedings in the County Court against any manufacturer supposed to be infringing the Act. It appears that manufacturers do not like to entrust even this limited and reserved power to the sanitary authority, holding that a local board might consist of men hostile to their interests, and, therefore, likely to set the law in motion for vexatious purposes. To us it appears that malicious prosecutions of the kind feared would have smal chance of success, and it should be remembered that the mere fact of the chief inspector having declined to interfere would itself be a strong point in favour of the manufacturer, who could of course serve a subpœna on the inspector. The clause is simply intended to act as a safeguard against a possible inert or inefficient chief inspector. While such a man as Dr. ANGUS SMITH held office, the clause would no doubt lie dormant, but we cannot be certain

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of always securing the services of equally energetic administrators.

Clause 29 seems to be even more strongly disliked by manufacturers. It provides that when a nuisance appears to arise from the acts or defaults of two or more persons, joint action may be taken against the whole of the alleged offenders, each one of whom may be made liable for some portion of the penalty. It must be confessed that there are grave difficulties in regard to this clause, and that the fears of manufacturers are not wholly unreasonable. It was, we believe, inserted at the instance of the South-Eastern Sanitary Association, whose members have suffered severely from nuisances emanating from a small nest of factories in the neighbourhood. It has been found impossible to fix the blame exclusively on any one of these factories, and so because many offend all have been allowed to go free. Some modification in this clause is, however, in our opinion, desirable, and if some agreement in regard to it cannot be arrived at, it would probably be better to drop the clause altogether, than to run the risk of again making shipwreck of a much-wanted measure of sanitary reform.

Annotations.

"Ne quid nimis."

MEDICAL DEPARTMENT OF THE NAVY: THE NEW DIRECTOR-GENERAL.

IT is understood, and by the time this sheet is in the hands of our readers will possibly be announced, that Dr. Reid has been appointed the Director-General of the Medical Department of the Navy. Dr. John Watt Reid's diplomas date from 1844. He graduated M.D. in 1856, and held the rank of Deputy Inspector-General, being attached to the Royal Hospital at Haslar. The fact of the selection being made from the active list is hailed by naval surgeons as a welcome appreciation of their claims to recognition. The next step in naval reform should be the promulgation of the new Warrant. Until this is forthcoming we trust candidates for examination will be conspicuously wanting. If the appeal recently made for surgeons is not answered until the Admiralty has stated the terms of its offer explicitly, reasonable concessions cannot be long delayed. If, in their anxiety to enter the service, students come forward prematurely, the reforms urgently needed will probably be again indefinitely postponed.

THE SUCCESSOR TO DR. FARR IN THE REGISTRAR-GENERAL'S OFFICE.

IT is rumoured that Dr. William Ogle will probably be appointed successor to Dr. Farr in the Registrar-General's Office. The rumour is not the less acceptable because it was unexpected, and if it should prove to be well-founded the appointment cannot fail to be received with great satisfaction by the profession at large. It must be a difficult task to fill Dr. Farr's place, even formally. He is of that rare class of men of whom examples cannot be looked for more than once in an age (so niggardly is Nature of her great geniuses), and whose individuality is so impressed upon all they do that to strive to emulate them would be as foolish as hopeless. Hence, to find a successor in any work he has undertaken is no enviable task, and still less enviable is the lot of the individual upon whom the task may devolve. For whoever may succeed Dr. Farr must possess qualifications which will at least do no discredit to the office he held, and to which he has given a dignity and reputation out of all propertion to its actual value from the strict official point of view; and the successor will be expected, while in no way derogating from the acquired honourable position of the office, to maintain in their integrity the essential duties attaching to it without seeking to rival Dr. Farr's method of procedure. The difficulty of finding a medical man capable of undertaking so delicate a task must, indeed, be great; but whoever first suggested Dr. Ogle must have been gifted with a rare insight into man. Probably no man could be found in the profession so well fitted to succeed Dr. Farr, under the peculiar circumstances of the case. Dr. W. Ogle is M.A. and M.D. of Oxford, Fellow of his College (Corpus Christi), and Examiner in Natural Sciences in the University. He has also for some time been the medical officer of health to the East Hertfordshire Combination of Sanitary Authorities. He has the reputation of being a competent mathematician, is an accomplished physician, and his experience as a medical officer of health could not fail to be of peculiar value as regards the application of the statistical results of the Registrar-General's office to public-health requirements. Finally, Dr. Ogle is a gentleman of mature judgment, who has already given evidence of his aptitude to deal with the sort of questions which would have to occupy his attention at Somerset House. We trust then that the rumour to which we have referred of his probable appointment as successor to Dr. Farr may be the forerunner of the fact.

THE MEDICAL DEGREES OF THE UNIVERSITY OF LONDON.

IN assenting without any debate to the resolution of their Annual Committee, as expounded by Dr. Poore, Convocation of the University of London expressed its tacit belief in the inadequacy of the present existing regulations of the Preliminary Scientific and First M.B. Examinations to meet the requirements of modern medical education. By that resolution it was recommended for the consideration of the Senate that it would be desirable in future to hold these examinations twice annually instead of once a year, as hitherto. As no serious argument can be advanced against the desired change, it is to be hoped that the Senate will grant it forthwith. It must, at the same time, be clearly borne in mind that there is no wish to in any way lower the standard of these examinations. The unjust sneers which have been cast at them were properly refuted by Dr. Poore at the meeting of Convocation—if indeed they required refutation. The standard is not too high for any well-educated and industrious student to pass, and their thoroughly practical character is sufficient answer to the innuendo that they encourage a system of "cram." But, as we pointed out in our issue of Dec. 13th, 1879, the fact that these examinations were only held once a year acts as a deterrent to many industrious workers from entering on the necessarily prolonged curriculum. Once that obstacle is removed we may look to a large accession of students seeking the London degree—students, too, of a class who will be worthy of it, but who have hitherto been compelled to seek degrees elsewhere. At the same time it cannot be too strongly urged, or too widely known, that to ensure success at the Preliminary Scientific Examination, it is essential that the whole time of the student should be devoted to its preparation. Very many fail because they try to economise time by working at their anatomy and physiology at the same time as they are preparing for the science examination. This is a great error, and if the proposed alteration be such as to allow students to pass the latter, six months after matriculating, there will be no excuse for this waste of energy. The small percentage of graduates of the London University has long

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been a reproach to this body—when it is remembered how many fall out of the race owing to the difficulties placed in the way of the primary examinations. The proposed change will do away with these obstacles, and not only the University but the profession, and the public too, will be the gainers. As Dr. Poore pointed out, the University has led the way in the improvement of medical education, and it is not likely to abandon its high position. But it is an act of mere justice to afford all reasonable facilities to students who are desirous of becoming its graduates.

UNIVERSITY OF EDINBURGH.

THE Matriculation returns for the past year (1879) have now been made up, and show a very satisfactory increase in all the faculties over the returns for 1878. The aggregate number of students who matriculated during the year was 2856, being an increase of 239 on the register of the previous year. Of these fully one-half belong to the faculty of Medicine, the number of students who matriculated in that faculty during the year being 1442, thus showing an increase of 149. The gradually increasing ratio of progress in this medical school is probably due in a great measure to the wide range of supply of students to which India, our colonies, and even foreign countries, largely contribute. The entries show that 622 of the students are from Scotland, 492 from England, 25 from Ireland, 89 from India, 174 from the different British colonies, and 40 from foreign countries. The proportion of students who took degrees is about 1 in 11. During the year one fellowship of about £240, and one scholarship of about £65, have been added to the prizes to be gained by competitive examination in this faculty. The new buildings for the medical school have been vigorously pressed forward during the past year, so that there is every prospect of some portion of them, especially the department of anatomy, being ready for occupation at the beginning of the winter session 1880–81.

THE CLINICAL SOCIETY.

AT the annual meeting of the above Society, held on the 9th inst., the officers and council for the ensuing year were duly elected as follows:—President: Dr. Headlam Greenhow. Vice-Presidents: Drs. Bristowe, Buzzard, Andrew Clark; Messrs. R. B. Carter, Hulke, and Thomas Smith. Treasurer: Mr. Christopher Heath. Council: Drs. Althaus, Barlow, Cayley, Farquharson, Goodhart, J. E. Pollock, Poore, Symes Thompson, Whipham, Wiltshire, Leonard W. Sedgwick, J. G. Glover; Messrs. Marcus Beck, Bellamy, W. B. Dalby, Langton, Macnamara, T. P. Pick, W. F. Teevan, W. Spencer Watson. Honorary Secretaries: Dr. Frederick Taylor and Mr. Howard Marsh.

The Hon Secretary (Dr. F. Taylor) read the Report of the Council, and the Hon. Treasurer (Mr. Heath) the balance-sheet. On the motion of Mr. Parker, seconded by Dr. S. Mackenzie, the report, &c., were adopted. The following addition to the bye-laws, recommended by the Council, was also unanimously agreed to. It was moved by Dr. Glover, seconded by Dr. Barlow:—

"58. There shall be three Trustees of the Society, who shall stand possessed of the funds and securities of the Society for the time being, vested in them upon trust from time to time, and shall pay the interest and dividends thereof to the Treasurer of the Society, and shall apply and dispose of such funds and securities for the benefit of the Society in such manner as shall be directed by the Council, subject to the control of general meetings of the Society. Upon going out of office the Trustees shall execute all deeds and instruments which the Council shall require as necessary for vesting in the Council all their interest in the funds and property of the Society for the time being.

"59. At the first meeting of the Council held after the annual general meeting the Council shall fill (by ballot) from among themselves, or from the other members of the Society, any vacancy which may have occurred in the office of Trustees. And, provided the choice of persons to fill such vacancies shall be confirmed by the Council at their next meeting, such persons shall be declared duly appointed Trustees of the Society accordingly.

"60. Should the choice of such persons to be Trustees not be confirmed by the Council at their next meeting, the Council shall, at their following or subsequent meetings, proceed to a new choice and confirmation thereof until the existing vacancies shall be filled up."

A cordial vote of thanks to the retiring Vice-Presidents and other retiring members of the Council was passed, on the motion of Dr. Powell, seconded by Mr. Gould.

We have elsewhere referred to the business of the meeting, which was of a highly interesting character.

PSOROSPERMOSIS HEPATICA.

AT a meeting of the Quekett Microscopical Club, held on the 9th inst., the President exhibited some freshly mounted specimens of *Coccidium oviforme*, a psorosperm which gives rise to morbid appearances in the liver (of rabbits), that to the naked eye resemble tubercular deposits. Similar bodies have been found by Professor Perroncito in the dog (Eiformige Zellen in der Leber eines Hundes als Analoga der Psorospermosis hepatica des Kanischens; *Zeitsch. f. Vet. Wissensch.*, Berlin, 1877; and in *Revue für Thierheilkunde und Thierzucht*, Vienna, Aug., 1878.) From a comparative-pathology point of view these gregariniform bodies possess considerable interest, inasmuch as they evidently correspond very closely with the psorosperms separately found by Gubler, Virchow, and Dressler in the human liver. Whilst, however, the egg-shaped corpuscles from the rabbit vary from $\frac{1}{300}$ to $\frac{1}{700}$ of an inch in length, those found by Gubler in man gave an average of $\frac{1}{1500}$." In the course of the evening it was stated in conversation that some human liver-psorosperms had been received from Australia by Dr. Cobbold, and it was thought that these differed from any of the similar bodies that had hitherto been described. Considering the attention that has more or less recently been paid to this department of parasitism by Rivolta, Waldenburgh, Siedamgrotzky, Leuckart, and others, it might be well if some of our able microscopists at the Pathological Society studied more closely the morbid states resulting from the presence of these remarkable gregariniform productions both in human and animal tissues.

THE MEDICAL CARE OF PRISONS.

MR. WILLIAM TALLACK, of the Howard Association, seems to be of opinion that the Home Office is emulating its neighbour the Local Government Board in muddling medical and sanitary matters. He writes of prisoners sent to gaols for short sentences, and having their health destroyed even within a few weeks ("virtually sentenced to death" are his words in respect to the effect of the imprisonment upon their health). And this disastrous state of things, he tells us, arises from the fact that "the duties of the medical men are so minutely described, so far as the requirement of statistical returns and registration is concerned, that this very vigilance over the doctors may lead them to kill their patients." In other words, the Home Office, in its infinite solicitude for the welfare of the prisoners, has imposed upon the medical officer so excessive an amount of pen-and-ink work, in filling up returns which will satisfy the Home Office that he is doing his duty, that the prisoner and his surroundings become merely the text for elaborate returns. The getting up of these returns leaves no time, it seems, for the medical man to give proper medical care to the unfortunate individual, but the completed papers are in the highest degree satisfactory to the Central Authority. The medical officer of an Irish prison appears to have eight forms of return relating to medical matters in constant use, irrespective of

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returns on all subjects concerning the sanitary condition of the prison and prisoners; and the medical officers of the English prisons seem to be little better off in this respect.

This mania for returns is the consequence of the centralisation of the prison government in London. This has involved the whole of the prison administration in a mesh of red-tape, and is having the effect of preventing that local care, judgment, and interest in prisons which were formerly given by the magistracy. The beginning and end of prison administration would appear to be a "return." We have been sufficiently familiar, in the medical relations of such a system, with the miserable result as it affected our army and navy; now we are to learn the result as it affects our prisoners. The Howard Association has obviously here a great work before it, and we have confidence that it will do it in the interests both of the prisoners and the public.

SMALL-POX AT BATH.

WE have information from Bath as to a serious outbreak of small-pox there which reflects so severely upon the action of the local authorities that we are unwilling to believe it without further intelligence. It is to the effect that the hospital provision for infectious diseases at the command of this wealthy and important health resort is so lamentably insufficient that it has proved equally unavailing for stopping the progress of the disease and for providing for the sufferers. The sanitary authority, it is stated, has in use a small villa as hospital, situated so far from the town (out of consideration for visitors!) that the distance precludes ready use and interposes a great obstacle to the removal of patients (the friends and relatives objecting to their removal to a place difficult of access); while the Poor-law Guardians' hospital, a ruinous cottage, it is said, adjoining the workhouse, is adapted to receive only three or four cases. The sanitary hospital is, however, we learn, full without relieving the necessities of the town; and the guardians have been compelled to admit numerous cases within the precincts of the workhouse, thus incurring the danger of general infection of the inmates and causing one of the greatest scandals of workhouse administration. Surely there must be some error of detail and exaggeration in all this. It is difficult to believe that the Corporation and Guardians of Bath can have been so shortsighted as to pursue a policy in respect to infectious diseases which would have discredited the least advanced sanitary authority in the kingdom.

THE INFECTION OF SCHOOLS.

NOT long ago we had occasion to direct attention to a circular issued by the Prior of St. Lawrence's College, Ampleworth, York, Dr. T. J. Kearney, on the subject of revaccination. This gentleman, with a thoughtfulness and foresight which could not be too highly commended, requested permission of the parents of youths under his charge to have them revaccinated. The time, according to the best authorities, was peculiarly suited for the purpose, as there was no alarm of small-pox in the district where the college is situated, and the operation might, therefore, be done deliberately and efficiently. We have been favoured with a copy of another circular issued by the same gentleman, showing equal thoughtfulness and foresight as regards the interests of the youths under his charge, and which we regret did not come into our hands at an earlier date. This circular has an immediate interest for us, as it concerns a subject—namely, the introduction of infectious diseases into schools—which we have had cause to know does not receive all the attention from the managers of large schools that it might and should have. Dr. Kearney, writing with reference to the vacation which has just come to an end, begs that parents, in consequence of the great prevalence of scarlet fever, measles, and other similar ailments throughout England, and with a view to prevent any of these illnesses being introduced into the college, will forward to him a medical certificate, or at least a satisfactory assurance, that their sons "have been in no way exposed to the danger of any infection during the holidays." Except that the phraseology "no way exposed" is needlessly general, and may serve to frustrate in a measure the object of the circular, we would commend the course here taken, as we commended Dr. Kearney's revaccination circular to the heads of all private schools and colleges. It cannot but exercise the best effect in bringing into concord the efforts of principals and parents to limit the spread of infectious diseases among children, by diminishing the danger of school-infection.

PROPOSED CONVALESCENT HOME FOR TEIGNMOUTH.

WE have received a copy of an appeal which is now being circulated by the committee of the Teignmouth, Dawlish, and Newton Infirmary, to solicit help for the establishment of that institution upon a new basis. It appears that not only have Cottage Hospitals and dispensaries been established at Dawlish and Newton, but the Great Western Railway have bought the site of the present hospital for their extensive works. The committee have determined therefore upon purchasing new premises, and re-establishing and extending the utility of the old hospital in the direction of affording a seaside Hospital for Convalescents. Teignmouth itself is well suited for such an establishment, and, judging from a photograph with which we have been furnished, the new premises it is proposed to acquire are well situated. The Railway Company have paid £1700 for the old premises, and it is estimated that £1000 or £1500 in addition will be required to fully establish the hospital in its new home. Judging from the favour with which other institutions of a similar kind have been regarded in different parts of the country, we can feel no hesitation in recommending this scheme of the Teignmouth Committee to the consideration of the benevolent.

DEATH OF WILLIAM BUDD, M.D.

DR. WILLIAM BUDD has so long retired from active work in his profession that his death will not, probably, excite the same painful interest as would have been occasioned had it occurred ten years ago. Up to the period of his withdrawal from public life, no man was more earnestly or prominently engaged in the study of disease. The name of the deceased physician is so inseparably associated with the subject of typhoid fever in its pathological and epidemiological aspects that we must defer our obituary remarks for a review of the whole question.

THE MEDICAL SOCIETY.

THE meeting of this Society on the 12th inst. (of which we shall publish a report next week) was of unusual interest. An important paper on Tumour of the Cerebellum was read by Dr. Hughlings Jackson, and was followed by one on the Value of Parallelism of the Lower Extremities in the treatment of Hip Diseases and Hip Injuries, with the best means of maintaining it, by Mr. Bryant. Mr. Coles also exhibited the Laryngo-phantom, invented by Dr. Trenschmid, of Munich.

HYDROPHOBIA IN DUMBARTONSHIRE.

A REMARKABLE state of matters is recorded from the Vale of Leven. A mad dog appeared in the district about a month ago, and bit a gamekeeper, who showed symptoms of hydrophobia three weeks afterwards, and died in the Royal Infirmary of Glasgow, after four days' illness. A cow, bitten

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about the same time as the man, showed also symptoms of rabies, and has had to be shot. Within the last few days six calves on the same farm have met with a similar fate. On the 10th a rabid dog was found secreted on board one of the Loch Lomond steamers, and, after being dislodged from its hiding-place with much difficulty, was destroyed. The Sheriff of the County has wisely ordered all dogs to be confined for the next two months.

THE LATE MR. SERJEANT PARRY.

THE feeling of deep regret which has been awakened in the legal profession by the death of Mr. Serjeant Parry will be shared by a large number of medical men of the passing generation who have from time to time been brought into business relations with the deceased gentleman, and by many who enjoyed his personal friendship. In his professional character, and as an upright and estimable man, Mr. Serjeant Parry was justly respected, and his loss will be deplored.

HARVEIAN SOCIETY.

THE annual meeting took place on Jan. 8th, and after an able address by the President, Mr. H. C. Stewart, the following officers were elected for 1880: — President: Mr. Henry Power. Vice-Presidents: Mr. George Eastes, Dr. Robert Farquharson, Mr. F. J. Gant, Dr. W. H. Day. Treasurer: Dr. James E. Pollock. Hon. Secretaries: Dr. J. Milner Fothergill, Mr. Geo. Field. Council: Drs. T. Fitzpatrick, T. Buzzard, G. C. P. Murray, W. Squire, G. Danford Thomas, W. Ward Leadam, J. W. Langmore; Messrs. Hy. C. Stewart, H. E. Sewill, H. T. Mapleson, Edmund Owen, Owen Roberts.—The *conversazione* which followed was well attended, many prominent members of the profession being present.

THE LATE MR. HANCOCK.

AT the last meeting of the Council of the College of Surgeons it was resolved unanimously—"That the sincere condolence of the Council be and is hereby offered to Mrs. Hancock and her family, in the irreparable loss which they have sustained by the decease of Mr. Henry Hancock. That the Council feel that by the death of Mr. Hancock they have lost not only a valued and esteemed personal friend, but a colleague who, throughout the whole of his long official career, has taken the keenest interest in the welfare of the College, and has worked with incessant energy for the good of the profession which he adorned."

MEDICAL AID FOR NECESSITOUS GENTLEWOMEN.

A SOCIETY for the purpose of procuring professional aid for gentlewomen who are no longer in the possession of means has been established, under good auspices. The offices are 2, East India Avenue, E.C., and the honorary secretary is Capt. J. G. Hamilton. If such a society is careful in the selection of cases it will be worthy of support. If it is not so, it will only be one more instance of an abused charity. But undoubtedly there is, in the metropolis, room for such an institution. It is very properly provided that the physicians and surgeons shall be paid.

THE BROMPTON CEMETERY.

CONSIDERABLE surprise has been experienced among the profession in consequence of Lord Beaconsfield appearing in the guise of patron to the Brompton Cemetery, as indicated by his appointment of a Manager. It would appear, however, that this cemetery is the property of the Government, acquired in 1852, and that it is administered in subordination to the Commissioners of Works and under the Home Office. The staff of the Brompton Cemetery, in fact, consists of Government officials. This explains Lord Beaconsfield's appointing Mr. Marwood Tucker as Manager of the Cemetery.

VOLUNTEER AMBULANCE DEPARTMENT.

WE have been requested to announce that the official inspection of Surgeon Shepherd's class will take place at the Guildhall on Wednesday, Jan. 28th, at 7.30 P.M., by Surgeon-General Wm. Munro, C.B. The Right Hon. the Lord Mayor will be present in state, and has consented to present the certificates of efficiency to members of the classes of Surgeon Faris, A.M.D., and of Drs. Daniell, Egan, and Norton.

SIR DOMINIC CORRIGAN.

THE latest information as to the condition of Sir Dominic Corrigan is not favourable. There appeared to be evidence of a slight improvement on the 14th inst., but the state of the distinguished baronet remains highly precarious.

THE annual Fancy Ball was given at the Surrey County Lunatic Asylum, Brookwood, on the 9th inst. The patients mustered in great force, and seemed thoroughly to enjoy the entertainment, which was witnessed, and participated in, by a large body of friends, including the principal families connected with the district. The entire success of the enterprise, which was not qualified by a single untoward incident, reflects great credit on Dr. Brushfield, the medical superintendent, his assistants and coadjutors. It is an interesting fact, which should be noted in relation to this annual ball, that the whole expenses are defrayed by subscription among the medical officers of the asylum and their friends, no portion of the costs being charged to the ratepayers.

ON Monday, Jan. 12th, an entertainment was given to the patients and a few of the friends of the Westminster Hospital, in the board-room of the institution. Several choristers from the Abbey were kindly allowed to sing, and other songs were sung by Dr. S. West, Mr. Pearce Gould, and Mr. Glassington. Mr. Seton Hamilton gave some very vigorous recitations, and afterwards he, with two others of the students, acted "Box and Cox." Both the music and the comedy appeared to give great pleasure to the patients, who, with very few exceptions, were all able to be present.

A THEATRICAL performance was given by the members of the Medical Society of Charing-cross Hospital on Tuesday evening last, for the benefit of the patients. The performance, which consisted of vocal and instrumental music and a farce, was conducted with complete success, and met with the greatest applause from an admiring audience.

MR. HENRY TRENTHAM BUTLIN, F.R.C.S., of St. Bartholomew's Hospital, and a Jacksonian prize essayist, has just been elected an "Erasmus Wilson" professor for the present year. His course will consist of three lectures on the structure and nature of certain tumours.

SIR JOSEPH FAYRER, K.C.S.I., has been appointed Examiner for the Medical Service of the Army in Anatomy and Physiology, *vice* George Busk, Esq., F.R.C.S., who has resigned the appointment.

DR. CURNOW, F.R.C.P., has been appointed Visiting Physician to the Seamen's Hospital, the late *Dreadnought*, in the vacancy created by the death of Mr. Harry Leach, M.R.C.P.

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UNIVERSITY OF LONDON.

MEETING OF CONVOCATION.

THE meeting of Convocation of the University of London took place on Tuesday last (the 13th instant)—Dr. Storrar, chairman. The attendance was not large; and seeing that the only business on the agenda paper, besides the election of Senator, related to the medical degrees, it is significant somewhat of the apathy of its medical graduates that so few presented themselves on the occasion. The resolution in question was one recommended by the Annual Committee in its report, and ran as follows:—"That the Senate be requested to consider whether it would not be desirable that in future the Preliminary Scientific and First M.B. Examinations should be held twice annually."

Dr. G. V. POORE, in moving the foregoing resolution, passed in review the various reasons adduced in the Report of the Annual Committee in favour of this change. He pointed out that an increase in the number of candidates had especial force in the case of practical examinations, such as those for medical degrees, in the argument for increasing the number of such examinations. The published statistics of the University showed how large a number of candidates for the preliminary scientific examination failed in one or two subjects only—so that failure once nearly always entailed rejection a second time—on account of the candidates being compelled to devote themselves to other subjects, whereas a shorter interval would allow them to limit their work to the matters special to the scientific examination. The London University in these respects was put at a disadvantage with respect to other universities, where (with the exception of Oxford) examinations in these subjects were held twice annually. The length of the medical curriculum and its expense also told heavily in restricting the number of intending medical graduates, deterring many students from entering at the University, and causing others to cease from pursuing their career therein. For it was computed that "out of every 100 candidates who fairly enter upon our course of medical study, about 21 per cent. ultimately take a degree, while 67 per cent. fail to pass one or other of the examinations, and nearly 12 per cent. stop in their career from no obvious cause, and in spite of the fact that the risk of failure very sensibly diminishes with every succeeding examination." It was desirable that as many men as possible should be induced to enter for the London degree, for an increase in the number of those trained upon a scientific plan is certainly a distinct gain. The examinations entail great industry, and thereby increase the sum of knowledge possessed by the medical profession. Dr. Poore dwelt at length upon this reason for urging increased opportunities for graduation, because during the last few months a clamour had arisen, and was being fostered, for easy medical degrees. He maintained that the character of the examinations should not be altered; devised and perfected as it was by the wisest men in the country, it had stood the test of time, as a reference to the list of graduates of twenty years' standing would show, including as it did names which are known and honoured wherever medicine is studied. The work done by the University had been little appreciated, and even strangely misrepresented; its standard had been accused of being excessively high, and to be practically prohibitive of "all but a chosen few graduates, and those only of the highest examining power, and frequently at the risk of mischievous strain of the brain-power"; and a comparison had been drawn between its degree and those of Edinburgh, Dublin, Glasgow, or Paris, which are said to be more fitted to test competency to practise. Dr. Poore refuted these statements by pointing out that but few entered on the University curriculum, from the general ignorance of its existence; that the examinations were expressly framed practically to prevent cramming, and in this respect had set a worthy example to other medical examining boards; whilst the distinguished graduates he had named were examples of the fallacy of the argument that the examinations were productive of a mischievous strain of brain power. He concluded by pointing to the undoubtedly high position held by its graduates in all departments of medical science, to the respect in which they were held in the profession and in the scientific world, and this in spite of the difficulties and drawbacks thrown in the way of the University at its inception; whilst in regard to the small numerical strength of the graduates, it was remarkable how many of them had filled important offices in the hospitals, in the College of Physicians, in the Universities, in the General Medical Council, and in the British Medical Association itself. The President of the Council of that body was a graduate of the University, and if present he would doubtless have informed Convocation, whether the views to which he (Dr. Poore) had referred really represented the opinions of members of the Association.

Dr. CURNOW seconded the resolution, remarking that it was a matter of common observation that students referred in one subject proceeded no further. It was a question of simple justice, which should not be overridden by the only conceivable difficulty in its way—that, namely, of necessitating an increase in the examining staff.

The resolution was then put from the chair, and carried *nem con.*

The Chairman had great difficulty in keeping a "house" until the close of the poll for nomination of a senator, when the following was declared to be the result of the voting:—Mr. Shaen, 535; Mr. Herschell, 177; Dr. Weymouth, 115.

HEALTH OF LARGE ENGLISH TOWNS.

FIRST WEEK OF 1880.

THE mild weather that followed Christmas has caused a marked decline in the registered mortality. In twenty of the largest English towns, estimated to contain at the middle of last year very little short of seven and a half millions of persons, or nearly a third of the entire population of England and Wales, 5493 births and 3444 deaths were registered during last week, the first of this year. The births exceeded by 308, and the deaths by 169, the average weekly numbers during 1879. The deaths were 676 less than those returned in the previous week; and the annual death-rate, which had averaged 29·4 per 1000 during the last four weeks of 1879, declined to 24·0 last week. The lowest death-rates in the twenty towns last week were 15·8 in Oldham, 17·6 in Norwich, 17·7 in Leicester, and 19·8 in Leeds. The rates in the other towns ranged upwards to 25·1 in Hull, 26·4 in Bristol, 28·3 in Liverpool, and again the highest rate 35·5 in Plymouth.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 574 and 607 in the two preceding weeks, declined last week to 541; they included 182 from whooping-cough, 131 from measles, and 126 from scarlet fever. Whooping-cough showed the largest proportional fatality in Salford, Plymouth, Bristol, and London; measles in Plymouth, Hull, Liverpool, and Nottingham; and scarlet fever in Bristol and Newcastle-upon-Tyne. Of the 19 deaths referred to diphtheria 11 were recorded in London, 3 in Birmingham, and 2 in Plymouth. Small-pox caused 8 deaths in London (against 2 and 4 in the two previous weeks) and one in Bristol, whereas no fatal case was recorded in any of the eighteen other large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 48 and 56 at the end of the two preceding weeks, had further increased to 77 on Saturday last; during the week no less than 30 new cases of small-pox were admitted to those hospitals during last week, against 5 and 22 in the two previous weeks. Under the influence of the recent mild weather the registered fatality of lung diseases showed a marked decline last week. In London the deaths referred to diseases of the respiratory organs, which had been 652 and 672 in the two preceding weeks, declined to 455 last week, and were 40 below the corrected average weekly number. The deaths from these diseases were equal to an annual rate not exceeding 6·5 per 1000 in London, whereas the recorded fatality of lung diseases in Liverpool was no less than 9·1.

AT the meeting of the Society of Medical Officers of Health, to be held this day (Friday, Jan. 16th), at 7.30 P.M., at 1, Adam-street, Adelphi, a paper will be read by Dr. Tatham (Salford), "On certain Reforms which appear desirable in the Statistical Reports of Medical Officers of Health."

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Correspondence.

"Audi alteram partem."

OUR VACCINE LYMPH.

To the Editor of THE LANCET.

SIR,—As you support the object which I have in view—namely, the provision of State facilities for the optional use of animal lymph for vaccination, I have no desire to quarrel with you respecting matters of detail. I did not therefore consider it necessary to reply to your article in THE LANCET of the 20th ult., in which you ridiculed the views that I advanced as to the impairment of the protective powers of the old Jennerian lymph in use in this country, and as to the variolous nature of the so-called variolo-vaccinic lymph produced by Messrs. Ceely and Badcock, by the inoculation of the cow with variolous matter. I see, however, that in last week's LANCET you again return to the charge; and as I conceive that, were I to allow your reiterated assertions to pass unchallenged, they might mislead your readers, I must ask you to allow me to correct them. In the first place, however, permit me to point out that my arguments on these points are perfectly germane to the subject in dispute. When I advocate the use of animal lymph, I am answered with Dr. Seaton's statistics, which show that in proportion to the number of points of insertion animal lymph does not produce the same number of vesicles as the humanised lymph current in this country. I could quote half a dozen authorities to the effect that this inferiority does not exist; but I do not wish to obscure the real question at issue in any dispute as to the weight to be attached to this or that authority, when it can be decided much more satisfactorily on its own merits. I therefore say that it is puerile to enter into details as to the number of vesicles produced. What we want to know is the relative amount of protection against small-pox conferred by the two methods of vaccination. Dr. Warlomont assures us that, after having vaccinated with animal lymph for now nearly twelve years, he has been unable to learn of a single case, and the Belgian Academy of Medicine has been unable to learn of a single case, in which a person vaccinated with his lymph has been attacked with small-pox. Dr. Martin, who has had an enormous experience with animal lymph in the United States, repeats the same assertion. On the other hand, during the recent epidemic (1876–7–8–9), of 15,117 persons, treated in the several small-pox hospitals under the control of the Metropolitan Asylum District Board, 11,412 had been vaccinated (Mr. Jebb's letter in *Times* of last Nov. 8th). In the early days of vaccination, when the lymph was fresh, death in such cases was almost unknown. In Copenhagen, for example, a city at that time of 100,000 well-vaccinated inhabitants, there was not a single death from small-pox from 1811 to 1823 inclusive (Simon's Report, Appendix, p. 171). Taking 8000 cases of post-vaccinal small-pox recorded in London, Edinburgh, France, and Copenhagen, between 1818 and 1830, I find that the mortality was 1 per cent. In the 11,412 cases just referred to, observed during the recent epidemic, it was 8·8 per cent. In the fifteen or twenty years immediately succeeding Jenner's great discovery, when the lymph in use was still comparatively fresh, the universal practice was to make only one insertion on each arm, or often one on one arm only. Dr. Marston showed very conclusively that in the time embraced in his observations (1836–51), one or two insertions did not confer sufficient protection, and that among persons with one or two vaccinal cicatrices attacked with small-pox, 6·21 per cent. died, whereas of those with three or more, only 1·3 per cent. succumbed. Coming down a little later, Dr. Seaton has classified 6905 cases of post-vaccinal small-pox which occurred in London during the epidemic of 1870–73, and there the mortality among persons with only one or two cicatrices had risen to 10·4 per cent., while in persons with three or more cicatrices it was 6·4. What is the use of wrangling over details as to relative numbers of insertions and vesicles, when we have before us facts like these—facts which show that the mortality in post-vaccinal small-pox observed in the two epidemics of the past decade has been about nine and a half times as great as it was in 8000 cases observed between 1818 and 1830?

Coming now to my assertion that M. Chauveau's experiments prove that the variolo-vaccinic lymph produced by the inoculation of cows with small-pox, and put in circulation by Messrs. Ceely and Badcock, is simply small-pox, I venture to say, that if you will read Mr. Ceely's own account of his experiments, you will arrive at the same opinion, without the assistance of M. Chauveau at all; at least, you will arrive at this conclusion, that whatever the so-called variolo-vaccinic lymph was, it was not cow-pock. If, then, it be not small-pox, we have no facts, whatever before us to justify us in asserting that inoculation with this lymph exercises that protective power against small-pox which is exercised by inoculation with small-pox or cow-pock virus. Mr. Ceely's book is, I believe, out of print, and, though I have a copy by me as I write, I refer you for a quotation of his description of his experiences to Dr. Ballard's prize essay, or M. Bousquet's *Nouveau Traité de la Vaccine* (Paris, 1848), where, at p. 444, you will find a very clear and succinct summary of the results produced. Mr. Ceely, having succeeded in inoculating two cows with small-pox, proceeded to vaccinate with the product. The first experiment was accidental. Mr. Ceely's assistant, Mr. Taylor, having pricked his hand with the lancet employed in collecting lymph from the cow, there resulted a vesicle, fever, and an eruption, which Mr. Ceely calls roseola. In the subsequent cases the vesicles were undistinguishable from those of genuine cow-pock; "but," I quote for the sake of brevity from M. Bousquet, "the general symptoms were very different. The primary symptoms comprised, with infants, sleeplessness, agitation, loss of appetite, vomiting, and diarrhœa. Towards the ninth day few escaped fever, and this fever was accompanied with vomiting, delirium, diarrhœa, &c. Adults suffered still more; headache, shivering, anorexia, anxiety, nausea, powerlessness to quit bed, &c. But neither on infants nor on adults was anything observed which resembled variola or varioloid; *only roseola lichen and an eruption of vesicles such as one sees in chicken pock.* Finally, adds Mr. Ceely, the eruption remains always local; *only one often sees supernumerary vesicles near the pustules. In one case, however, one of these vesicles was found on the shoulder and another on the neck, and in two others they appeared on the abdomen.* And in spite of all this," adds M. Bousquet, "Mr. Ceely persists in maintaining that vaccinia is only small-pox modified by transmission through the cow!" Then M. Bousquet goes on to compare the results obtained by other experimenters who had worked in the same groove. First he takes Thièle's experiences. In his cases the fever showed itself twice—on the second or third day, and again on the eleventh to the fourteenth, as in inoculated small-pox; and when Thièle neglected to temper the strength of his virus with some drops of milk, there supervened a veritable small-pox, with fever and its two eruptions. Then M. Verheyen, proceeds M. Bousquet, reports in the Memoirs of the Royal Belgian Academy of Medicine, 1847, p. 133, that in a certain case variolous matter inoculated on the cow had produced, when re-inoculated on man, "variola to which nothing was wanting." M. Gaultier, he goes on to say, reported that one of the infants experimented upon had died of confluent small-pox; and he adds the following paragraph, on which I should be glad if any of your correspondents could throw some additional light:—"The same thing," he writes, "has just happened in England. There also variolous matter, having been inoculated on the cow, was retransferred to infants. The first had only a local eruption, but on pursuing the experiments it was found that in some cases perfect variola occurred, so that the authorities forbad the use of the virus under penalty of 300 francs fine"—(Op. cit., p. 550-1). As to the similarity of the vesicle produced by this vaccino-variolic lymph with that produced by cow-pock, there is nothing in that. As M. Bousquet remarks, and as anyone may see by referring to Jenner's petition (quoted in Mr. Simon's Report, Appendix, p. 2), Jenner himself was struck with the close resemblance which existed between the vaccine vesicle which he produced and those produced by inoculation; and a number of the most celebrated inoculators (quoted by Bousquet, p. 449) state "that when, as was common, there was no secondary fever, the variola limited itself to the points of insertion." After this I need hardly add that Bousquet does not believe in the vaccino-variolic lymph; but it may be necessary for me to state (so intense do I find the prevailing ignorance regarding the literature of vaccination) that Bousquet was one of the greatest authorities on the subject which the present half-century has

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produced—a man of cosmopolitan reputation, a man whom I may describe as the Trousseau or Bretonneau of variola and vaccination. Well, what Chauveau ten years ago did was to prove by a most exhaustive series of experiments what Bousquet and many others had been convinced of for years before—namely, that variolo-vaccine lymph was not cow-pock, and that it was small-pox; and this he did in such a way as enabled him to explain the discrepancies exhibited in the results obtained by different previous experimenters. Where Ceely had only succeeded in inoculating two cows, Chauveau inoculated seventeen, in fifteen of which the success of the operation was proved by subsequent insusceptibility to cow-pock inoculation. With the variolo-vaccine matter from these animals he inoculated a child on March 14th, and obtained vesicles undistinguishable from cow-pock. But on the 23rd there was fever, vomiting, and an eruption on the face and trunk, which on the 24th had developed into "very fine variolous pustules, mostly umbilicated, forming a semi-confluent eruption." A second child inoculated from this one had a secondary eruption consisting of fifteen pustules on the face and other parts of the body. Fear of creating a centre of infection in the hospital where the experiments were conducted prevented them being pushed further in this direction. But, having reinoculated on the cow lymph taken from the variolo-vaccinic vesicles on the arm of the children, which, as I have said, were undistinguishable from cow-pock, it produced, not cow-pock, but the totally different bovine small-pox eruption. Now if a chemist finds two substances, undistinguishable in outward appearance, to act in a totally different manner in the presence of a given reagent, he has no hesitation in pronouncing them different. This was precisely what Chauveau found on testing the variolo-vaccinic, as against the cow-pock vesicle, with a physiological reagent. From the reaction of the one substance the chemist says it is so and so, and from the different reaction of the other he declares it to be something else. This is again precisely what Chauveau did. The secondary symptoms noted by Ceely and Thièle themselves sufficiently, to my mind, show that the disease that they succeeded in producing was not cow-pock; and that, with its delirium, its vomiting, and its secondary eruptions, it bore a most suspicious resemblance to inoculated small-pox. Chauveau demonstrated that it was inoculated small-pox. The lymph so produced is still going the round in the country, and it either still preserves its powers of infection or it has lost them—probably through that degeneration of the virus which inoculators observed to occur, through successive inoculations from the primary vesicle. If it retains its powers of infection there is every reason to believe that inoculation with it confers precisely the same protection against small-pox as inoculation with ordinary variolous matter. If it has degenerated so as to have lost its infective power, there is nothing to assure us that it retains its power of protection. Your article speaks of Chauveau's results as conflicting with those obtained by Mr. Marson and Professor Simmons. Certainly they did, even as the latter conflicted with those of Messrs. Ceely and Badcock. For Mr. Marson and Prof. Simmons, when they inoculated cows with small-pox, simply failed to obtain any results at all; or rather they failed to recognise the significance of the very slight and local eruption which characterises inoculated small-pox in the cow. Chauveau himself failed to recognise it, until its specific nature was revealed to him by the accidental discovery that it destroyed susceptibility to subsequent inoculations of cow-pock. Having made this discovery, which had escaped Ceely on the one hand and Marson on the other, he inoculated twelve animals without one failure, and with uniform results, and from these he proceeded with the experiments which I have just summarised.

I am not a dogmatist, and am content to leave humanised lymph to those who prefer it. I, for many reasons, prefer animal lymph, and claim the same facilities for its use for myself which, until we have amply tested both, I am willing to accord to others in respect of the article of their choice. But when my opponents turn round and attempt to choke me off with peddling arguments about cost of calves, proportion of vesicles to punctures, and so on, I hardly care to waste time in confuting them with the experience of other countries on these points of detail. I answer boldly, cow-pock lymph direct from the calf protects against small-pox, as the lymph used by the early vaccinators protected against small-pox. Your lymph protects against small-pox, and against death by small-pox, to an infinitely smaller extent. You don't even know what an indeterminably large portion of your lymph-stock is—whether it is not small-pox pure and simple, or whether, if modified so as to be innocuous to the general community, it is not utterly fallacious as a protection against small-pox. What we have to aim at is, not a mass of petty details which the early vaccinators cared nothing about, but the results obtained by them in the first ten or fifteen years of the present century. In those days the work was performed in what we should now consider an utterly inefficient manner, and often by unskilled men; *but they worked with good lymph.* The result was that for long post-vaccinal small-pox was of the rarest occurrence, and when it did occur the death-rate, instead of being one in every ten or eleven persons attacked, as has been the case in the epidemics of the decade just concluded, was for many years less than one in every hundred.

I am, Sir, yours very sincerely,

CHARLES CAMERON, M.D., M.P.

Glasgow, January 6th, 1880.

ON THE DIAGNOSIS OF HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—In my remarks on rabies, or hydrophobia, I have pointed out most of the difficulties in connexion with a true diagnosis; and, further, I think I have established by my statistics that there are cases on record of recovery from the disease. Mr. Moore has quoted, in the very interesting observation published in THE LANCET of December 13th, a passage from my book bearing on this point. Whatever name we may give the disease from which his patient recovered, there cannot be a doubt that the group of symptoms he describes are sufficiently pathognomonic, and that, if unchecked by remedial treatment, death would have been the result. As Mr. Moore justly observes, the fact of the patient recovering is regarded by some as *primâ facie* evidence that the patient was not suffering from true hydrophobia, but from an affection either simulative or caused by some morbid change in the medulla oblongata.

In order to obviate in the future all disputes, I offer what I think would be a crucial test, derived from my experience with rabies in animals.

The West Riding of Yorkshire has suffered to a considerable extent from rabid dogs, and the police authorities have been compelled to destroy both rabid and suspected dogs; and, living in the district, I have been able to obtain many animals for experiment and dissections. In order to test the condition of the dog, I have collected in small tubes, like those in a feeding-bottle, the saliva taken both from living animals and from those recently killed. By injecting the saliva into rabbits the actual existence of rabies will be found out by the development of the disease in that animal or not.

I would extend the same method to the human being. Breschet and Magendie proved that the human saliva is capable of producing rabies in animals. Maurice Raynaud has more recently confirmed this evidence. I would therefore advise all practitioners attending a presumed case of hydrophobia to collect the saliva each day in a tube, to seal it hermetically, and to have it tested on some of the lower animals as soon as possible.

At present there is under treatment a child, with most suspicious symptoms, bitten by a rabid dog thirty-three days ago, and I have arranged with the medical attendant to adopt my suggestion. It is premature to enter into the particulars of this case until the result is known, which shall be duly forwarded for publication in THE LANCET.

I remain, Sir, your obedient servant,

T. M. DOLAN, F.R.C.S. ED.

Halifax, Yorks, Dec. 16th, 1879.

*** Mr. Dolan's suggestion that the diagnosis of every case of hydrophobia should be rendered, as far as possible, certain, by ascertaining whether the saliva is capable of communicating the disease to one of the lower animals, is of great importance. There can be no doubt, from the experiments to which he refers, that such a test would often supply information of the greatest value. We do not at at present know whether the saliva of the human subject will communicate rabies with certainty in all stages of the

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disease. It is probable that it will do so, but until the fact is proved, the absence of transmission would not demonstrate that the disease was not rabies. On the other hand the fact of such transmission would be conclusive evidence of the nature of the malady. It is not probable that the virus in saliva remains active for more than a few days. At any rate a negative result would be rendered of most doubtful value by a greater delay. Probably, however, an arrangement could be made by which the activity of any saliva could be promptly tested at the Brown Institution. We would commend to Professor Greenfield's consideration the practicability of such an arrangement.—ED. L.

ANTISEPTIC SURGERY.

To the Editor of THE LANCET.

SIR,—In a letter on Antiseptic Surgery in one of your contemporaries of January 3rd, referring to the practice of the surgeons of King's College Hospital, I have been alluded to in such a way as would lead readers to suppose that I do not practise the antiseptic method, as I am mentioned as "still following the treatment used by Sir W. Fergusson."

Kindly permit me to refer to the pages of THE LANCET for November 15th last, where is a short paper termed the "Description of an Apparatus used after Excision of the Knee," and in that paper I speak of my conviction of the value of Mr. Lister's method, and make use of these words: "In a large proportion of the more severe operations of surgery I follow this method carefully." I will, in addition to this statement, mention as further proof of my humble estimate of Mr. Lister's treatment, that were I to undertake certain operations without taking strict antiseptic precautions as prescribed by Mr. Lister, I should be guilty of grossly neglecting the welfare of the patients committed to my care. I am, Sir, your obedient servant,

Wimpole-street, Jan., 1880. HENRY SMITH.

BIRKENHEAD.

(*From our own Correspondent.*)

THE Children's Hospital in this town presented an unusual spectacle on the evening of Friday, the 9th inst., on the occasion of the annual party. The large ward on the first floor, the walls of which were tastefully decorated with chromo-lithographs and evergreens, and illuminated legends wishing happiness and bidding welcome to all, was specially arranged for those who would have to enjoy their treat in bed. On the mantelpiece was a trophy of toys, and opposite it was a dolls' house, almost large enough to live in, but neither of these obtained as much attention as they deserved; the main object of interest to the occupants of the neat iron bedsteads disposed round the room was the Christmas tree, bright with twinkling lights and many-coloured presents. The entertainment began with tea, which was served at half-past four, and which was not too strong for little folk, and then the tree was lighted up. By six o'clock the wax lights had burnt down, and the branches were shorn of their fruit. Then nurse went round and washed each little patient's face and hands, and made all snug for the night.

Meanwhile the visitors had been conducted into the board-room on the ground floor, where there was a second tea (covers laid for forty-eight children), and a second Christmas tree. Here the fun was a little more pronounced than upstairs, and romps and games were continued till eight o'clock. Indeed, except that some of the faces looked too pale for childhood, and that some of the limbs were bandaged, one would hardly have recognised the guests in the board-room as patients at all. The Christmas tree was a very large one, the gift of Mr. David McIver, the member for the borough, and, like its fellow upstairs, carried a present for every child in the room. It is worthy of remark that each present was ticketed, so that every child received something specially intended for it by the ladies who dressed the tree. Nor were all the presents mere toys; a large proportion were small flannel petticoats and woollen socks and comforters. The Mayor, Mr. T. H. Jackson, J.P., and a large number of ladies and gentlemen, called in during the evening, and everybody congratulated Miss Frecker, and the ladies who had assisted her, on the success of the little gathering, so well planned and carried out.

A special interest attaches to the Children's Hospital just now, as it is about to be enlarged by the addition of three wards and an out-patients' room. The design for this new wing has already passed the committee, and it is hoped the work may be proceeded with early in the spring.

Obituary.

HENRY HANCOCK, F.R.C.S.

MR. HANCOCK, whose sudden demise we regretfully announced last week, was a man who had made for himself, in the world and in the profession, a place and a position which will not readily be filled. He died, somewhat rapidly at the last, of disease of the pylorus, his father having succumbed, at nearly the same age, to a similar if not the same malady.

Henry Hancock was the son of a merchant of repute, whose wife was a daughter of Alderman Hamerton. He was born at Bread-street-hill on Aug. 6th, 1809; and at the proper age was sent to study at the then well-known school in Cheyne-walk, Chelsea, kept by Mr. Butler. Having completed satisfactorily his earlier studies, he entered at the Westminster Hospital, where his energy and perseverance soon attracted the attention of Mr. Guthrie and of Mr. Anthony White. It is probable that the latter surgeon (who, it will be recollected, was one of the pioneers of resection of the joints) guided young Hancock's studies in one direction, while Mr. Guthrie's work in the field of ophthalmic surgery impelled them in another. Under these surgeons and the elder Lynn, Hancock filled with credit the office of house-surgeon to the Westminster Hospital. He became a member of the College of Surgeons in 1834, and in the following year was appointed demonstrator of Anatomy at the Westminster Hospital School, which office he held for three years, when he became lecturer on Anatomy and Physiology at Charing-cross Hospital. At this time he was busy with a translation of Velpeau's "Regional Anatomy," his first literary effort, which saw the light in English dress about two years after its publication in France.

This lectureship led, as is generally the case, to an appointment on the hospital staff. The contest was severe between him and Mr. Palmer, energetically supported by Sir B. Brodie, who desired to see his friend become the assistant-surgeon of that institution. Shortly after his election Mr. Partridge resigned to go to King's College Hospital. Mr. Howship died, and thus still early in life the subject of our memoir became full surgeon to and lecturer on Surgery at the Charing-cross Hospital. He continued to fill the former office up to 1873, the latter he resigned in 1868. Mr. Hancock's name will ever be associated with that hospital as an ardent and successful teacher, a skilful and keen surgeon, a friend and help to many a student and young aspirant.

With eye surgery, too, Mr. Hancock's name is honourably connected; he held for many years the surgeoncy to the Westminster Ophthalmic Hospital, and taught the Charing-cross students there. He introduced a mode of dividing the ciliary muscle for glaucoma—an operation which has given way to iridectomy.

We will now leave Mr. Hancock's hospital career to glance at his connexion with and influence on the College of Surgeons. He was one of the Honorary Fellows appointed in 1843 when that degree was first established. In 1863 he became a member of the Council, and in 1865 he, as Arris and Gale Professor of Anatomy and Surgery, lectured on the Human Foot, of which we shall say more immediately. With Mr. Hancock's election to the Presidency of the College of Surgeons, 1872, commenced his gradual withdrawal from the active duties of his profession, and soon after his year of office ceased he virtually retired to reside in Wiltshire, coming, however, occasionally to London, when he frequently visited his old hospital and gave a surgical lecture to an attentive and appreciative class.

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We have said that White's influence had directed Hancock's studies towards articular disease, and he was one of those who early took up the subject of conservative surgery and the excision of joints, and although in other branches of the art, especially in eye surgery, he had a large practice, yet his name will, more especially in future, be associated with certain operations about the foot. He it was that introduced into England, and at the same time improved, Moreau's excision of the ankle-joint, and he vindicates in the Arris and Gale lectures his claim to this merit, of which certain writers had endeavoured to deprive him. Another operation is more markedly his—namely, an amputation which, preserving the back part of the os calcis and upper part of the astragalus gives, when these are juxtaposed, a mobile and exceedingly valuable stump.

In character, Mr. Hancock was kindly and considerate, but his most marked quality was straightforward and honest attachment to duty. What he undertook that he did to the best of his ability. He rarely missed giving a lecture, and, we believe, that from the time of his joining the Council of the College of Surgeons till the close of his Presidency, he never neglected a single meeting either of council or committee.

SURGEON-MAJOR JOSHUA HENRY PORTER.

IT is with much regret we record the death, on the 9th inst., in the Sherpur Camp, Afghanistan, of Surgeon-Major J. H. Porter, Principal Medical Officer of the Cabul Field Force. The event was telegraphed from Cabul by the correspondent of *The Times* as follows:—"A great loss was sustained by the death yesterday of Dr. J. H. Porter, the Principal Medical Officer with this force—one of numerous recent victims, European and native—of pneumonia. His services have been of the greatest value both in this and the last campaign." The name of Joshua Henry Porter has now to be added to the death-roll of medical officers who have perished in the Afghan war, and by his death the Army Medical Department lose one of their most capable, efficient, and distinguished members.

Mr. Porter was educated in Ireland, taking the L.R.C.S.I. diploma in 1852. In June, 1853, he was appointed an Assistant-Surgeon in the Army, and was shortly after gazetted to the 97th Regiment, with which corps he served throughout the Crimean campaign, receiving in addition to the ordinary medal, clasp, and Turkish medal, the Order of the Medjidie of the 5th class. He was present in India during the Mutiny of 1857–8, served with the Jounpore Field Force in the actions of Nusrutpore, Chanda, and at the siege and capture of Lucknow, the storming of the Kaiser Bagh, and the subsequent operations in Bundlecund in 1859, receiving the Mutiny medal with clasp. In the Franco-German war of 1870 Mr. Porter served with the British ambulance, and was present at the capitulation of Paris; for this service he was decorated with the German steel war medal. Early in 1879 Mr. Porter embarked for a tour of service in Bengal, and on arrival was posted to the charge of the Field Hospitals with Sir Samuel Browne's Division in the Khyber, accompanying them to Jellalabad and Gundamak, taking part in that "march of death" back to India in May and June, when cholera and the intense heat so decimated our troops. For his exertions in this part of the campaign he received the special thanks of the Government of India, and was appointed to officiate as Deputy Surgeon-General of the Allahabad Division. On the resumption of the hostilities which followed the Cavagnari massacre, Mr. Porter hurried to the front and was appointed to General Roberts' force, which he accompanied on its forced march to Cabul over the Shutargurdan Pass, and of which he became Principal Medical Officer when Deputy Surgeon-General Townsend was wounded in the Shutargurdan Pass. Mr. Porter was present at all the actions prior and subsequent to the capture of Cabul, and has been indefatigable in his exertions to organise and administer the Field Hospitals and medical arrangements of the Cabul army. His death in the midst of his work is greatly to be deplored; by officers and men alike he will be sorrowfully mourned. He leaves a widow and young family.

Mr. Porter was for five years, from 1873 to 1878, Assistant Professor of Military Surgery at the Royal Victoria Hospital, Netley; whilst there he issued "The Surgeon's Pocket-book," the international prize essay of the best treatment of wounded in war, the prize having been given by the Empress of Germany. He also contributed some valuable papers to the Army Medical Department Reports, of which we may specially note his annual reports on the operations performed in the hospital, and two papers on the relative Value of Chloroform and Ether based on observations made by him in that institution. Netley will miss him greatly. A hard-working, painstaking officer, a sound practical surgeon, a careful operator, endowed with great common sense, quick in resource, genial and kind-hearted, he combined the thoroughly useful executive officer with the able administrator—he was, in fact, a beau ideal army surgeon. He has died in harness, with the din of battle sounding in his ears, and he lies in an Afghan cemetery, surrounded by the soldiers amongst whom he lived and worked and died.

MICHAEL FOSTER, F.R.C.S. ENG., L.S.A.

THIS esteemed medical practitioner was born on April 22nd, 1810, at Holywell, a small village in the outskirts of Bedfordshire, close to Hitchin. His father was a farmer of more than average ability, being much given to antiquarian research. For many generations back the members of the family had been farmers in Herts or Beds, and were generally conspicuous for their devotion to the cause of civil and religious liberty; some of them in their time being close personal friends of John Bunyan.

Michael Foster began his professional studies in 1826 by becoming an apprentice to Mr. Peck, surgeon, of Kimbolton, and after serving the usual time of five years, entered, in 1831, the medical school of University College, pursuing his clinical studies at Middlesex Hospital at the same time, University College Hospital not being as yet established. Of his teachers, among whom were Sir Charles Bell and Dr. Elliotson, one still survives him, the then Demonstrator of Anatomy, Richard Quain. His college career was a very brilliant one; he carried off a very large number of medals, his chief rival being his, at that time, intimate friend, William Baly, the distinguished physician. Possibly had his means allowed him to stay in London, Michael Foster might have achieved an eminence like that of his college friend. But he had no such opportunity. When, after two years' study (for so short a time was sufficient then) he had "passed the Hall and College," the *res angusta domi* led him to turn his qualifications to immediate profit by becoming first assistant to, and subsequently partner with, Mr. Josiah Wilson, of Huntingdon. For over forty years (for many years single-handed) he carried on a large country practice, winning from his patients not only an almost unbounded confidence in his professional skill, but also a strong personal affection, growing out of his blameless, unselfish character and pure Christian spirit. Nor was the confidence or affection misplaced; few men possessed to so marked an extent as he did the instincts of a doctor, or loved his profession more. Few men go through life intent as he was on doing good to others.

Premonitory warnings of the malady which finally destroyed him, appearing in the form of transient pain, did not at first excite the anxiety of his family; but the shock which he received five years ago in the sudden death by accident of his son, John B. Foster, was soon followed by unmistakeable symptoms of that "cruel" malady, as Charcot truly calls it, paralysis agitans, or Parkinson's disease. He was soon compelled to withdraw from practice, and after many more months of suffering, which, in spite of the best exertions of professional friends and the most unremitting attention of his family, were often acute, he finally sank on Jan. 7th. Of a family of ten children, three only—one of whom, Dr. Michael Foster, is the distinguished Prelector of Physiology at Cambridge—with his widow, survive him.

DENIS McDONNELL, M.R.C.S. ENG.

THIS most promising student must be added to the long list of those who have fallen victims to the risks incidental to the daily work of our profession. Mr. McDonnell having matriculated at the University of London in 1875, entered the medical department of King's College in the following October, and obtained a Warneford Scholarship for proficiency in general educational subjects. He early dis-

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tinguished himself as one of the best students of the year, and obtained numerous prizes, medals, and certificates of honour. He passed the primary examination for the Fellowship of the Royal College of Surgeons, as well as the Preliminary Scientific and First M.B. of the University of London, and obtained honours at both of the last-mentioned. On obtaining his diploma last year, he was appointed assistant house-physician to King's College Hospital, and performed the duties with much zeal and energy. On the 1st of January he made a post-mortem examination of a child who had died of scarlet fever. On the 3rd he noticed some inflamed patches on his finger, and very rapidly other symptoms of blood-poisoning showed themselves. As his friends were aware that, although apparently strong and so very energetic, he had been suffering from glycosuria for some months, much apprehension was felt as to the result. On January 8th vomiting and dyspnœa set in; he became delirious, and died of coma at 9 A.M. the next morning.

Whilst Mr. McDonnell's energy and steady perseverance attracted the notice and gained the approbation of the professors of King's College, his quiet gentlemanly manners and obliging disposition made him an especial favourite with both teachers and students. To mark the esteem felt for him, it has been proposed to erect a tablet to his memory in the chapel of King's College.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on the 9th, 12th, 13th, and 14th inst.:—

Arthur T. Wills and Ralph G. Heathcote, Manchester; William Groom, Cambridge; John H. Cuolahan, T. A. Evans, and Walter B. Skelton, Guy's Hospital; Thomas W. Buckley, St. Thomas's Hospital and Manchester; Charles B. Parker, Ohio and London Hospital; Samuel G. Milner and Charles W. E. Toller, St. Bartholomew's Hospital; Philip Vincent, James D. Bluett, George Serjeant, Edward F. Greenhill, and John W. Walker, University College; John H. T. Walsh, Westminster Hospital; Edward S. Webber, Cambridge and St. Bartholomew's Hospital; Edward H. Squire, London Hospital; York T. G. Moore and Austin Bissill, St. George's Hospital; Herbert E. Cree, Middlesex Hospital; Bertram Spencer, Toronto, Canada; Walter H. Goddard, St. Mary's Hospital; Richard D. Pedley, St. Thomas's Hospital; William J. Stephens, Cecil W. Cunnington, C. L. Stow, R. N. Jones, J. Hodges, and A. Morris, King's College; J. O. Lane, Cambridge and St. George's Hospital; W. H. Burton, Ontario; G. H. Bennett and Charles J. Stansby, St. Bartholomew's Hospital; T. F. Jeyes, J. R. Howell, and W. D. J. Morris, Guy's Hospital; J. S. Reynolds, Charing-cross Hospital; H. E. Haycock, Edinburgh and St. Bartholomew's Hospital; J. H. Jones, University College; G. C. Wilkin, University College and St. Mary's Hospital; T. R. Morse, W. E. Walter, W. H. Bean, and H. Appleton, Charing-cross Hospital; Robert B. Mole and Henry Harratt, Middlesex Hospital; H. E. Richardson and Q. R. Veitch, Guy's Hospital; C. D. Hoar, University College; H. M. Davidson, King's College; R. H. Hodgson, St. Bartholomew's Hospital; and R. H. Cowan, London Hospital.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Jan. 1st:—

Hart, Robt. Alfred Hillings, Stones-end House, Southwark.

The following passed and received certificates on Jan. 8th:—

Sanjana, Kavasji Cursetji, Gower-place, Euston-square.
Sawtelle, Frederick Appleton, Chatham-place, Brighton.

The following gentlemen have also passed their Primary Professional Examination:—

Paul Bennett Conolly, Charing-cross Hospital; Richard Gilpin Cooper and Henry Wickham Stevenson, St. Bartholomew's Hospital.

COLLEGE OF PHYSICIANS IN IRELAND.—At the January examinations the following obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—James Henry Parkinson, Wm. Robert Minching Young.
MIDWIFERY.—James H. Parkinson.

MR. JAMES CHARLESWORTH, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed a Justice of the Peace for the borough of Hanley, Staffordshire.

THE CORONER'S COURT.—The adjourned meeting of medical men, to consider their relations with the Coroner's Court, was held in the Court Room, King's-road, St. Pancras, on Tuesday last, under the presidency of Dr. Hardwicke. Several fresh resolutions were moved, discussed, and carried, and suggestions made for necessary alterations in the Registration Act. It was also moved and carried, that a report of the proceedings of the two meetings which have been held should be prepared and presented for consideration to the medical profession, in view of impending legislation on the subject during the ensuing parliamentary session. Dr. Thomas, the Deputy Coroner, with the assistance of Dr. Steavenson, was requested to draw up the report. The meeting ended with a cordial vote of thanks to Dr. Hardwicke for his kindness in presiding, and allowing the subject to be discussed before him.

MANCHESTER MEDICAL SOCIETY.—The annual meeting of this Society was held on Jan. 14th, when the following office-bearers and committee were elected for the current year:—President: Dr. David Little. Vice-presidents: Dr. Daniel John Leech, Dr. Henry Simpson, Dr. John Thorburn, Mr. Walter Whitehead. Treasurer: Mr. F. A. Heath. Secretary: Mr. C. J. Cullingworth. Honorary Librarian: Mr. Thomas Windsor. Other members of Committee: Drs. John Broadbent, William Crosby, Julius Dreschfeld, C. E. Glascott, E. Gumpert, J. Hardie, Henry Humphreys, Thomas Jones, Joseph C. Peatson, David Lloyd Roberts, Jas. Ross, Mr. Wm. Hugh Hughes (Ashton-under-Lyne). Librarian: Mr. William Dykes. The annual report stated that there were 208 members at present on the roll, as compared with 198 last year; and that 1272 volumes were added to the library during the year 1879, bringing the number of volumes now in the library up to 23,895.

Medical Appointments.

BAILEY, J. B., M.D., L.R.C.S.Ed., & L.M., has been appointed Medical Officer for the Clunbury and Hopesay District of the Clun Union, Salop.

BAYLY, J., M.R.C.S.E., L.S.A.L., has been appointed Consulting Medical Officer to the Great Yarmouth Hospital, upon retiring as Surgeon, according to the rules.

BLAND, A. R. H., M.D., C.M., has been appointed a Medical Officer to the Brompton Provident Dispensary.

BOULTING, W., L.R.C.P.L., has been appointed a Medical Officer to the Hampstead Provident Dispensary, vice Gwynn, resigned.

BROCK, W. J., M.B., C.M., has been appointed an Assistant Physician-Accoucheur to the Glasgow Maternity or Lying-in Hospital, vice Sloan, appointed a Physician-Accoucheur.

BROWN, P., M.D., has been reappointed Medical Officer of Health for the Blaydon-on-Tyne Urban Sanitary District, at £35 for one year.

BROWN, W., M.B., has been appointed House-Surgeon to the Gloucester General Infirmary and Gloucestershire Eye Institution, vice Bower, resigned.

CHANING-PEARCE, J., M.D., L.R.C.P., has been appointed Honorary Medical Referee to the British Home for Incurables, Clapham-rise.

CHILCOT, J., M.R.C.S.E., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Mere, Wilts, vice Watson, resigned.

COUTTS, J., L.F.P.S.G., has been appointed Medical Officer and Public Vaccinator for the Parish of Kirkcowan, Wigtonshire, vice Fitzmaurice, resigned.

COX, A. G., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer and Public Vaccinator for the Crewkerne No. 2 District of the Chard Union.

DAWSON, Y., M.D., L.R.C.S.I., has been appointed a Medical Officer to the Brompton Provident Dispensary.

DOBSON, A., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the West District of the Holbeck Union.

FORSYTH, R., M.D., C.M., has been appointed Medical Officer and Public Vaccinator for the Tong District of the North Bierley Union, Yorkshire, vice Hunter, deceased.

GRANDISON, A., M.B., L.R.C.S.I., & L.M., has been appointed Resident Medical Officer to the Leicester Friendly Societies' Medical Association, vice Cope, resigned.

HUXTABLE, Mr. L. R., has been appointed Resident Clinical Assistant to the Royal National Hospital for Consumption, Ventnor, vice Jelly, resigned through ill-health.

KITCHENER, T., M.D., M.R.C.S.E., has been appointed Medical Officer to the Southern Dispensary, Widcombe, Bath, vice Lawrence, resigned.

KNIPE, W. M., M.R.C.S.E., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Melbourne, Derbyshire, vice Tasker, deceased.

LAMBERT, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the newly-formed Thornbury and Tyersal District of the North Bierley Union, Yorkshire.

LINDSAY, A., M.B., L.R.C.S.Ed., has been reappointed Medical Officer for the Morland District of the West Ward Union, Westmoreland, at £25 per annum, for three years.

MACDONALD, D., B.Sc., M.B., C.M., has been appointed Professor of Biology in the Elphinstone College, Bombay.

MACFIE, J., M.D., C.M., F.F.P.S.G., has been appointed Aural Surgeon to the Glasgow Royal Infirmary, and Lecturer on Aural Surgery in the Medical School, vice Cassells, resigned.

MAYO, A. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the St. Nicholas Lodge of the Nottingham Order of Odd Fellows, Great Yarmouth.

MITCHELL, A., M.D., C.M., has been appointed Medical Officer to the St. James Lodge of the Nottingham Order of Odd Fellows, Great Yarmouth.

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PERCIVAL, G. H., M.B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the St. Andrew District of the Northampton Union, vice W. Percival, M.R.C.S.E., L.S.A.L., resigned.

PROSSER, T. G., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Monmouth District and the Workhouse of the Monmouth Union, vice Woollett, resigned, and since deceased.

PYLE, T. T., M.D., M.R.C.S.E., L.S.A.L., has been appointed by the Quarter Sessions of the County of Durham Visiting Physician to the Dinsdale Park Retreat Lunatic Asylum.

RANSOM, F. P. F., M.D., has been appointed Medical Officer to the Workhouse, and Medical Officer and Public Vaccinator for No. 6 District of the Chesterton Union, Cambridgeshire, vice Molony, resigned.

RIGDEN, B., M.R.C.S.E., L.S.A.L., has been appointed Assistant-Surgeon to the Canterbury Dispensary.

ROBINSON, C. H., L.K.Q.C.P.I., F.R.C.S.I., has been appointed Lecturer on Botany at the Ledwich School of Anatomy, Medicine, and Surgery, Dublin.

TAAFFE, M. H., L.R.C.S.I., L.A.H.D., has been appointed Medical Officer, Public Vaccinator, &c., for the Gort Dispensary District of the Gort Union, co. Galway, at £120 per annum and fees, and £10 per annum as Medical Officer of Health, vice Nolan, resigned.

WADHAM, F., L.R.C.P.L., M.R.C.S.E., has been appointed Resident Obstetric Assistant to St. George's Hospital, vice Walker, resigned.

WALSH, M., M.D., C.M., has been appointed Medical Officer, Public Vaccinator, &c., for the Ardrahan Dispensary District of the Gort Union, at £140 per annum and fees, and £10 per annum as Medical Officer of Health, vice Taaffe, appointed to the Gort Dispensary District.

WHITEHEAD, H. R., M.R.C.S.E., has been appointed Surgical Registrar to the Charing-cross Hospital, vice Leahy, resigned.

WILSON, R. A., M.D., C.M., has been reappointed Medical Officer of Health for the Lunesdale Rural Sanitary District, Lancashire, at £25 for one year.

Births, Marriages, and Deaths.

BIRTHS.

FLEMING.—On the 9th inst., at 155, Bath-street, Glasgow, the wife of William James Fleming, M.B., of a son.

GOGARTY.—On the 9th inst., at Rutland-square East, Dublin, the wife of Henry J. K. Gogarty, L.R.C.P.Ed., of a daughter.

LEWIS.—On the 10th inst., at Storie-street, Paisley, the wife of William Lewis, M.D., of a daughter.

TREVES.—On the 5th inst., at Dalby-square, Margate, the wife of William Knight Treves, F.R.C.S.E., of a son.

WALKER.—On the 3rd inst., at King Edward-road, Hackney, the wife of William Newman Walker, junr., M.R.C.S.E., of a daughter.

MARRIAGES.

BUCHANAN—BROWNE.—On the 6th inst., at St. Nicholas, Rochester Walter Buchanan, M.R.C.S.E., to Kate Cowan, widow of T. W. S Browne, Esq.

PALMER—FAWCETT.—On the 8th inst., at Holy Trinity Church, Weston-super-Mare, by the Rev. Prebendary Hunt, Vicar, Francis Craddock Palmer, L.K.Q.C.P.I., M.R.C.S.E., L.S.A.L., of Brigg, Lincolnshire, to Laura Augusta, eldest daughter of the late Benjamin Fawcett, Esq., of Torfels, Weston-super-Mare. No cards.

SHERWOOD—WILLIAMS.—On the 8th inst., at Holy Trinity Church, South Penge, Arthur P. Sherwood, Esq., of Eastbourne, son of the late Edward Sherwood, Esq., of Purley, Berks, to Katherine Douglas, daughter of the late Major-General W. Freke Williams, K.H.

DEATHS.

BANCKS.—On the 14th inst., at 18, Promenade, Cheltenham, Thomas Bancks, F.R.C.S.E., late of Stourbridge.

BEECROFT.—On the 12th inst., Samuel Beecroft, F.R.C.S.E., of Hyde, Cheshire, aged 59.

BOOKEY.—On the 7th inst., at York-street, Dublin, Richard Bookey, M.B., aged 34.

BRADSHAW.—On the 6th inst., at Weston-super-Mare, William Hanna De la Maine Bradshaw, M.D., aged 33.

BUDD.—On the 9th inst., at Clevedon, William Budd, M.D., aged 68.

COOPER.—On the 24th ult., in London, Thomas James Cooper, M.R.C.S.E., late of Brighton, aged 47.

FOSTER.—On the 7th inst., at Huntingdon, Michael Foster, F.R.C.S., aged 69.

HUME.—On the 9th inst., at Crumlin, co. Antrim, George Alexander Hume, M.D., aged 60.

HURLSTONE.—On the 11th inst., at Summertown Villa, near Oxford, Michael Oscar Hurlstone, M.R.C.S.E., Staff-Surgeon R.N., aged 39.

JACKSON.—On the 7th ult., at Buxar, Bengal, Dr. Nevil Jackson, Superintendent of the Buxar Central Gaol, and Civil Surgeon of Buxar, aged 50.

LENEY.—On the 4th inst., at Southampton, Alexander William Henry Leney, M.B.

O'FLAHERTY.—On the 18th ult., at Ardagh, Killarney, Thomas Austin O'Flaherty, M.D., aged 56.

PORTER.—On the 9th inst., at Sherpur, Joshua Henry Porter, L.R.C.S.I., Officiating Deputy Surgeon-General.

RABLAH.—On the 9th ult., James Joseph Rablah, L.F.P.S.G., of Scarborough.

RANKIN.—On the 2nd inst., at Holles-street, Cavendish-square, George Campbell Rankin, Surgeon, Bengal Service, Retired List, aged 79.

ROBSON.—On the 9th inst., at Rock Ferry, Birkenhead, Edith, third and beloved daughter of John Robson, M.D., in her 6th year.

SHERWOOD.—On the 3rd inst., at Manchester, William Dresser Sherwood, M.R.C.S.E., aged 65.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Jan. 15th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jan. 9	30·56	S.	31	..	..	36	29	..|	Overcast
,, 10	30·52	E.	36	35	..	42	29	..	Snowing
,, 11	30·58	S.E.	39	36	..	39	34	0·62	Overcast
,, 12	30·59	E.	36	34	..	39	32	..	Overcast
,, 13	30·52	S.E.	34	33	..	37	30	..	Foggy
,, 14	30·33	N.W.	32	..	..	33	29	0·02	Overcast
,, 15	30·34	NNW	33	..	..	37	29	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

YEARLY AGRICULTURAL SERVANTS AND MEDICAL ATTENDANCE.

Dr. A. Allison, of Bridlington, writes a very forcible letter to us, though too long for insertion, on the hardship accruing to medical men from the state of the law which exempts masters from all responsibility for supplying their servants, though yearly, with medical attendance. He suggests that the only way in which a medical man can secure himself is to stipulate for his fee beforehand, particularly where the servant is prone to acts of dishonesty or to be erratic. There are, of course, extreme circumstances in which a medical man is bound to act promptly and without stipulations as to his remuneration; but in the case of servants there is no reason why from the beginning he should not have it clearly understood whether the master or the servant is to be responsible to him, and, if the latter, why he should not be paid from time to time, during the course of the illness, in fees which shall exempt him from at once the labour of keeping lengthy accounts and sending in bills.

A Fellow.—Mr. Samuel Jackson stipulated that competitors for the prize he founded should be members of the College. The subject for the next prize, 1880, is "The History, Principles, Practice, and Results of Antiseptic Surgery."

Mr. James Whitlock.—The second week in September annually, price 7*d.*

STREET AMBULANCES.

To the Editor of THE LANCET.

SIR,—It seems a tax on the benevolence of that class of humane persons who (together with the medical profession) support so many metropolitan hospitals that the arrangements provided by the State for the conveyance of serious accidents should have to be supplemented by private outlay.

The necessity of street ambulances in this busy and densely populated city has been frequently contended for in your columns, and a fact that came under my immediate notice indicated the need of some ready and available system for carrying an injured person.

Some time ago I was called to a dangerous accident, which required immediate removal to a hospital. I took upon myself to apply to a workhouse and also to the nearest police station for the loan of a stretcher. At the former they possessed none. At the latter I was civilly refused, as the inspector had no orders to lend the desired object of my search; in addition, he informed me that it might be required, if not for a street accident, for some *drunken person*.

Now, Sir, in every manufactory where dangerous trades are carried on, and at railway stations where accidents are likely to occur, the owners or companies, as the case may be, provide a stretcher at their own expense, and I cannot but think that this custom should commend itself to the owners of public-houses, gin-palaces, &c., that there may be available means for the porterage of their "accidents" to a hospital, perhaps to undergo treatment by emetics or the stomach-pump, and not enlist State aid to the exclusion of some poor individuals who meet with serious injuries in their own homes.

Your obedient servant,

Sutherland-gardens, W., Jan. 1880. ALFRED WISE, M.D.

THE LAW REGARDING FOREIGN MEDICAL PRACTITIONERS IN ITALY.

A Correspondent, *M. J.*, is anxious for information on this subject. He would be glad to be informed whether an English medical man, wishing to practise in Italy amongst his countrymen, needs to obtain an Italian qualification or to pass an examination conducted in Italian.

Mr. C. Jones.—1. Messrs. Corbyn, Chemists, Holborn, we believe.—2. Local Government Board, Whitehall, S.W.

A. M. D.—Important changes cannot be carried out without careful consideration.

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SMALL-POX IN THE UNITED STATES.

THE bulletin of the United States National Board of Health for the 27th ult. directs attention to the renewal of activity of small-pox in several cities of the States. Since the 15th November deaths from the disease have been recorded in New York, Philadelphia, Washington, and San Antonio. Philadelphia is stated to have been free from the affection for several years, and efforts to trace the origin of the malady, both in this city and in Washington proved futile. Possible introduction by infected rags is suggested. Small-pox has been prevalent along the borders of the States for some time, notably at Montreal, St. John's, N.B., Havana, and Matamoros.

Mr. W. Prosser.—THE LANCET for September 20th, 1879.

THE INHALATION OF ETHER AS A RAPID STIMULANT.

To the Editor of THE LANCET.

SIR,—I observe in THE LANCET for Dec. 27th last, p. 942, an account of case of collapse after injury to and amputation of both legs (treated at the York County Hospital), in which was demonstrated the successful and rapid action of ether as a stimulant when administered through the respiratory system, after such administered through the medium of the stomach in the ordinary way had failed to restore the action of the heart, and this fact is properly dwelt upon as one of the important points to be noted with regard to the case. Then in your issue of Jan. 3rd last, in a paper on a "Case of Aconite Poisoning," by Dr. Thelwell Pike, it is recorded that after the failure and rejection of stimulants repeatedly administered by the mouth, the subcutaneous injection of ether was resorted to with successful issue in restoring the heart's action and warding off exhaustion, though not until after three doses had thus been given of fifteen, fifteen, and twenty minims respectively, at intervals of about ten minutes. With regard to this case, Dr. Pike states: "I think we may fairly claim that the ether at any rate helped considerably to stave off death while the aconite was being eliminated, and the result of the last injection was so marked as to deserve, I think, a trial in a similar case."

It appears to me that these cases are interesting and deserving of particular attention, as showing the great and special value of ether as a rapid and diffusible stimulus. Its action in this respect is, as we all know, rapid, even when it is administered by the stomach, but more rapid, of course, when subcutaneously injected, and more rapid still (and almost instantaneous) when inhaled. Considering these facts, and that ether at the best of times constitutes a nauseous, irritating, and very unpalatable potion, we cannot fail to learn that its administration by inhalation should be the first resort in all such cases, as being the most convenient method by which to administer it, and by means of which we cannot fail to get certain and rapid action in all cases without any fear of rejection, as in the case of administration by the stomach. Under these circumstances it is a wonder that such a simple expedient as a few whiffs of ether from a pocket-handkerchief should not long before now have suggested itself as being the most convenient, rapid, and sure stimulus that can be given in cases where, from depression or temporary failure of the heart's action, prompt action and speedy effect form the desideratum. Indeed the whole subject of the administration of drugs by inhalation in preference to any other method is one that well deserves close and further attention, with a view to the greater use of drugs in this manner (where possible), on account of the more speedy and certain effects thereby produced. In the series of lectures on "Anæsthetics" which the late Sir James Simpson was wont to interpolate in his general course, I find, on reference to my notes (taken during the session 1867-68), that Sir James, after stating that "they are absorbed by the mucous membrane of the lung—a vast surface, fifty times or more larger than the superficies of the whole body,"—made the following suggestive remarks: "It will be a great advance in therapeutics to cause medicines to be given by inhalation where possible, in order that they shall act more readily and more quickly. A great deal of scope here exists for work by ingenious men." These are the exact words used by my former distinguished teacher, and I think they will bear repeating and airing afresh, even at the present time.

I am, Sir, your obedient servant,

Richmond, Jan. 1880. J. WILKIE BURMAN, M.D. Edin.

R. W. C.—The assistant or the locum tenens acts in that capacity in the services specified. In the absence of any special contract to the contrary, for which there is something to be said, such fees, like all others, accrue to the principal, who, however, is not exempted from the duty of regarding them as special fees.

Surgeon.—Yes.

THE BRITISH MEDICAL SERVICE: A QUESTION AND A SUGGESTION.

To the Editor of THE LANCET.

SIR,—Is there any good reason why a qualified medical man should be debarred from competing for the British Medical Service if he has previously held a commission in another capacity in one of Her Majesty's services, whilst there is no difficulty in obtaining leave to take Holy Orders? If the directors of the examinations for the public services would affix to the names of the successful candidates their respective qualifications, I think the lists would be both interesting and instructive.

I remain, Sir, yours truly,

Plymouth, Jan. 2nd, 1880. A. H. B.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT the written examination on Monday, the 5th instant, the candidates for the Membership, 140 in number, were required, from one to three o'clock, to answer four, and no more than that number, out of the following six questions on Anatomy:—

1. Describe the clavicle, and mention the various structures attached to, and in relation to it.
2. Describe the ligaments of the elbow and superior radio-ulnar articulation, and mention the structures in immediate relation with them.
3. Describe the boundaries and contents of the posterior triangle of the neck.
4. Describe the arrangement of the peritoneum in the *female* pelvis, giving its relations to the several organs.
5. Describe the posterior mediastinum and its contents.
6. The orbit having been unroofed, describe all the parts met with successively down to the level of the optic nerve.

The candidates were then released for an hour, at the expiration of which time the following paper on Physiology was submitted to them, with the same direction to answer four out of the six questions, the time allowed for that purpose being from four to six P.M.:—

1. What do you understand by the term protoplasm? Describe the different forms of epithelial cells, stating where they are found.
2. Give the structure of a capillary bloodvessel, and state the conditions which modify the capillary circulation in any part or organ.
3. What is the average temperature of the body? How is this maintained and regulated?
4. What are the functions of the third division of the fifth pair of cerebral nerves, and of the portio dura of the seventh? Give the evidence on which your statements are founded.
5. Describe the structure of a lobule of the liver. What are the functions of the liver?
6. Give the changes which take place in the circulation of the blood at birth, and state the cause or purpose of each.

At the oral examination each candidate had fifteen minutes at the Anatomical table, and the same time at the Physiological section. The Anatomical sections were represented as follows:—Table A: Messrs. C. Heath and T. P. Pick. B: Messrs. A. E. Durham and W. Rivington.—The Physiological sections. Table C: Messrs. H. Power and B. T. Lowne. D: Messrs. J. W. Hulke, F.R.S., and W. M. Baker. Mr. John Wood, F.R.S., of King's College Hospital, was the Chairman.

THE PREVENTION OF ABUSES IN GENERAL OR SPECIAL HOSPITALS.

THE Secretaries of the Bradford Medico-Ethical Society, 35, Manor-row, Bradford, would be glad of any information from those well versed in the administrative work of special or general hospitals as to the best means of preventing the giving of surgical or medical relief to those who are able to pay for private medical or surgical advice. We are of opinion that there is no other way of doing this than by a careful investigation into the circumstances of applicants, and by entrusting this duty to an officer whose judgment and whose kindness can be relied on.

James W. should try for the Durham or the St. Andrews degree.

"MEMOIRS OF CAPTAIN CREIGHTON."

To the Editor of THE LANCET.

SIR,—The correspondent whose communication you quote at page 968 of your last December number does not seem to be aware that the Captain Creighton, whose memoirs purport to have been edited by Swift, is as purely a fictitious character as Captain Samuel Gulliver or Robinson Crusoe. All that the Dean says about the pipes of lead and the tent of green cloth lying in his hero's belly for seven months and four days is as entirely the product of his fertile brain as the Flying Island or the Horses' Parliament. Moreover, if the so-called "memoirs" are referred to, it will be seen that the ultimate healing of the wound in twenty days is attributed, not to the drainage-pipes, but to another remedy prescribed after the patient's removal to Ireland. The connexion, therefore, which it is desired to establish between the surgery of 1731 and that of the present time falls to the ground, and is of about as much value as Mother Shipton's supposed prophecy of the invention of steam-carriages and railroads. Sir Walter Scott says that Swift and Defoe's descriptions are such "as almost to induce us to believe that we are reading real history." This your correspondent has obviously done; but I fear he would look in vain for an entry of Captain Creighton's commission in the records of the War Office.

I remain, Sir, yours &c.,

Jan. 6th, 1880. E. G. S.

CONSULTING FEES TO GENERAL PRACTITIONERS.

IT is usual and altogether proper for general practitioners of good standing, when meeting a consulting physician by special appointment, to charge or to be offered a consulting fee, which should vary with the means of the patient, but should in nowise be the fee charged by such a practitioner for an ordinary visit to a patient. The slightest reflection will show that the duty of taking part in a consultation, at an hour fixed for the convenience of another, is not to be rewarded by a fee that would merely cover an ordinary visit.

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THE LEGALITY OF AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATIONS.

Practitioner.—Our correspondent questions the legality of these institutions, especially with reference to their right to dispense medicines to their members, the proprietors not being qualified pharmacists. He avers that they do great injury to medical practitioners by admitting all classes of persons to medical benefits on very low terms. We fear there is no doubt about this; and we think the time has come when the profession of any town should let it be understood that any gentleman undertaking the duties of such an office, and selling his services to people in comfortable circumstances for a mere pittance, injures and degrades his profession.

D. O. C. Raye (Calcutta.)—The fresh brain is to be placed in a solution of chloride of zinc (50 per cent.) for ten or twelve days, and then transferred to alcohol for ten days, after which it is placed in glycerine containing 1 per cent. of carbolic acid; when sufficient glycerine has been absorbed, it is set aside to dry and then varnished.

Mr. J. H. Wraith and *Virus.*—Messrs. Corbyn, Holborn.

THE EAST WIND AND ITS EFFECTS.

To the Editor of THE LANCET.

SIR,—The following remarks may not prove uninteresting to those of your readers who have paid some attention to the connexion existing between the occurrence and prevalence of an east wind and certain diseases which follow in its train. Bad enough as is the east wind without cold, it is infinitely worse with, as rheumatic and asthmatic sufferers too well know. It has long, and not undeservedly, enjoyed an evil reputation as a factor and carrier of disease, and this year it appears to have introduced something new in the way of colds—an affection, in fact, which (lying within an ideal triangle, whose sides might be represented as formed by influenza, bronchitis, and whooping-cough) may be considered as occupying the contained area, and partaking of the mixed characters of all three diseases. Many such cases, consequent upon a sudden shift of the wind to the east, accompanied with intense cold, have come under my notice during the past six weeks. They were ushered in by chilliness, shivering, languor, pains in the head and limbs (sometimes heavy, dull, and aching, at others of a darting, rheumatic, or neuralgic character), followed, however, in most cases by very little reaction; coincident with which, in all cases, appeared running at the nose, profuse, but never irritant as to the watery discharge, the subacute inflammation of the nares passing backwards to the larynx and bronchial tubes, producing cough, occurring in paroxysms of the most violent nature, ending in scanty, frothy expectoration, without whooping, but frequently accompanied with vomiting; the bronchitis never becoming intense, but the cough remaining long after all indications, stethoscopic or otherwise, of bronchitis had vanished, and causing great distress to the patients; the pulse and skin, as to rate and heat of surface, being throughout but little affected.

I was about to say that I regretted having suffered an attack; but if a discovery made during its progress should draw attention to the matter, and elicit an invariable connexion between the result of my discovery and the disease in question as an exciting cause, I shall not regret having suffered. I will now briefly say what was the discovery referred to. During one of the paroxysms of coughing it occurred to me to examine some of the scanty sputum which I got rid of at its close. I thereupon took a perfectly clean slide, and coughed up a little sputum upon the slide itself, over which I placed a piece of thin glass, which I had previously dry-wiped, and, placing the slide upon the microscope stage, examined it with an A eye-piece and half-inch objective. The usual appearances of almost healthy sputum—mucus cells with epithelium—presented themselves; but, in addition, there was present a living organism, which was twice the size of the ciliated epithelium sometimes met with, and, moreover, of a globular shape, furnished with cilia at the upper border of a distinct narrow collar or neck, these cilia being not only unusually long and in rapid action, imparting to the body a rocking motion, but thicker and more distinct than, for the size of the organism, cilia usually are. I am sorry to say, however, that it was the only body of the kind that I did discover, and this nearly at the close of the case. Nor have I had an opportunity of examining the sputa of patients similarly affected; this I purpose in future to do; and if any of your readers feel disposed to follow the same line of investigation, I should feel glad to know the results of their investigations.

Your obedient servant,

SAMUEL SMITH,

Bristol, Dec. 26th, 1879. Surgeon-Major, 1st Ad. Batt., G.E.V.

THE WEIGHT OF THE BRAIN.

E. F. asks a question, about which there is always much curiosity—namely, the highest weight of the human brain. The well-known instance of the brain of Cuvier, which weighed 64 oz., has been exceeded, a maximum of the adult male brain in a series of 278 cases having been noted at 65 oz. (Quain's Anatomy, eighth edition.) The same authority gives 56 oz. as the maximum weight of a female brain in a series of 191 cases, the average weight being 49½ oz. for the male and 44 oz. for the female brain.

A Widow.—The question is a legal and complicated one, and to be answered only by a lawyer.

THE COPLAND FUND.

THE Committee of the above Fund, which was instituted for the benefit of the widow and children of the late Mr. J. C. Copland, beg to announce that the subscriptions hitherto received amount to only £84 9s. As this sum is quite inadequate to meet the necessities of the case, the Committee are induced to solicit further contributions, recalling the facts of Mr. Copland's services to medical literature, especially in the assistance rendered by him in the composition of the well-known "Copland's Cyclopædia," his own blameless character, and the suddenness of the visitation by which he was carried away in the prime of life before he had time to make any adequate provision for his family. Subscriptions may be forwarded to the Treasurer, Dr. Semple, 8, Torrington-square, W.C.; or to Arthur Norton, Esq., Secretary, 6, Wimpole-street, W.

THE INTRAVENOUS INJECTION OF AMMONIA IN ACUTE ALCOHOLISM.

To the Editor of THE LANCET.

SIR,—I read Mr. Hamilton's communication on the above subject, which appeared in your issue of the 2nd August last, with considerable interest, more especially as I found in it confirmatory evidence of the correctness of my views in regard to the value of the intravenous injection of ammonia in acute alcoholic poisoning. In the course of the controversy in 1875 as to the utility of this treatment in snake-poisoning, I wrote thus in one of the Australian papers (the *Telegraph*): "No one wishes to deny, or can deny, that the intravenous injection of ammonia has a most powerful effect in the coma resulting from alcoholism; and had Dr. Halford confined himself to recommending it in such cases, and not as a remedy in snake-poisoning, he would have deserved the thanks of all," &c. At the time Dr. Halford's supporters were indignant that it should be thought possible that they were mistaken in the symptoms of snake-poisoning, and protested that the injection of ammonia into the veins could not possibly be a remedy for alcoholic poisoning. For example, Dr. Bowen, in his address to the Medical Society of Melbourne, remarked: "With reference to the recorded cases of snake-bite treated by this means—the intravenous injection of ammonia,—many persons had alleged that the symptoms which were supposed to have been caused by snake-poisoning had, in fact, arisen from alcoholic poisoning, owing to the quantity of brandy given to the patient. This could not, however, be the case, as it was well known that alcoholic poisoning would show congestion of the brain and lungs to such an extent that it could not be annihilated in a few moments by the introduction of any remedy." In answer to this assertion, I quoted one of Professor Halford's selected cases of supposed snake-poisoning. Mr. Elms, the reporter of the case in question, thus records it: "The patient was perfectly comatose, and the pupils were contracted. In two hours the comatose symptoms were so great that I was rather alarmed. At the same time it was a sleep which any man *who did not know of the bits* [italics mine] would have said to be drunken." The poor man had been dosed with one and a half bottles of brandy in three hours. Ten minims of liquor ammoniæ were injected into a vein, and, according to the reporter, the patient "woke up at once, and recognised friends and walked about." Besides this example of "snake-poisoning," Dr. Halford recorded others of a similar kind. For instance, a boy supposed to have been bitten by a snake was taken to hospital "very drunk," and after the injection of ammonia he, "very unusually, soon recovered." I might, moreover, have pointed out that the administration of ammonia has for years been thought very highly of as a remedy in alcoholic poisoning. Having in the course of my experiments had considerable experience in the intravenous injection of various substances, I think it right to mention that great care should always be taken to inject *very slowly*, so as to admit of the free admixture of the blood with the injected material, otherwise alarming, if not fatal, symptoms may result.

Yours &c.,

Bengal, Oct. 15th, 1879. VINCENT RICHARDS.

Scrutator.—Such a visit is to be regarded as an act of fraternal kindness to a neighbouring practitioner, and does much to increase the amenity of professional life.

RUPTURE OF THE HEART.

To the Editor of THE LANCET.

SIR,—The following short notice of a case of rupture of a hypertrophied heart in an old Hindoo during a scuffle with his son, whom he wished to detain in the house against his will, may be of interest to your readers.

On opening the chest to search for the cause of the sudden death, which occurred the previous evening, the pericardium was found distended by red serum, and the heart encased in one large clot, weighing nine ounces. The point of rupture was found in the left ventricular wall at the thick edge, and about half way between the base and apex. The organ weighed thirteen and a half ounces; its muscular tissue was healthy to the eye, but the front was covered, and at the base loaded, with fat. Arcus senilis existed in both eyes. The man was reported as of exceptionally active habits, and the accident seems attributable to a disproportion between the powers of effort for his time of life and the textural strength of the organ, no doubt impaired by senile degeneration.

Yours faithfully,

F. C. BARKER, F.R.C.S.I.,

Oct. 31st, 1879. Acting Civil Surgeon, Rutnagiri, Bombay.

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A CORRESPONDENT, writing from British Guiana, says:—

"As you remarked in your issue of the 4th October with reference to the Cape Bill, so with us, the tragedy of 'Hamlet' is being played with the hero left out; for no medical officers of health have been appointed nor a chief health officer to 'organise a sanitary system throughout the colony.' The Central Board of Health is composed of the members of the Colonial Legislature, some officials, with the Attorney-General as chairman, and include among their number the Surgeon-General and one other medical officer. The sittings of the Board are getting fewer every day. You will be surprised to learn that there is no compulsory vaccination in this colony, and that the registration of deaths is very imperfectly performed, and under no skilled supervision."

LETTERS not noticed in the current week will be dealt with in the next issue of THE LANCET.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Bryant, London; Sir Henry Thompson, London; Dr. Thorowgood, London; Mr. Walter Coulson, London; Dr. Semple, London; Dr. Vinen, London; Mr. Teevan, London; Mr. Davis, Hereford; Mr. Duke, Dublin; Professor Faber, London; Dr. Johnston, Shanghai; Dr. Macdonald; Dr. Naylor, Tasmania; Dr. Barnardo, London; Mr. J. Hall, London; Mr. White, London; Dr. Poulton, London; Dr. Ross, Croydon; Dr. Cameron, Glasgow; Mr. Gallamore; Dr. J. B. Mawer, Bucharest; Mr. Hamerton, Lambeth; Mr. G. Barnard, London; Mr. Fernandes, London; Mr. M'Evoy, Dublin; Dr. Burman, Richmond; Dr. Pearce, Brixton; Mr. Sampson, Painswick; Dr. Buchanan, Glasgow; Mr. S. Murphy; Mr. Chatwood, London; Mr. Silke, Edinburgh; Mr. Dobson, Holbeck; Mr. Wraith, Over Darwen; Dr. Steavenson, London; Mr. Wiglesworth, Liverpool; Mr. E. Canton, London; Mr. Godlee, London; Mr. Popert, Southport; Mr. Newstead, London; Mr. N. Hardy, London; Mr. W. C. Jones, Bayswater; Messrs. Allen and Hanbury, London; Messrs. Hill and Son, London; Mr. Rigden, Canterbury; Mr. Pickering, Monaco; Messrs. Sampson Low and Co., London; Mr. T. Y. Jones, London; Dr. Blades, London; Dr. F. Robinson, London; Mr. Wadham; Mr. Ryan, Sheffield; Mr. Gawith, London; Dr. J. Mackenzie, Manchester; Mr. Charlesworth, Hanley; Miss Steward, London; Mr. Claremont, Sheffield; Dr. Landolt, Paris; M. Burq, Manchester; Mr. Myers, Takow, China; Mr. Cullingworth, Manchester; Mr. Moore, Coventry; Mr. Birt; Mr. Ingpen, London; Mr. Marton, Kennington; Mr. Vanes, Uitenhayi; Mr. L. Tait, Birmingham; Dr. Hill, Oldham; Mr. Maiben, Gloucester; Messrs. Rowcliffe and Co.; M.D.; Scrutator; One in the Service; A. M.; L.R.C.P.; E. F.; Dental Licentiate; A. M. D.; Medicus; Virus; A Subscriber; M.R.C.S., L.S.A.; Y.; A. C., Stanhope; Amicus Exercitus; R. M.; James W.; A British Guiana Surgeon; Melison; Alpha; A Student; J. L., Oldham; M.R.C.S.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Hannay, Weobley; Mr. Appleton, Beverley; Mr. White, London; Dr. Palm, Largs; Mr. Monkton, London; Mr. Clark, Birmingham; Mr. Spiers; Messrs. Tatham and Co., Manchester; Dr. Malins, Dublin; Dr. Pugh, Cannock; Dr. Pratt, Newtown; Dr. Squire, London; Dr. Byers, Belfast; Mr. Simons, Thaxted; Dr. Clarke, Folkestone; Mr. Maw, Bradford; Mr. Dransfield, Penistone; Mr. Williams, Sunderland; Mr. Watkin, Manchester; Mr. Redwood, Rhymney; Mr. Kesteven, Holloway; Mr. Scott, Manchester; Mr. Laen, Pembroke; Dr. Robson, Rockferry; Miss Smith, Oxford; Mr. Buckby, Leicester; Mr. Baker, Birkenhead; Dr. Peiterson, Maclean, South Africa; Mr. Macnamara, Rye; Mr. Collier, Hounslow; Mr. Elliott, Carlisle; Medicus, London; Alpha, Irthlingborough; H., Great Whitney; Theta; Chron; W. M.; E. V., Lincoln; X. Z., Torquay; A. H. B., Canterbury; Practitioner; J. B., Bow; Scapula, Wigan; Delta, Slaithwaite; P. H. D., Leeds; W. H. R., Gunnislake; W. C., Tottenham; J. D., Eastbourne; N. L.; Medicus, York; R. B., Preston; H. F., London; M.D., London; J. D., Newport; X. Y., Felling-on-Tyne; Vertebra, Hulme; Theta; J. H.; Ramsgate; Chirurgus, Bristol.

New York Tribune, High Peak News, Queenslander, Hand and Heart, Heckmondwike Herald, Leeds Mercury, Manchester Guardian, Liverpool Daily Post, Irish Daily News, Bristol Mercury, &c., have been received.

NOTICE.

In consequence of THE LANCET being frequently detained by the post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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Medical Diary for the ensuing Week.

Monday, Jan. 19.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
MEDICAL SOCIETY OF LONDON. — 8½ P.M. Lettsomian Lectures: Mr. W. F. Teevan, "On Enlarged Prostate."

Tuesday, Jan. 20.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Schäfer, "On the Physiology of Muscle."
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Late Hereditary Syphilis, Organs affected by Visceral Syphilis; Malformation of Heart, with transposition of Aorta and Pulmonary Artery; Dislocation of External Semilunar Cartilage of Knee-joint; Dislocation and Fracture of Clavicle; Dislocation forwards of First Phalanx of Thumb; Œsophagus and Stomach from a Case of Carbolic-acid Poisoning; Congenital Malformation of the Left Kidney, Double Ureter on both sides of the Body; Drawings of Cancer; Membranous Inflammation of the Air-passages; Diseased Bone; Congenital Occlusion of the Duodenum; Gangrene of the Colon; Ulcer of Stomach; Perforating Ulcer of Duodenum; Epithelioma of Pharynx; Cases of Locomotor Ataxia, with Osseous and Articular Lesions (living specimens).

Wednesday, Jan. 21.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at th same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

Thursday, Jan. 22.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION. — 3 P.M. Mr. H. H. Statham, "On Modern Architecture since the Renaissance."

Friday, Jan. 23.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Ordinary Meeting.
ROYAL INSTITUTION.—8 P.M. Evening Meeting.—9 P.M. Dr. Carpenter: "Sea and Land in relation to Geological Time."
CLINICAL SOCIETY OF LONDON. — 8½ P.M. Mr. Pick, "On a Case of Sub-astragaloid Dislocation." — Dr. Hewan (for Mr. Adam), "On a Case of Bullet-wound of the Lung." — Dr. Habershon and Mr. Davies-Colley: "Pyelitis; Discharge of Pus; Incision in the Loins; Recovery." — Dr. Habershon: "Chylous Urine after Ague in India; Albuminuria; Cessation of Chylous Urine with the Development of Glycosuria and Polyuria."—Dr. Pavy will exhibit a modified form of the Copper Test for Sugar, specially adapted for Clinical use.—Dr. Sturge will show two Cases of Trade-neurosis.

Saturday, Jan. 24.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Rupert Jones, "On Coal."

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REPORT ON "MALTINE."

By W. S. HAINES, M.D., Prof. of Chemistry and Toxicology, RUSH MEDICAL COLLEGE.

From THE CHICAGO MEDICAL JOURNAL AND EXAMINER.

"CHICAGO, November 18th, 1879.

"In order to test the comparative merits of **MALTINE** and the various Malt Extracts in the market, I purchased from different druggists samples of **MALTINE** and of the most frequently prescribed Extracts of Malt, and have subjected them to **CHEMICAL ANALYSIS.**

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"The large amount of **PHOSPHATES** and **ALBUMINOIDS** found in the **MALTINE** demonstrates, moreover, the **SUPERIOR SKILL** and **CARE** employed in its preparation, and thoroughly warrants the confidence placed in it by the Medical Profession. W. S. HAINES."

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From THE BRITISH MEDICAL JOURNAL.

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From THE MEDICAL TIMES AND GAZETTE.

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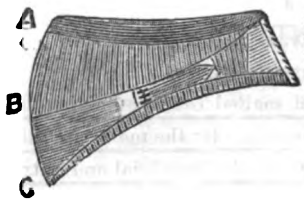

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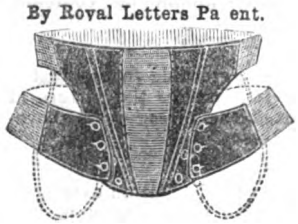

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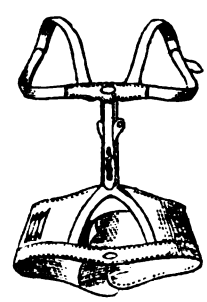

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Clinical Lecture
ON
PULMONARY PHTHISIS, WITH FIBROID CONTRACTION OF THE RIGHT LUNG;

DISPLACEMENT OF THE HEART UPWARDS AND TO THE RIGHT; ANGULAR BENDING OF THE AORTA, AND DILATATION OF THE ANGLE, SIMULATING A CONSIDERABLE ANEURISM; DEATH FROM MALIGNANT DISEASE OF THE COLON AND PERITONITIS, ETC. ETC.

By DAVID JAS. BRAKENRIDGE, M.D., F.R.C.P.E.,
PHYSICIAN TO THE ROYAL INFIRMARY, AND LECTURER ON CLINICAL MEDICINE, EDINBURGH.

(Concluded from p. 82.)

READ in the light of the facts and explanations given, the changes which took place in the size and form of the pulsating area are not far to seek. First: We had a small circular area, about one inch in diameter, making its appearance in the second intercostal space; evidently indicating the commencing bend on and outward displacement of the aorta, from the upward displacement of the heart. Second: After a time this pulsating area rapidly increased in size, until it came to occupy an oval area extending longitudinally over the three upper intercostal spaces. This was the result of the further contraction of the lung. It indicated progressive doubling of the aorta upon itself, increasing obstruction to the flow of blood, and pressure upon, with dilatation of, the angular bend, along with outward and upward displacement of the right auricle and of the pericardium covering both the aorta and auricle. It was further distinctly noticed during life that in the first and second interspaces, the portion corresponding with the displaced and dilated aorta, distinct expansile pulsation, with systolic fremitus and double impulse &c., were well marked; while over the lower portion (that represented by the auricle) the pulsation was feebler and more flickering and the sounds were less distinct. Finally, a change in shape and position to that represented in the diagram (Figs. 2 and 3, p. 82) took place towards the termination of life; because a continuance and increase of the same causes—perhaps favoured by the rapid ascitic accumulation in the peritoneum, which would, on the one hand, diminish the arterial tension in the aorta, and, on the other hand, exercise an upward pressure on the heart, liver, and lungs—led to further displacement of the sac with its contents, until it assumed the shape and position noted towards the end of life, and found after death.

These, gentlemen, seem to me to be the conclusions logically deducible from the facts observed during life, and after death, in this most interesting case. They explain satisfactorily to us how the signs were markedly those of vascular tumour. They also account for what was noted throughout as a remarkable circumstance—viz., that the vena cava had escaped pressure.

I have thought it right, gentlemen, to draw your attention to this rare, interesting, and I believe hitherto undescribed condition, because it must, in future, be taken into account in the diagnosis of aneurism, along with other conditions, such as pulsating empyema, carcinoma, &c., which may simulate that disease. I confess, at the same time, that it will always be a most difficult point in diagnosis to distinguish a bent, displaced, and hyper-distensile aorta—such as we have in this case,—from aneurism. Indeed, the distinction is only one of kind and degree; for this was in reality an aneurismal tumour of all the coats of the healthy aorta—emphatically, in a sense, a *true aneurism*.

In such a case as this, it might be expected that the alteration in the position of the heart, taken in connexion with the signs of contraction of the right lung, would have afforded some clue to the real nature of the changes taking place; and in ordinary circumstances it would. In this case, however, the heart was overlapped by an emphysematous border of the left lung, and its left apex was displaced backwards by a dilated and hypertrophied right ventricle, so that the apex-beat could not be felt, and the left limit of deep percussion dulness could not be accurately determined.

Before passing from this question, it is worthy of note that such persistent distensile pressure must have acted on the healthy coats of the aorta for a period of about three months *without producing atheroma*. Doubtless, if the man's life had not been cut short by those abdominal diseases which we will proceed to consider immediately, the cup-shaped dilatation present at the bend of the aorta would have become the seat of degenerative atheromatous changes, followed by the production of indubitable aneurism in the fullest sense of the term.

The pulmonary phthisis present in this case, which we have already considered, affords an interesting example of the effect of contraction of the lung upon the position, and it may be the function, of an adjacent organ. Possibly it may also offer a clue to the etiology of a certain class of cases of aneurism of the ascending aorta. I shall certainly examine most carefully in future the post-mortem position of the heart and vessels in all cardiac displacements, and aneurisms of this region which have been associated with contraction of the apex of the right lung. The phthisis pulmonalis may further serve as a hint to connect the thoracic diseases in this case with those morbid conditions of the abdominal organs which we now proceed to consider.

On October 23rd this was noted: "The patient has been suffering for the last two days from *pains in the abdomen*. The pains are worst *in the left iliac region, and are not affected by pressure*." On Nov. 7th: "Diarrhœa has been present for the last three days." This diarrhœa was repeatedly checked by treatment, but tended to recur. On the night of Dec. 2nd it was recorded that the patient suffered from very profuse sweating. This persistent pain, diarrhœa, and profuse sweating, supervening on the pulmonary phthisis, were thought to indicate, as they naturally do, secondary phthisical ulceration of the bowels. This diarrhœa continued to recur until the death of the patient.

The post-mortem showed a few transverse phthisical ulcers on the sigmoid flexure of the colon, also on the ileo-cæcal valve. But in the same regions signs and symptoms were now developing which had a different and even graver significance. On Dec. 14th I find this note in the report of the case:—"No return of the diarrhœa since December 11th, but this morning a solid tumour can be felt in the left iliac region. The tumour is about six inches long and two inches broad, hard to the touch, slightly doughy, and lobulated. It is painful on *firm pressure*." The diagnosis then made was that it depended on "fæcal impaction on the sigmoid flexure of the colon, possibly indicating commencing cancer."

Now, before I pass on any further, I wish to draw your attention very particularly to the significance of this sign as an indication of commencing malignant disease. I do not in the least mean to assert that fæcal impaction always means malignant disease of the intestine; on the contrary, we know that it may arise from many causes. I have generally found, however, that in patients presenting a decidedly cachectic appearance, as was the case in J. M——, localised pain, followed after a time by decided fæcal obstruction, coming on insidiously at the seat of the pain, has so frequently been associated with commencing malignant disease that I think in such cases the presence of such a condition should be considered probable. This is more particularly true if the accumulation should manifest a decided tendency to recur at the same spot. Such a tendency, preceded by severe pain at that spot, even although, on clearing out the bowel, no tumour can be felt, where the patient is more or less cachectic, should be looked upon as being at the least of very grave significance. I lay the more stress upon this point because I have frequently seen the removal of such a "phantom tumour" regarded as proof of the absence of any malignant growth, and the tendency of the statements in some of our text-books on this subject is certainly to encourage this error. Most assuredly the fæcal accumulation in this case would have led to a very speedy termination of the patient's life had not the means employed by my resident physician, Dr. Lamb, been completely successful in temporarily overcoming the obstacle. I think it worth while to give you somewhat in detail the means employed in this case, which resulted, after their persevering application for ten days, in complete relief for the time, and the prolongation of the patient's life for about six weeks. If there is one thing more than another that should be impressed upon your minds as prac-

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titioners, it is the necessity of persevering with rational means of treatment so long as there are no contra-indications.

From Dec. 14th to the 16th inclusive enemata were regularly given several times a day, but with almost no success. At first a little crumbly fæcal matter came away; latterly nothing whatever. On the 16th the pain was still increasing; the tumour remained unchanged, and there were very frequent calls to stool. In the evening the tube of a stomach-pump was passed up to the mass, and an enema of castor and olive oils slowly injected, frequent pauses being made, and the operator's fingers being forcibly thrust within the sphincter whenever the patient manifested any tendency to reject the enema. In spite of every precaution, however, only about one pint of fluid was received, and even that was rejected immediately on the tube being withdrawn. A small quantity of light crumbling matter, almost cretaceous in character, in small masses, the size of peas, came away mixed with granular detritus and fluid. On Dec. 17th the patient continued to pass frequent very scanty motions, the tumour remaining little, if at all, diminished in size.

On Dec. 18th manipulation was tried. The upper end of the mass being fixed, its lower part was cautiously kneaded, and attempts were made to detach parts, and push them down towards the rectum. After some time, when considerable progress had apparently been made, the under-finger of the left hand was introduced as far as possible into the rectum, while the right hand was used to push the mass down from above. Only a few small and detached fragments could be reached, and, as the patient was considerably exhausted, no further attempt was made that night. Dec. 19th: The patient has passed a good deal of fæcal detritus, but the tumour is still of considerable size. It is, however, situated lower down than it was before the manipulation. In the evening manipulation was resumed. A lump, the size of a walnut, was removed by the finger, but the main tumour could not be reached from below.—Dec. 20th and 21st: Frequent stools of broken-down matter. The patient has no pain; feels much better.—Dec. 23rd: Tumour quite gone. The bowels continued, with occasional assistance of simple medicine, to act freely.—Dec. 30th: There is this note in the record of the case—"Diarrhœa, four or five motions daily; thin, brownish, and very fetid." Diagnostic note of the same date—"The suspicion of malignant disease of the intestine is considerably stronger than it was. It seems, indeed, probable from the rapid emaciation and cachectic appearance of the patient, and from the persistent very fetid diarrhœa."

At the post-mortem a month afterwards it was found that, in confirmation of the view taken from the commencement, there was situated at the sigmoid flexure a large fungating soft growth, which looked like a sarcoma growing from the mucous membrane. Microscopic examination showed it to be a cylinder-celled epithelioma, a very rare form of cancer. There were several polypus growths from the mucous membrane at different parts of the colon.

For a week, from Dec. 30th to Jan. 5th, the patient was in the country, and his condition during that period was not noted. After his return on Jan. 5th, the abdomen was found to be considerably distended, presenting on percussion drum-like resonance all over; pain recurring, chiefly in the left iliac fossa, but when severe pretty general over abdomen; no tenderness on firm diffuse pressure. Ordered half a grain of morphia.

Jan. 8th.—Evening: Pain in the abdomen severe; subcutaneous needle run through the skin, but nothing injected; relief almost immediate and lasting.—11th: Abdomen tightly distended, but resonant all over; pain recurring in left iliac fossa. No tumour can be felt, though palpation can be thoroughly practised, and causes no aggravation of the pain. Diarrhœa continues; two or three fetid liquid stools daily.—20th: Patient much weaker since last report, nine days. Abdomen dull on percussion laterally and inferiorly, but no fluctuation to be made out. Œdema of both feet, much most marked of right; diarrhœa as before.—25th: Abdomen more distended; dulness increased; distinct fluctuation; no tenderness nor tumour; patient sinking.—27th: Fluctuation well marked in lumbar regions; slight œdema of feet. A diagnostic note was made to the effect that asthenic peritonitis had apparently supervened, probably secondary to malignant disease of the bowel. There was copious hare-soup vomit last night. The liver was again examined, but the dulness was rather increased. Cirrhosis of the liver was conjectured, the only evidence in its favour being a history of intemperance, the amount of the effusion, and the hare-soup vomit. The ascites was certainly peritonitic—probably malignant, possibly tubercular.

Post-mortem examination.—The peritoneum contained 148 oz. of a purulent fluid. The large omentum was fixed by adhesions between the sigmoid flexure, which was distended with fæcal matter, and presented those conditions already referred to. The surfaces of the intestines were covered with recently deposited lymph, more especially in the neighbourhood of the sigmoid flexure. The liver weighed 2 lb. 10 oz. Its surface was extremely nodulated, and the organ atrophied. The gall-bladder was distended with inspissated bile of a black colour, and its subatance was of a greyish-yellow colour. There were large bands of fibrous tissue dividing the organ into nodules, and producing a state of coarse cirrhosis.

The points I would have you note here are:—Firstly. Cirrhosis may exist in a very marked degree without revealing its presence by any ascites or other characteristic symptom. In M——'s case the coffee-ground vomiting and ascitic accumulation occurred only within a short period before death, and the ascites was really determined by the occurrence of peritonitis, which had its starting-point at the seat of the malignant growth in the sigmoid flexure of the colon. Secondly. When peritonitis is associated with rapid and abundant effusion, it is well to examine the condition of the liver and portal vein. Probably in many such cases it will be found that although there has been no previous ascites, a cirrhotic condition of the liver, or some other obstruction to the portal vein, has so predisposed the patient to ascites, that when peritonitis has occurred rapid and unusually great effusion has been inevitable. The cirrhotic condition of the liver in M——'s case must be attributed to the excessive use of alcohol. The organs affected with cirrhosis from this cause are very different in different cases. Many drunkards never have cirrhosis at all, while in some the liver, in others the lungs, in others the kidneys, and so forth, may be the seat of the morbid change. These differences must be attributed to individual constitutional peculiarities. In certain individuals there exist special predispositions in particular organs to cirrhotic changes. It is believed that a history of previous alcoholic excess is common in cases of the cirrhotic form of Bright's disease; yet in this case an irritation from this cause, sufficient in all probability to induce very marked cirrhosis of the liver, had no such injurious influence on the kidneys, which, although they presented slight traces of congestion, were otherwise normal in appearance and consistence.

I do not think, gentlemen, that the time spent on this case will have been thrown away if there has been brought prominently before your minds the possibility of a great many independent diseases occurring together in the same individual. It is not often that we meet with such an unusual array of morbid conditions as we have here; but the possibility of such a combination as phthisis, malignant disease, peritonitis, cirrhosis of the liver, and aneurismal dilatation of the aorta, should be borne in mind; and we should particularly learn from this case the lesson that it is not always the disease which occurs earliest, or which most obtrudes itself upon the physician's notice, that is most dangerous to life. Here it was neither the phthisis pulmonalis nor the developing aneurism which killed M——, but the cancer of the sigmoid flexure of the colon, which, by causing obstruction of the bowel, first endangered life, and, finally, by lighting up peritonitis, terminated it. It was, indeed, in this case, a race of diseases, for most certainly each of the other diseases present would sooner or later have proved fatal.

BEQUESTS, &C., TO MEDICAL CHARITIES.—The Greenock Infirmary has become entitled to £1000 under the will of Mr. Duncan Hoyle, and £100 under that of Miss Hunter. The West Herts Infirmary, Hemel Hempstead, has become entitled to £200 under the will of the Hon. Granville Dudley Ryder, of Westbrook Hay. The Royal Westminster Ophthalmic Hospital has received £100 under the will of Mr. James Fellows, of Old Quebec-street. Messrs. Joshua Tetley and Son have given £100 to the Leeds General Infirmary. The Rev. W. G. Humphry has given £50, being the first half of a donation of £100 towards the erection of the new Charing-cross Hospital Medical School building.

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Lettsomian Lectures
ON
THE TREATMENT OF STRICTURE OF THE URETHRA, ENLARGED PROSTATE, AND STONE IN THE BLADDER,
WITH SPECIAL REFERENCE TO RECENT PROGRESS.

Delivered at the Medical Society of London, January, 1880.

BY W. F. TEEVAN, B.A., F.R.C.S.,
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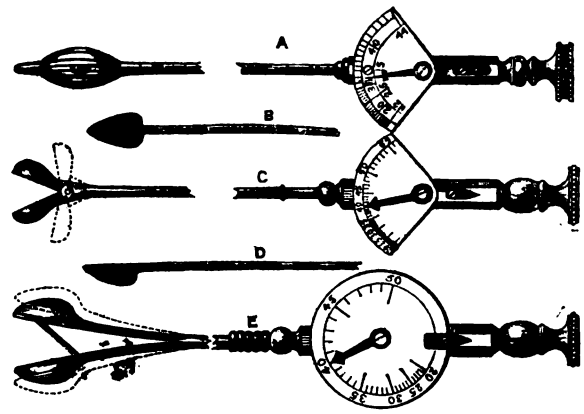
LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—I desire to thank you very sincerely for the honour you have done me in appointing me your Lettsomian lecturer.

Before proceeding to the treatment of stricture, it will be necessary to inquire, "When may a man be said to have a stricture." The existence of stricture in its early stage is but little recognised here; and the answer to the question, whether gathered from students or books, would prove there was a general idea that if a No. 10 English catheter can be passed into a man's bladder, there can be no stricture. Inasmuch as the average calibre of the urethra is at least 10 mm. larger than that of a No. 10 Eng., and as every stricture must have a beginning, it follows that the calibre may be reduced from 28 mm. to 18 mm. (10 Eng.) without the stricture being recognised. Many years ago at this Society I defined a stricture to be "Any diminution of the normal calibre of the urethra, the result of the contraction of organised lymph." This gives an answer to the question, "When may a man be said to have a stricture?" If the calibre of a man's urethra is equal to No. 12 Eng. and only a No. 11 catheter can be introduced, I should say he has a stricture. Now in order to determine whether a certain condition be abnormal or not we must be acquainted with the normal state. All measurements taken in the dead-house are misleading, for they are made on a flabby strip of tissue, instead of on a tube surrounded by muscular fibres in a state of active life. Till recently the average diameter of the urinary canal had not been put at a higher figure than about 7 mm., giving only a calibre of about 21 mm. Not long ago the profession was startled by the investigations of Dr. Otis, and it was at once manifest on inquiry that the capacity of the urethra had been greatly under-estimated. When Dr. Otis was over here, he satisfied me, by actual examination, of the general accuracy of his measurements, and of the existence of a close relationship between the circumference of the penis and the calibre of the tube it contains. He also convinced me that we had been very illogical in regarding all men as possessing the same sized urethræ when treating them for stricture; for there can be no doubt that the urethræ of men differ in calibre, as much proportionately as do other parts of their bodies. It may now be safely asserted that the average calibre of the living male urethra is certainly not less than 28 mm.; also, that a catheter which may be quite large enough for one man may be much too small for another.

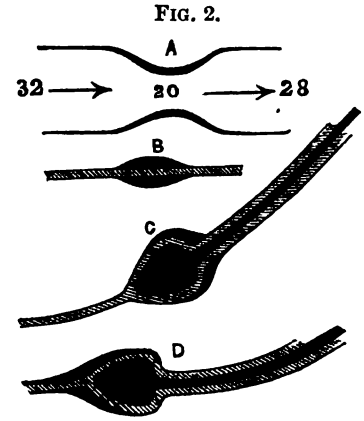
There are various instruments in use for exploring the urethra and detecting stricture, and for ascertaining the calibre of the canal. For the former purpose the "bougie à boule," originally invented by Sir Charles Bell, modified by Leroy d'Etiolles and Dr. Dick, is the most useful instrument. (See B, Fig. 1.) It has often been confounded by English writers with the "bougie olivaire," between which and the former there is as much difference as between a sound and a catheter, one being for diagnosis, the other for treatment. The "bougie à boule" is most useful for exploring the urethra to ascertain whether there be any stricture or not. It is especially valuable for detecting contractions in their incipient stage. A tight stricture is the work of years, and ought to be found out long before it has so diminished the calibre of the urethra as to interfere with micturition and attract the patient's notice. But if he has no trouble in urinating, why should he complain? He does not; but when he suffered from gleet he consulted somebody. Now, a gleet of more than six months' duration implies chronic inflammation, so that if an examination be

FIG. 1.



made, some induration will usually be found, indicated by a feeling of leatheriness, so different from the soft, velvety sensation conveyed by the "bougie à boule" when travelling down the urethra. The instrument detects tight strictures as it is passed down the canal (see D, Fig. 2), and those of large calibre as it is withdrawn. (See C, Fig. 2.) How can it detect a contraction which allows it to slip through without the slightest resistance being encountered? It must be remembered that the urethra is not an open tube like a gas-pipe, but a closed one. Let A, Fig. 2, represent a longitudinal section of the urethra when the

FIG. 2.



urine is passing through it. Let 20 mark the calibre of the strictured portion, 28 the calibre in front, and 32 the circumference of the dilated posterior portion. Now, when the urine is flowing the urethra will be closed as at B, the stricture will then be the indurated tissue marked black encircling the tube. When a bougie-à-boule with a head of calibre 18 (see C)—that is, two sizes smaller than the stricture—is introduced, it will slip through the stricture, as its tapering head permits it to do so, but on its withdrawal the base of the head, which is *travelling at right angles* to the axis of the urethra, will hitch against the strictured portion C, because every particle of the bougie is closely enveloped by the urethra. There is no such a thing as a vacuity in the canal, and whether urine, a calculus, or a bougie be passing down the urethra, each is intimately and accurately embraced by it. For hospital work the "bougie-à-boule" is invaluable and indispensable. D represents the "bougie-à-demi-boule," for diagnosing whether the stricture affects the side, floor, or roof of urethra. Not so, however, the endoscope. At one time I worked with it a great deal, and had the advantage of seeing its master, Desormeaux, use it, but I was disappointed with it. As Dr. Dick had pointed out, its revelations are often misleading,

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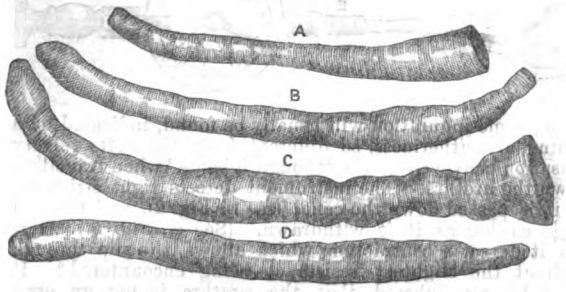
for the introduction of the tube causes much irritation, and modifies the colouring. I am afraid it may be literally said of the endoscope, "Le jeu ne vaut pas la chandelle." With the urethrometer of Dr. Otis (A, Fig. 1) or Dr. Richardson's (C, Fig. 1), or that of Dr. Weir (E, Fig. 1), the normal character of the urethra can be ascertained. Now every mucous canal has two calibres—(1) an ordinary, (2) an extraordinary; or, to use Reybard's distinction, a natural and an artificial. The urethra has a given calibre during ordinary micturition, and it has another in extraordinary urination; as, for instance, when we compress the penis when making water, which causes a sudden distension of the portion of the urethra behind, attended by great pain. So also, when a large urethral calculus is travelling down, the canal exhibits a capacity not displayed in ordinary micturition. These differences have an important bearing on the question, as to what point dilatation ought to be carried when treating stricture. Very recently Dr. Sands and Dr. Weir, of New York, have made most important investigations into the ordinary and extraordinary calibres of the living and dead urethræ.[1] The drawings in Fig. 3,

FIG. 3.



reduced in size one-half, are taken from casts made of the urethra. C is from that of a healthy urethra in the deadhouse, when distended forcibly, and is seen to be much larger than B, which represents a urethra not so strongly distended. Figure A is that of the urethra when naturally expanded in ordinary free urination, and is considerably smaller than that of figure D, which represents forcible distension in the living subject. It will be seen that there are certain ridges or transverse lines on the casts, giving rise to a sacculated appearance; but whether they are normal constrictions or duplicatures of the mucous membrane cannot as yet be determined. At all events, whichever they may be considered it must be admitted that our heretofore relied-upon methods of exploration are not sufficiently trustworthy for us to distinguish between normal and abnormal narrowings of the urethra, certainly from No. 29 upward. An amendment to the statement of Dr. Otis is therefore demanded, for he says, "complete freedom from stricture can only be demonstrated by the easy passage of a bulbous sound, of a size fully equal to the normal calibre of the urethra."[2] Dr. Weir relates cases in which strictures admitting No. 30 bougie were diagnosed during life, but of which no traces could be found when the urethræ were laid open after death. He and others diagnosed strictures of large calibre on dead men. When the urethræ were examined no evidences of stricture could be found. It is very clear, therefore, that any diagnosis of the existence of strictures of a calibre larger than No. 29 must be received with great caution. The matter, however, need not trouble us in the least, for patients whose urethræ can take No. 29 can have no interference whatsoever with the act of urination.

It is well to bear in mind that in stricture we have not only *narrowing* of the canal, but *deviation* also, as shown by Jules Guérin and Mercier, and it is of the utmost importance to keep this in view when dealing with very tight or impassable strictures. To me stricture is one and indivisible. I know of no such condition as spasmodic or inflammatory stricture; it is an ephemeral phenomenon, and not an organic alteration. Dr. Gross and Dr. Otis hold the contrary, and the latter has recently written a paper on "Urethrismus," or chronic spasmodic urethral stricture, which, he states, simulates organic stricture in every respect. He maintains that many of the so-called deep contractions are, in reality, spasmodic, the result of reflex irritation, caused by the existence of organic strictures of large calibre in the penile urethra, and he holds that when they are divided the deep ones at once disappear. The deductions he draws is that no operation should be performed on a deep stricture until the anterior portion of the canal has been completely restored to its normal calibre. Dr. Otis' views are combated by Dr. Sands and others in New York. Much of the discrepancy may, I think, be explained when we reflect that a penile stricture is usually non-dilatable, whilst a deep one is generally amenable to dilatation. I exclude all cases of congenitally contracted meatus and orificial constrictions resulting from chancre. It is not fair to include such trifling conditions with the important and classical organic stricture, as much confusion is caused thereby. I divide strictures, physically considered, into the *ring* and *tunnel* varieties. I flatter myself these terms clearly and accurately convey what they are supposed to represent. The *sympathetic* symptoms caused by strictures are sometimes most extraordinary, and ought to be borne in mind. The curious case related by Sir Benjamin Brodie of a gentleman who suffered from pain in the instep, which was only relieved by passing a bougie through his stricture, is an instance in point.[3] The *obstructive* effects of stricture on the entire urinary apparatus behind it have been exhaustively investigated and described by Mr. Marcus Beck, and have an important bearing on operations.

Is stricture of the urethra *curable?* Practically it is, but not pathologically. We can usually make a patient as comfortable as ever he was, but this happy result is dependent on his regularly using the bougie for the rest of his life. Half a century has now rolled away since the great Delpech officially and dogmatically declared that stricture was incurable. He went so far as to say that any man who pretended to cure stricture was trifling with truth—"jouer avec la verité" was the strong expression he made use of.[4] It is the almost unanimous belief of French and English surgeons that stricture is not curable. These pessimist views of surgeons in the old world are not shared in by certain American surgeons. Dr. Otis, Dr. Gross, Dr. Pease, and Dr. Mastin hold that stricture is curable. Dr. Otis maintains that, if the stricture is completely divided and the urethra restored to its normal calibre, the deposit is absorbed and the patient cured. To prove his statement he has exhibited a few cases some time after operation in which no recontraction could be detected. At present I consider that the cases reported are too few in number, and the periods which have elapsed since the operations too short, to enable us to draw any deduction. To me such instances are wholly exceptional. Dr. Otis bases his views on Reybard's experiments proving that longitudinal wounds in the urethra are not followed by any contraction, so that if the stricture be divided completely, longitudinally, and the edges of the wound kept apart by the passage of a bougie during the healing process, a soft supple cicatrix will be formed which will not contract, and the patient be cured. In opposition to Dr. Otis' views, I would refer to the operation of external urethrotomy. In that procedure we can guarantee that Dr. Otis' conditions are thoroughly and completely fulfilled. Not only is the stricture divided, but the entire thickness of the urethra, together with some portions of the healthy canal above and below it. According to Dr. Otis there ought to be no recontraction; but the experience of all surgeons proves that there is if the bougie be not used regularly. Let me appeal to another operation—that of subcutaneous urethrotomy, which operation very closely resembles internal urethrotomy, only being more efficient and thorough in its execution, for in it everything between the staff and the skin is divided. According to Dr. Otis there ought to be no recontraction, and yet *there is*. I think these operations clearly show that the grounds upon which Dr. Otis bases his views are not tenable. Besides, the mere insertion of a "cicatricial splice" between the two divided ends of a stricture can in no way destroy the property of contraction which resided in it before operation: we simply have a larger stricture. There can be no doubt, however, that as the American surgeons go in for the insertion of a much larger "cicatricial splice" than we do, their results will be more enduring than ours; but I consider they have only postponed and not abolished the inevitable recontraction. I would here say how much I feel we are indebted to Dr.

[1] The Normal Urethra and its Constrictions, by Robt. Weir, M.D., p. 10.
[2] Op. cit., p. 18
[3] Lectures on certain Nervous Affections (1837), p. 86.
[4] Delpech, vol. i., p. 373.

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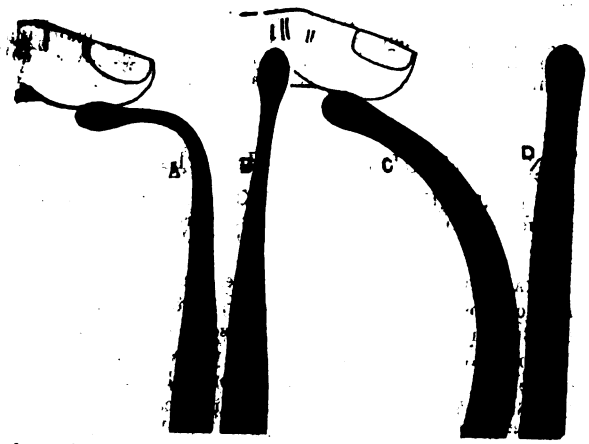
Otis. He has shown us that we had greatly under-estimated the calibre of the urethra, and what good results we shall obtain if we raise our standard in the treatment. Let us not forget that without Otis there probably would have been no Bigelow. Dr. Otis demonstrated what large instruments could be passed down the urethra, and Dr. Bigelow utilised the discovery for his new method of lithotrity.

All strictures range themselves into two great divisions, the *passable* and the *impassable*. The former usually are as easy of treatment as the latter are difficult. I do not think that this great difference has been sufficiently insisted on in their classification, and it would seem to be the tendency of all surgeons to occupy themselves more or less with the passable form of the complaint. The impassable stricture is always situated low down in the urethra, unless produced by traumatic causes. Fortunately for surgeons, although deep strictures are the most difficult to enter, they are the most amenable to dilatation. I will commence with the treatment of the passable variety.

There is, firstly, what may be called the "expectant" plan, which consists in confining a patient to bed and trusting to warmth, rest, and purging for an abatement of the trouble. This is not a desirable method, and has but few advocates. It entails a great sacrifice on the patient, and any amelioration effected rapidly vanishes when he resumes his ordinary methods of life.

Secondly, there is the treatment by gradual dilatation with instruments, allowing the patient to follow his occupation. There is a general consensus of opinion amongst surgeons all over the world that this is the best method of treating ordinary dilatable uncomplicated stricture. It is attended with no risk to life, and involves no sacrifice on the part of the patient. Certain American surgeons object to it, alleging that the treatment is merely palliative. Inasmuch, however, as I consider no more can be claimed for any other method, I hold that their objection is not founded on good grounds. With what kind of instruments ought the process to be carried out? We have soft and metal bougies, and each have their respective advocates, although I am glad to say the partisans of the cold steel are gradually diminishing in numbers every year, to the infinite benefit of mankind at large. If anyone has a doubt as to which is the better instrument to use, a soft or a metal one, let him one day pass a soft one on himself, and a few days afterwards introduce a metal one. We need not wait for an answer. Who has ever seen a man die after the passage of a soft French catheter? Are not cases on record in which patients have lost their lives from the mere introduction of a metal catheter, sound, or lithotrite? Who has ever seen a case of abscess and perineal fistula from the passage of an elastic olivary bougie? I have myself come across patients in whom abscess and fistula have followed the introduction of metal instruments by eminent surgeons. Are not rigors often seen after passing metal catheters, and are they not almost unknown after the use of soft ones? On every ground, therefore, let us use soft instruments. "La sonde rigide ne cede pas, l'obstacle cede devant elle." (Mercier.) But I have heard surgeons say, "Why, my patients actually prefer a metal bougie to a soft one." No doubt they do when the soft one is badly made. A viciously-shaped soft bougie is more annoying to the patient than a metal one. The latter may be steered into the bladder, but the former cannot. There are bougies and bougies, as illustrated in the accompanying woodcut. English bougies are badly adapted for the treatment of stricture, for, being cylindrical, they are blunt at the end, and cause the maximum amount of friction. The only use to which they can be put is to replace the dangerous wire stylets of metal catheters. In the French olivary bougie we have an instrument which gives rise to only a minimum amount of friction, and is admirably adapted for the purpose. It was invented by Lisart at the commencement of the present century, and was formed by placing an olive on the end of a conical bougie. Its tapering flexible extremity enables it to adapt itself to the windings of the urethra, and the olive tip prevents it from lodging in the lacunæ or false passages. A well-made French olivary bougie has a thin long neck and a well-developed head, whereas the so-called French bougie made in England has usually a thick neck and badly-shaped olive, which, as Van Buren has pointed out, renders the instrument useless for treatment. The "bougies olivaires" delineated in Fig. 4 represent respectively the good and the bad. B is a well-made bougie, and its extremity can be bent at right angles to its shaft, as seen at A. Directly the finger is removed the instrument regains its former position, B. Not so, however, the badly-shaped bougie, D, whose extremity cannot be bent at right angles to its shaft, but assumes the position represented at C if the finger presses down its tip. Most cases of passable stricture can be gradually and efficiently dilated with olivary bougies; but every now and

FIG. 4.



then when there is a long tunnel stricture, the soft conical bougie will be the best to deal with it. Either of the instruments can be strengthened by inserting stylets of lead, as seen in the "bougie-à-plomb" of the French. Bougies filled with small shot, as used in Paris, glide into the bladder almost by their own weight. Although I am a strong advocate for soft instruments, I recognise that metal ones have their uses. In connexion with the subject I would remark that the English gauge ought to be abolished. Its transitions in size are abrupt and meaningless. If a No. 10 Eng. is passed one day, and a No. 12 Eng. the next, what does it signify? Nothing beyond the fact that a larger instrument has been introduced, but how much larger cannot be said. Gradual dilatation, when carried out by the English gauge, often fails on account of the abrupt transition in the size of the bougies used. In the French gauge the transitions are very gradual, and are mathematically exact. If No. 18 be passed, and after it No. 19, it is known that one millimetre in circumference has been gained.

Thirdly, there is the method of continuous dilatation, which is most useful when the former plan has failed, or where a patient cannot afford the length of time requisite for gradual dilatation. It, however, sometimes fails on account of the irritation set up by the retention of an instrument, and occasionally it is impotent to effect the desired object. Mercier has shown that perforation of the bladder may be caused by tying in a catheter, and he points out that a cylindrical instrument, having its eye close to the end, ought to be used, the eye being made to correspond with the meatus internus, so that the catheter does not project into the bladder. Mr. Furneaux Jordan and I have shown that tight strictures can be well treated simply by tying in a filiform bougie; the urine runs by its side and dilates the stricture.

There is, fourthly, the method of sliding one instrument over the other, chiefly known here as "Wakley's." It is very useful in certain cases where there are false passages; for when once the guide has been passed tubes increasing in size can easily be slid over it.

There is, fifthly, cauterisation. At one time it was extensively used in this country, but it has been almost completely abandoned. The experiments of Reybard demonstrated that it was a most objectionable method on account of the character of the cicatrix which resulted. Now, although I do not think it eligible for passable strictures, still I have seen it useful in cases of impassable stricture, where the opening was placed very eccentrically; and it was employed not for the purpose of enlarging the stricture by causing ulceration, but simply to open up the mouth of the contraction, to enable a bougie to be introduced.

Sixthly, electrolysis. Mallez and Tripier were the first to employ it in the treatment of stricture. They were followed by Newman, of New York; all of them, however, merely using it to cause absorption. Dr. Van Buren says it has been tried and found wanting. It appears to me to possess

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one great disadvantage, and that is the long period of four weeks which must elapse between each introduction. I had some time ago a patient under my care who had a perineal abscess and fistula caused by its application in America.

There is, seventhly, the method of over-distending the stricture by introducing an instrument with two blades, which can be expanded. It is very painful on application, and the results are of a most ephemeral nature. Fortunately, it has only a few advocates.

So much, gentlemen, for what I may call the manipulative treatment of stricture. At the next lecture I shall commence with the operative treatment.

ON TUMOURS OF THE CEREBELLUM.[1]

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CHARLES M——, aged thirty-five, was admitted into the London Hospital under the care of Dr. Sutton, Aug. 30th, 1879. Dr. Sutton made the diagnosis of disease of the cerebellum. The patient was later on transferred to my care. (The notes of the case were taken by Mr. Lawton and Mr. Lloyd Jones; Dr. Sutton's house-physician and medical assistant; and also by my house-physician, Dr. Jones, and by Mr. Richards, medical assistant.)

The patient was a healthy-looking man, and had had, except for rheumatic fever, a healthy life until the fatal illness. The duration of the illness altogether was from about January, 1879, but at first there was only a complaint of stiffness of the neck. The marked symptoms were of about three months' duration. He was at his work as a law writer until his admission, Aug. 30th, 1879.

The first thing he noticed beyond mere slight stiffness was that when writing his neck would become suddenly stiff and painful at the nape, preventing his bending his head over to the desk. The attacks came on irregularly, and at first he ascribed them to excitement, caused by having to control what he called the "drunken set" he had to overlook. The attacks of neck pains and stiffness generally began with a throbbing pain in front of his throat, and this pain, as he expressed it, "flew backwards, drawing his head back." Sometimes for a day his head would be drawn a little back, and go further back in paroxysms. He slept well, having no paroxysms at night. About a month before his admission he felt his feet tottering when he got up to walk, but he walked well when fairly started. About fourteen days before admission his eyesight became dim. On admission, Aug. 30th, patient had pain in the back of the head. He had double optic neuritis with impaired vision. His other special senses were normal. He had occasional vomiting. His head was constantly drawn back, and occasionally he had paroxysms of greater drawing back, each lasting two or three minutes. On one occasion, to relieve himself, he lay on his belly, with his chin resting on the pillow. Sometimes the occiput would touch the spine, and in the earlier notes of his attacks his body is said to be drawn back, and that he is in a state of opisthotonos. On Sept. 25th he had an attack of greater range, in which there was twitching of the limbs with greater retraction of the head and opisthotonos; there was also some nystagmus, the exact nature of which is not mentioned.

He was transferred later on to my care. On Oct. 6th I saw him. His head was then drawn back, but at my examination he was not in a paroxysm. When got out of bed he could walk, but reeled very slightly. When sitting, his legs acted strongly whilst endeavouring to overcome our resistance to flexion, extension, and to raising his knees. His arms were not affected. Patellar tendon-reflex was normal.

He continued subject to the paroxysms. On Oct. 11th he had paroxysms nearly all day long. A diagrammatic sketch was taken of the patient in one of them by Dr. Stephen Mackenzie whilst the patient was standing. It was of necessity taken rapidly. I noticed spasm of no other parts than of the muscles of the spine, and in particular that the masseters were not engaged. Possibly part of the incurvation of the back was compensatory. To my astonishment the patient died the same day.

There was found, post mortem, a tumour about the size of a walnut in the inner part of the left lobe of the cerebellum reaching up to the middle lobe. It was a sarcoma, cystic in its interior. The symptoms may be put in two classes.

1. *Those which pointed simply to the existence of local gross organic disease of some kind.*

2. *Symptoms which localise*—(*a*) retraction of the head; (*b*) paroxysms of increased retraction; (*c*) an unsteadiness of gait.

Before considering either set of symptoms, it may be remarked that tumour or abscess of part of the cerebellum may exist without any marked symptoms. This may be affirmed of the cerebrum also. A patient may for a long time have symptoms so slight that he takes no notice of them, when suddenly he has a convulsive seizure, or becomes apoplectic, or dies suddenly; after death we find abscess or tumour of the cerebrum or cerebellum. In the case of tumour we find occasionally hæmorrhage from that tumour. Or a patient is under our care for some non-cerebral ailment, and we find tumour or abscess post mortem, although the existence of any kind of intracranial disease was never suspected during the patient's life.

1. *Symptoms pointing only to gross organic disease of some kind within the cranium.*—(*a*) Double optic neuritis was found on the patient's admission. His sight began to fail about fourteen days before admission, but no doubt his discs were abnormal before that time. It is well known that very strikingly abnormal ophthalmoscopical appearances may exist before the sight becomes defective, and that neuritis may pass away, probably always leaving some relics, without leaving defect of sight. Optic neuritis is of no value in localising disease in any part of the cerebrum or cerebellum. It has been said that tumour of the cerebellum, of the middle lobe especially, produces blindness by pressure on the corpora quadrigemina. Admitting that this may be so, it remains that in all cases I have yet seen, or heard of, of defect of sight with cerebellar tumour, there has been optic neuritis, and thus the defect of sight may be accounted for in another way than by the pressure hypothesis. In one case of tumour of the middle lobe there was optic neuritis when the patient's sight (a child) was such that he could see a hair on his pillow. As a matter of fact, a defect of sight from intracranial tumour is not caused in the majority of cases because the tumour involves any known part of the optic nervous system (corpora quadrigemina, optic tracts, or optic nerves); it is, therefore, in most cases not caused by destruction of any part of the cerebrum or cerebellum. (It may be that symmetrical disease of Ferrier's centres of vision produces defect of sight). Optic neuritis results in an indirect way. By some unknown process the tumour (or other adventitious product) leads to changes in the optic nerves, on which blindness may or *may not* follow. Again, in some cases of even large intracranial tumour, there is no optic neuritis. It may come on years after the first symptom of intracranial tumour. (*b*) Headache. Probably the pain at the back of the head was partly soreness, the result of dragging by the retracting muscles. There appears to have been no excessive pain. Pain at the back of the head is not to be trusted for the diagnosis of cerebellar tumour. (*c*) Vomiting is not a symptom peculiar to cerebellar tumour. Probably it depends rather on acuteness of process than on the position of the tumour.

To resume. The three symptoms mentioned are of no value in localisation. They are not decisive evidence of local gross organic disease; such disease may exist without them. They are, nevertheless, the best evidence of gross organic disease (renal disease being excluded).

2. *Localising symptoms.*—As aforesaid, there may be no marked symptoms in cases of cerebellar tumour or cerebellar abscess. I have seen a tumour in each lateral lobe of the cerebellum in a man who, fourteen days before death, had no motor symptom except paralysis of one arm, which was accounted for by tumour of the hinder part of the uppermost frontal convolution. Beyond question, whether we have motor symptoms or not depends on the size of the tumour, on the rapidity of its growth, on the softening it produces, and, of course, on the exact position of the tumour.

[1] Read before the Medical Society of London, Jan. 12th, 1880.

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Then we have to bear in mind that, during the last part of the illness, in most cases, the patient is obliged, by pain and misery, to keep his bed, and testing his locomotion is not possible. (Tumour under the tentorium probably produces more disturbance by pressure than cerebral tumours do.) I think Nothnagel is right in his opinion that disease of the middle lobe is more likely to be attended by reeling than disease of the lateral lobe. Reeling is the earliest motor symptom from cerebellar disease.

It may be well here to speak of the several motor symptoms found in some cases of cerebellar tumour.

There are three motor symptoms which may occur with tumour of the cerebellum; they have their analogues in cerebral disease. (*a*) Reeling. (*b*) A certain persisting *rigidity*. (*c*) Tetanus-like paroxysms. Reeling, I think, is, or at least depends on, a cerebellar paralysis, the analogue of the hemiplegia a cerebral paralysis; persistent rigidity is the analogue of the well-known rigidity in hemiplegia and the tetanus-like seizures of unilaterally beginning convulsive seizures from cerebral cortical disease. (After some unilaterally beginning convulsion there is temporary paralysis of the parts first and most convulsed. I have yet no facts as to anything analogous in cerebellar disease.)

(*a*) Reeling is the earliest motor symptom. It is not the gait of locomotor ataxy, nor that of paraplegia. It is like the walk of a drunken man. It occurs in some cases of ear disease—often acutely in paroxysms (Menière's disease), or sometimes chronically. It is essentially a swaying of the trunk from back to front and from side to side. It is masked in some slight cases by the patient's walking with his legs apart; by this means small inclinations of the trunk are neutralised. The gait is worse when he walks with closed eyes. In early stages, in slight reels, I believe the real fault is paresis of movements of the spine answering to the swayings of the trunk. The legs act erratically, but in an early stage they are blameless; they act erratically because they have to "run after" the trunk, to prop it up in its various over-inclinings. The legs, often blamed, are really doing more than their duty. In cases of paralysis of the extensors of the feet the patient lifts his legs highly. To a layman his defect would appear to be that of lifting the legs highly. But this movement is "necessitated" by the paralysis of the extensors. To blame the legs in an early stage of cerebellar reel would be like blaming the leg-lifting movement in paralysis of the extensors of the feet. If the true fault in cerebellar reeling be paresis of the movements for bracing up the spine, we see that the reel compares with hemiplegia; the essential fault in the reel is a partial paralysis.

I suppose no one nowadays would confess to a belief in a *faculty* of co-ordination, nor to a belief in a co-ordinating centre, but that all consider every nervous centre, whether spinal, cerebellar, cerebral, or sympathetic, to be a centre of co-ordination, and that only in the sense of its being a part where these or those impressions and movements are *represented* in this or that degree and order. So those who hold that the cerebellum is the centre for the most special and complex co-ordinations of locomotor movements mean that it is a centre where the most special and complex of these movements are represented. This is only another way of saying that the cerebellum represents especially those movements which are bilateral or alternate. If we take count of all kinds of locomotion (and, indeed, of equilibration, whether statical, as in standing, or continually changing, as in progression) we see that the usual statement as to the chief functions of the cerebellum is equivalent to saying that it represents movements of all parts of the body. We must not use the term locomotion for walking only. In swift running the body is bent forwards, the jaws and face are in action, the arms swing, and professional runners carry cork in their hands to prevent the nails hurting the palms. We have to study all degrees of locomotion, from getting up to swift running, with the aim of ascertaining *the order* in which movements of different parts of the body are represented in the cerebellum. We see, I think, that muscles *first in action* are the spinal; they get into very strong action *in swift running;* the body would fall forwards if not held up. *The reel is,* I think, owing to paresis of movements of *the spinal column.* If so, the true morbid condition in the *reel compares with* hemiplegia and not with chorea, the *movements of which,* even on a very superficial glance, differ *toto cœlo.* If we look at the choreal limbs and at the legs in *the reeling man we may* properly say that they are both disorders of co-ordination, but in the former case the movements occur at any time (from increased cerebral discharges) in the latter only when the patient is trying to move, and then they are "necessitated" over-movement to compensate for the loss of other (spinal) movements. A truer analogue of the cerebellar reel is the tremor of disseminated sclerosis in which there is also paralysis. (Judging by the analogy of other cases, the condition will be more complex than this. From energising of the diseased centre there will probably be underdoing of some and overdoing of other spinal movements.)

It is quite true that in cases of complete paralysis, with atrophy, of some of the spinal muscles, say the erectores spinæ, we have no such reel as in cerebellar disease. But the cases are different. A lesion of the anterior horns of the spinal cord destroys the action of some muscles altogether; this is a very different thing from loss of some complex movements of the spinal column. Again, in the paralysis, with atrophy, of some muscles, the patient walks by "dodging" the paralysis (just as we see other patients "dodge" the effects of paralysis of an external rectus); even then he walks badly, has a veritable inco-ordination of locomotion, although not one so complete as a reel.

(*b*) *Cerebellar rigidity.*—Just as rigidity ensues in some cases of cerebral paralysis (hemiplegia), so it does in some cases of cerebellar paralysis. In the latter the spinal muscles first become rigid, drawing back the head and curving the spine; ultimately the legs and arms are rigid. This universal rigidity, as a condition arising from cerebellar tumour, I have seen only when the tumour has been of the middle lobe. I may here say that I am indebted to Dr. Stephen Mackenzie for the drawings I send round, and also for most valuable help in the investigation of cases of cerebellar disease. In cases of hemiplegia the rigidity is contemporaneous with the ensuing of Wallerian wasting in the spinal cord. Whether there is a "descending" wasting in cerebellar rigidity I do not know. Cerebellar rigidity differs from the rigidity of paralysis agitans; in the latter the body is bent forwards, in the former backwards.

(*c*) *Tetanus-like seizures.*—Besides rigidity we find, in some cases of tumour of the middle lobe, attacks very like, if not quite like, those of ordinary surgical tetanus. I pass round drawings by Dr. Stephen Mackenzie, to whom again I gratefully acknowledge my indebtedness for help in the investigation of cerebellar disease.

I have only once seen seizures like tetanus in a case of local cerebral disease, and in that case they occurred during the last hours of life, during dying. Dr. Gowers discovered no cerebellar lesion; there was large cerebral tumour corresponding to hemiplegia. In the case of extensive rigidity and tetanus-like seizures, the tumour has been of the middle lobe, and has been large. I suppose the cerebellar rigidity to be owing to unantagonised cerebral influx (rigidity in hemiplegia being owing to unantagonised cerebellar influx), and the tetanus-like seizures to be owing to cerebellar discharges analogous to those cerebral discharges which produce unilaterally beginning (epileptiform) convulsions. But there is the obvious objection that the two symptoms, with the cerebellar disease, may be owing to interference with the corpora quadrigemina (electrical excitation of which Ferrier finds produces tetanus-like states), or to interference with the medulla oblongata.

Hitzig and Ferrier have convinced most people that some parts of the cerebral cortex represent movements, and Charcot, by a very different kind of evidence, clinical and pathological, has confirmed their opinions. I have long wished to ascertain if the cerebellum cannot be broken up into regions, each representing especially some movements of the body. In this case, the subject of this paper, there was a very local movement, a local tetanus. That the drawing back of the head in paroxysm was owing to discharge of some part where the movements for drawing back or supporting the head are represented is a truism; but I do not draw the inference that it was the part in which the tumour lay, for, besides objections already stated, I have but one case. If the discharge *were* of the cerebellum, it may have been of some part of the middle lobe. Of course the discharge would be of *nerve-cells* rendered highly unstable by action of the tumour, and it does not follow that the *nearest* cells would soonest become unstable; probably small cells become unstable before large ones. Another important thing is that one would suppose the movements of drawing back or supporting the head to have a wide representation, and we could, I think, only expect to find some part of the cerebellum, on each side doubtless, where movements of the head are *chiefly* represented. There are clinical difficulties,

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drawing back of the head occurs in cases of meningitis; but plainly, the best cases for investigation of regional localisation are cases of small tumour producing a chronic illness.

Occasionally we meet with other local tonic spasms, sometimes of the jaws. Of the pathology of these cases I know nothing at all. I would suggest that the cerebellum should be carefully searched as well as other parts in all cases of local tonic spasm, including ordinary torticollis.

I think there is evidence that in some parts of the cerebellum there is a unilateral representation in the order from trunk movements to movements of the hands and feet. I have no doubt that Brown-Séquard is right in saying that tumour pressing on the crus cerebelli produces paralysis of the same side, and I believe this is mainly of movements of the trunk and those passing to the upper parts of the limbs. The ataxic movements of the arm in some of these cases partly depend, I think, on paresis of muscles attaching the limb to the trunk.

There are indirect symptoms from tumour of the middle lobe and large tumours under the tentorium. There is vast increase of fluid in the lateral ventricles of the cerebrum in some cases. In children the head enlarges; there is great lobetude of mind, a slow failure of mental faculties. This I used to suppose was caused by pressure, as the veins of Galen. Stephen Mackenzie, in an admirable paper on Cerebellar Disease, recently read before the Hunterian Society, suggests another explanation.

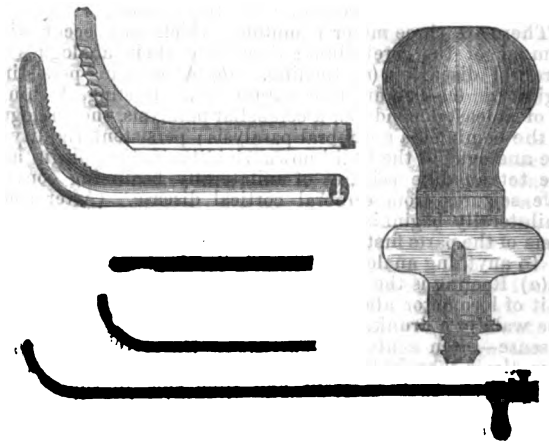
A MODIFIED CLOVER'S BOTTLE FOR THE RAPID EXTRACTION OF DEBRIS AFTER LITHOTRITY.

BY BERKELEY HILL,

PROFESSOR OF CLINICAL SURGERY IN UNIVERSITY COLLEGE, SURGEON TO UNIVERSITY COLLEGE HOSPITAL.

DR. BIGELOW'S bottle and tubes for exhausting débris after lithotrity are manifestly a great improvement on the apparatus previously employed for that purpose. The improvement consists, first, in providing a wider passage for the current to and fro between the bladder and the exhausting bottle; and, secondly, in furnishing a more forcible stream than was possible with the small bottle of Clover. But as Bigelow's bottle has considerable disadvantages in being costly, cumbersome, and especially in being much larger than is necessary, it occurred to me that Clover's bottle might, by some small modifications, be rendered a more rapid exhauster of débris than that of Bigelow. For some time before Dr. Bigelow's visit to this country I had been employing urethral tubes for washing out débris larger than those commonly used for this purpose, habitually employing Nos. 24 and 26 French, instead of No. 22 or No. 23 (Nos. 12 and 13 English), the customary sizes. Consequently, when Dr. Bigelow brought before the profession his rapid method of clearing the bladder of débris, I was prepared to appreciate the improvement he has effected in this department of surgery. By the apparatus which I have now used on several occasions—the outcome of repeated alterations—I find I can exhaust a given quantity of débris more rapidly than I can by Bigelow's bottle. This advantage I attribute mainly to the shorter distance the fragments have to travel from the neck of the bladder before they are securely lodged in the trap below the current. The length of the tube from the bend to the interior of the receiver is only eleven inches, or twenty inches less than that in Bigelow's apparatus.

The woodcut shows the form of the apparatus very well. A stout india-rubber bottle, holding ten ounces, with a neck one inch across internally, is fitted to a glass receiver, or trap, blown into a discoid shape resembling that of a flat turnip or onion, having a transverse diameter of 3½ in. The mount of this receiver is closed by a cap, to which the washing out catheters can be fitted in a joint fastened by a bayonet-catch. The catheter is prolonged into the centre of the receiver by a short tube, $\frac{1}{12}$ in. (about No. 40 French) in diameter, to prevent the reflux of the fragments that have already been sucked out of the bladder. As the fragments issue from the tube they at first swirl about in the receiver, then fall rapidly into the lower part, where they lie snug and still while the water is being injected again into the bladder to bring forth another quantity of débris. Probably the main advantage of the apparatus is its shortness. A moment's reflection will show that when the outflow ceases part of the débris sucked from the bladder lies in the tube, to be driven into the bladder again by the next inflow of water; consequently the nearer the trap or receiver can be



placed to the neck of the bladder, the more rapid will be the removal of the fragments. In Bigelow's apparatus, the receiver is placed at the farthest extremity of the bottle. This large bottle is placed for convenience of working at the end of 14 in. of flexible tube. Thus the fragments have to travel 11½ in. along the silver tube, then along 14½ in. of flexible tube, making a total distance of 26 in., before they reach the bottle itself, down which they gravitate during the pauses between each act of injecting and exhausting to the glass receiver placed at the further end of the bottle. Thus the fragments do not reach the trap or resting-place, until they have traversed 31 in. of distance. The tubes I use have an internal capacity equal to sounds Nos. 24, 26, and 30 French (equal to Nos. 14, 16, and 18 English). They are provided with large eyes, carefully bevelled off to prevent their gaping edges from lacerating the mucous membrane. Some have the eye placed at the convexity of the beak, some have it at the concavity, and one tube (the largest) is straight throughout. This I have seldom used, as it is rare for the urethra to admit its introduction without a preliminary free incision of the meatus urinarius, which it is not always expedient to do. Except in being shorter, and in the lesser sizes smaller, my tubes do not greatly differ from Bigelow's, and their mode of attachment to the washing-bottle is copied from Bigelow's pattern.

The woodcut also shows the beaks of a powerful lithotrite made for me by Mr. Coxeter, for breaking large hard stone that cannot be safely managed by ordinary lithotrites. It was constructed for me in imitation of Sir Henry Thompson's new lithotrite, and in some respect, like other imitations, advances beyond the first embodiment of the new idea. His recent alterations on former patterns Sir Henry Thompson has already brought before the profession in this country, and on the continent. They are chiefly two. First, the male blade is fitted to slide along the female blade until its heel comes flush with the outer surface of the beak of the female blade, which is cut away for that purpose. By this arrangement fragments cannot lodge nor lock the blades, but are driven through the female blade before the advancing male blade. The second novel point is, the knife edge form given to the beak of the male blade. This knife edge enables the male blade to penetrate a hard, bulky stone with facility, and split it into fragments, that can afterwards be readily comminuted by the usual lithotrites, which have more pulverising action. The beaks of the lithotrite depicted in the drawing differ from those of Sir Henry Thompson's instruments in having a somewhat sharper knife-edge and a wider notching of the edge; there is also a slight jagging of the opposing edges of the female blade to afford a better hold of the stone before it is broken. Whether this increased sharpness of the knife-edge is an additional advantage can only be determined by comparative trial of the two instruments. Mine was simply an endeavour

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on the part of Mr. Coxeter to produce a lithotrite for me that should embody Sir Henry Thompson's recent improvements, of the value of which there can be no doubt. Both Sir Henry Thompson's lithotrite and the repetition shown in the drawings, while being sufficiently powerful to deal with the hardest stones, are far less bulky and heavy than Bigelow's large lithotrite. This power is attained by better mechanical concentration of the crushing force.

Wimpole-street.

ON THE TREATMENT OF DIPHTHERITIC OPHTHALMIA BY LOCAL APPLICATIONS OF SOLUTION OF QUININE.

BY JOHN TWEEDY, F.R.C.S. ENG.,
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TRUE diphtheritic ophthalmia is so rare in this country, and its treatment at all times and in all places so unsatisfactory, that no apology is, I hope, needed for the following remarks.

Until the beginning of last year I had, out of an aggregate of many thousand cases of disease of the eye, seen but one unmistakable example of primary diphtheritic ophthalmia, and that was in the year 1873. In February, 1876, I was consulted about a case of ophthalmia in an infant, which I suspected to be diphtheritic, but was deterred from treating it as such in consequence of overwhelming evidence of its gonorrhœal origin. More than three years and a half after—namely, in October, 1879—I accidentally alighted on some knowledge that tended to strengthen my suspicion, and has indeed convinced me that, whatever may have been its origin, the case was really diphtheritic when I saw it. These were the only cases I had ever seen, either in my own practice or in that of others, prior to those hereinafter described.

I deem it necessary to make this explanation, because many cases have been recorded in the medical newspapers and other periodicals of this country, under the name of diphtheritic ophthalmia, which, in my opinion, were not diphtheritic at all, but merely cases of purulent ophthalmia, accompanied with the formation of pellicular membranes on the surface of the conjunctiva. If the confusion only involved a question of nomenclature, it would scarcely be necessary to do more than call attention to it in passing; but there is a more important issue at stake. It unfortunately happens that the treatment that is appropriate for the membranous form of purulent ophthalmia is, according to the best authorities, highly injurious in the diphtheritic variety. Hence the danger that lurks in the hypothesis that membranous ophthalmia and diphtheritic ophthalmia are different phases of the same disease. If the caustic treatment, which is uniformly successful in the former disease, be adopted in the latter, disastrous results will ensue. I cannot perhaps cite a better illustration of the sort of case that has been recorded by British practitioners as diphtheritic ophthalmia than that reported in THE LANCET "Mirror of Hospital Practice" for July 5th, 1873, as occurring in the practice of Mr. Streatfeild at Moorfields. This particular illustration is especially apposite, because there is a long editorial comment pointing out the essential difference between the case in question and those described by von Graefe and other continental writers under the same name.[1] A like criticism would apply to almost all the other cases that have been recorded in this country.

My late lamented friend and colleague, Mr. Soelberg Wells, who, while acting as assistant to Professor von Graefe, in Berlin, had many opportunities of witnessing the disease, used to say that he had never seen a genuine example of diphtheritic ophthalmia in this country. I regret that he was unable to inspect any of those I am about to relate until they were nearly cured. It is, however, as I have already hinted, a mistake to imagine that the malady never occurs in this country. At the fourth International Ophthalmological Congress, held in London in 1872, Dr. Samelson, of Manchester, read a paper on some cases of diphtheritic ophthalmia that occurred in that city during the years from 1867 to 1871. Dr. Samelson was careful to explain that by the term "diphtheritic ophthalmia" he did not mean "the so-called membranous conjunctivitis as characterised by the formation of a pellicular membrane and easily removable recurrent exudation on the surface of a mostly highly vascular mucosa," but "that specific affection of the eye for the life-like delineation of which we are indebted to von Graefe, and the chief pathognomonic feature of which is the thorough solid infiltration of the parenchyma of the mucous membrane, so almost hopelessly unmanageable, and so prone to destruction."[2]

This is precisely the criterion by which all cases should be judged. Keeping these characteristics in mind, anyone who will take the trouble to read the descriptions of the so-called cases of diphtheritic ophthalmia recorded as occurring in this country, will find that, almost without exception, they fall into the former category, and that neither in severity nor gravity did they resemble the true form. The cases I shall relate fulfil, I think, the conditions laid down by Dr. Samelson.

On the 15th of February last a puny male child, four months old, was shown to me at the hospital, suffering apparently from a moderate attack of purulent ophthalmia of both eyes. The lids were red and swollen, but soft and easily evertible. A thin purulent discharge exuded from the palpebral fissures, and the conjunctival sacs contained a considerable quantity of the ordinary yellow muco-pus that is secreted in purulent conjunctivitis of children. The palpebral conjunctiva of both eyes was of a bright-red colour, vascular, prominent, and spongy. Both corneæ were smooth, bright, and clear. The mother, a small, delicate, and ill-nourished woman, stated that she first noticed the discharge three days before, and that the child, who was breast-fed, had not previously had anything amiss with the eyes.

The case was treated as one of simple purulent ophthalmia. The conjunctival sacs were gently but thoroughly cleansed with tepid water, and the surface of the mucous membranes was lightly brushed with a ten-grain solution of nitrate of silver, and a lotion containing six grains of alum to an ounce of water was given to the mother to use every three hours. When seen by Mr. Burnham, the junior house-surgeon, on the following morning, the eyes seemed better; although the swelling had in no degree abated, the discharge was diminished in quantity, thinner in consistence, and less purulent in character. On the 17th the case was apparently doing satisfactorily; the lids were again lightly brushed with a five-grain solution of nitrate of silver.

The child was not seen on the 18th, but on the morning of the 19th I saw it myself, and was startled to find a marked change for the worse. The lids were more swollen, and they had become hot, hard, and shining, and of a reddish-purple hue. A thin, dirty-looking fluid, mingled with greyish flakes and shreds, escaped from the deep, narrow chink between the upper and lower eyelids. The lids could hardly be separated, and when they were everted the palpebral conjunctivæ of both eyes were found no longer red and spongy, but pale, smooth, thick, and mottled with red and grey, the grey vastly predominating. Many small ecchymoses were scattered over the surface, and here and there were larger or smaller blood-vessels, blocked with stagnant blood. The mottled patches of exudation had an irregular and an ill-defined margin, and extended laterally along the whole length of the lids from inner to outer angle, and antero-posteriorly from the free margin, where they were most pronounced, to the oculo-palpebral fold, where they seemed to gradually fade away. They began again near the periphery of the ocular conjunctiva, and continued up to the corneal limbus. To the touch, and when compressed edgeways between the thumb and finger, the conjunctiva felt hard and resistent. In both eyes the upper lids were the more affected.

Moderate friction with lint failed to remove more than a few insignificant shreds, and left the appearance substantially unaltered; nor could fairly energetic friction detach the false membrane, which seemed to sink deeply into the conjunctival tissue. Even the forceps failed to strip it off, or to provoke bleeding. Both corneæ were rough and steamy, and had lost their transparency to such a degree that neither the iris nor the pupil could be traced. On the right cornea there was, in addition to the general haziness, a well-

[1] THE LANCET, vol. ii. 1873, p. 10.

[2] Report of the Fourth International Ophthalmological Congress, held in London, August, 1872, p. 127. London, 1873.

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marked, greyish-yellow concentric crescent, about one-sixth of an inch in length, midway between the centre and the outer margin.

I did not hesitate to pronounce the case to be one of genuine primary diphtheritic ophthalmia, and I, not unwilling, accepted the opportunity of putting to the test a plan of treatment that had some years before suggested itself to me as suitable in such cases. The treatment that had been previously prescribed was at once countermanded, and a lotion was ordered containing three grains of sulphate of quinine with a minimum quantity of diluted sulphuric acid to the ounce. Although the mother was informed that there was too much reason to fear that the eyes were lost, she was enjoined to keep compresses, well saturated with the lotion, constantly applied over the eyelids, and to wash out the conjunctival sacs freely at least every two hours with the lotion.

These instructions were carried out with praiseworthy assiduity and zeal, and at the end of forty-eight hours the eyes were not only not worse, but appreciably better, the improvement being more noticeable on the left side. On the 22nd the lids were neither so hard nor so hot, and they were less swollen. The corneæ were recovering their translucency and smoothness, and the false membranes on the conjunctivæ were considerably reduced both in extent and in depth. Three days later the conjunctivæ were almost wholly free from false membrane; both corneæ were clear and transparent, and no trace of the crescentic patch on the right cornea could be discovered, even with a strong magnifying glass. The palpebral conjunctivæ had again become red, vascular, and spongy. They had not, however, the ordinary villous appearance, but were coarsely wormeaten. The discharge was once more thick and purulent. The compresses were omitted, but the lotion was continued every three hours.

On the 3rd of March a weak alum lotion was ordered to be used three times a day, in addition to occasional applications of the quinine lotion. A week later there was scarcely any discharge, and the wormeaten irregularities of the conjunctivæ were disappearing, and some of them were closing by very fine cicatrices. About the middle of the month of March the quinine and alum lotions were replaced by a weak perchloride of mercury lotion, one-tenth of a grain to an ounce, which was to be used twice a day.

The child was seen at intervals of two or three weeks until the beginning of May. When last seen there was no discharge; the corneæ were bright, clear, and perfectly transparent; the palpebral conjunctivæ were smooth, but presented a delicate network of minute cicatricial bands. All treatment was stopped, and the case dismissed cured.

There can, I think, be no reasonable doubt that the case was identical with those described by Graefe[3] and others under the name of diphtheritic conjunctivitis. The three classical stages were well marked both as regards sequence and intensity. In addition to the early purulent stage, which may or may not have been essential, there were the exudative or pseudo-membraneous stage, the exfoliative and suppurative stage, and, lastly, the stage of cicatrisation. This peculiar sequence of phenomena separates the case from membranous conjunctivitis, which is, as I have already stated, merely a complication of ordinary purulent ophthalmia. Indeed, the two diseases seem to me as dissimilar in their anatomical and pathological nature as in their clinical aspects. In the membranous form there is a greyish pellicle *on the surface* of the conjunctiva, whereas in the diphtheritic the pseudo-membrane is embedded, sometimes deeply, *in the substance* of the mucous membrane. The pellicle in the membranous form may without much difficulty be stripped off entire, or in large shreds, exposing a red, spongy surface, which readily bleeds; but the pseudo-membrane of the diphtheritic form can neither be rubbed nor stripped off; at best it may be picked off in tiny bits with forceps, and then the underlying tissue is usually pale, and does not yield fluid blood. Again, the pellicular membrane involves only the epithelium of the conjunctiva, and does not effect any permanent change in the structure of the mucous membrane, whereas the exudation of diphtheria produces molecular disintegration of the parenchyma, which can only be repaired by cicatrisation. These anatomical differences are, I believe, constant. There is yet another particular in which the two diseases are unlike, and that is in their behaviour to treatment. Those who have had most experience in treating unequivocal cases of diphtheritic ophthalmia agree that caustics do harm, and that nitrate of silver especially, which generally agrees with membranous conjunctivitis is prejudicial in the genuine disease.

(To be continued.)

[3] Deutsche Klinik, 1853, No. 35; and Arch. für Ophthalmologie, Bd. i., Abt. i., p. 168 (Berlin, 1854); a translation of the latter appeared in Archiv. Belges de Médecine Militaire, t. xvii., p. 32; and in the London Medical Review for 1860.

RINGWORM (OF THE HEAD): DIAGNOSIS AND TREATMENT.

BY ALDER SMITH, M.B. LOND., F.R.C.S.,
RESIDENT MEDICAL OFFICER AT CHRIST'S HOSPITAL, LONDON.

(Continued from p. 55.)

The treatment of chronic ringworm.—There are some cases which no ordinary remedies, even under skilful hands, will cure. The treatment of these I now pass on to describe; as well as the treatment of those cases in which the disease has been attended to until the hair has grown again, and then neglected for months, or even years (because it was supposed to be well), until some special reason has brought it under the notice of an expert.

Here the difficulty is not to find some parasiticide that will destroy the ringworm fungus, but to bring the remedy into contact with it. In recent ringworm the conidia only penetrate a certain distance into the follicles, and therefore the disease is easily cured by almost any remedy; *but after a time they penetrate to the very bottom of the follicles*, which it must be remembered are even below the true skin, and into the roots of the hairs. Therefore it is impossible to reach the fungus by any ordinary remedy applied to the surface of the scalp. Again, the stumps are so diseased that they cannot be extracted by epilation, but always break and leave the root part swarming with the fungus down to its very base (*vide* diagram, p. 53). One must therefore select a remedy that will penetrate deeply into the follicles, and Mr. Marshall's preparation of oleate of mercury is certainly the best for this purpose, combined afterwards, if necessary, with the treatment I will call "the artificial production of kerion."

I have seen oleate of mercury cure the most inveterate cases that have existed for many years, and on which all sorts of other remedies had been tried in vain. It does not cause much pain—very often none; and although I have used it most extensively for years, I have never seen even slight salivation caused except once, and that was in a child of four years of age. It is prepared as a thick solution in oleic acid, and sold as a 10 per cent. and 5 per cent. solution. I use the 5 per cent. for children under eight years of age, and the 10 per cent. to those over that age, if the skin will bear it without much irritation. It is advisable to have acetic ether mixed with it in the proportion of one part of ether to seven parts of oleate. This increases the penetrating power. The mixture must be kept in a stoppered bottle.

The treatment is commenced by having the hair cut short, about a half to one inch long. The head should then be thoroughly washed with soft soap and water, and when dry *the oleate should be rubbed well into the entire scalp*, if the disease be at all extensive, with a small sponge mop. This must be done regularly, especially into any patches, night after night, and again in the morning into any well-marked diseased places. The caps before described should be worn at night, special care being taken that the oleate does not run on to the face or pillow-case, as it will produce much irritation, and even a rash. It is advisable to apply a thin towel, like a turban, round the head, as well as the cap, to prevent any oleate getting on to the face.

It is most important that the head should not be washed more than once a fortnight. If water be constantly used, it tends to prevent the oleate from soaking to the bottom of the hair-follicles, which is so essential to the success of this remedy. Therefore, while the case is under treatment, which may be from three to six months, wash well every fortnight, cutting the hair again if necessary, removing all the scabs and yellow incrustations with the point of a pair

[4] Wecker and Landolt: Traité complet d'Ophthalmologie, tom. i., p. 335. 1879.

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of forceps, small-tooth comb, or other means, and then examine the scalp with a lens, to see how the case is progressing, before applying the oleate again. Of course care must be taken that no mercurial symptoms arise during the treatment. If the 10 per cent. solution produces too much irritation, the 5 per cent. must be substituted. It is important to obtain the oleate from a first-class chemist.

After from three to six months there is very often a complete cure, but at any rate the disease will be very much better, and restricted to the original patches or a few disseminated stumps. At this stage of the case I strongly advise the treatment I call the artificial production of *kerion*—i.e., that swollen, raised, inflamed, and infiltrated state of the scalp, which sometimes accidentally occurs during treatment, and *which always results in a speedy cure of the disease.*

The artificial production of kerion.—Kerion should be produced, if possible, in old chronic small patches of ringworm that have resisted all other treatment for months, but not in those cases where the disease extends over a large extent of surface. Croton oil is the best irritant for causing this inflammatory condition, but it must be used with great caution, and at first only applied to a small place, and its effect watched. I generally put it on a patch the size of a shilling, or less, with a small camel's-hair brush, and order a poultice to be put on at night. Then, if it has not set up severe inflammation and pustulation by the next day, which is very rare, I apply it again, keeping poultices constantly on day and night. A daily application of the oil for three to six or ten days, together with constant bathing with warm water, and poulticing with linseed-meal, will rarely fail to set up such severe inflammation that the patch resembles true kerion. It becomes very tender, swollen and puffy, pustular, and is usually covered with a thick yellow incrustation. On removing this yellow substance with the point of the forceps, and a sponge and warm water, the skin underneath will be found very red and tender, and sometimes a muciform or purulent discharge exuding from the follicles, and, what is most important, *the hairs and stumps loose in the follicles.* They either come away with the discharge, or can be easily pulled out. If the patch be very much swollen the hairs, on being extracted, come out from a considerable depth, even half an inch.

Sometimes this effect is rapidly produced, at others it is most difficult to obtain; and you may apply croton oil over and over again without getting the swollen, puffy state of the scalp you require. Care should be taken not to produce an actual slough of the upper stratum of the skin. When the patch is so thoroughly inflamed and infiltrated that the stumps come out easily, I content myself with simple poulticing and bathing for a few days, and then, when the tenderness has abated, and the yellow incrustation has been removed by bathing, I begin to pull out all the hairs and stumps that are left on the patch, using for this purpose a broad-pointed pair of forceps.

The great aim of this treatment is to cause inflammatory swelling and effusion into the tissues around the follicles, so that the stumps which otherwise would break off on attempted epilation, will now come out with the discharge, or can easily be extracted; in fact, very often in a short time an inveterate patch of ringworm, that has withstood every other treatment for years, can be transformed into a smooth, slightly raised place, utterly destitute of all hair and stumps, and practically well.

Soothing remedies, such as poultices or water-dressing, should be applied till all the inflammatory swelling has subsided, while the stumps are removed day by day by the attendant. I usually see a case in this state every three to seven days, and carefully examine the spot with a lens to see if there are any stumps to be extracted. If it happens that any of them break off on attempted epilation, it is better immediately to place a minute drop of croton oil on the follicle, which will probably cause the expulsion of the stump in a few days. At the next examination I follow the same plan, and so on until I cannot find a single stump, even after watching for a fortnight. Then I apply tincture of iodine or cantharides to the places, which stimulates the new downy hair to grow. When once a stump has been thoroughly extracted, there is no fear of the new hair becoming infected with the fungus, as some of the parasiticide used is sure to get into the follicle, and destroy any conidia left there.

If there is more than one patch at first, I soon begin to apply the oil to the second or third, when I see how the first one is progressing, and thus try to get every place converted into kerion. The largest patch I have inflamed at a time has been about the size of a five-shilling piece, but I should never attempt such a large one at first, but would prefer to treat half or a third of it, and then the rest.

Even if the swollen condition of kerion cannot be produced, this treatment very rarely fails in loosening the stumps and curing the disease. While the croton-oil treatment is being followed out, a little oleate or carbolic-glycerine should still be applied to the other parts of the scalp. Even when one or more patches are treated in this way, in the course of time other small places or isolated stumps reappear here and there; therefore, the whole scalp should be examined when the case is seen week after week, and any stumps removed or touched with croton oil, as described further on under disseminated ringworm. But when the case has been pronounced absolutely well, these isolated stumps will often crop up time after time for months. Thus children that are supposed to be cured ought to be examined regularly for a few months.

Some remedies may produce kerion unexpectedly. I have seen carbolic-glycerine and citrine ointment act in this manner, and lately oleate, applied to the heads of three children in one family, produced severe kerion with excellent results in two cases. This is the only time I have seen oleate produce kerion.

Sometimes, if croton oil fails to produce the necessary inflammation, I use a minute quantity of tartar emetic ointment as well; but this is more apt to produce a slough than the oil, and should only be used with extreme caution on a place already sore. The friends are, as a rule, greatly frightened when kerion is produced; so it is better to explain to them beforehand the reasons for adopting this treatment, and the result expected from it. The condition is somewhat painful, and much resembles the formation of an abscess; the glands often enlarge about the back of the neck, but I have never seen them suppurate.

Especial care should be taken not to apply too much oil at a time, and that the poultice is firmly fastened to the spot, otherwise the oil may run on to other parts of the head or forehead; or, by the poultice slipping, kerion may be produced just where it is not wanted. If the oil by any means gets on to the pillow-case, and the child rubs its face on it, of course a pustular eruption will follow. I lately saw a little girl who had managed to rub the oil on the pillow-case, and then all over her forehead and cheeks. This produced a most universal crop of small pustules, and gave me very great anxiety lest some marking should ensue; but with soothing applications and simple ointment, the slight crusts were speedily removed, and not the least mark remained. Of course, with proper precaution, this should never occur.

The bare patches that remain after this treatment may continue for some months, but the hair will grow again sooner or later. I have seen a few cases where, after very severe irritation and some slight sloughing, the hair has not thoroughly grown again. But, as this remedy is only to be used after all others fail, it is better to get a slight loss of hair in one place than for a child to be unable to go to school, and thereby lose education. Even if some of the hair-follicles are destroyed by this treatment, many hairs will still grow on the place, and a distinct bald patch is never left. Croton oil must of course be applied by the medical attendant; and I may mention, lastly, that I have never seen any internal irritation from its use, or erysipelas.

(To be concluded.)

ABSORBENT AND MEDICATED SURGICAL DRESSINGS.

BY SAMPSON GAMGEE, F.R.S.E.,
SURGEON TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

BEFORE me is a cup of water, on which a piece of fine cotton-wool, like that used in jewel-boxes, has floated for thirty-eight days. I have frequently pushed the cotton to the bottom of the cup, but it has instantly risen to the surface, and seems likely to float indefinitely. Pledgets of cotton made absorbent by removal of its oily matter, when dipped into the same cup, sink below the surface of the water in three seconds, and rapidly fall to the bottom.

When I first became acquainted with this fact, I made

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pads of the absorbent cotton in fine gauze, believing that they would be softer for compression, and more favourable to the dryness of wounds by their superior absorbent power, than oakum pads. The gauze used was very fine and unbleached, similar to that employed by nurserymen (under the name of "tiffany") to stretch under the roofs of their conservatories. Experiment proved that the gauze in question is non-absorbent to such a degree, that a pad, made by covering with a single layer of it a pledget of absorbent cotton, will float on water for many days.

The desideratum suggested itself, of making the gauze absorbent like the cotton, and I find that this result is attained by the process of bleaching. Pads made of the absorbent gauze and cotton take up water as rapidly as blotting-paper, and sink to the bottom of a vessel in a very few seconds. As one illustration of the practical advantage of these dressings to wounds, I shall abstract the main facts of a clinical history, for recording which I am indebted to my dresser Mr. Arthur Holdsworth.

A woman, aged sixty-one, in good health, was admitted into the Queen's Hospital under my care, Sept. 18th last, with a swelling over the left shoulder and side of neck, extending laterally from the armpit to a level with the larynx, covering the posterior triangle and the lower half of the anterior, the whole of the clavicle and the upper part of the pectoralis major. The antero-posterior axis was the longest, and measured thirteen inches.

The tumour had been of slow growth for ten years, rapid for the last six months. It was elastic and fairly movable, and only troublesome for its size and weight; covering skin dimpled. Diagnosis, lipoma.

Operation.—On Sept. 24th, under ether, I made an incision from a point one inch outside the episternal notch, to another about midway along the spine of the scapula. The growth was then dissected from off the subjacent tissues, from behind forwards, being very adherent over the acromion, but free and lobulated in front. It reached to the trapezius, and extended its lobes deep into the anterior triangle of the neck, exposing on its removal the pleura covering the apex of the left lung, and the great vessels and nerves to the head and upper extremity. Very few drops of blood lost; no vessel tied. Immediately after the removal of the tumour, the wound measured superficially eight and a half by eight and a half inches. I brushed it out lightly with styptic colloid, brought the edges together with seven silver sutures, inserted a drainage tube, and compressed with a shoulder spica, over oakum pads. The patient passed a good night, and next morning, the temperature was 101·5°, pulse 118, respiration 32. There was not a single bad symptom.

On the 1st October (seventh day), pulse 94; respiration 24; temperature precisely normal, which it continued throughout, with the exception of only one day (Oct. 13th), when the old lady had a slight cough for a few hours, and the temperature rose to 101·2° at night. Next morning it was again normal.

At the end of a week the patient was allowed to get up for a few hours, after the removal of the drainage-tube and sutures and the application of fresh dry pads and compression. The edges were united for nearly the whole length, but in the course of another week the union gave way a little. It was maintained with strips of adhesive plaster and compressing pads of absorbent muslin and cotton. The wound was not exposed for another week, and the cicatrix was then quite solid, as shown in the annexed woodcut.

I have since used the same materials, with the occasional addition of pitch-pine sawdust in absorbent gauze, with the very best results in a variety of cases; amongst others, in a compound fracture through the ankle, a large sloughing ulcer of the foot, a scirrhous ulcer of the mamma, and an extensive gangrenous wound over the breast.

My friend and colleague, Professor Bostock Hill, has instituted experiments, which prove that after treating with iodine, borax, and tannin, the materials above referred to preserve their absorbent properties, and I confidently anticipate that absorbent and medicated dressings will prove of essential service in wound-treatment.

The absorbent pads are made by lightly folding the muslin over absorbent cotton without stitching. I venture to suggest to accoucheurs, that in childbed such pads would be cleaner, safer, and more comfortable than napkins, and a large number of them might be used and burnt at far less cost than washing. The materials are cheap, and most agreeable to manipulate. I shall be happy to furnish specimens to surgeons who may desire to try them, and I take this opportunity of acknowledging the cordial assistance I have received from the manufacturers, Messrs. Robinson and Son, Wheatbridge Mills, Chesterfield.

Birmingham.

CALOMEL FUMIGATION.

By WILLIAM S. BYRNE, A.B., M.B., M.Ch., T.C.D.,
SENIOR HOUSE-SURGEON, METROPOLITAN FREE HOSPITAL.

I AM induced to bring to the notice of the medical profession a little apparatus for the purpose of calomel fumigation, which I have never seen used at any of the London hospitals, but which has been employed frequently in some of those in Dublin. It was originally invented, I believe, by Mr. Kane, late surgeon to Jervis-street Hospital, and has been used with much success in cases of syphilitic and other ulcerations about the throat and mouth, where local application of mercury seemed desirable. The apparatus, as invented by Mr. Kane, consists of a glass tube about eight inches and a half in length, three-quarters of an inch in diameter, which tapers towards a point for about two inches at one extremity, and a bulb blown on one side of the cir-

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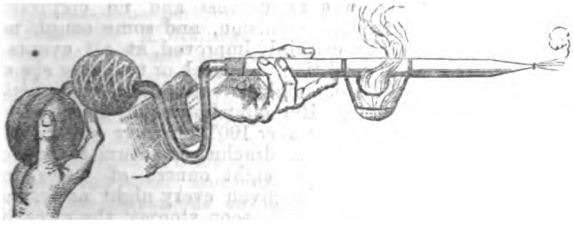
cumference about three inches from the same extremity for the purpose of holding the calomel. In the other extremity of the tube is placed a cork, which is pierced by a piece of glass tubing, small enough to be encircled by the india-rubber tubing of Richardson's ether spray apparatus, which is used for the purpose of propelling the fumes of the calomel on to the part to which the point is directed, when the calomel is sufficiently heated by a small quantity of spirit, which saturates a piece of sponge placed under the bath in a small pan made of tin or thin iron, and hung on the tube by two hooks of iron wire.

When using Mr. Kane's fumigator in cases of throat disease, I have had considerable difficulty in passing the point into the mouth, so as to direct it towards the parts affected, as the flame was so near the patient's face, as to be at least disagreeable, if not dangerous; so I had some tubes[1] made by Messrs. Townson and Mercer, Bishopsgate-street, E.C., with the bulb five inches from the apex of the conical extremity, thus moving it back a considerable distance, and the result has been most satisfactory.

When the bulb has had a small quantity of calomel placed in it, then heated by means of the spirit sponge, and the india-rubber bag of the ether spray apparatus compressed, the fumes stream out and give the part to which it is directed a white coating of the vapour. All those points are shown in the accompanying woodcut.



At the Metropolitan Free Hospital this method of fumigation has been used frequently during the past six months, once or twice a week, according to the nature of the case, being usually sufficient for its application, and in no case has salivation in the slightest degree occurred.

I am induced to bring this subject forward solely for the reason that many medical gentlemen learned in such matters, to whom I have shown the apparatus, were unacquainted with it, and from its having proved so satisfactory in this hospital I have been advised to publish two cases which have been benefited by its use.

CASE 1. — Annie J——, aged sixteen years, came under treatment at the Metropolitan Free Hospital on Aug. 21st, 1879, suffering from extensive ulceration of the hard and soft palate, tonsils, and pharynx. No history of specific disease, either hereditary or otherwise, could be obtained. It appeared that she had been suffering for twelve months, and during that time had been under the treatment of different medical men, but without any decided improvement. She was a pale, anæmic-looking girl, and had been unable to take solid food for some months, owing to the excessive pain in mastication and deglutition. She was fumigated twice a week from the date of her first attendance, cod-liver oil was given internally, and she was discharged cured on Oct. 29th, 1879.

CASE 2.—John G——, aged twenty-nine years, a painter, had been suffering from ulcerated sore-throat since he had syphilis (three years ago), and had been attending as outpatient at this hospital ever since, off and on; and although he derived great benefit from the treatment adopted, yet he was never perfectly cured. He resumed attendance for his throat about the middle of September, 1879, and then was unable to eat solid food of any kind, his diet chiefly consisting of beef-tea, milk, and eggs. He was very hoarse, and only spoke with great difficulty and pain. Mr. Walsham examined him with the laryngoscope, and found large patches of ulceration on the right aryteno-epiglottidean fold, on the epiglottis, and on both tonsils. He was fumigated regularly every week, and given iodide of potassium internally. The day after the first fumigation he declared he felt better, and was discharged, perfectly cured, on Nov. 6th, after seven weeks' treatment.

[1] The tubes are supplied to this hospital, with pan, &c., at a cost of 10s. per dozen.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

[THROAT DEPARTMENT.]

SYPHILITIC DISEASE OF TONGUE AND LARYNX; PARTIAL IMPROVEMENT UNDER IODIDE OF POTASSIUM; MARKED IMPROVEMENT UNDER MERCURY.

(Under the care of Dr. POORE.)

E. R——, aged twenty-five, a barman, came to the hospital on Dec. 11th, 1878, complaining of hoarseness. The patient looked ill, and there was a distinct history of syphilis, with the scars of old ulcerations on the arms and legs. The tongue was enormously enlarged, deeply fissured in the centre, and uniformly indurated. There were no separate swellings visible on the tongue, but the organ seemed to be the seat of a uniform infiltration. Round the margin of the tongue were one or two superficial ulcers. The epiglottis and the laryngeal mucous membrane were slightly congested. He partook rather freely of alcoholic liquors, which his occupation brought in his way. He suffered from irregularity of the bowels and dyspepsia. A mixture containing fifteen grains of iodide of potassium and half a drachm of sulphate of magnesia in each dose was given, and a lotion containing half a grain of perchloride of mercury to the ounce, as a wash for the mouth, was ordered. His improvement was immediate and rapid, and in a few weeks the ulceration of his tongue had disappeared, and it had become soft and natural to the feel, and much diminished in size.

Early in February the patient caught cold, and his laryngeal symptoms suddenly increased. The epiglottis was now seen to be very much swollen and reddened, and the thickened edge was the seat of superficial ulceration. The patient was completely aphonic, was troubled with an incessant cough, and could swallow nothing but the blandest liquid, in consequence of the pain which it caused him. An examination of the lungs showed a slight and doubtful amount of consolidation of the right apex. Emaciation was rapid and extreme, and the condition of the patient at this time seemed to warrant the worst prognosis. Cod-liver oil and syrup of the iodide of iron were ordered, together with an inhalation of compound tincture of benzoin, and sedative lozenges. The relief thus afforded was slight, but the application of a strong solution of nitrate of silver to the epiglottis notably diminished its sensibility. So much so was this the case that the patient asked to be allowed to apply it for himself, which he readily learnt to do. In March he was sent away to St. Leonards in order to avoid the inclement spring weather. He returned somewhat improved in general health, but with the local condition unaltered. His slight gain in strength soon disappeared, and it was then resolved, in spite of his prostrate condition, to try the effect of mercury. Mercurial ointment was accordingly rubbed into the sides of the chest every night, and with the very best results. The ulcers on the epiglottis quickly healed, the swelling of the mucous membrane subsided, the power of taking nourishment returned, and the patient's general condition rapidly improved. The gums soon became tender, when the inunction of mercury was discontinued, to be resumed after a week's rest. The man's improvement has been continuous, and at present he is able to follow his occupation of a barman. An abscess, probably due to the breaking down of a gumma, had recently appeared in the calf of the right leg, but this rapidly got well after being tapped with an aspirator by Mr. Godlee.

Remarks.—The condition of this patient's tongue when he first came under treatment was one of great interest, the enlargement and the induration of the organ being both excessive. Although the tongue rapidly improved under

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iodide of potassium, it will be noted that the larynx became affected in the manner indicated, while he was still taking large doses of that drug; and it is remarkable and instructive to note that no amelioration of the laryngeal condition took place, in spite of local treatment and favourable hygienic conditions, until the inunction of mercury was resorted to. One naturally felt considerable reluctance to give mercury to a patient in such a miserably shattered condition, but the result proves that any fears one might have had as to the possible ill effects of the drug were groundless.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

CASE OF GRAVES' DISEASE.

(Under the care of Dr. MURRELL.)

ANNIE G——, a bright intelligent child, aged fourteen, first came under observation in November, 1878, suffering from exophthalmic goitre. She was a native of London, and had lived in London all her life. She never had chorea or fits of any kind. Her father died of melancholia, and her maternal grandmother and aunt died of phthisis. She had four brothers and one sister, all well and strong. She was quite well till about four years before, when she was greatly frightened by her father, in one of his insane fits, running after her. Some five or six months later she complained for the first time of palpitation; next her throat began to enlarge, and after that her eyes were noticed to be unusually prominent. About a year later she had rheumatic fever; after that the palpitation was much worse. After the fever she spat a little blood, but never much. All the symptoms had been increasing in severity for two years.

The eyes were very prominent—so prominent indeed that people in the street noticed her, and the boys called after her "cat's eyes" and "horse's eyes." There was no difficulty in closing the lids, but the mother stated that at night, when asleep, "the eyes remained open, and looked quite frightful." The degree of protrusion was said to be somewhat variable, but it was equal on the two sides. The eyes had never been inflamed in any way. Both pupils were dilated, and contracted somewhat slowly under the influence of light.

Mr. Tweedy kindly saw the patient, and the following notes were taken from his dictation:—"Right eye, V = $\frac{6}{9}$; left, $\frac{3}{36}$. Right eye, No. 2 Jaeger, from 12 inches to 18 inches, 12 inches being the nearest point at which she can make it out. Left eye, No. 4 Jaeger, from 13 to 18 inches, these being the nearest and farthest points respectively. Pupils react well to light, but are more active in dilatation than in contraction. — Ophthalmoscopic examination: At 4 feet the vessels of both eyes give clear erect images (hypermetropic refraction). Right eye: veins broad and distinctly tortuous; on disc the arteries are quite as large as the veins; no visible pulsation of either arteries or veins. Left eye: normal disc and fundus, both as regards colour and relative sizes of arteries and veins, or it may be they are more nearly equal in size than natural; no visible pulsation in either veins or arteries. With convex spherical, 36 inches, right eye sees $\frac{3}{36}$—i. e., has manifest hypermetropia of $\frac{1}{36}$. Left eye with same lens sees $\frac{4}{9}$. When the eyes are extremely adducted there is quite $\frac{5}{8}$ in. between the outer margin of the cornea and outer canthus, and the eyes seem to fill the orbit. After this examination, half an hour from the beginning, and often knowing the letters, she says that with the right eye she can see $\frac{3}{9}$, and with the left $\frac{3}{9}$."

Patient's neck was found to measure 12¼ inches, taken at the level of the sixth cervical vertebra behind and the most prominent point in front. The thyroid tumour measured 2½ inches from side to side. It varied somewhat in size from time to time, but the lobes were equally enlarged. Patient suffered greatly from shortness of breath on the slightest exertion, and at times even when perfectly quiet. She had often great difficulty in swallowing, everything "seeming to go the wrong way." She suffered very greatly from palpitation, and there was "a great throbbing" in her head. On physical examination of the chest, a loud systolic musical murmur was heard at the heart's apex, and was conducted into the back and nearly all over the front of the chest; the heart was greatly hypertrophied. The pulse was weak, very irregular, and usually 130. No thinning of eyebrows or eyelashes; no enlargement of liver or spleen; digestion bad; bowels regular; catamenia not appeared; urine free from sugar and albumen.

Such was the history of the case. Treatment was commenced at once, five minims of tincture of belladonna being ordered in a drachm of water every four hours, and this at the expiration of a week was increased to ten minims every four hours. At the expiration of a fortnight there were no signs of improvement, and as the pulse was weak, irregular, and over 100, a drachm and a half of fresh infusion of digitalis was ordered in an iron mixture three times a day. This was taken for three weeks, and, with the addition of a belladonna plaster, succeeded in quieting the heart a little, but it did no good in any other way. It was then determined to give the belladonna a more extended trial, and she was ordered ten minims of the tincture in a little water every hour during the daytime, and at night when awake. This was taken for seven consecutive weeks without benefit. She was brought fully under the influence of the drug, and her sight was so dim that she could not read, and at times her throat was so dry that she could hardly swallow. The iron and digitalis mixture was tried again, but without benefit. Nitro-glycerine, the 1 per cent. solution, in half-drop doses, was next given experimentally, but it did no good. About this time patient began to suffer from cough, with copious thick yellow expectoration. Her chest was frequently examined, but nothing wrong could be detected with the breath-sounds, except, perhaps, that they were a little harsh. There was no dulness and no crepitation. She was given pancreatic emulsion, and some cough mixture, and on this she certainly improved, at all events as regards her general condition. A week or two later she suffered most severely from night-sweating, and this quickly pulled her down again. Her temperature in the middle of the day was nearly always over 100°, and her pulse 112 or more. She was ordered a drachm of saturated aqueous solution of picrotoxine in eight ounces of water, one or two teaspoonfuls to be given every night at bedtime, or oftener if necessary. This soon stopped the sweating, and the patient improved once more. The belladonna treatment—this time six minims every hour—was then tried again for a fortnight, with the addition of extract of belladonna and glycerine to rub in over the tumour, but again it completely failed. She then took quinine, iron, and other tonics, in conjunction with cod-liver oil, for a month or more, but she was obviously getting worse. The palpitation kept her awake at night, and the shortness of breath was especially distressing. There was still a little cough, and the expectoration was at times tinged with blood. The next complication was diarrhœa; this proved most obstinate, but was at last checked by half-drachm doses of carbonate of bismuth. After this she underwent a course first of bromide of potassium, and then of phosphorus, but without any benefit. Later on belladonna was tried for the fourth time, ten drops of the succus being given every three hours for the first week, and then every alternate hour for another week, but it did no good. Iodide of potassium and painting the tumour with iodine were also tried in vain. About this time a change was noticed in the character of the murmur, and it was quite clear that there were now two apex systolic murmurs, one musical and the other rough, and they were somewhat differently conducted. The cough too was worse. There was great shortness of breath, especially on going upstairs and when she lay on her back. The throat was dry, and she had great difficulty in swallowing. She complained much of headache, and said it "felt as if it would open." The diarrhœa returned, and she died on Nov. 17th, 1879, having been under treatment just a year, worn out with pain and suffering. The patient was of a most amiable disposition, and, to use the mother's expression, "never made a complaint during the whole of her long illness."

The points of interest in the case are:—1. Origin from fright. 2. The order in which the symptoms appeared—palpitation, enlargement of gland, exophthalmos. 3. The ophthalmoscopic appearances. Trousseau, vol. i., p. 544 (New Sydenham Society), quotes Dr. Withmisen on this point; or fifth edition, vol. ii., p. 552 (Veesmh). 4. The absence of change in temper, the patient not being at all irritable. 5. Resistance to treatment. Several trials of belladonna failed. Some cases, on the other hand, cured with belladonna, were recorded in THE LANCET, June 27th, 1874; and a successful case with belladonna, under Mr. Hutchinson, is recorded in the *Medical Times and Gazette*, 1874, vol. ii.

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TUNBRIDGE WELLS INFIRMARY.

CASE OF COMPOUND COMMINUTED FRACTURE OF THE EXTERNAL CONDYLE OF THE FEMUR AND PATELLA, IMPLICATING THE KNEE-JOINT, PRODUCED BY A FRAGMENT OF GUN-BARREL; RECOVERY; REMARKS.

(Under the care of MR. MANSER.)

FOR the following notes we are indebted to Mr. John Footner, F.R.C.S., house-surgeon.

B. W——, aged thirty-six, a tailor, of temperate habits, was admitted on March 19th, 1879, suffering from a severe gunshot wound of lower end of femur. About half an hour before, whilst watching a friend shoot a dog, the gun burst, and a jagged sharp-pointed fragment of the barrel, two inches and three-quarters long and three-quarters of an inch in its widest part, entered the external condyle of the left femur on its outer aspect, penetrated it, and then, taking an upward direction through the knee-joint, perforated the patella about its centre, shattering it into several fragments, and protruding through the skin over it to the extent of an inch.

Chloroform was administered, and Mr. Manser, after enlarging the wound in the skin under carbolic spray, removed the fragment of gun-barrel, together with some comminuted portions of patella. The aperture of entry was large and jagged, admitting two fingers. Internally a large cavity in the bone could be felt, containing splinters of the external condyle and some portions of the patient's trousers, which were removed. A drainage-tube was inserted, the wound dressed antiseptically, and the limb placed on a McIntyre's splint. A good deal of blood was lost while the patient was being brought to the infirmary.

A subcutaneous injection of morphia was administered in the evening, but the patient slept badly, and complained next morning of considerable pain about the wound. The wounds were dressed, and looked healthy. There had been a good deal of sanious oozing. Pulse 112; temperature 103° F. On the 21st the wounds were dressed. Tongue clean and moist; appetite good; pulse 104; temperature 101·8° F. On the 26th the wound of exit had healed by first intention, and the other wound was looking healthy. There was no effusion into the joint. Pulse 100; temperature 99·8° F. On the 27th, at 1 P.M., he had a prolonged rigor, lasting three hours. An ounce of brandy was administered, and hot bottles applied to the feet. There was great pain in the wound; no swelling of joint. Ordered four grains of sulphate of quinine every four hours. Pulse 120; temperature 101·8° F. On the 28th he had another rigor at 6 A.M. Brandy (one ounce) repeated. The parts about the wounds were swollen and very painful; tongue dry and furred; pulse 128; temperature 102·4° F. On the 29th he was better; there was less fever and less pain in the wound. Pulse 116; temperature 101° F. On the 30th the discharge from the wound was offensive. The antiseptic dressings were discontinued, and a linseed poultice was applied. He vomited twice. Quinism was produced. On April 3rd a cutaneous erysipelatous rash appeared outside the thigh above the wound and below along leg. A line was drawn above this with solid nitrate of silver. A mixture containing fifteen drops of tincture of perchloride of iron and two grains of quinine were ordered every four hours, and eight ounces of brandy daily. Pulse 104; temperature 100·2°. On the 4th the red blush had extended above the line of nitrate of silver. Collodion and perchloride of iron were painted over it. The discharge from the wound was profuse. Pulse 128; temperature 104·4°. On the 9th the tongue was dry and brown. The thigh, hip, and leg, which had become tense and brawny, were freely incised in several places, and linseed poultices were applied. The abdomen was tympanitic; turpentine stupes were laid over it. A pint of champagne and four ounces of brandy to be taken daily. Pulse 116; temperature 102·6°. On the 10th the pain had been relieved by the incisions, some of which discharged pus and slough. The abdomen was still tympanitic. The redness extended along flank to waist. He had another rigor at 5.30 P.M. Diarrhœa six times in twenty-four hours. Pulse 120, temperature 103°. On the following day he was very feeble; the diarrhœa still continued. An enema of starch and opium was administered. On the 12th he said he felt much better. Tympanites was less, and the tongue was fairly clean and moist. The diarrhœa had stopped. Pulse 116, temperature 97·8°. On the 13th he was worse again. Tongue dry and brown; rash extended up to axilla, but less vivid. Pulse 128, temperature 102·8°. On the 16th he was apparently in a sinking condition, and had low muttering delirium, picked bedclothes, &c.; rash extended to penis and crotum; scrotum freely incised; retention of urine; catheter introduced. Pulse 128, temperature 100·6°. On the 18th he was decidedly better; tongue was cleaning and moist, delirium gone; took nourishment well; pulse 128; temperature 100·4°. On the 22nd erysipelatous rash had quite faded away, and patient was convalescent. Pulse 108, temperature 99°.

From this date the patient recovered rapidly. The wounds took on a healthy action. A portion of the scrotum slonghed, but the skin, as usual, was completely restored. During his convalescence (on June 8th) an erythematous blush reappeared along the inside of the affected thigh, accompanied by headache and a high temperature (104° F.), but it quickly faded away, and the temperature sank to normal in four days. On July 1st the splint was removed and a gum-and-chalk bandage was applied, with an aperture for dressing the wound. It was found that the knee-joint had undergone firm fibrous anchylosis. The patient was discharged on July 1st with the wound (the aperture of entry) nearly healed, only a sinus being left. No dead bone could, however, be detected with the probe.

Remarks by MR. MANSER.—This case is worthy of notice as showing what nature, with a little assistance from art, will do towards repairing the most severe injuries to joints. Here was a man with a compound comminuted fracture of condyle of femur and patella, a large piece of gun-barrel having passed completely through the joint from without inwards; that is, it entered on the outside, and had to be extracted from the inside, the metal being so firmly wedged in between the bones that it was found impossible to remove it by the way it had entered. Not very many years ago this man's leg would have been amputated, or his joint excised, without a doubt as to the propriety of so doing; it being almost a fundamental rule that such injuries to joints necessitated amputation. In the present instance I had serious doubts as to the advisability of leaving the case to nature, but consoled myself with the thought that amputation could be performed later, if necessary. It will be observed that, notwithstanding the use of carbolic spray, the patient passed through a most severe attack of erysipelas, which at one time seemed likely to prove fatal. He had low muttering delirium, picking at the bedclothes, and looked altogether like a dying man. Free incisions and poultices gave great relief. The continuance of the antiseptic treatment appeared to retard suppuration, and it was curious to note that the wounds and the skin about them remained quite free from erysipelas and looked healthy, whereas the whole of the leg, thigh, scrotum, and abdomen was a mass of inflammation. So soon as carbolic spray was discontinued the wounds began to discharge more freely. Drainage tubes were kept in the joint and also in the incisions made in the thigh for the erysipelas, until healing was nearly completed.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Visceral Lesions in inherited Syphilis.—Malformation of Heart.—Dislocation of Thumb.—Granular Contracted Kidney.—Membranous Laryngitis.—Cancer of Lung.

THE ordinary meeting of the Pathological Society was held on Tuesday, the 20th inst., the President, Mr. Hutchinson, in the chair. Dr. Coupland raised the interesting question of the nature of the parenchymatous visceral lesions in inherited syphilis; Dr. Lees discussed the causation of the cyanosis and clubbing of the fingers met with in congenital malformation of the heart, and Dr. Pye-Smith showed a specimen of membranous laryngitis, which he believed was not diphtheritic. The President announced that no discussion would be held this session, but that the Council had decided to have a discussion in November next on Rickets.

Dr. COUPLAND showed specimens from two cases of Retarded Hereditary Syphilis. Case 1, was that of a girl

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aged thirteen, admitted into the Middlesex Hospital (under the care of Dr. Greenhow) in September, 1877, suffering from renal dropsy of ten months' duration. A firm but irregular tumour was noted in connexion with the liver, and its syphilitic nature was inferred from the following facts:—She was the seventh child of a family of twelve (including three still-born), four dying in infancy, most after having shown some of the usual signs of congenital syphilis. First, second, and sixth children were healthy, but the eleventh was weakly. The patient had notched incisor and an opacity on the cornea. She died in December, 1877, from renal disease. The liver was greatly deformed, and the seat of two large firm caseating gummata, chiefly of the right lobe. The spleen weighed nine ounces and a half, was indurated, but not lardaceous. There was well-marked parenchymatous nephritis. Case 2 was that of an ill-developed girl, under the care of Mr. Lawson, who died at the age of eighteen years and a half, in November, 1879. She was one of a family of thirteen (seven of whom had died in infancy), and the mother also had two abortions. No history of infantile syphilis could be elicited in this case, the patient being said to be in good health until 1876, when she began to suffer from painful swellings near the knee-joints. This was followed by other nodes in front of the leg, and on the forearms, and in October, 1878, she was also under treatment for necrosis of the frontal bones. She died from nephritis, and cellulitis of the right leg following suppuration of a node and necrosis of the tibia. At the autopsy numerous isolated, ill-defined periosteal masses (gummatous) were found in connexion with the right tibia, but there was no marked osteitis with the exception of a patch of superficial necrosis connected with one of the suppurating gummata; there was necrosis of the frontal bone, and two gummata in the frontal and left parietal regions, one of which involved both tables. There was also perihepatitis, and a small caseous gumma in the substance of the liver, the organ itself being extremely fatty. The spleen weighed 13 ounces, was firm and glistening, but not lardaceous. Kidneys in same condition as the other case. In this case there was characteristic notching of the left upper central incisor. In neither case was there any ground for believing the disease to have been acquired; whilst in both the condition of the teeth and the striking family history were strong presumptive evidence of hereditary taint. Dr. Coupland referred to the difficulty of speaking with absolute certainty in this class of cases, to which Lancereaux first drew attention; but in the light of recent knowledge on the lesions of hereditary syphilis the grounds for doubting their existence had been dispelled. He referred to two analogous cases recorded in 1874 by Professor Laschkewisch of Charkow, and remarked upon the frequency with which renal disease (apart from lardaceous change) carried off the subjects of tertiary syphilis.—The PRESIDENT doubted how far the term "late" was applicable to these specimens. These lesions occurred at about the age of Dr. Coupland's cases, and he had met with them in many cases during life, but had only rarely been able to demonstrate them post mortem. He could only remember to have examined four or five such cases after death, and in one of them the changes found were just like those shown. He confirmed Dr. Coupland's statement, that it is the disease of the kidneys that proves fatal to these patients.—Dr. BARLOW considered the liability to nephritis in such cases very important; he had recently seen, in conjunction with Dr. Gee, a child at the Hospital for Sick Children, suffering from very marked signs of inherited syphilis, who died from parenchymatous nephritis without having suffered from scarlet fever or other known exciting cause of this malady.—Dr. MAHOMED had seen three or four cases of granular contracted kidney in conjunction with congenital syphilis, but in each case there was also lacdaceous degeneration, which he thought was the primary lesion, and it might also be the starting point of tubular nephritis.—Dr. GREENFIELD had seen two or three cases of lardaceous degeneration, of the kidney in young persons with gummata and other evidences of syphilis. He recently met with the case of a woman aged twenty-three, who from the age of twelve had suffered from marked syphilitic lesions and disease of the kidney. At the autopsy he found syphilitic meningitis, symmetrical nodes on the cranium, nodes on the dura mater, three large gummata in the spleen—but none in the liver,—and very extreme lardaceous and interstitial degeneration of the kidneys and lardaceous change in several other organs. Such facts led him to question if the disease be not always primarily lardaceous.—Dr. N. MOORE was sure that in acquired syphilis the disease of the kidney was not always lardaceous; in a woman who had undoubted evidence of syphilis, the kidneys were found to be very granular, with puckered scars across them, but no lardaceous change could be detected in them.—Dr. BARLOW stated that in the case he had referred to there was no lardaceous change; there was very often a fibrous change in the liver and spleen, without lardaceous degeneration.—Dr. MAHOMED asked if Drs. Barlow and Moore had examined the kidneys microscopically, as the change could often only be detected by that means.—Dr. BARLOW and Dr. MOORE stated that they had made a microscopic examination.—The PRESIDENT stated that in the case he had mentioned there had been no microscopical examination, but he had Dr. Sutton's authority for stating that there was no lardaceous change. The case presented one peculiar feature; the liver would swell to twice its normal size, and then after treatment subside. This occurred two or three times, the man being very ill on each occasion; he had also albuminuria, and repeated attacks of hæmaturia. The liver was afterwards proved to be not enlarged, and the only change was patches of thickening of the capsule.—Dr. COUPLAND stated that in his cases the change in the kidneys was mainly epithelial and not lardaceous; the spleen was also large, firm, and glistening, but neither it nor the liver was lardaceous. All these organs were examined microscopically.

Dr. LEES showed a specimen of Malformation of the Heart with transposition of Aorta and Pulmonary Artery, taken from a child aged seven months, that was brought to him at the Hospital for Sick Children when four months old. The mother stated that it had been blue from birth, especially in the head and upper limbs, and had been very short of breath. The cyanosis of head and arms was very deep; there was no clubbing of the fingers. The pulse was over 160; second sound strongly accentuated, and there was no bruit. This fact was repeatedly verified by Drs. Barlow and Garlick and himself. Two months later a systolic bruit was detected at the left base, conducted up to the left clavicle, and audible in the upper part of the interscapular region; this was occasionally heard at the apex, and continued till death. At the autopsy two vessels lying parallel were found to spring from the base of the heart; the one on the right, the smaller, was the aorta springing from the right ventricle, giving off the two coronary, innominate, and left carotid and subclavian branches, and then being very much narrowed. The larger vessel on the left was the pulmonary artery, which sprang from the left ventricle, gave off the two branches to the lungs and the ductus arteriosus, which was patent, and joined the narrowed aorta to form the descending aorta. Both auricles were normal, and the foramen ovale was practically closed; the walls of the two ventricles were of equal thickness, and in the septum between them was an aperture as large as a common cedar pencil. All the valves were normal, with the exception of a slight thickening of the mitral valve. Thus the head and arms had been supplied with venous blood, and the trunk and legs with partially aerated blood, the quantity from the aorta and ductus arteriosus being about equal. The dyspnœa was probably caused by the circulation of venous blood in the respiratory centre in the medulla oblongata. When the mother of the child was about six weeks advanced in her pregnancy she received a severe mental shock while bathing, the effect of which upon her abdominal nervous system was evidenced by vomiting and diarrhœa; this was the period when the septum of the ventricles was being developed. The events were synchronous; might they not be cause and effect? She had also previously had one of a twin birth stillborn and deformed—having no nose but one large central cloaca,—which the mother attributed to her having met a woman who had lost her nose and upper lip from lupus. This case was important as throwing great light upon the cause of the marked cyanosis of congenital malformations of the heart; it was evidently not due to venous congestion, and there was abundant evidence to prove that it was not the result of simple intermingling of arterial and venous blood.—Dr. LEES thought that cyanosis was only met with where there was an imperfect aeration of the blood, as must have been the case here where the same stream of blood was con-

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stantly circulating through the lungs with but little chance of mingling with and purifying the main bulk of that fluid. Although the cyanosis was intense, there was no clubbing of the fingers or toes, which it was reasonable to connect with the absence of congestion of the venous system. Dr. Peacock's cases showed that where there was great obstruction to the passage of blood through the right auricle the clubbing was marked; but where a patent foramen ovale removed the obstruction clubbing was little if at all marked. Cases recorded by Dr. Pye-Smith and Dr. Crocker also supported the view that clubbing is due to systemic venous congestion.—Dr. N. MOORE thought the fright had nothing whatever to do with the deformity of the heart; the mother had brought forth another deformed child, and had had twins, which Dr. Matthews Duncan had shown to be one form of blight; it therefore seemed to be a clear case of imperfect development of ova.

Mr. EVE showed a specimen of Dislocation forwards of the first Phalanx of the Thumb, removed from a man who was killed by the fall of an archway upon him. The bone of the phalanx rested on the front of the metacarpal bone, the back of the capsule being torn; it could be readily reduced by flexion. Hamilton mentioned ten cases of this injury, two seen by himself; a similar case was recorded by Mr. Wood, in vol. iv. of the Society's Transactions.

Dr. SAUNDBY (Birmingham) showed several drawings illustrating his views on the Pathology of Granular Contracted Kidney. He stated that, after a long and careful study of the subject, he had given up the theory of interstitial nephritis, in favour of the views of Drs. Johnson and Moxon, that it is a parenchymatous change. He referred to his own and other observations on the changes in the epithelium in cirrhosis of the liver, by which it had been shown that, side by side with the fibroid change, the hepatic cells become replaced by smaller epithelial elements. He believed that a similar change occurred in the kidney. The epithelial cells atrophied, lost their opacity, the protoplasm diminished, and the nuclei took on a deep staining with carmine; the tubules became filled with these small round cells; these cells then became spindle-shaped, and later on developed into fibrous tissue—a change which had been noticed before. The Malpighian bodies underwent what he would call an "embryonic transformation," being converted into little masses of granulation tissue, which became mucous, and later on formed a cyst with homogeneous contents; and thus arose most, if not all, of the common renal cysts. He had found the arteries to show undoubted fibroid thickening of the intima and adventitia, but also great hypertrophy of the muscular coat. This hypertrophy he considerd to be the effect of the long-continued congestion of the organ, which was the initial change occasioned by the fact that upon the kidneys was thrown the main part of the depuration of the blood.—Dr. GREENFIELD was glad attention had been called to such an important subject, but thought it would be unfair to discuss it while only Dr. Saundby's drawings were before them. Such a complex organ as the kidney was probably affected with more than one form of disease, and certainly his own investigations had led him to a different conclusion from that arrived at by Dr. Saundby. He thought it would be well if Dr. Saundby would bring up the subject on another occasion, and exhibit his specimens.—Dr. MAHOMED supported Dr. Greenfield's proposal. He was doubtful if the epithelium wandered through the basement membrane, and then changed into connective tissue.—At the request of the President, Dr. Saundby promised to exhibit his specimens and give a fuller account of his views at another meeting of the Society.

Dr. PYE-SMITH showed a specimen of Membranous Laryngitis in an adult. A woman aged twenty-three was suddenly attacked on Dec. 25th with shivering, vomiting, and cough, being very ill. The next day she brought up some false membrane, and the following day a large arborescent cast of the trachea and bronchial tubes, which he exhibited. He saw her on Dec. 29th. There was then great dyspnœa, moderate fever, no membrane to be seen on the fauces. The next day she was delivered of a child prematurely without the loss of much blood. The dyspnœa increased, and, after a week's illness, she died. After death the fauces and larynx were found to be healthy, but the whole of the larynx, trachea, and bronchial tubes were inflamed, but showed hardly a trace of false membrane. The expectorated cast resembled those met with in plastic bronchitis; but its fatal issue, the absence of hæmorrhage, and the affection of the larynx and trachea, showed that this was not a case of plastic bronchitis. He thought there were serious objections to calling it diphtheria:—1st. It was a sporadic case. There were no other cases of diphtheria, typhoid, or scarlet fever in the neighbourhood, nor was there any local source of the poison found. 2nd. The absence of the characteristic sign of diphtheria, asthenia; it was acute asphyxia, like that seen in croup in children. 3rd. No affection of fauces; no swelling of neck or cervical glands. 4th. No signs of a general blood disease found post mortem; the blood was firmly coagulated; no swelling or ecchymosis of spleen, or staining of vessels. 5th. Kidneys were healthy, and there was no albuminuria. It seemed to him to come as near as possible to a case of non-diphtheritic membranous inflammation of the larynx and trachea.—Dr. SEMPLE considered the case to be really diphtheria; the membrane had been coughed up, and was therefore not found after death; it was well known that sporadic cases of diphtheria occur, and also cases in which the fauces are unaffected.—The PRESIDENT asked if there were any evidence of the contagiousness of this case.—Dr. SHADWELL, in whose practice the case occurred, stated that there was no sore-throat about at the time nor after, and no evidence of its contagiousness.

Dr. N. MOORE showed a recent specimen of a Morbid Growth in the Lung, probably cancerous, which surrounded the root of the right lung, penetrated the right auricle, one pulmonary vein, and completely filled up the left auricle. The signs during life were those of bronchitis and emphysema.

The specimens shown by card were:—(1) Œsophagus and Stomach, from a case of Acute Carbolic-acid Poisoning; by Dr. Robert Smith. (2) Fracture of the Clavicle, with Dislocation of the Acromial End upwards; by Mr. Eve. (3) Drawings of Epithelioma; by Mr. Hulke. (4) Two complete Ureters on either side of the Body. (5) Congenital Malposition and Cystic Degeneration of the Left Kidney. (6) Mucous Membrane of the Bladder, showing Miliary Tubercle in the absence of Tubercle elsewhere. (7) Fibroid and Calcareous Changes in both Suprarenal Capsules, perhaps of Syphilitic origin; all by Dr. W. Ewart. In reference to the last specimen, Dr. EWART stated that it was taken from the body of a woman aged thirty-seven, who died from scarlet fever and parenchymatous nephritis, who had not shown any symptoms of Addison's disease. There was no evidence of struma or tubercle; but on the inner table of the skull was a depression like the result of a node.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Tumours of the Cerebellum.—The value of Parallelism in the Treatment of Disease and Injuries of the Hip.

AT the meeting on the 12th inst.—Dr. Cockle, President, in the chair—a paper was read by Dr. HUGHLINGS JACKSON, on Tumours of the Cerebellum (which is published *in extenso* in another column.) In thanking the author, the PRESIDENT remarked that he had seen three or four cases of tumour in the cerebellum, in which death had taken place suddenly.—Dr. DOWSE inquired whether sensation or hearing were affected in the author's cases; and also whether perfect co-ordinating power was retained in the recumbent posture.—Dr. SYMES THOMPSON referred to a case of long-standing otorrhœa (ten or fifteen years) which terminated suddenly, the man dying from an abscess involving almost one hemisphere of the cerebellum. The petrous bone was much diseased. In such cases the optic disc should be examined.—Dr. H. JACKSON, in reply, said that he had not noticed defect of hearing in cases of cerebellar disease; as to co-ordination, there was reeling gait in the cases he had seen. Optic neuritis was always present in cases of abscess of the brain.

Mr. BRYANT read a paper on the value of Parallelism of the Lower Extremities in the Treatment of Hip-disease and Hip-injuries, with the best means of maintaining it. The author first pointed out how it was that in most of the deformities of the lower extremity following a natural recovery with a stiff joint after hip disease or injury, the deformity was due to a want of parallelism of the lower extremities, and then passed on to demonstrate, by means of

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a simple instrument he had constructed for the purpose, that, as a rule, in such cases the deformity is produced by the *ad*duction of the affected limb. He conclusively demonstrated that when the hip-joint is fixed in an *ad*ducted position, and the patient attempts, for walking purposes, to bring the limb vertically downwards, the pelvis on the affected side is tilted upwards, and on the sound side downwards, with the result of increasing the shortening of the affected limb. On the other hand, when the anchylosed limb is *ab*ducted and the foot is brought down for the purposes of progression, the pelvic line on the diseased side is lowered, and the affected limb is merely apparently elongated; apparent lengthening of the diseased limb in hip disease meaning its *ab*duction and apparent shortening its *ad*duction. Under these circumstances it is clear that only by maintaining parallelism of the two limbs in such cases can deformity be prevented. For this purpose the use of the double splint, which he has had slowly built up under his eye at Guy's, was strongly recommended, for he maintained (1) that it is far more comfortable to the wearer than any other he had used or seen used; (2) that it most thoroughly immobilises the limb to which it is applied; (3) it keeps up well-regulated, steady and persistent elastic extension; and (4) maintains absolute parallelism of the lower extremities. In children with acute hip disease, the splint, when well applied, so securely guards against joint movement that the nurse may turn the child over on to the sound side for purposes of cleanliness, and lift him for the performance of the natural functions, with freedom and confidence. In cases of fracture of the neck of the femur or shaft, the same principle is applicable and the same splint of value; in proof of which the author stated that thirty consecutive cases of fracture of the neck of the thigh-bone, occurring in patients averaging seventy-four years of age, left his wards with useful limbs; and that out of forty consecutive cases of fracture of the shaft of the femur, in only four, or one in ten, was there any important shortening, such as an inch. In twenty of the remainder there was no shortening, and in eighteen there was less than half an inch.—Mr. MASON thought the splint a useful one. At St. Thomas's Hospital they were now using Hamilton's splint in three cases.—Mr. ROYES BELL said that most surgeons were now agreed that parallelism was most desirable in these cases. At King's College Hospital they now used the American splint and weight.—Mr. PEARCE GOULD could not agree that the legs are normally parallel. They are abducted.—Mr. BRYANT, in reply, said that the subject of parallelism had been much neglected. He had seen many cases of hip disease which had been treated by the weight and splint result in considerable deformity, due either to abduction or adduction. In the splint suggested by Mr. De Morgan, from which his (Mr. Bryant's) was built up, parallelism was secured. In adults normally there might be abduction, but in children there is parallelism of the limbs. No force should be used in extending a flexed joint. Mr. Marsh's paper on this subject was of great value, but Mr. Marsh in his cases gained his end by means of the American splint.

Mr. G. C. COLES exhibited the Laryngo-Phantom devised by Dr. Isenschmid, of Munich, intended to familiarise the student and practitioner with the use of the laryngoscope, enabling the various conditions to be learnt without the loss of time involved in observations on the living subject. The apparatus is sold by Messrs. Kröhne and Sesemann.

OBSTETRICAL SOCIETY OF LONDON.

AT the meeting on Jan. 14th—Dr. Playfair, President, in the chair—specimens were shown by Dr. Godson, Dr. Hilliard, and Mr. Clabburn.

A paper on "The Pain in Pelvic Cancer, and its relief by Morphia," by Dr. CHAMPNEYS, was read. The former and larger part of the paper consisted of a clinical study of fifty cases in the wards of St. Bartholomew's Hospital, and was illustrated by fourteen tables, dealing with the ages of the patients, the first symptoms noticed, the seat of pain, its locality, the date of its commencement, its quality, amount of intensity, and the relation of pain to hæmorrhage. The analysis showed some points of departure from what have been considered established facts; for instance, as many of the patients were from thirty to forty years of age as were from forty to fifty; and again, pain rather than hæmorrhage was the first symptom noticed. On these the author remarks that his cases were only fifty, and can therefore not overthrow Dr. West's larger number of 166, but suggests that as this part of the question cannot be founded on objective facts, but must depend on the patient's memory, which memory might be supposed to retain hæmorrhage rather than pain, it may be supposed that pain, as a first symptom, may occur oftener than is usually imagined. It was shown that cancer may be painless at almost every stage, but it was remarked that of the author's cases none were painless in which hæmorrhage was absent. The seat of pain was carefully ascertained by making the patient lay her hand or finger on the spot. The localities were most various, the region of prevalence of uterine pains being seen, however, to be mainly bounded by the line of the sacrum above and of the knee below. It is remarkable that the pains were six times as common on the left as on the right side, which cannot depend on the locality of the disease, but must depend on the difference with regard to sensation between the two halves of the body, a difference seen also in the common left-sided pain of females and the preponderance of left-sided hemi-anæsthesia; "Man is not an absolutely bilaterally symmetrical animal." Aching of the whole front of the thighs and pain transfixing the body are believed by the author to be at least uncommon except in cancer. Backache amounted to 24 per cent., pain in lower abdomen to 14 per cent., pain in the groins to 18 per cent., of all pains. It was shown that no relation existed between intensity of pain and duration of disease. Thirty cases showed the pain to be worse post-meridian than ante-meridian. The author suggested a connexion between pain worse at night and pain relieved by bleeding as possibly depending on the increase or diminution of vascular tension in the diseased tissues, which is illustrated by the nocturnal tightening of bandages, and he remarked that in all his painless cases there was bleeding. Three remarkable cases are given at length of nervous affection, in one of which there was paroxysmal nocturnal motor and vaso-motor disturbance of one, then of both legs, depending probably on irritation reflected at the spinal cord. Of the methods of administering morphia the hypodermic injection was shown to be by far the most, and the suppository the least, effectual.—Dr. MATTHEWS DUNCAN thought the paper was one for reference rather than criticism. The collection of facts was great and valuable, and never before made. The connexion of physical signs with lesions was easier than symptoms with them.—Dr. HEWITT said the paper showed great research. He had paid particular attention to the pain of cancer. Its peculiarity was its spontaneity. He had also observed increased frequency of pulse in cancer.—The PRESIDENT was struck with the frequency with which pain was present. He asked if measures for removal had had any effect in alleviating the suffering.—Dr. GODSON had found hæmorrhage frequently the first symptom.

A paper on Cotton-leaf Tea as a Galactagogue, by Dr. ANDERSON, of Jamaica, was read. It was in common use among the natives. He had used it, and thought it efficacious up to the fourth month of delivery.

Dr. CARTER and Dr. DALY described the removal of a foreign body from vagina after four years. After removal, the vagina contracted; it was dilated. The patient married and became pregnant; labour was induced at the eighth month, but the cicatricial tissue in vagina obstructed the head. The band was divided, and delivery soon accomplished.

A case of large foreign body in vagina for two years, perforating the posterior walls of the bladder, and its removal and closure of the fistulous opening, was read by Dr. CARTER.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

THE third meeting of the present session of this Society was held at the Royal Kent Dispensary, Greenwich, on Dec. 5th, 1879, Mr. J. P. Purvis, President, in the chair, when Mr. F. B. JESSETT, F.R.C.S.E., of Erith, read a paper on "Fractures, their Pathology and Treatment." After going fully into the pathology of fractures, the author discussed at length the various modes of treatment, especially urging the early application of fixed splints in all simple fractures of the long bones, plaster-of-Paris and starch

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bandages being especially recommended; and in the treatment of compound fractures he also recommended the same line of treatment, with trap-doors cut over the wounds for dressing.

Reviews and Notices of Books.

Clinical Lectures on the Diseases of Women. By J. MATTHEWS DUNCAN, M.D. J. and A. Churchill.

WE have read this book with a great deal of pleasure. It is full of good things. To derive the maximum of profit from its perusal, however, the reader should have some personal knowledge of the author, for he has impressed his own individuality upon his work. The book consists of nineteen short lectures or sketches, of varying degrees of merit, but all good. The subjects of some of the lectures are symptoms, as painful sitting, aching kidneys; of others, definite diseases, as cancer of the body of the uterus, fibrous tumour, &c. The style is fresh, clear, and striking. Of course the subject is in no instance fully treated. Clinical lectures are always in one sense fragments, while in another they may be integers. The papers before us are of this character. The hints on pathology and treatment scattered through the book are sound, trustworthy, and of great value. A healthy scepticism, a large experience, and a clear judgment, are everywhere manifest. Instead of bristling with advice of doubtful value and unsound character, the book is in every respect a safe guide. There are some things in it with which we do not agree; yet these errors, if they be such, have a harmless, if not a beneficial tendency, for they are "errors on the right side." We have but one fault to find with the book: it is too short. It is suitable to the advanced student, rather than to the beginner in gynæcology.

Traité Elementaire d'Analyse Qualitative des Matières Minérales. Par ALFRED DITTE, Professeur à la Faculté des Sciences de Caen. pp. 364. Paris: Dunod. 1879.

SO many text-books of elementary chemical analysis have appeared of late years, some of them excellent in nearly all respects, that a new one must show remarkable advantages to induce teachers to adopt it. A careful examination of M. Ditte's work has convinced us that it has a distinct *locus standi*; that it is not a mere repetition of old systems, but a work of originality, even though the older methods have been in the great majority of cases retained. We do not mean that we approve of all the changes that have been introduced. Here and there one strikes us as the reverse of an improvement, but on the whole the methods recommended are well chosen, and the arrangement of the book is so clear and the descriptions so simple that a student will be able to get on with comfort and without unnecessary delay.

In the earlier portion of the book, the chapter we like best is that on the identification of acids in simple salts and mixtures. Students generally find far more difficulty with acids than bases, especially when more than one acid radical may be present. The acid groups are not very sharply defined, and the members sometimes rather hard to separate. There are so many special tests, and the metals so often interfere with the reactions, that this student's difficulty is not surprising. Now, the analytical scheme adopted by M. Ditte for the separation of acids is decidedly simpler than most others that we have seen, and will certainly for this reason be a boon to students. We think, however, that the omission of sulphuric acid as a general indicating test for acid radicals is a mistake. It can be applied very quickly, and in a large number of cases gives a simple and obvious indication.

A long section devoted to the methods required for special cases, such as the ashes of plants, silicious mineral, &c., is very satisfactory, and will afford excellent practice to the more advanced student. The same may be said of the last book, which is devoted to a practical as well as theoretical account of spectrum analysis, and, indeed, in varying degrees to all portions of the work.

We regret that the author should have made so little use of symbols, which, indeed, are almost absent. This is a very grave defect, for although, of course, a diligent student may supply this want for himself, many reactions are hardly comprehensible without them. But, after all, as the old atomic weights, now almost forgotten in England, are employed, a greater profusion of formulæ might have been a doubtful blessing.

We must add that the work is admirably got up and illustrated. It is accompanied by a series of tables of the spectra of metals and non-metals, most beautifully executed, and of the highest value for purposes of study.

OUR LIBRARY TABLE.

The Quarterly Journal of Microscopical Science. Edited by Messrs. LANKESTER, ARCHER, BALFOUR, and KLEIN. No. 77. January, 1880.—This number contains several valuable papers, and is illustrated by seven plates. Mr. H. Ward supplies an article on the Embryo Sac and Development of Gymnadenia conopsea, one of the commoner orchids of Europe. It is not possible to abstract the details, but they are evidently the result of much patient research. The same may be said of F. Elfving's studies on the pollen bodies of the Angiosperms, made at the Jenäische Institute with Professor Strasburger's co-operation, and translated from the *Jenäische Zeitschrift*. Mr. Bower gives the Development of the Conceptacle in the Fucaceæ. Dr. Cunningham, of the Indian Medical Service, writes on certain effects of Starvation on Vegetable and Animal Tissues. By placing germinating spores in distilled water, he finds that the primary effect of starvation on vegetable tissues consists in a gradual analysis of the complex amalgam constituting the protoplasm, and of a precipitation of the oily matter from it. This is followed by transformation affecting the albuminoid constituents, and leading to their more or less complete conversion into fat. The effect of starvation on animal tissues was found, in accordance with previous observations, to be of essentially the same nature. Dr. Cunningham's Indian experience enables him to give the results of numerous autopsies made on the victims of famine in Madras. The coats of the intestine, in particular, were found to have undergone fatty degeneration, the epithelium to have disappeared, and the general condition of the alimentary canal to be unfavourable for the digestion, absorption, and assimilation of food. He draws some important conclusions from these premisses in reference to the establishment of relief camps in cases of famine. One of the most important articles is that by J. E. Bloomfield, of Oxford, upon the Development of the Spermatozoa in the Lumbricus. He applies the term spermatospore (parallel to oospore, denoting the ovarian egg-cell) to the constituent cells of the testis derived from the primitive germ epithelium. These, by division of their nuclei, form spermatospores, or sperm-polyplasts. Each constituent of a sperm-polyplast is a spermatoblast, and when the process of division is over each spermatoblast becomes a spermatozoon. Mr. Balfour has a note on the Spinal Nerves of Amphioxus. Lastly, M. G. Armaner Hansen has a paper on the Bacillus of Leprosy.

The Journal of Anatomy and Physiology. Conducted by Professors HUMPHRY, TURNER, MCKENDRICK, and CREIGHTON. Vol. XIV., Part 2. Jan. 3rd, 1880.—This part contains:—1. An account of the Intrinsic Muscles of the Marsupial Hand, by Alfred H. Young, of Owens College, the animals examined being the opossum, the wallaby,

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the yellow-footed rock kangaroo, the wombat, and the koala. Mr. Young agrees with Dr. Cunningham in admitting a plantar layer of adductors, an intermediate layer of short flexors, and a dorsal layer of abductors. This paper is accompanied by a plate. 2. Mr. Young also contributes a paper on the Myology of the Viverra Civetta. 3. Dr. Roger Williams gives a note on the Anatomy of the Knee-joint, chiefly bearing on the bursæ about the patella, and the expansion of the quadriceps extensor femoris. 4. Dr. D. J. Hamilton describes the development of fibrous tissue from the hepatic parenchyma in Cirrhosis of the Liver. The appearances are illustrated by a carefully made drawing. 5. Mr. McBride supplies a contribution to the pathology of the Internal Ear, showing in a plate and accompanying description the changes taking place in a recent case of croupous inflammation of the cochlea, and an abnormal condition of the semicircular canals. 6. Dr. Beatson, of Edinburgh, describes the disease called Sturdy in Sheep, and its relation to cerebral localisation. This is well known to result from the development of an hydatid, the Cœnurus cerebralis, in the brain of the sheep, this being the larval stage of the Tænia cœnurus of the dog. One case he records favours the view that the cerebellum is the co-ordinator of muscular movements. In a second there was gradual disappearance of the corpus striatum without loss of motor power, and he was led to think that when vertiginous movement is present there is some interference with vision on the opposite side of the body; when both eyes are affected the vertiginous movements cease. 7. Dr. James Carmichael gives two cases of Lesion of the Temporo-sphenoidal Lobe of the Brain. 8. Dr. W. Osler records two cases of striated Myo-sarcoma of the Kidney. 9. Dr. George Gibson has an interesting paper, with tracings, on the Sequence and Duration of the Cardiac Movements. 10. Professor Turner gives two short communications, one on the Fœtal Membranes of the Eland, and the other on the Dissection of a Second Negro. Lastly, Dr. Anderson describes a new abnormality in connexion with the vertebral artery.

The Birmingham Medical Review, January, 1880.—Among the contents of the present number is a thoughtful review by Dr. Saundby on some recent contributions to the question of the relation between kidney disease and hypertrophy of the heart, and other reviews on medical ophthalmoscopy, psychological medicine, glaucoma, &c. The original contributions include articles by Eales on the Retina in Bright's Disease; Lawson Tait on Cirrhosis of the Ovary; McMann on the Spectroscope; and Handford on Hereditary Deformity. The editor would do well to look out for verbal and literal errors in his contributors' papers rather more carefully than has been the case in this number.

The Practitioner, January, 1880.—Dr. Hunter Mackenzie discusses the question, Is Aconite a diuretic? and concludes that it is not. Mr. Gamgee contributes a clinical note on Pressure. Dr. Dyce Duckworth discusses the effects of Tight-lacing. Dr. D. J. Hamilton considers, in a valuable paper, the subject of Catarrhal Pneumonia and Tubercle. Dr. W. Nicholson vindicates Alkalies from their supposed depressing effects; and Mr. Martindale describes the Pharmacy of Nitro-glycerine.

The Irish Medical Directory for 1880 admirably fulfils its purpose as a register of the profession in the sister isle, and will be appreciated as a useful adjunct to the works of reference usually kept on the book table.

Popular Science Review. Edited by W. S. DALLAS. January, 1880.—This number contains four original articles: 1. Notes on the Argentine Republic, by Charles Oxland. 2. Meteor and Meteor Systems, by W. F. Dunning. 3. The Law of Association in the Animal Kingdom, by M. E. Perrier. 4. The Dinosauria, by Professor H. G. Seeley. In the article on the Law of Association, M. Perrier, commencing with the hydraform polypes, shows how the division of labour, ultimately ending in transformation and separation, occurs in them, and how even the highest animal may be regarded as a colony of separate and independently acting parts.

New Inventions.

THE BOWER PATENT SEWER-GAS TRAP.

THIS invention is brought forward by Messrs. J. Warner and Sons, of the Crescent Foundry, Cripplegate. It is applicable to sinks, and to the overflow pipes of water-closets and the waste and overflow pipes of baths. The house end of the trap opens into a glass or leaden dome having its convexity downwards, the diameter of the dome being about double that of the house-pipe. The sewer-pipe leaves the domed chamber at its upper part, and sufficiently above the level of the end of the house-pipe to ensure the interposition of a good stratum of water between it and the sewer-pipe. The dome or bell contains an india-rubber ball, which is floated upwards by the water, and closes the lower end of the house-pipe effectually. The greater the pressure in the sewer-pipe or the bell, the greater is the pressure on the ball, and the more securely is the house-pipe sealed against regurgitating gases. The bell part, being of glass, permits of an easy inspection of the trap, and, being removable, allows of repairs and interference if necessary. The action of the ball, when pushed about by the down-rushing current from the house-pipe, is such that it stirs up all deposits in the bell and prevents any accumulation. In addition to these advantages, it is claimed for this trap that it can be unsealed neither by syphonage nor evaporation, that the compression of the india-rubber valve compensates for the expansion from freezing, and that the valve can be easily renewed by anyone, and at a small cost. The invention seems to us to be an admirable one, and is well worthy the attention of sanitarians.

BOSTEL'S PATENT "EXCELSIOR" WATERCLOSET.

THOSE who have visited the Parkes Museum, and have seen the collection of corroded leaden pipes and traps, and the defective plumbers' work, which are there exhibited, must have been impressed with the desirability of avoiding the use of lead in the construction of waterclosets. This closet of Bostel's is constructed in one piece of earthenware, and its simplicity is one of its best points. The bottom of the basin is sufficiently concave to hold a small quantity of water to receive the soil. The outlet pipe makes an S bend beneath the basin, and thus provides a trap. The basin has a flushing rim; and the soil-pipe is provided with a ventilating pipe and a movable cap, which allows of the ready introduction of a plumber's plunger in case of any obstruction occurring in the trap. The closet is a great improvement on those too complicated arrangements which seem especially designed to stimulate the passage of money from the pockets of householders to those of plumbers and sanitary engineers. We may state that a specimen of this closet has been deposited by the inventor (Mr. Bostel, of Brighton, and Golden-lane, E.C.) in the Parkes Museum of Hygiene, where it may be inspected.

MEDICAL SOCIETY OF LIVERPOOL.—The following gentlemen have been elected office-bearers for the ensuing year:—President: Mr. Reginald Harrison. Vice-Presidents: Mr. Newton, Mr. Puzey, Dr. Caton, Dr. Dickinson. Treasurer: Dr. Campbell. Honorary Secretaries: Mr. Rushton Parker, Mr. Edgar Browne. Librarian: Dr. Howie. Council: Drs. Davidson, Graham, D. Williams, Townson, Waters, Barr, Rawdon, Messrs. Warburton, Banks, Ransford.

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THE LANCET.

LONDON: SATURDAY, JANUARY 24, 1880.

THE time of the remaining Parliament is short. The Government fails to see that in regard to the domestic sphere of legislation, it has but a poor account to give. There is, however, possibly, another session before it, in which it may show its capacity for dealing with subjects that deeply affect the happiness and the welfare of the people of the United Kingdom. There may be something to be said for the foreign policy of the present Ministry. But no Ministry can long remain in reputation which has not a domestic policy, and which has little success in abating social misery, and in adding to the security of life, property, and virtue in the community. Mr. CROSS gave promise from the first, in his sphere, that these great functions of the Government would not be unfulfilled. There is an obvious honesty of purpose and expression in him, that makes men of all parties hope for much from him. But it must be confessed that up to this time Mr. CROSS has not satisfied expectations that were so general and so independent of party. His enunciation of sensible views and intentions has not been accompanied with the production of measures that have succeeded in bringing about the effects which we have indicated above, and which ought to some extent to be within the power of every Ministry. We do not know any member of the Government who has a deeper interest in the work of the coming session than Mr. CROSS. Lord BEACONSFIELD's reputation is that of genius, and is pretty well established. His talent and his power are absorbed in questions that lie far outside of the immediate affairs and interests of the people of these realms. Africa, Turkey, Asia Minor, Afghanistan, and India are the wide regions in which his genius finds scope and employment. But there is a domestic region in which the views and interests of millions have to be consulted, and we must regard the Home Secretary as representing that part of the Government which takes notice of these. Genius is a grand quality, but it will not do much in the details of home legislation. Here more is to be expected from good sense and honest purpose. These are all well enough represented in the present Government. And the time has fully come when they should have a chance of asserting themselves. A demand, even an urgency, is admitted on all sides. And it is allowed that this Parliament will go discredited into history, and the Ministry hopelessly to the country, if something is not done in the home sphere of statesmanship. We have had enough of politics; we want a little statesmanship, and legislation that will make homes happier and the maintenance of families easier.

There are some medical questions that affect deeply both the health of the people and the credit of the Ministry. One of the most urgent of these is the Medical Bill, or Bills, now under the consideration of a Select Committee. We shall not here go into any details as to the position of these Bills. Speaking roughly, they affect the education and the efficiency of the medical profession. If the Ministry is in earnest, and will encourage the Committee in its work, it may do a huge service to the public.

The Prevalence of Epidemic Diseases (some of them absolutely preventable) on a large scale, and of other avoidable diseases on a more limited scale, might well engage a few of the last hours of a Parliament that was summoned to the cry of *Sanitas sanitatum, omnia sanitas.* Asylums that were built for the reception of one kind of zymotic sickness are filled by another; and those meant for one class are monopolised by a different one. Vestrydom has entirely failed—in the metropolis at least—as a power to cope with epidemics; and the Act of the Government, prepared last year, is a mere postponement and evasion of the duty to make more serious provision for the protection of the public.

The law affecting Coroners' Inquests can scarcely remain as at present. Some uncalled-for inquests are held, and a great many inquests that are called for are held in a perfunctory and formal way, that throws no light on the cause of death, and in no way increases reverence for human life. A Select Committee has already reported in favour of important changes. With considerable boldness, it is argued that none but lawyers should be eligible for the office of coroner, though it is admitted that the men who have kept alive in the public mind the power and use of the office have been of the medical profession. Some *amende* is made for the audacity of this proposal by providing for the presence and assistance of experts in the holding of inquests. But this provision will have to be well safeguarded if any improvement in the present style of holding inquests is to be effected.

The Ministry, if accounts be true, will have to face a debate on the appointment of Sir BRYDGES HENNIKER as Registrar-General, and on the non-appointment of Dr. FARR, who, more than any living man, has breathed the breath of life into the dead figures of vital statistics, and invested them with a significance that is now studied by all civilised nations. When a Government acts as the Ministry have done in this case, it inflicts a serious blow and great discouragement on the whole Civil Service.

The subject of the Water-supply of London has already called forth a spirited expression of determination on the part of Mr. CROSS to buy up the interests of the Water Companies on reasonable terms. It would be a feat of statesmanship to take the metropolitan water-supply out of the region of commercial interest, and make it, in affluence and in purity, as near as possible like the supply of air or light. The latest reports throw doubt on Mr. CROSS being able to carry out his resolution to buy at a reasonable price. We must give him the benefit of the doubt, but it will be discreditable if he does not.

Lunacy law reform, in a rational, but sufficiently bold sense, is, it must be assumed, at this moment a matter of serious consideration. The question at issue is grave and pressing.

We can only notice one subject more in which the credit of the Government, and of Mr. CROSS in particular, is concerned. We refer to the expected legislation on the basis of the Report of the Lords' Committee on Intemperance. We cannot doubt that Mr. CROSS has long since regretted his concession to the public-house interest in

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relaxing most seriously the legislation of the previous Government, which, by the universal testimony of magistrates and police, was doing great good. Be this as it may, the Lords' Committee have made important suggestions which must be regarded, and public opinion is even more urgent than the Lords' Committee.

With such questions to settle, the Ministry has opportunities of placing itself in a better position before the country and posterity than it will occupy if they are evaded or lightly treated.

DR. REID, the new Director-General of the Medical Department of the Navy, has our warm sympathies in the difficult task awaiting him, and we shall rejoice greatly if he succeed in restoring the Service to somewhat of its old prestige. We hear most favourable reports of him, but we cannot forget that he has Herculean labours to perform. We sincerely hope that he may receive loyal and unflinching support from the officers of the Department, and from those who have placed him in his present position. But whilst we congratulate the First Lord and the Department upon the appointment, we deem it our duty to add a few words of caution. We would point out, first, the necessity for the issue of a new Warrant before the date of the next examination. If this be not done, the attempt to obtain a supply of candidates must prove a failure. Mr. W. H. SMITH is too much of a man of business to expect to get good men, or even a sufficient number of indifferent men, to come forward before the conditions of service are made known. The existing conditions are manifestly insufficient for the purpose, and in the present day men will not enter under vague promises or without a distinct and binding agreement. We would also caution him that a Warrant merely assimilating the pay to that of the army medical officers, under their new Warrant, will not be sufficient to restore the Department to popularity. There are other matters which require amendment. And the first of these is the honest enforcement of the rule laid down with regard to the choice of cabins. If medical officers are to be entitled to "have cabins according to their relative rank in the service," they must be protected from the injustice which, we regret to say, has too often been inflicted on them, of having the best cabins selected and marked for certain officers, while they come in for the choice only of those which remain. Let the conditions be laid down as to choice of cabins, and then let them be strictly adhered to, otherwise how can it be expected that officers will be satisfied? Another matter deserving serious consideration is the system of placing officers on half pay when a ship is paid off till they are appointed to another. Why should they not be sent to do duty in one of the naval hospitals, after a fair amount of leave, till their services are again required afloat? The principle of *continuous* service would remove one of the grievances of the Department. We would also venture a word of advice to the new Director-General. Kindness and courtesy are by no means incompatible with efficiency and discipline, and they go far to remove many of those smaller evils and discomforts which tend to make a service unpopular and its officers discontented. Above all, we counsel the avoidance of favouritism. If the best appointments are given to the best men, and the Director-General will fearlessly stand up for the rights of the officers of the Department over which he presides, he will have a fair chance of restoring the Naval Medical Service to the estimation in which it was at one time held in the profession, and securing for it an adequate supply of good candidates, and for himself the esteem and cordial support of all who take an interest in our navy. We cannot conclude without a word of caution to the younger members of the profession who are desirous of entering the Navy. Let them insist on the new Warrant being published before they go in for the competitive examination advertised for February. If they do not—if they come forward on the mere promise of a new Warrant and find afterwards that nothing is to be done to improve the service except an addition to the pay, they will have themselves to thank for it, and will meet with no sympathy either from the service or from the profession.

A VALUABLE contribution to our knowledge of the Bacteria suspended in ordinary air has been made by Dr. MIFLET, of Kiew, and appears in the just-issued part of COHN'S *Beiträge zur Biologie der Pflanzen*, the paper being prefaced by a few observations by COHN himself, who remarks that although many investigators since the time of EHRENBERG have alluded to the presence of the spores of fungi and other particles in the atmosphere, the credit of first calling the attention of scientific men to their importance in the production of fermentation and putrefaction belongs to PASTEUR, whilst special credit is due to DOUGLAS CUNNINGHAM and to BURDON-SANDERSON for their researches on this subject. It still remained doubtful, however, whether the minute bodies obtained by means of an aeroscope constitute the germs which develop into the bacteria found in putrefying solutions, or whether the infection or contagium was conveyed or developed from some impurity in the water. In MIGUEL'S researches, for instance, twenty litres of air per hour were transmitted through a plug of wool, and the particles contained in the air were retained on a plate moistened with a mixture of glycerine and glycose. The number varied from 560 to 120,000 per cubic metre of air. But these microbia or micro-germs were chiefly spores of fungi, and alga-pollen grains, fragments of tissue of different kinds, starch grains, and particles of silex, all of which are of comparatively small importance from a hygienic point of view, whilst no information was supplied as to the presence of bacteria-germs. In order to supply this deficiency, and to determine whether germs of the Schizomycetes are really present in the air, COHN conceived the plan of drawing large volumes of air through fluids fitted for the nutrition, growth, and development of the germs in question, and employed for this purpose a very ingeniously constructed pump which permitted different specimens of the same air to pass through them without admixture. The nutritive fluids employed were, first, a mineral solution containing acid potassium phosphate, magnesium sulphate, neutral ammonium tartrate, calcium chloride, and distilled water; secondly, a 10 per cent. solution of extract of malt; and thirdly, a 10 per cent. solution of Liebig's extract of meat. It need hardly be said that all were thoroughly freed from any germs or spores that might have been present in them by exposure to steam

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heat for one hour and a half, previous experiments showing that a shorter period was ineffective. Under these conditions the mineral nutritive fluid was adapted for the development of Bacterium termo alone, whilst the other two solutions were fitted for the development of all forms of bacteria. Having instituted some preliminary experiments, M. COHN and M. MIQUEL set themselves to determine whether bacteria were present in the air, and whether they were discoverable or demonstrable bodies; and, secondly, whether they could be cultivated. The air transmitted through the nutritive fluids was drawn from localities as distinct as possible. Thus one set of experiments were conducted on air drawn from the rooms of the institute, another on the air of the botanic gardens, a third on that of the operating theatre, a fourth on that of the dead-house, and a fifth on the air of the typhus ward of the hospital. Taking these in succession, it appeared that the vessels through which the air of the rooms of the Physiological Institute was drawn showed the presence in moderate quantity of various kinds of bacillus and micrococcus, which soon caused cloudiness of the disinfected malt and flesh infusions. The mineral solution remained in all cases clear, nor did an increase or development take place when the mineral solution was inoculated with the meat or malt infusion containing the bacteria. As an incidental fact, it may be mentioned that some of the bacteria-holding infusion was injected into the veins of rabbits without being productive of any evil consequences. The air of the dissecting-room contained germs which quickly clouded both the mineral and the organic solutions, both malt and meat infusions presenting the same micrococci, and two mineral solutions the same bacilli, whilst the organic infusions also presented certain quite peculiar and distinctive forms, which are very beautifully delineated in a plate accompanying the paper. The results of the experiments on the free air of the operating theatre were that large micrococci of the same species were found in both the mineral and in the malt infusions, and twice also in the meat infusion, but in addition zoogloea-like micrococcus balls were found with an enigmatical ascococcus. The air of the botanic gardens constantly caused cloudiness of the organic infusions from bacilli, from the mycelium of the Rhizopus nigricans, and from the leptothrix. The inorganic solution remained perfectly clear. Some experiments were also made on air exhausted from the soil of the botanic garden; and it was found that whilst both the malt extract and the mineral solution remained clear, the flesh infusion contained entangled threads of torula-like bodies—that is to say, forms of micrococcus which arranged themselves in chaplets, and ascococci. A remarkable circumstance remains to be noticed. The experiments conducted on the air in the typhus ward of Wenzel's Hospital were all without result; neither the mineral solution nor the organic infusions exhibited the slightest turbidity. This M. MIQUEL attributes to the thorough ventilation adopted in the wards, and the perfection of the methods of disinfection now in use. If this be correct, it speaks volumes in favour of the system employed, which deserves to be widely known and followed. As it has been said that, notwithstanding the accidents recorded in the daily papers, a seat in a first-class railway carriage is the safest place in the world, so it may prove, if bacteria are really the insidious fiends they are represented to be, that residence in a typhus-fever ward will secure immunity from disease.

"COMPARISONS are odious." We will not, therefore, attempt to recall the past to memory, or to point out, as it would be easy to do, the vast and increasing difference between those close relations which once bound Medicine to Letters and the slender ties that now connect these branches of applied knowledge. To some extent, doubtless, the change has been inevitable. As practical science develops, its technical growth must become more distinctive and isolating. The sum of the information to be acquired by the student and borne in mind by the practitioner is augmented, and individual attention is engrossed with the immediate business of life, without leaving time or energy for the intellectual pursuits in which scholarly members of our profession, even so recently as the early part of the present century, found relief and pastime. It cannot, however, be disguised that an intense spirit of *professionalism* has taken possession of the inner life of Medicine, as a vocation, in the course of the last thirty or forty years, probably with the death or retirement of the penultimate generation of medical men. Just as the surgeons of the army have sought better opportunity and increased honour in consolidation—another word for severance and class-distinction—the practitioners of Medicine, as a whole, have struggled, and in a signal way succeeded in the endeavour, to make the scientific enterprise of healing a craft, and those who are engaged in it a profession.

There are two sides to the result which has been achieved. Medicine *is* more than it ever was before a "vocation," but it is also less an integral part of science, and almost alienated from "Letters." The tendency of medical reform points to the widening of the breach which has been thus created. One by one the ties hitherto preserved by what are called discursive or "unpractical" branches of study are being severed, and instead of the idea betokened by the old practice of a university man "going out" in Divinity, Law, or Physic, we have that of specific education for the profession, with all the exclusiveness and "making to order" such a system implies. It is no longer a question what line of life a young man may choose, or for what he may be fitted, when he has completed his general education as a person of culture and refinement, but for what profession the stripling shall be *educated;* because, if he is "to be a 'doctor,'" a little Latin and less Greek will be requisite; while, as for literature or mathematics, these accessories are held to fall under the definition SCHLEIDER gave of specific botany—they are "either pastime or waste of time"; whereas, if the boy is to be a bishop *in posse*, or to train for a seat on the woolsack, he must go in for a more scholarly curriculum, and prepare for the business of life by learning to be a reader, thinker, and a talker of the type cultivated when professional qualifications were deemed to be secondary to the personal qualities required by a liberal education. What wonder that we do not find the physicians of to-day taking the same rank as "men of letters" as their predecessors of the last and the early part of the present centuries!

Never was there a time when the scientific attainments of professors of the medical art stood higher, or were more excellent in quality as well as range, than to-day; but it

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will not be denied that at no period since Medicine has been recognised as a pursuit for men of culture has the class devoted to its study been so ill-represented in literature as now. Speaking broadly, there is scarcely a lingering regard for literature in place of the old love which the profession bore for the *alma mater* of the sciences in all their developments. We have conceded that the press and stress of technical work is too great to allow either students or practitioners scholarly leisure, but the fact is not the less to be regretted because it seems inevitable. Moreover, it is useful to note the true state of affairs, as it constitutes at least one reason why it is increasingly more difficult than in time gone by to make the influence of Medicine felt, and the views of medical men perceived, in circles where the older fashion of thought still holds sway. Everyone not himself wholly engrossed in business or exclusively professional in his habits of thought must have observed a serious diminution of respect for the *general* opinions of men—not only of our own, but of every other cloth—who show a tendency to exclusiveness. It must sometimes strike the reflective among us that we may carry to excess the policy of glorifying and enforcing at every turn and on all occasions the professional character. No class of men, be they ever so intellectual, can bear the strain of incessant concentration on business, and no bearing is so repellant as the purely professional. The clergyman, for special reasons—rightly, or perhaps wrongly interpreted,—goes about hall-marked, as it were. The doctor need not emulate the exclusiveness of the professor of divinity, but it would not be amiss if he strove to excel the clergyman's genius for versatility. Even the wearer of the long robe, as represented by the best specimens of his order, leaves his brief-bag with his wig at chambers. Unhappily the physician is "Doctor" everywhere; he is, in a sense, never off duty, and his very presence in society seems to be regarded as an incentive to conversation that drifts into consultation. If not professional, he is almost sure to be "scientific." The curious and, as we think, significantly suggestive circumstance, is that the Medicus in his lighter vein is rarely inclined, or perhaps we ought to say able, to pose as a man of letters!

Annotations.

"Ne quid nimis."

DEATH OF DR. E. C. SEATON.

WE greatly regret to have to announce the death of Dr. E. C. Seaton on the evening of the 21st inst. Our readers will remember that Dr. Seaton retired from the office of Medical Officer of the Local Government Board at the close of the past year on account of serious ill-health. When last we had occasion to refer to him we were enabled to state that his health was slowly improving, and we learn that this improvement became more marked as the days went on. Unhappily it proved delusive. On Monday evening last he became suddenly worse, and on Wednesday evening he died. We hope to present our readers with a notice of his life and works in our next impression.

SMALL-POX IN LONDON IN 1879.

IT appears from the Registrar-General's last weekly return that 458 fatal cases of small-pox were registered in London during the fifty-three weeks of 1879. In the two preceding years the deaths from this disease were 2544 and 1416 respectively. No less than 280, or 61 per cent., of these 458 deaths from small-pox last year were recorded in the Metropolitan Asylum Hospitals. Distributing these hospital cases to the localities whence the patients were admitted, it appears that 93 of the 458 deceased small-pox patients in 1879 had resided in Greenwich and Deptford, 80 in Camberwell, 52 in Southwark (including Newington), 39 in Fulham, 25 in Kensington, and 25 in Wandsworth. The small-pox deaths in London last year were equal to 126 per million of the estimated population; this rate was considerably below the average annual rate from the disease in London, which was equal to 410 per million during the forty-two years 1838-79, and ranged between 2422 in 1871, and 17 in 1874. It is now generally known that the average death-rate from small-pox in England and Wales has fallen, since the Compulsory Vaccination Act was passed in 1853, to less than half that which prevailed during the period of civil registration that preceded the passing of that Act. In London, the decline in the death-rate from small-pox since 1853 has not been so marked as in the rest of England and Wales. During the sixteen years, 1838-53, the annual death-rate from small-pox averaged 512 per million of the London population; and in the twenty-six years since the Compulsory Vaccination Act came into operation it has not averaged more than 348 per million. The statistics of vaccination show that more children escape the operation of the Compulsory Act in London than in other parts of England and Wales; and it is therefore not surprising that small-pox has been less successfully controlled in the metropolis than elsewhere. Out of London the mortality from small-pox in England and Wales last year was very considerably smaller than in any previous year on record.

SUDDEN DEATH IN ACUTE RHEUMATISM.

THE question raised at the last meeting of the Clinical Society by Dr. Goodhart is one of great practical importance and deserves serious consideration. He related a case of acute rheumatism of moderately severe type in a previously healthy young woman, where sudden death occurred whilst under treatment by salicylic acid. Setting aside the hypothesis that the case was one of septic poisoning and not of rheumatism, for which there seems to be no evidence either clinical or post-mortem, or that death was due to pulmonary embolism, sufficiently disproved by Dr. Goodhart, three alternatives were presented to the meeting. These were, that death was due to impairment of the muscular wall of the heart, or to the toxic effect of salicylic acid, or to the rheumatic poison itself. It is true that there was pericarditis to a slight degree, but careful scrutiny failed to reveal a sufficient amount of change in the myocardium to account for death from this cause. Dr. Green did well to draw attention to the fact that the existence of a contracted ventricle does not imply absence of marked degeneration, owing to the effect of cadaveric rigidity; but Dr. Goodhart did not rely upon the presence of contraction alone as disproving the existence of marked degeneration. Then comes the important question of the drug itself. Only sixty grains in all had been taken, but its administration was continued to within an hour before death. In the face of the somewhat alarming statements made by Dr. Mahomed, some might hesitate to acquit it of all blame. He testified to having noticed in all patients subjected to this drug marked evidence of failing heart-power in the enfeeblement or absence of the first sound. So far as we know this statement stands almost alone. Salicin and its congeners are now prescribed with remarkable frequency, not only in rheumatism, but in other affections also; yet few of those who prescribe it would venture to say that they have *invariably* met with this

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significant sign of cardiac failure following its administration. There is no physician who does not closely watch day by day the character of the heart-sounds in every case of acute rheumatism; and if Dr. Mahomed's statement be of universal application, it is astonishing, to say the least, that it has not been pointed out before. At the same time, it must be admitted that depressing effects have been noted, and have led to the abandonment of the drug in certain cases; but hitherto such cases have been regarded as exceptional, and it is a long leap from the particular to the universal. The drug may be as potent for harm as it is undoubtedly for good, and its use should be directed by caution; but it must not be condemned outright without further earnest inquiry. The discussion the other night will, no doubt, result in particular attention being paid to these points. Lastly, the view to which Dr. Goodhart and some other speakers most inclined was, that death was due to the direct action of the rheumatic poison. This is quite conceivable, and Dr. Bristowe lent valuable support to it in his narration of two cases of sudden death not under the salicylic treatment. Apart from actual lesion of the heart-wall, sudden death in acute rheumatism may be conceived to be due either to hyperpyrexia or to cardiac paralysis. Both classes of cases may well come under the head of "cerebral" rheumatism, for in both the medullary nerve-centres are probably involved through the direct action of the rheumatic poison. In this connexion it is singular to note that during the last few years (almost coincident with the universal adoption of the salicylic treatment) deaths from rheumatic hyperpyrexia have been very infrequent; whilst we have Dr. Goodhart's statement, on the other hand, that within this period he has met with two other cases analogous to the one he had read. Hyperpyrexia may fairly be put aside in this case. There were none of the phenomena that mark its onset; but that death was due to failure of the heart was evidenced by the ominous rise in pulse-rate noted—a sign which almost induced Dr. Goodhart to discontinue the salicylic acid. The subject is one that certainly requires elucidation; and perhaps the committee of the Society that is engaged upon the subject of hyperpyrexia may be enabled by its researches to throw a side-light upon this other, and quite as inscrutable, class of cases of sudden death in acute rheumatism.

DIPHTHERIA IN RUSSIA.

THE Russian journal, the *Voice*, gives a lamentable account of the progress of diphtheria in Russia-in-Europe. It is but thirty years ago that this disease first attracted attention in that empire, and now it has become the most formidable of the maladies ordinarily prevalent. It has spread over seventeen of the fifty European provinces, and during the last six years it has ravaged continuously the southern provinces of Poltava, Kherson, Kharkow, Catherinoslaw, Kiew, and Bessarabia. The zemstvos of these provinces have found it necessary for three years to prepare special returns of the disease, and they declare that it has become a public calamity. Moreover, the report of the Medical Department of the Minister of the Interior shows that of the total mortality of Russia, the greatest part is now due to diphtheria. In Poltava the mortality from diphtheria is so enormous that it exceeds by 1·5 per cent. the number of births. The zemstvos have appealed to the Imperial Government for help, confessing that they are unable to struggle against the evil unaided. The zemstvos of Kharkow, Moscow, and Riazan have suggested that the provincial assemblies should be empowered to combine in order to take measures in common against the epidemic. The Red Cross Society has entered boldly upon the task of giving such assistance as it is possible for it to give to the infected populations, by organising convoys and sending detachments of medical men and sisters of charity, but the succour it can afford is stated to be insignificant in proportion to the magnitude of the mischief and to the extent of territory over which it prevails.

THE DOVER HOSPITAL.

UNLESS the *Dover and County Chronicle* for the 17th inst. has strangely misrepresented matters, the honorary medical and surgical staff of the Dover Hospital is likely to bring itself into evil odour in an unworthy cause. It appears that in the year 1875 a bye-law was made which rendered it incompetent for any person who had held the post of resident medical officer "to engage in private practice, or accept any medical appointment in the town, for two years after vacating his appointment." The object of this extraordinary regulation does not require any explanation; it was clearly intended to obviate the possibility of any house-surgeon engaging in private practice in the town after leaving the hospital. After some preliminary discussion this rule was very properly rescinded at an annual meeting of the governors held on the 16th inst. It is stated, however, that four out of the five members of the honorary staff have resigned in consequence. If this be so, it is needless to say that unless they are able to put a different colour on the facts given by our lay contemporary, these gentlemen have placed themselves quite out of the reach of the sympathy of their professional brethren. Some explanation is imperatively needed.

HEALTH STATISTICS OF SALFORD.

THE Medical Officer of Health for Salford (Dr. Tatham) has recently presented to his sanitary authority, and published, a most valuable report on the health of that borough during the ten years 1869–78. The idea of preparing a decennial report dealing with the ten years during which Salford has had the advantage of a medical officer of health was a happy one. The statistical work in the report is thoroughly trustworthy, and eminently calculated to throw useful light upon the causes of the high rates of mortality that have so long prevailed in Salford. It appears that the annual rate of mortality within the borough during the fourteen years 1865–78 averaged 27·7 per 1000, exceeding by 4·2 per 1000 the average rate that prevailed in London during the same period. This signifies that during the fourteen years more than 5000 persons died in Salford who would have survived if the death-rate during that period had not exceeded that which prevailed in London. Dr. Tatham is, however, able to prove by his statistics that there is conclusive evidence of decided sanitary progress in Salford in recent years. Dividing this period of fourteen years into two periods of seven years, we find that the death-rate, which averaged 28·5 per 1000 in the seven years, 1865-71, declined to 26·9 in the more recent seven years, 1872-8. Thus mortality in Salford showed a proportional decline equal to 5·6 per cent. in the later, compared with that in the earlier period of seven years; in London, however, the decline of mortality in the same periods was equal to 7·4 per cent. It is in the last two years embraced by Dr. Tatham's report that the most marked decline in the Salford mortality occurred. The death-rate in the borough fell to 25·1 and 25·6 in 1877 and 1878, which, although considerably in excess of the London rate, and of the average rate in the twenty large English towns, was lower than in any two consecutive years on record in Salford. The mortality in these two years was lower by 8 per cent. than the average rate that prevailed during the first eight years after the formation of the Salford Health Committee. Dr. Tatham does not attempt to comfort his sanitary authority with the statement that the marked excess in the death-rate of the borough is due to the high birth-rate that prevails. It has been conclusively proved that the proportional

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age-distribution of a population which produces a high birth-rate should cause a lower death-rate than the age-distribution which causes a low birth-rate. The Salford Town Council is now plainly told by Dr. Tatham that the gross death-rate in the borough, high as it is, understates the true excess of mortality due to the sanitary shortcomings of the town. The excess of mortality in Salford occurs mainly among infants and children aged under five years. In 1878 the excess of mortality at all ages, after due allowance for the age-distribution of the population, was equal to 18·5 per cent., compared with the English Life-table death-rate in a population at similar ages; among children under five years of age, however, the excess of mortality, compared with the same standard, was no less than 42·8 per cent. The excess of child mortality in Salford may well engage the serious attention of its sanitary authority. We strongly recommend Dr. Tatham's report to those who are interested in studying the important relations between mortality statistics and the health-condition of urban populations. The mortality statistics of Salford have never before been so clearly and soundly analysed as in this decennial report; and it may be hoped that the reduction of the death-rate in 1877 and 1878 will stimulate the local sanitary authority to the initiation of further efforts in the direction of sanitary progress. Salford since the latter part of 1876 has possessed an excellent hospital for infectious diseases, to which 508 patients had been admitted before 31st December, 1878. To the beneficial effect of this hospital may partly be attributed the decline of zymotic fatality in Salford in 1877 and 1878.

DISLOCATION AT THE HIP, WITH FRACTURE OF THE FEMUR.

THE diagnosis and treatment of dislocations at the hip must always attract the serious attention of surgeons, for while in most instances the deformity produced by the displacement of the bones is very obvious, it is well known that experienced surgeons have at times found difficulty in coming to a decision as to the exact nature of the injury sustained. And now that the old and rough method of reduction by extension, aided by constitutional depressant remedies, has given place to the reduction by manipulation, aided by the complete muscular relaxation of anæsthesia, it becomes perhaps more than ever important to recognise correctly the exact position of the displaced bone, and to study its course from the joint. The discussion at the Medical and Chirurgical Society, reported in THE LANCET of last week, dealt with a matter of greater practical interest than might at first sight appear, and it is by no means a matter of indifference to the most "practical" surgeon whether the head of the femur escapes at the lower? or the back of the capsule of the joint in the common backward dislocation.

Dr. Oscar Allis of Philadelphia has published, in the "Transactions" of the Medical Society of the State of Pennsylvania for 1879, an interesting paper, in which he draws attention to the cases in which the femur is dislocated, and also fractured in its shaft. He states that in these cases the dislocation may readily be overlooked, that the head of the bone remains close to the cotyloid cavity, the Y ligament being untorn, and the change in direction of the upper fragment is greater than in a simple dislocation. The directions for treatment are to attempt reduction of the displaced bone while extension is made on the limb in the line of its axis; and if this attempt fails, the limb and lower fragment should be brought into a line with the upper one, displaced as it is, and afterwards, when union has occurred, reduction of the dislocation attempted, and if that fail the head should be forced into the thyroid foramen, to make a new socket for itself there. If, on the other hand, the fracture be treated with the limb brought parallel with its fellow, when reduction is afterwards accomplished the limb is thrown out of its proper position and may be permanently deformed, and to a great extent useless.

ANIMAL VACCINATION IN INDIA.

IT would appear from recent proceedings of the Punjab Hindu Association (Anjuman-i-Punjab) that the promoters of the Bill for making vaccination compulsory, and instituting vaccination from the heifer into Bengal, have unintentionally conducted their movement in such fashion as to risk wounding the religious susceptibilities of the Hindu population. Lymph taken from the teats and udder of a heifer or cow would be deemed by the Hindu contaminating in the sense of leading to loss of caste. This does not affect the Mahommedans, and seems to have been lost sight of by the Mahommedan gentleman who moved the Bill in the Legislative Council of the Government of India. Hitherto the mass of Hindus have submitted to vaccination in ignorance of the real nature of the lymph employed, regarding the operation as the Government method of "inoculation." It is held highly undesirable that the actual nature of vaccine lymph should be made generally known as was the case in the discussion on the Bill, and as has been done in Dr. Cuningham's "Sanitary Primer," lest religious prejudice should be added to the difficulties already experienced in carrying out vaccination. The Association, therefore, urges some little reticence in this matter, especially in translating the paragraphs of the "Primer" into the native dialects. Dr. Leitner, the President of the Association, tells us, however, that the religious objection which attaches to the female of the bovine species does not attach to the male, and that if steers were substituted for heifers, "all the religious grounds of opposition to the Government mode of inoculation would be at once removed and could court the fullest inquiry." If this be the case, it should be possible to conciliate the Hindu population of India in regard to the Bill. The Association voted against vaccination being made compulsory.

CHILDREN'S HOSPITAL, PENDLEBURY.

THE letter of sympathy addressed by a large number of the leading practitioners in Manchester and the neighbourhood to Dr. Henry Humphreys, late physician to the Children's Hospital, Pendlebury, may be taken as expressing the feeling of the profession generally on this disagreeable episode. Three years ago Dr. Rayne, who had been ignominiously dismissed from the post of physician, vainly endeavoured to obtain a just and reasonable explanation of the manner in which he had been treated. There is, we would fain hope, a better chance for Dr. Humphreys. A thorough investigation into the management of this institution is urgently needed, and unless this is accomplished it is incumbent upon every member of the profession who respects his calling to refrain from accepting office there. Meanwhile we cordially re-echo the kindly sentiments contained in the letter to Dr. Humphreys, published in another column.

THE SANITARY STATE OF RUNCORN.

THE first drop which has reached us of the coming shower of medical officers of health's annual reports for 1879 arrives in the form of the report of the medical officer of health for Runcorn, Mr. R. H. Mousit. It is of the briefest, but contains much which should call for the attention of the sanitary authority. The medical officer speaks of a fair amount of sanitary work done during the past year, and of a death-rate from all causes of 22·0 per 1000, which he hopes will become lower in future years; but he gives particulars which show that the Runcorn Sanitary Authority cannot afford to congratulate itself upon this comparatively low death-rate, as it appears

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disposed to do. Rainworm is exposed to the irritating vapours sent off so freely by the large chemical works in its vicinity. These vapours, from their antiseptic nature, the medical officer of health holds to be beneficial in restricting the prevalence of zymotic diseases, but, on the other hand, they are most mischievous in exciting lung diseases. Infantile mortality is described to be enormously high, and it seems there is much overcrowding in the town. The sanitary authority "congratulated the medical officer on the satisfactory character" of his report, when it was presented to them. We fail to see the grounds for congratulation.

THE RUSSIAN ASSOCIATION OF NATURALISTS AND MEDICAL MEN.

THE sixth congress of the Russian Association of Naturalists and Medical Men has been recently held in St. Petersburg. The section of Medicine was presided over by M. Lamble, and the section of Hygiene by M. Jacobi. Among the subjects discussed in these sections we note: Traumatic fever, by M. Wahl; the weight of the body in epileptics, by M. Kovalevsky; the distribution of stammering in Russian Europe, by M. Chervin; the sewerage and scavenging of towns, by Count Sauer; the waters of Cronstadt, by M. Arkhangelsky; the influence of putrified matters upon the human organism, by M. Devrischine; the influence of high and low temperatures upon the human body in health and in disease, &c. In the section of Hygiene the questions submitted for discussion were arranged in four groups, as they related respectively to the medical service of the zemstvos (local medico-sanitary administration), the military medical service, the marine medical service, and the railway medical service.

THE ARCHBISHOP'S MEDICAL DEGREE.

HIS Grace the Archbishop of Canterbury has used his power of conferring a degree in medicine in favour of Mr. James Rogers, of Swansea, whose diplomas date from 1841. He was Mayor during the recent Church Congress. It would be difficult to defend the principle of such a doctorate. The medical law of England, as made by the Act of 1858, does not recognise such doctorates, excepting such as were conferred *prior* to the passing of the Act of 1858. Neither does the Government Bill which is now before the Select Committee of the House. We may nevertheless congratulate Dr. Rogers on an honour which the Archbishop only confers on the advice of men of standing in the profession. In this instance three doctors of medicine, two of them Fellows of the College of Physicians, concurred in commending the conferring of the degree. Dr. Rogers has practised in Swansea and the neighbourhood for nearly 40 years, and enjoys the respect of his neighbours and of his professional brethren. The expenses incident to the conferring of the degree are about eighty guineas, and they have been more than met by subscriptions from men of all creeds and classes in Swansea.

COTTAGE HOSPITALS.

THESE institutions are multiplying, and making out a very good *raison d'être* by their work and its results. A very interesting account of one at Savernake, by Mr. William Gilbert, appears in the December number of *Good Words*. It was originated by the Rev. J. O. Stephens, vicar of Savernake, who was struck with the disadvantages of a farm-labourer who had to be taken many miles to a doctor, and many more to a large hospital. It is said to be one of the most appropriate and elegant buildings of the kind, on the summit of a hill, with four or five acres of ground round it. The wards are all on the ground floor, and contain on an average eight beds each. Two hundred and eleven serious cases were treated in 1878 at a cost of only 15*s.* a week, and with a mortality of only a decimal fraction more than 3 per cent.

The *Evesham Journal* of December 13th contains a full account of the opening of the Evesham Cottage Hospital, which is to accommodate eight persons at a time, at a total cost of £1736. We cannot withhold our approval from these institutions, especially when the working classes themselves are encouraged to take an interest in supporting them. We are persuaded there are many Coopers and Brodies in country places who only need the proper hospital conditions to show good surgery, to say nothing of medical cases. Metropolitan surgeons will be interested in the results of rural surgery. And the poor will be largely benefited.

A MODEL FOUNDLING HOSPITAL.

M. BROCA, at a recent meeting of the Paris Academy of Medicine, read a very favourable report upon the Foundling Hospital at Moscow, which he had visited while in that city. M. Broca says that this hospital, which was founded in 1764, covers five acres of ground, and that infants are received into it without any inquiry as to their origin, though the parents are allowed to claim them back. As soon as they are admitted they are provided with nurses, and remain in the hospital for three or four months, at the expiration of which time they are put out with their nurses into lodgings in the country. The rate of mortality in the hospital, which was about 81 per cent. at the end of last century, has now been reduced to 25 per cent.—a result which M. Broca attributes in part to the spacious and well-ventilated rooms and numerous baths which have recently been erected, and partly to the fact that the medical staff has been increased to such a degree that no doctor has more children under his care than he can manage. The children are weighed every week, and the registered weights form some interesting statistical tables. There are never fewer than 3000 nurses with infants at the breast in the Moscow hospital, and some months there are as many as 11,000 infants admitted.

A NUISANCE AFLOAT AT RAMSGATE.

RAMSGATE has been suffering from a serious nuisance afloat in her inner harbour. It appears that a few days ago a ship bound for Berwick-on-Tweed, and laden with bones from Naples, was brought into the harbour. The bones were in a state of rapid putrefaction, and emitted so great a stench as to be all but unbearable in the vicinity of the harbour. The pier was deserted of promenaders, and the nuisance extended even so far as the Granville Hotel, driving away some of the visitors there. The Sanitary Committee of the town took up the matter actively, and at the last news had considerably abated the nuisance. We may assume that it has now been entirely removed.

DR. PIROGOW.

IN 1882 this celebrated surgeon, if, as is to be hoped, he is spared till then, will have completed the fiftieth year of his professional life. It is proposed by his admirers and pupils throughout the Russian empire to establish a surgical hospital, to be named after him. This hospital is to be completed and opened in honour of his jubilee. Arrangements have been made for securing subscriptions and donations towards this commendable end.

WE hear with regret of the death, suddenly, of Charles Benson, A.M., M.D., of Dublin. The deceased gentleman was born in 1797, and was Consulting Physician to the City of Dublin Hospital, and an ex-President of the Royal College of Surgeons of Ireland.

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THE Registrar-General for Ireland has adopted an improvement in connexion with his weekly reports, to the effect of including in his returns some fifteen towns, containing, according to the last census, upwards of 10,000 inhabitants.

DR. SIDNEY COUPLAND has been appointed Physician to the Middlesex Hospital, in succession to Dr. E. H. Greenhow, resigned. A vacancy is thereby created in the staff of assistant-physicians.

THE numerous friends of Sir Dominic Corrigan, Bart., will be gratified to learn that a marked improvement has taken place in his condition, reviving hopes in the favourable termination of his malady.

HEALTH OF LARGE ENGLISH TOWNS.

SECOND WEEK OF 1880.

THE decline of the recorded mortality in the first week of this year was maintained last week. In twenty of the largest English towns, estimated to contain, in the middle of this year, very little short of seven and a half millions of persons, or nearly a third of the entire population of England and Wales, 5262 births and 3484 deaths were registered during last week. The births exceeded by 77, and the deaths by 209, the average weekly numbers during 1879. The deaths were within 20 of those returned in the previous week; and the annual death-rate, which had been equal to 29·1 and 24·0 per 1000 in the two preceding weeks, was 24·2 last week. The lowest death-rates last week in the twenty towns were 16·0 in Brighton, 16·9 in Bristol, 17·3 in Leeds, and 18·1 in Leicester. The rates in the other towns ranged upwards to 27·1 in Plymouth, 27·2 in Hull, 27·6 in Manchester, and 28·1 in Liverpool.

The deaths referred in the twenty towns to the seven principal zymotic diseases, which had been 607 and 541 in the two preceding weeks, further declined last week to 518; they included 164 from whooping-cough, 143 from scarlet fever, and 123 from measles. Whooping-cough showed the largest proportional fatality in Newcastle-upon-Tyne, Salford, and London; scarlet fever in Norwich, Sunderland, and Salford; and measles in Hull, Plymouth, Nottingham, and Liverpool. The 19 deaths referred to diphtheria included 10 in London, 2 in Manchester, and 2 in Bradford. Small-pox caused 4 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 56 and 77 at the end of the two preceding weeks, were 75 on Saturday last; during the week but 8 new cases of small-pox were admitted to these hospitals, against 22 and 30 in the two previous weeks.

The fatality of lung diseases, under the influence of lower temperature, showed a slight increase. The deaths referred to diseases of the respiratory organs in London, which had been 672 and 455 in the two previous weeks, rose last week to 512, and exceeded the corrected weekly average by 42; 347 resulted from bronchitis, and 113 from pneumonia. The deaths from these diseases were equal to an annual rate of 7·2 per 1000 in London, whereas in Liverpool the rate from the same diseases was equal to 8·1 per 1000.

LONDON AND PARIS MORTALITY IN 1879.

IT appears from a summary of the weekly returns of mortality issued during last year in London and Paris, that the death-rate of the two cities in 1879 showed their usual wide difference in favour of London. During last year the rate of mortality in London was equal to 23·6 per 1000 of the estimated population, which was almost identical with the rate during the preceding year 1878; in the ten years 1869-78 the average death-rate in London was 23·1 per 1000, and somewhat lower than the rate last year. In Paris the death-rate last year was equal to 26·3 per 1000 of the estimated population, against 24·1 in 1878. Thus the mortality in Paris last year exceeded by 2·7 per 1000 that which prevailed in London. These figures, however, by no means correctly represent the excess of mortality in the Paris population. Setting aside the fact that a large number of infants in Paris who die during the first few days of life are there recorded as stillborn, which in London would be counted as deaths, the age constitution of the Paris population should give a considerably lower rate of mortality than that of the London population. Calculated by the same tables, the normal or life-table annual rate of mortality is only 19·8 in Paris, instead of 21·8 in London. This is due to the fact of the small proportion of children in the Paris population, while the proportion of elderly persons is scarcely larger than in London. Corrected for this difference of age-constitution, the death-rate in London in 1879 would become 21·5 per 1000 for true comparison with the Paris rate of 26·3. The significance of these rates is, that in equal numbers living in the two cities last year 122 died in Paris to each hundred in London. Looked at in a different way, if these two rates were maintained in a stationary population the mean duration of life would be only thirty-eight years in Paris, instead of forty-seven years in London. If we look to the fatality of one or two of the principal zymotic diseases we see corroborative evidence of unsatisfactory sanitary condition in Paris. Small-pox caused 951, diphtheria 1002, and typhoid fever 1168 deaths in Paris last year; against 458, 592, and 1099 respectively in London. After due allowance for difference of population, small-pox was nearly four times, diphtheria more than three times, and fever nearly twice as fatal in Paris as in London. From the beginning of this year the Paris municipality commenced a new form of weekly return, which is signed by Dr. Bertillon, as chief of the Statistical Bureau. The form and detail of this improved weekly bulletin will afford valuable assistance in analysing the causes of the recent excess of mortality in Paris. In the return for the first seven days of this year it appears that 64 fatal cases of small-pox, 27 of typhoid fever, and 28 of diphtheria and croup were registered in Paris. No less than 28 of the 64 deaths from small-pox were of children under five years of age.

ST. JAMES'S HOME FOR FEMALE INEBRIATES, KENNINGTON PARK.

WE have been favoured by C. Corbett Blades, M.D., Surgeon to the Home, and Senior Surgeon to the Royal South London Dispensary, with the following description of the above-named institution.

Now the Habitual Drunkards Act has come into operation, it may be interesting to the profession to learn something of a Home which has been doing good work for the last four years, where the average number of free inmates has been seventy, aged from fourteen to sixty years.

The Home consists of five dwelling-houses, which have been put into the best possible sanitary state, under the supervision of my friend Dr. Iliff, officer of health for Newington.

The institution is managed by a Committee of ladies and gentlemen, the Earl of Shaftesbury being the president; the actual responsibility mainly falls upon "the Lady Superior," who is enthusiastic in her work, as she needs be, to carry on, in many respects, a most disagreeable duty. The Home is chiefly supported by the washing taken in, the needlework, and by some little charitable assistance. The younger are taught every domestic duty, and as they become fitted and, having behaved well, have places found for them, and "fitted out" with four pounds' worth of clothes.

The inmates get up at 6 A.M., and attend chapel twice a day. For breakfast they have tea, coffee, cocoa, bread-and-butter; for dinner, meat, vegetables, bread, and puddings; for tea, the same as for breakfast. They go to bed at 9.30 P.M. They walk daily for half an hour in the grounds, unless it rains. In the summer, those sewing sit out of doors all day, under an awning. Very little medicine is given, and that of the simplest. When anyone is brought drunk (perhaps has been drinking for weeks) she is put into a separate room away from the others, is constantly watched, given beef-tea, arrowroot and milk, eggs and milk, generally a simple aperient. It is wonderful how soon the tongue cleans; solid food is enjoyed, she is a new being,

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Not any alcohol, narcotic, or sedative is given. Only one was confined to bed last winter for a short time with bronchitis; this winter she is well, and there has been scarcely a case of "cold."

The free cases are sent by magistrates and by missionaries. The paid cases require a certificate from their medical man, saying they are not insane, and a written promise from a friend to remove them if required.

The Home can be seen on application any day except Sunday, after 10 A.M.

Correspondence.

"Audi alteram partem."

THE MEDICAL DEGREES OF THE LONDON UNIVERSITY.

To the Editor of THE LANCET.

SIR,—In your report of the late meeting of the Convocation of the University of London, you remark, "It is significant somewhat of the apathy of its medical graduates that so few presented themselves on the occasion." A few minutes' consideration will show you that probably their absence arose, not from apathy, but from a desire to fulfil the most pressing duty. As you well know, a medical man, unless he have a partner or assistant (both which things I abhor), cannot leave his practice for many hours in any peace or comfort if it be at all extensive, or embraces much midwifery. Take my own case as an example of many others. I reside three or three and a half hours' run from London; but, owing to railway arrangements, I, had I carried out my intention of being present at the meeting in question, should have been obliged to start at 11.37 A.M., and could not have returned until about the same hour next morning. On the morning of the 13th inst., in our neighbourhood a very heavy snowstorm was raging—so fierce, in fact, that I feared to make the attempt lest the line might become blocked and I should not be able to get home on the following day. As the day wore on I of course saw such a contingency would not occur, but then it was too late to reach town in time for the meeting. Had I been there I should have strenuously opposed the resolution moved by Dr. G. V. Poore, on these grounds:

1st. We have to compete with the older universities, and the only method in which we can overcome the prestige given by their long-continued existence and the social traditions connected with them, is by the high standard of our examinations.

2nd. Although the character of the examination be not altered as far as knowledge is concerned, yet by increasing the number of the times for holding the examination, indirectly the mental power of the successful candidates will be lowered; at least it seems to me that the man who can get up four subjects in twelve months must be possessed of more mental power or more industry than the man who can only manage three subjects, and therefore as a whole our body of medical graduates are better without the latter man than with him.

Should the proposed change be carried out we shall probably increase the number but not the quality of our medical members.

Far from regarding the fact that only 21 per cent. of candidates ultimately obtain a degree in medicine as a thing to be deplored, I consider it a thing to be deeply grateful for.

As to the question of "a mischievous strain of the brain power," I would only point to the positions held by many of our graduates; and I very much doubt whether more of our men break down from mental strain than do men holding lower degrees. My *personal* experience tells decidedly in favour of our University as compared with the College of Surgeons; but this experience is not large enough to be of any value.

Although writing about medical degrees, I have yet to learn that the other degrees are in their way easier to obtain; and the same reasoning may be applied to the varied degrees granted by the University of London.

I remain, Sir, yours obediently,
G. C. TAYLER, M.D. Univ. Lond.

Trowbridge, 17th Jan., 1880.

CHILDREN'S HOSPITAL, PENDLEBURY.

To the Editor of THE LANCET.

SIR,—I beg to forward you an address of sympathy to Dr. Humphreys, which has been signed by the physicians and surgeons to the hospitals in Manchester and Salford. The circumstances of the case were stated by Dr. Humphreys in his letter to your paper of the 20th of December.

The action of the committee has excited great indignation in the profession, since no justifiable cause has been given for his suspension by the committee.

Personally, I have had a full opportunity of observing the able and painstaking manner in which Dr. Humphreys fulfilled his duties whilst physician to the hospital. I had the pleasure of acting as resident medical officer under him at the Children's Hospital for twelve months.

Though I am well acquainted with the working of many hospitals, I can safely say that I have never seen work more efficiently carried out than it was by Dr. Humphreys, who devoted his time and energies most thoroughly to the children under his care.

I myself fail utterly to comprehend the procedure which terminated in his resignation.

I am, Sir, yours, &c.,
JUDSON S. BURY, M.D., B.S. (Lond.)
Late Senior Resident Medical Officer to the Children's Hospital, Pendlebury.

Fitzwarren-street, Pendleton, Jan. 1880.

To HENRY HUMPHREYS, Esq., M.D., M.R.C.P.

We, the undersigned physicians and surgeons to the hospitals in Manchester, wish to express our sympathy with you in the position in which you have been placed by the action of the Committee of the Children's Hospital, Pendlebury.

Since you came to Manchester, three years ago, you have shown by your contributions to the Medical and Microscopical Societies, and in other ways, that you possess marked ability, and that you follow your profession most zealously.

We deeply regret that your work, which promised to add much to medical knowledge, should have been cut short for the present in the manner it has been.

Since the Committee of the Pendlebury Hospital refuse to give other grounds for their action than those which appear in your letter to THE LANCET of the 20th of December, we can only presume that they have acted solely on these grounds. Should such be the case, we feel that their conduct has been extremely arbitrary and unwarranted, and that they have been wanting in that courtesy which was to be expected from the committee of a hospital towards a physician of your standing. If, on the other hand, the committee have been led to the course they have adopted by reasons other than those which they have set forth, but which they decline to communicate to you, we cannot but characterise such conduct as unjust to you, and unworthy of those gentlemen to whom the supervision of the hospital has been entrusted.

We feel that the committee have, by their action, done you a most grievous wrong, and we are satisfied that in doing so they have acted in a manner detrimental to the interests of the hospital of which they have the management.

Wm. Roberts, M.D., F.R.S., F. A. Heath, M.R.C.S., H. Simpson, M.D., E. Lund, F.R.C.S., J. Morgan, M.D., F.R.C.P., S. M. Bradley, F.R.C.S., D. J. Leech, M.D., F.R.C.P., W. Whitehead, F.R.C.S. Ed., J. Thornburn, M.D., D. Little, M.D., J. Dreschfeld, M.D., M.R.C.P., J. Hardie, M.D., J. Ross, M.D., M.R.C.P., D. Lloyd Roberts, M.D., F.R.C.P., R. Heslop, L.R.C.S., C. J. Cullingworth, M.R.C.P., J. H. Ewart, M.R.C.S., E. Gumpert, M.D., W. N. Maccall, M.D., H. W. Boddy, M.D., S. Buckley, F.R.C.S., G. Reed, M.D., A. W. Stocks, M.R.C.S., A. M. Edge, M.D., M.R.C.P., A. Boutflower, M.R.C.S., J. H. Morris, M.R.C.S., W. J. Sinclair, M.D., R. D. Fox, F.R.C.S. Ed., J. Scott, M.B., C. E. Glascott, M.D., S. H. Mules, M.D., A. E. Jones, M.D., F. M. Pierce, M.D., T. H. Pinder, M.R.C.S.

To the Editor of THE LANCET.

SIR,—I can endorse the statements of your correspondent. Dr. Rayne, in reference to the management of the Children's Hospital, Pendlebury.

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When a resident physician was required for the institution, some two years since, I applied for the office, stating that I had been hon. surgeon to one provincial hospital, hon. physician to another, that I held three illuminated testimonials, and had received two public subscription-gifts.

I was not deemed good enough to fill the office.

I am, Sir, yours faithfully,
M.D., M.R.C.P.E., M.R.C.S., L.S.A.

ON THE DIAGNOSIS OF HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—In a letter on the diagnosis of hydrophobia, which appeared in THE LANCET of January 17th, it is suggested that, in cases where the diagnosis is obscure, a crucial test may be applied by ascertaining whether the saliva of the patient is capable of communicating the disease to one of the lower animals, the rabbit being chosen for this purpose, as being readily inoculable, and the period of incubation being in that animal of very short duration.

In a case which was lately under treatment in the Manchester Royal Infirmary, this test was applied, not with a view of establishing a diagnosis, for of this there was no doubt, but merely with the object of verifying the results which had recently been obtained by M. Raynaud, in Paris.

In this instance the patient, a boy, aged six years, bitten by a dog about seven weeks previously, was admitted into the hospital on October 2nd, 1879, with well-marked symptoms of hydrophobia, which had made their appearance about thirty-six hours previously. In spite of treatment the case terminated fatally about five hours after admission.

Shortly before death a rabbit was obtained, and an incision having been made through the skin of the dorsal region, some of the saliva (of which there had been a copious discharge) was removed with a spatula from the patient's mouth, and immediately introduced into the cellular tissue beneath the skin. In order to make the inoculation more sure, a needle was also moistened with the saliva, and several times introduced through the wound into the muscles and subcutaneous tissue in its immediate neighbourhood.

No effect was, however, produced upon the rabbit; the wound on its back readily healed without any signs of irritation, and the rabbit is still living in perfect health, having never presented any morbid symptoms of any kind, though it has been closely observed.

I write these few lines in order to show that this proposed crucial test cannot be safely relied upon, for in this case, where the disease was well-established, and where the inoculation was carefully performed, the results were absolutely negative.

I am, Sir, your obedient servant,
F. A. SOUTHAM, M.A. Oxon., F.R.C.S.,
Resident Surgical Officer.
Royal Infirmary, Manchester, Jan. 18th, 1880.

"ERRONEOUS IMPRESSIONS OF PROFESSIONAL WORK."

To the Editor of THE LANCET.

SIR,—Your issue of to-day contains a leading article entitled "Erroneous Impressions of Professional Work," the text of which is an extract by one of your contemporaries from my published Report of this Hospital for 1879. The words quoted are these:—"Owing chiefly to the application of electricity being troublesome and tedious, and requiring patience and sacrifice of time, the belief in its efficacy is theoretical rather than practical with the great majority of the medical profession; and it may be confidently affirmed that in England its medical value has never yet been fairly and exhaustively tested." You state that you should not have alluded to the matter had not this assertion with respect to electricity been "*an aspersion on the work of every practitioner in the land.*" I emphatically deny this, and I hope that upon consideration you will withdraw it. I see no reason to modify my opinion. As I have stated elsewhere—and I am confident I shall be supported by the experience of all physicians who see much of diseases of the nervous system,—a theoretical belief in the benefit to be derived from judicious electrization is widely diffused, while comparatively very few medical men have a practical knowledge of the subject; and hence it is still too common (as was the complaint of Golding Bird thirty years ago) for the medical practitioner to consider that when his fiat has gone forth, "Let the patient be electrified," he has done all that is necessary, while the patient usually carries out this mandate by the purchase of a rotary magneto-electric machine, and by using it according to the directions of its maker.

You seem to assume in your article that the medical profession includes only hospital physicians, and you ignore the general practitioner, who most assuredly in the vast majority of cases possesses no electrical apparatus whatever, so that his knowledge is perforce "theoretical;" while of hospital physicians themselves the greater proportion are similarly situated. You write that at "every hospital in the kingdom electricity is had recourse to *in each and every one of its forms.*" Although in this very number of THE LANCET you have published a letter from Dr. Allison, advocating the use of static electricity in carcinoma, you will not find a dozen (perhaps not half a dozen) hospitals in Great Britain and Ireland which even possess a static machine; and this being so, surely it is ungenerous and unfair to characterise my opinion as to the medical value of electricity not having been exhaustively tested, in the anything but courteous tone you have adopted; and I am the more sensitive perhaps to being thus pilloried as I am conscious of having for years past, as my published works and correspondence in your own columns testify, earnestly endeavoured to induce the general practitioner to use electricity himself rather than to send his patients to an expert for advice. I send you our Hospital Report, and trust to your sense of justice to accord as prominent a position to this letter as was occupied by your article.

I am, Sir, your obedient servant,
HERBERT TIBBITS, M.D., F.R.C.P. Edin.,
Hon. Medical Superintendent.
The West End Hospital for Diseases of the Nervous System,
73, Welbeck-street, W., January 10th, 1880.

*** We were not, of course, aware that the paragraph in a lay contemporary of the 2nd instant was written by Dr. Herbert Tibbits, or that he was responsible for the statement, concerning electricity, to which we particularly took exception—namely, that "owing chiefly to its application being *troublesome* and *tedious*, and *requiring patience* and *sacrifice of time*, the belief in its efficacy is theoretical rather than practical with the great majority of the medical profession"! The italics are ours.—ED. L.

ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—I trust you will permit me to trespass on your space in reply to "Y.'s" criticisms on my letter, that appeared in your issue of the 3rd instant.

"Y.," in his efforts to show that my letter "is not a model of close reasoning,"—which it never pretended to be, by the way—deals with six of the seven points I enumerated as some of the advantages the Army Medical Service gains by the recent Warrant. The seventh—viz., the restoration of forage—he admits is an undoubted grievance remedied.

"Y" also acknowledges that pay and pensions have been solidly increased, and there he is certainly correct; but parenthetically he remarks that increase of pay was not asked for. The parenthesis is not accurate, for increase of pay was recommended by more than one Medical College and School in the United Kingdom, when their governing bodies were requested, by Lord Cranbrook's Committee, to state the causes of the unpopularity of the Service with young medical graduates. Besides, reference has only to be made to your columns to see that many writers, as well as the profession generally, did ask for higher pay for army surgeons. The point is conceded by the new Warrant, and it is probable that most medical officers regard an addition to their emoluments, of about £45 per annum in the majority of instances, as not only worth having but also worth suitably acknowledging without going the length of the "gushing gratitude" that "Y." speaks of.

The increase of pension is most notable after twenty years'

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service. It has been raised from 12*s.* to 20*s.* per diem, and is a boon that the officers of the department have regarded as a *summum bonum* for the last twenty years or more. If "Y." can point to an equally good retirement in any other department of the army I am much mistaken.

It is not easy to reason with mere assertion, and "Y.'s" statement that retired medical officers will still be subject to Whitehall-yard, will be restricted to residence in these islands and debarred from the privilege of commuting their half-pay, I can only meet by asking him to be so good as to quote his authority for it.

It is true officers who retire before the age of fifty-five are liable, till they reach that age, to be called on to serve in cases of national emergency. It is possible that is what "Y." considers being "still subject to Whitehall-yard." If it is, I can only say I know no medical officer who would, under such circumstances, act with less loyalty and patriotism than was shown by the rank and file of the reserve forces in 1878. For the residence restricted and the commutation debarred I am not able to find any clause in the Warrant, and until some authority is given I must regard the statement as without foundation.

Sick leave, "Y." says, has been *nominally* extended, but he adds, "a medical officer cannot claim the privilege on the decision of the Medical Board." Neither can any other officer. Medical Boards have only the power to recommend that leave be granted. The Commander-in-Chief grants the leave. Before November 27th, 1879, Medical Boards could not recommend more than six months' leave for medical officers; but clause 44 of the Warrant expressly states that, on the recommendation of the Director-General, such sick leave may be extended for a second period of six months on full pay. Such an act of justice was beyond the power of the authorities prior to the appearance of the Warrant.

"Y." asserts that exchanges were allowed before the date of the Warrant, and here again he compels me to point out to him an inaccuracy. It is notorious in the department that exchanges have not been permitted for some time past, save under exceptional circumstances, and clause 33 of the Warrant specially provides for their sanction in the future.

"Y." is singularly fortunate in having been so well acquainted with the terms of Indian service that qualify for promotion to the administrative ranks before the Warrant made them officially known. Clause 21 of the Warrant is the first official intimation the Department has received on the subject as far as I am aware.

"Y." affirms that soldier servants were allowed prior to the Warrant. Were they? How? When? Where? The conditions of service in the Army Hospital Corps distinctly forbade the employment of the men as officers' servants, and if a medical officer could not obtain a servant from his own corps, I know not how he could get one from another. It has happened several times within my knowledge that medical officers have endeavoured to get servants and have failed. Clause 10 of the instructions by the Secretary of State on the Warrant grants medical officers the option of employing soldier servants from the Army Hospital Corps, or drawing the allowance if they prefer to do so.

That, I think, is the last of "Y.'s" criticisms that concerns me, saving those he passes on the quotations I ventured to make. While I regret that "Y." fails to see their application, I cannot take up your space in explaining them to him; but it is unfortunate he should have troubled himself about them, since he confesses his inability to apply them.

I am, Sir, your obedient servant,

Jan. 12th, 1880. VERAX.

NAVAL MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—Now that important concessions have been granted to the Army Medical Service, to rescue it from the lamentable condition into which it had fallen, it is time something were done for the Naval Medical Service, which is fast drifting into the same state.

The conditions of life are so much more irksome and disagreeable on board ship than they are on shore, that, to obtain men of equal abilities, a higher rate of pay and better retirement must be given to the naval man than to his brother officer in the army.

One great cause which has prevented men from coming into the navy has been the want of faith shown by the Admiralty in not carrying out the promises given in their Circulars from time to time. Admiralty Circular dated the 7th of October, 1875, and headed "for information of candidates," states, in Paragraph 2: "Fleet Surgeons rank with Commanders according to date of commission"; and, again, in Paragraph 7: "Medical officers have cabins according to their relative rank in the service."

Now, this Circular, issued in 1875, has never been put in force. After four or five of the best cabins have been selected and marked for certain officers, the medical officers have then their choice, according to seniority. In H.M.S. *Euryalus*, the flagship on the East Indian station, the commander, paymaster, navigating officer, chaplain, bandmaster, and captain's steward have cabins on the main deck, whilst the old, white-headed fleet surgeon, who is years senior to all the officers mentioned, is delegated to a cabin on the lower deck, where the scuttle can never be taken out at sea, and where it is impossible for a man advanced in years to live without serious injury to his health.

Two fleet surgeons have already been invalided from that ship in eighteen months, and it is stated that the third, who has just gone out, is not likely to last long.

The same conditions as to cabins obtain in several other ships, such as the *Boadicea*, *Bacchante*, *Pallas*, *Hercules*, and many more, where the paymaster, navigating officer, and chaplain, if of only one day's standing, get cabins before the fleet surgeon, no matter how many years seniority he may have.

It is now time that something was done about this question, the above-mentioned Circular, as it now stands, being simply an attempt to lure under false pretences young medical men into the naval service.

Your obedient servant,

January 14th, 1880. ARGOSY.

BIGELOW'S OPERATION.

To the Editor of THE LANCET.

SIR,—I should be obliged if you would allow me to supply an omission, for which I owe an apology to Sir Henry Thompson.

In a clinical lecture published in THE LANCET of January 10th, I enumerated, as I imagined, all instances that had been recorded of the performance of Bigelow's operation by English surgeons.

The largest group of cases—namely, thirteen—by Sir Henry Thompson escaped my notice; they were published in the *British Medical Journal* for August 2nd, and they form part of the collection of thirty-one cases referred to by Sir Henry in last week's LANCET. I regret that I should have omitted to mention these cases, but it was due to my absence from this country at the time they appeared.

I am, Sir, yours, &c.,

Stratford-place, W., Jan. 19th, 1880. THOMAS SMITH.

"THE SUNNY SOUTH."

To the Editor of THE LANCET.

SIR,—Your article in THE LANCET of the 29th of December, on the so-called "Sunny South," would lead those at home to think we were having an exceptionally severe winter, whilst, on the contrary, we have had up to this, with the exception of one or two days, the most beautiful weather I have ever known. Neither lemons nor oranges have been injured here; and, as an instance of the mildness of the climate, I may mention that two weeks ago peas in full blossom were to be seen in an open field in the East Bay. It is quite true that the Princess of Monaco was interred during a snowstorm, but then it was of very short duration, the snow disappearing almost as soon as it fell, and differing in this respect from many of the other health resorts on the Riviera.

During the month of December we have had twenty-six bright sunny days, two on which rain fell, one snow and two cloudy; on only two nights did the thermometer go below freezing point, and then only one or two degrees. The mean daily temperature has been 46·3° Fahr.; maximum in shade 59°; minimum 30°.

The six days of the new year have been very beautiful; and indeed, looking back on the past three months, I do not think we have had six days on which the greatest invalid

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could not have sat with pleasure and advantage basking in the sun in the beautiful gardens of the Casino here.

I am, Sir, faithfully yours,

Monte-Carlo, Jan. 7th, 1880. T. HENRY PICKERING.

AN ITALIAN SCOURGE.

(From a Correspondent.)

NINETY-SEVEN thousand Italians (so I gather from the Report lately issued by the Minister of Commerce and Agriculture) are at this moment dying of pellagra. About one-half of the provinces of Italy are desolated by this scourge. The number of the victims represents 3·62 per 1000 of the total population of the Peninsula, or 0·21 per 1000 more than the worst cholera epidemic that ever swept over France. If we restrict our consideration to the infected regions only, the proportion becomes still more terrible, and oscillates between a maximum of 11·76 per 1000 in Lombardy, 11·08 per 1000 in Venetia, and a minimum of 0·09 per 1000 in Latium. In France, in the cholera visitation of 1834-35, the proportion in the infected departments only was 10·42 per 1000 of the population for the sick, and 4·73 per 1000 for the dead.

From the Mantuan Commission appointed to inquire into the subject I gather that pellagra, considered *per se*, is so extended and so manifold in its symptoms as to appear—so far as its external phenomena are concerned—a general malady of the organism. Its developments are principally found on the skin, the mucous membrane of the mouth and the entire alimentary canal, in the muscular system, and in the nervous system in its threefold sensory, motor, and psychical relations. For the most part its victims betray the first inroads of the disease by stupefaction, giddiness with a sense of traction from behind, and a general enfeeblement of the organism. On the approach of spring the parts of the skin most exposed to the sun, the backs of the hands and feet, the face, the neck, and the median part of the chest at the parting of the shirt, show an erythematous discolouration, with desquamation of the cuticle, and more rarely, in the severer cases, rough nodosities, vesicles, and puckerings. Corresponding characteristic alterations manifest themselves later in the mucous membrane of the lips, the mouth, and the fauces, and then there supervenes a profuse, obstinate, exhausting diarrhœa. The patient, becoming always feebler, is no longer fit for the slightest exertion; he totters rather than walks, with knees semiflexed and curved, till finally he falls forwards and lies with his mouth in the dust. The skin of the entire body becomes of an earthy colour and hangs in loose folds, the muscles are attenuated, and the whole person becomes lean or emaciated, if indeed he does not rather acquire a tumefaction, down-dragging and semi-transparent, from the infiltration of the subcutaneous tissue with serosity. The *pellagrosi* complain for the most part of a pain as if from contusion on the head and spine, which often radiates in zones around the abdomen and is prolonged to the thighs; of a formication and sense of heat at the extremities, and of an internal tremor often visible in the hands and tongue. They have often a burning sensation in the stomach, ascending the œsophagus; while not unfrequently there is laboured breathing which sometimes approaches absolute apnœa. The sight becomes clouded, the hearing first troubled with rumbling noises and then blunted. The heart's impulse gets weaker and diminished in bulk as the organ sometimes shrinks along with the other muscles; the radial pulse is feeble and generally rapid, with venous stasis indicated by the diffused leaden colour, mottled with sporadic sanguineous blotches, sometimes small sometimes large, on the skin and mucous membrane. In many cases of pellagra, sometimes from the beginning, occasionally later in the progress of the disease, there is mental alienation, which may break out in sudden paroxysms and assume every form, from laughing and loquacious maniacal exaltation to the gloomiest and fiercest melancholy, with suicidal, incendiary, and homicidal tendencies. More often, however, it begins with hebetude or slowing of the intelligence, and a prostrate apathy of mind which becomes true hypomania with stupor, and betrays itself in delirious words and deeds, in fear of persecution and in hopeless despair.

Pellagra runs, usually, a slow course, lasting for years, during which it betrays itself in attacks which may continue for months, and which occur most often in spring and summer, less frequently in winter, and still less so in autumn, and which recur always at the same season in successive years, with graver and more extended virulence. Like every other malady, pellagra renders the system more liable than it would otherwise be to noxious influences; and so it frequently happens that in its progress other common maladies supervene, especially those of the respiratory organs. It is computed that in more than one half of the cases of death among the pellagrous, intercurrent disease of the lungs is the proximate cause. But, independently of that, there are cases of pellagra in which it assumes an acute form, either from its commencement or in a more or less advanced state of its chronic course. The malady then takes in some measure the aspect of typhoid (*tifo-pellagroso*), and is generally fatal. In these cases, as in those of a persistently slow course, death most often happens from an intractable diarrhœa, which has exhausted the patient.

The grand cause of this frightful malady is the exclusive consumption, as food, of maize generally in a deteriorated condition, while minor or concurrent causes are the excessive labour to which the Italian rustic is subjected, and the unhealthiness of the hovel in which he lives. "Bad alimentation, bad lodging, excessive work,"—it is to these that with monotonous persistency the sanitary returns attribute the epidemic. The remedy belongs, therefore, to the State rather than to medicine, and obviously consists in so improving the material condition of the Italian labourer as to enable him to earn more and to live better, as regards food, dwelling, and occupation. According to the suggestions of the Commission, his wages can only be heightened by diminishing competition, and competition is to be diminished by encouraging emigration. Having thus reduced the number and enhanced the earnings of the labourers, the Government should next make it compulsory on their employers to provide salubrious houses for them. Under these conditions of better fare and superior home-comforts pellagra would be reduced to the proportions of a sporadic and occasional skin disease, which the physician could treat with some prospect of success. Till they are provided, however, the scourge will prevail unchecked, and the malady remain an opprobrium, not of the healing art, but rather of the State.

Obituary.

WILLIAM BUDD, M.D.

DR. WILLIAM BUDD was born at North Tawton, in Devonshire, in 1811; his father was a medical practitioner of high repute, and he himself was one of a distinguished family of nine sons, seven of whom entered the medical profession. It is worthy of note that five members of this family were Wranglers.

During the period of his medical education Dr. Budd spent four years in Paris, at the Collége de France and the Ecole de Médecine, and also studied in London and Edinburgh, and in 1838 he obtained his degree at the University of Edinburgh, carrying off the gold medal for his essay on Rheumatic Fever. After this he was appointed physician to the *Dreadnought*, and about this time published in the Medico-Chirurgical Transactions a paper on the Symmetry of Disease, which attracted considerable notice. Soon after coming to Bristol he was appointed physician to St. Peter's Hospital, and in 1847 obtained the post of physician to the Bristol Royal Infirmary, which he held till 1862, when he was made consulting physician to that institution. For some years he occupied the chair of Medicine at the Bristol Medical School. In 1870 he was made a Fellow of the Royal Society. At length his incessant activity of body and mind began to tell upon him, and about seven years ago he was forced to retire from professional life. The rest which he thus obtained, however, did not restore him to health, and gradually increasing weakness resulted in his death at Clevedon, on the 9th inst., in his seventieth year.

After settling in Bristol, Dr. Budd speedily obtained a large practice and a very wide reputation as a consulting

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physician. His rare ability was universally acknowledged and appreciated by his professional brethren. His extensive learning and great practical knowledge of disease, the clearness of his mental vision, and the strength of his convictions, together with the logical force with which he urged them, combined, with his natural kindliness of disposition and his unusual power as an orator, to make him the centre of professional life, a leader of professional thought and activity.

Dr. Budd contributed numerous able articles on subjects of importance to the pages of this journal, and to other periodicals and reviews; but the world-wide reputation he achieved rests chiefly upon his researches in the pathology and mode of dissemination of typhoid fever. His classical work on "Typhoid Fever, its Nature, Mode of Spreading, and Prevention" (published in 1873), is a striking instance of the practical application of strict scientific methods of induction to the elucidation of the complex problems presented by disease. To Budd belongs the lasting honour of proving beyond dispute that typhoid fever is a "contagious or self-propagating fever, and is a member of the great natural family of contagious fevers, of which small-pox may be taken to be the type;" and that "the contagious matter by which the fever is propagated is cast off chiefly in the discharge from the diseased intestine." Liebermeister (Ziemssen's Cyclopædia, art. Typhoid Fever, p. 51,) says, "The opinion that the poison of typhoid fever is propagated continuously and never originates autochthonously was first established by Budd." In his work above-mentioned Dr. Budd gives convincing proof of the mode of spread of typhoid fever. One of the most remarkable instances is afforded by the outbreak of the fever at North Tawton, and its spread to certain adjacent villages solely through proved sources of contagion. The mode in which the spread of this epidemic is worked out cannot but excite the admiration of the reader. Dr. Budd then goes on to prove that the discharges from the intestine contain the specific contagious matter. He regards the intestinal lesion as the special *rash* of the disease. He traces by the convincing evidence of outbreaks of the fever its propagation through the medium of drinking water, but also adduces indisputable proof of the conveyance of the specific poison by sewer-contaminated air; and says that the worst outbreaks he has witnessed have occurred where the water has been absolutely blameless. He also gives instances of infection through other agencies; such as hands, bedding, and clothes, and calls attention to the danger resulting from the fact that "the *sewer* has come to be looked upon as the actual and primary source of the disease, while the infected *man* has been altogether lost sight of." Having thus demonstrated the contagious nature of the fever, and the mode of its spread, with the practical thought so characteristic of the writer, he says, "Science passes into duty," that duty being to carry out in the most thorough manner the process of disinfection. The work concludes with a most forcible argument against the "pythogenic" theory of the origin of the fever. Dr. Budd points out that one positive case is worth many negative, and that the absence of proof of infection in a given instance is not special to typhoid fever, but is frequently met with in, e.g., small-pox, and that consequently variola may just as logically be held to originate *de novo*; and he contrasts the long-continued and entire immunity from typhoid fever amid the impurities to which it is commonly ascribed, with its intense virulence when once introduced.

Dr. Budd is also well known in connexion with the subject of cholera. As in typhoid fever, so in cholera, he held that the dejecta contained the contagious matter, and that by a proper disinfection of the stools in all cases, an outbreak of cholera could be absolutely arrested. In proof of this, in a pamphlet on "Asiatic Cholera in Bristol in 1866" (published in 1871), he contrasts the various epidemics which have occurred in Bristol, and points out that, whereas in 1849 the deaths were 1979, in 1866 they were only 29; that whereas in previous epidemics the disease had spread widely from points where it first appeared, in that of 1866 it did not spread, although it was introduced in twenty-six distinct localities, and was of a specially malignant type. The success with which this epidemic was stamped out in Bristol was due solely to the energetic carrying-out of the measures which Dr. Budd so strongly insisted upon as the result of his views as to the mode of spread of this disease.

On the subject of the contagious diseases of animals Dr. Budd also made valuable observations. In 1863 he published a pamphlet on "Variola Ovina, Sheep's Small-pox; or the Laws of Contagious Epidemics, illustrated by an Experimental Type." He also studied a disease which caused a fatal epidemic amongst pigs, and concluded that it was of the nature of typhoid fever, and could be arrested by the slaughter of the affected animals. It is well known that when the cattle plague first appeared in England Dr. Budd strongly held that it could and ought to be stamped out by killing all animals as soon as the earliest symptoms appeared, and that this opinion, although at first held up to ridicule in the columns of the *Times* "as the Pole-axe Theory of Dr. Budd," ultimately triumphed. In speaking of this method, its author was wont to say that any contagious disease, such as scarlet fever, could thus be utterly exterminated, if only the same line of action could be adopted.

In the later years of his professional life Dr. Budd was employed in the investigation of various questions of much interest, such as the contagious nature of phthisis and the prevalence of diabetes in certain localities; but it was not permitted to him to work out the theories he had been led to form.

From a review of his life's work, it is manifest that Dr. Budd's best energies were devoted to the furtherance of preventive medicine, and of few men can it be said that they have effected more for the welfare of the human race than has been done by the truly great man who has taught us how we may deal fearlessly and surely with foes that formerly gained power and terror from the mystery in which they were shrouded.

LEICESTER CUTHBERTSON PONSFORD.

MR. PONSFORD, whose decease at the early age of twenty-three, from blood-poisoning caught while in the discharge of his duties as physician's assistant to Dr. Wilson Fox at University College Hospital, was one of the most promising men of his year in his school. He obtained high honours at the 1st M.B. Examination at the University of London, and was preparing to take the full degree in November next. He wounded his finger at a post-mortem examination in November last, and for several weeks his symptoms were very obscure, but at length blood-poisoning clearly developed and proved fatal. We cannot but regard the loss of such a life in such a manner with the deepest regret.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on Monday last:—

Bothamley, W. Parkinson, L.S.A., Donington, Lincolnshire.
Davis, Arthur Randall, L.S.A., Langport, Somerset.
Fagg, Thomas William, L.S.A., Alkham, Kent.
Favell, Richard, L.S.A., Sheffield.
Greenhill, Joseph Moore, L.S.A., Whitley, Starpoint.
Heaven, John Cookesley, L.S.A., Bristol.
Heygate, Frederick Nicholas, L.S.A., West Haddon.
Irvin, Joseph Henry, L.K.Q.C.P. Irl., Longridge, Preston.
Mulroney, Thomas Richard, L.R.C.P.Ed., Bombay.
Pegge, William Joseph, L.S.A., Newton-heath.
Seale, Thomas William, L.S.A., Aberdare, South Wales.
Todd, George Dixon, Leeds.
Webb, William Wilfrid, L.S.A., Uxbridge, Middlesex.
Wigg, Alfred Edgar, Adelaide, South Australia.
Williams, William, L.S.A., Aberdare, South Wales.
Wood, James, Wigan, Lancashire.

The following gentlemen were admitted Members on Tuesday last:—

Allen, Francis Edward, Upton-on-Severn.
Armitage, Joseph, St. John's-wood.
Boulter, Walter Ernest, Manchester.
Brooks, H. A. Grundy, Kensington-park.
Chipperfield, T. J. B. Pearse, L.R.C.P.Ed., Twickenham.
Fowler, Charles Henry, East Kirkby.
Haggard, Robert, Leeds.
Jones, W. H. Fenton, Euston-road.
Lewis, G. Stephens, L.R.C.P. Lond., Hobart Town.
McKee, G. M. Eccles, Hammersmith.
Mead, Charles, Falmouth.
Oglesby, Joseph William, L.S.A., York.
Parish, Frank, L.R.C.P. Ed., Erith, Kent.
Reynolds, James Jones, Appledore, Devon.
Richardson, James Nowell, Leeds.
Roberts, Oswald, Richmond, Yorkshire.
Rich, Evelyn Arthur, L.R.C.P. Lond., Winchester.
Theed, Stanley Tipan, L.R.C.P.Ed., Hilton, near Stafford.
Warren, H. G. Seymour, Orange, New South Wales.
Webber, W. Woolmington, Crewkerne, Somerset.
Whitehouse, John, L.R.C.P. Ed., Birmingham.
Withers, Oliver, Sale, near Manchester.

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The following gentlemen were admitted Members on Wednesday last:—

Back, Alfred Henry, Hethersett, Norfolk.
Bartlett, Charles Richard, Cheltenham.
Bates, Henry Leslie, L.R.C.P. Lond., Streatham.
Beresford, Charles William, Buxton.
Biss, Cecil Yates, Sydenham.
Breese, Thomas Thwaites, L.S.A., Norwich.
Cree, Edward Russell, L.S.A., St. John's-park, N.
David, W. Washington, L.S.A., Cymer, South Wales.
Dixon, Harry Alcock, Burnley, Lancashire.
Evans, Ebenezer Daniel, Wrexham.
Groom, Henry Thomas, L.S.A., Camden-road.
Harvey, Sidney Frederic, Clapham-road.
Hebbert, Charles Alfred, Birmingham.
Hormazdji, Robert Nesbit, Bayswater.
Hunter, Vere Edward, Cromwell-crescent.
Knipe, F. A. Patrick, Malvern.
Little, Ernest Muirhead, Park-street.
Mort, Herbert Brownlow, L.R.C.P. Lond., Southport.
Shorland, W. Edmund, Bristol.
Smith, F. M. Codde, Fareham, Hants.
Swale, Harold, L.S.A., Guildford.
White, W. Hale, Carshalton.
Wightwick, Fallon Percy, Folkestone.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 15th inst.:—

Herbert A. H. McDougall, James J. Short, and James H. Breach, King's College; Americ E. Flaxman, Middlesex Hospital; John A. Coutts and Francis W. Humphery, St. George's Hospital; Richard S. Wright, St. Mary's Hospital; William J. Hill, St. Bartholomew's Hospital; William Growse, Guy's Hospital; Harry Gravely, University College; Edward Mattie, St. Thomas's Hospital.

Of the 140 candidates examined during the past fortnight, 42 failed to satisfy the Board of Examiners, and were referred for three, and 9 candidates for six months' further anatomical and physiological study.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Jan. 16th:—

Heygate, Frederick Nicholas, West Haddon, Rugby.
Jago, Edwin Osborne, Plympton, Devon.
Whelan, John Joseph, Grafton-terrace, Maitland-road.

The following gentleman on the same day passed the Primary Professional Examination:—

Davies, Jenkin, St. Thomas's Hospital.

THE Drapers' Company have granted a donation of fifty guineas to the Parkes Museum of Hygiene.

HIS Royal Highness the Duke of Connaught will preside at the sixty-sixth anniversary dinner of the Royal Hospital for Diseases of the Chest, City-road, to be held at Willis's Rooms, on Wednesday, 21st of April.

THE Coronership of the Borough of Guildford is vacant by the resignation of Dr. James Remington Stedman. The election of his successor has been fixed for Tuesday, the 10th of February.

AT the quarterly meeting of the Directors of the Naval Medical Supplemental Fund, Dr. H. J. Domville, C.B., Inspector-General, in the chair, the sum of £70 was distributed among the various applicants.

MR. HENRY J. L. GRAHAM, who has filled the office of Principal Secretary to the Lord Chancellor since 1874, has been appointed by the Lord Chancellor to succeed Mr. Barlow as Master in Lunacy, which office Mr. Barlow has resigned.

UNIVERSITY OF DUBLIN.—The Lord Chancellor of Ireland has been appointed Vice-Chancellor of Trinity College, Dublin.

THE BLANE MEDAL.—The biennial adjudication of the gold medal founded by Sir Gilbert Blane, Bart., physician in ordinary to George III., has just been made in favour of the following gentlmen—viz., Staff Surgeon Henry Frederick Norbury, C.B., M.R.C.S. Eng. and L.S.A., of H.M.S. *Active*, and Staff-Surgeon William Digby Longfield, L.R.C.P. Ireland, of H.M.S. *Tenedos*. The adjudicators were Dr. Bennett, President of the Royal College of Physicians, Mr. Luther Holden, President of the Royal College of Surgeons, and Sir Alexander Armstrong, Director-General of the Medical Department of the Royal Navy. The medal, which is of the value of ten guineas, is very handsome, having on the obverse a striking likeness of the donor in bold relief, and on the reverse, a wounded sailor falling into the arms of a comrade, the name of each recipient being engraved in the legend.

MEDICAL SOCIETY, COLLEGE OF PHYSICIANS IN IRELAND.—A meeting of the members of this Society was held last week to consider certain rules in connexion with this Association. Some slight changes were adopted, in reference to the admission of members, annual subscription, and office-bearers to be elected; but it is understood that they are not to become law until sanctioned by the College. It is possible that the resolution adopted by the College last June, that any member joining the Society after that date should not be permitted access to the reading-room, will be rescinded.

Medical Appointments.

ALLEN, J. G., L.K.Q.C.P.I., has been appointed Certifying Factory Surgeon for the District of Rich-hill, co. Armagh.

BALBIRNIE, J. P., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Certifying Factory Surgeon for the District of Dalton-in-Furness, Lancashire.

BELL, Mr. J. C., has been appointed Public Analyst for the Borough of Stalybridge, at £10 10*s.* per annum, and 10*s.* 6*d.* per analysis beyond ten.

BERRY, G. A., M.B., C.M., has been appointed Junior House-Surgeon to the Royal London Ophthalmic Hospital, vice Burnham, promoted.

BLUETT, J., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Chesterfield Urban Sanitary District, at £100 for one year.

BOND, C. J., M.R.C.S.E., L.R.C.P.L., has been appointed Resident Surgeon to the Bedford General Infirmary, vice Pickup, resigned.

BURMAN, C. C., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Fern Island Light Establishments, vice Broadbent, resigned.

BURNHAM, G. H., M.B., M.R.C.S.E., has been appointed Senior House-Surgeon to the Royal London Ophthalmic Hospital, vice Gunn, resigned.

CARLYLE, J., M.B., C.M., has been appointed Certifying Factory Surgeon for the District of Dyce, Aberdeenshire.

CLUBBE, C. P. B., L.R.C.P.L., M.R.C.S.E., has been appointed Senior Resident Medical Officer to the Hospital for Sick Children, Pendlebury, Manchester, vice Watson, resigned.

DEWAR, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Physician to the Hospital for Women and Children, Vincent-square.

FORBES, D., M.B., L.R.C.S.Ed., has been appointed Assistant Medical Officer to the Workhouse, Brownlow-hill, Liverpool, vice Eccles, resigned.

GRIFFITH, G. R., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Carnarvon No. 1 District of the Carnarvon Union, vice Foster, deceased.

HAYES, T. E. D., L.K.Q.C.P.I., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Bodiam District of the Ticehurst Union, Sussex, vice MacKeith, deceased.

HELME, J. M., M.D., C.M., has been appointed a House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital, for three months from the 1st of February.

HUNT, H. J., L.R.C.P.L., has been appointed a Medical Officer to the Harrogate Bath Hospital.

JONES, A. L., M.R.C.S., L.S.A.L., has been appointed House-Surgeon to the London Hospital.

JONES, H. P., M.R.C.S.E., L.K.Q.C.P.I., & L.M., has been appointed Medical Officer and Public Vaccinator for the Aberffraw District of the Holyhead Union, vice Owen, deceased.

MARSHALL, J., L.R.C.P.L., M.R.C.S.E., has been appointed a Surgeon to the Dover Hospital and Dispensary, vice Duke, resigned.

MYRTLE, A. S., M.D., L.R.C.S.Ed., has been reappointed Physician to the Harrogate Bath Hospital.

PRATT, J., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Certifying Factory Surgeon for the District of Markethill, co. Armagh.

REED, W. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Donhead District of the Tisbury Union, Wilts, vice Bey, resigned.

RENDALL, S. M., M.B., C.M., M.R.C.S.E., has been appointed a House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital, for three months from the 1st of February.

SAINSBURY, H., M.B., has been appointed Junior Resident Medical Officer to the Hospital for Sick Children, Pendlebury, Manchester, vice Wood, resigned.

SHAPLEY, F., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon at the London Hospital, vice Batchelor, resigned.

SIMPSON, W. S., M.R.C.S.E., L.R.C.P.Ed., & L.M., has been appointed Medical Officer to the Pontefract Union Workhouse, vice Atkinson, resigned.

SMITH, H., L.S.A.L., has been appointed Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest, Brompton, vice Keogh, resigned.

SMYTH, Dr. P., has been appointed Medical Officer, Public Vaccinator, &c., for the Stamullen Dispensary District of the Drogheda Union, co. Louth, at £110 per annum and fees, and £20 per annum as Medical Officer of Health, vice Adrien, resigned.

SOMERVILLE, W., M.D., has been appointed a Medical Officer to the Harrogate Bath Hospital.

SWANN, A., M.D., M.R.C.S., &c., has been appointed Honorary Surgeon to Batley und Districts Cottage Hospital, vice McFadden, resigned.

SWETE, H., M.D., has been appointed Third Physician to the Worcester General Infirmary.

WEBB, W. W., M.R.C.S.E., L.S.A.L., has been appointed Junior Resident Medical Officer to the Great Northern Hospital, vice McMunn, resigned.

WELCH, H., M.B., C.M., has been appointed a Junior House-Surgeon to the Royal Southern Hospital, Liverpool, vice Helme, appointed a House-Surgeon to the Edinburgh Royal Maternity Hospital.

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Births, Marriages, and Deaths.

BIRTHS.

CURRIE.—On the 7th inst., at Lydney, the wife of Andrew S. Currie, M.D., of a daughter.

DAVSON.—On the 15th inst., at Mount Galpine, Dartmouth, the wife of Frederick Adams Davson, M.D., of a son.

JACKSON.—On the 18th inst., at Ladbroke-grove, Notting-hill, the wife of Robert Alexander Jackson, L.R.C.P.L., of a son.

KAROP.—On the 15th inst., at Holland-road, Kensington, the wife of George C. Karop, M.R.C.S.E., of a son.

SHELDON.—On the 19th inst., at Cornwall-road, Notting-hill, the wife of Thomas Sheldon, M.D., of a daughter.

MARRIAGES.

GOWING—WELCH.—On the 14th inst., at St. Thomas's Church, Salisbury, by the Rev. C. N. Wyld, assisted by the Rev. L. Ridley, B. C. Gowing, M.R.C.S., to E. R. H. Welch, of Salisbury, second daughter of E. Welch, of Liverpool.

RENDALL—KILBURN.—On the 15th inst., at St. George's, Hanover-square, John Rendall, F.R.C.S.E., to Margaret, widow of F. Kilburn, Esq.

DEATHS.

CRAWFORD.—On the 17th inst., at Norton-terrace, Longsight-road, Manchester, James Crawford, M.D.

EDDOWES.—On the 17th inst., at Sandymount, William Eddowes, M.R.C.S.E., Surgeon-Major, 35th Bengal Native Infantry, aged 48.

FOSTER.—On the 3rd December, Thomas Sheldon Foster, L.R.C.P.L., of Carnarvon.

GILL.—On the 9th inst., at Kandy, Ceylon, George T. Gill, L.R.C.P.Ed., Assistant Colonial Surgeon.

MASSY.—On the 15th inst., at Woodfort, Fermoy, co. Cork, Thomas Massy, M.D., aged 75.

OSMOND.—On the 9th inst., at Thorpe-le-Soken, Thomas Edward Osmond, M.R.C.S.E., aged 69.

ROE.—On the 4th inst., at Malta, Peter Mitchell Roe, L.F.P.S.G., Surgeon, Royal Dockyard, Malta.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

BOOKS ETC. RECEIVED.

BAILLIÈRE & Co., London.
The Irish Medical Directory. 1880.

BAILLIÈRE ET FILS, Paris.
Conférences Pratiques de Médecine Légale. Par E. Clément.
Traité Clinique des Maladies de la Moelle Epinière. Par E. Leyden.

DAVID BOGUE, London.
Youth, its Care and Culture. By J. Mortimer-Granville.

G. CARLYLE, Liverpool.
Doctor's Prescription Book.

J. & A. CHURCHILL, London.
Pay Hospitals and Paying Wards throughout the World. By H. C. Burdett.

HODDER & STOUGHTON, London.
Economical Cookery for the Middle Classes. By Mrs. Addison.

W. & A. K. JOHNSTON, London.
Biological Atlas. By D. McAlpine & A. N. McAlpine.

H. KIMPTON, London.
Dentists and Dentistry. By A. Carter.

H. K. LEWIS, London.
Experimental Researches on the Regional Temperature of the Head. By Dr. J. S. Lombard.

LONGMANS, GREEN, & Co., London.
Two Lectures on South Africa. By J. A. Froude, M.A.

MACMILLAN & Co., London.
Eyesight: Good and Bad. By R. B. Carter.

G. P. PUTNAM & SON, New York.
A Dictionary of the German Terms Used in Medicine. By Dr. G. R. Cutter.

SMITH, ELDER, & Co., London.
The Essentials of Bandaging. By Berkeley Hill, M.B. &c.
St. Bartholomew's Hospital Reports. Vol. XV. 1879.

A. STEBBINGS, Lowestoft.
Sketches in Verse. By H. Gramshaw.

The Sunday at Home; January. The Leisure Hour; January. The Boy's Own Paper; January. (The Religious Tract Society.)—Auge und Schädel. Von Dr. E. Emmert. (M. V. von A. Hirschwald, Berlin.)—Brain: a Journal of Neurology. Part VIII. (Macmillan & Co.)—St. Louis Courier of Medicine; December.—Archives of Ophthalmology; December. (G. P. Putnam & Son, New York.)—Transactions of the American Ophthalmological Society. (Published by the Society.)—Transactions of the American Otological Society. (A. Williams & Co., Boston.)

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Jan. 22nd, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jan. 16	30·05	S.W.	38	38	..	43	32	0·14	Overcast
,, 17	30·06	E.	36	34	..	38	33	0·17	Overcast
,, 18	30·06	E.	32	..	..	38	26	..	Fine
,, 19	30·39	E.	29	..	..	34	26	..	Overcast
,, 20	30·64	WNW	25	..	..	34	22	..	Foggy
,, 21	30·65	W.	27	..	..	37	21	..	Overcast
,, 22	30·39	W	32	..	..	40	24	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

A NORTH WALES ELYSIUM.

WHILE from north, south, east, and west come innumerable lamentations of the severity of the weather, and even the winter-resorts on the coast of the Mediterranean offer but an imperfect refuge from it ("I am disabled from frost-bitten fingers," writes one artist from the land of the olive and myrtle), the Vicar of Llandrillo, Colwyn Bay (the Rev. W. Venables-Williams) writes to one of the Manchester journals giving a tantalising account of the local weather there. He tells us that his wife gathered sweet-peas in his garden eight days before Christmas-day, and that he himself the day before Christmas-day cut a large bouquet, consisting of roses, chrysanthemums, snap-dragons, wall-flowers, pansies, and violets. Not that the severity of winter has been unfelt at Colwyn Bay, but it has pressed there lightly as compared with many other places in the kingdom. Mr. Williams has had a ten years' experience of Colwyn Bay. He is accustomed there to cut asparagus in March, and to have regularly new potatoes on the 10th May; while as to flowers he is favoured with them all the year round. It is not surprising then that he suggests Colwyn Bay as a substitute for Cannes, Nice, and the south of England for northern folk who desire a winter-resort within an easy distance.

X. Y. Za.—The letter will be inserted in an early number.

DISTRIBUTION OF REWARDS FOR THE ZULU CAMPAIGN.

To the Editor of THE LANCET.

SIR,—Now that things appear to have been settled in Zululand, and senior officers who were incarcerated in Ekowe rewarded, I should like to know what is to be done for the junior officers and men who were in exactly the same position, and whose claims do not as yet appear to have been recognised, although some time has elapsed since they went through such hardships for their country. The senior combatant officer, I see, has been knighted, promoted, and loaded with other honours and rewards; the officer commanding the 3rd Buffs received a C.B.; the officer commanding the 99th Regiment a C.B.; the senior naval officer promoted, and a C.B.; and the senior naval medical officer promoted, and also a C.B. (the senior medical officer, Army Medical Department, not yet rewarded). From *Blackwood's Magazine* for last July it appears that the poor fellows were reduced to minimum field rations, eating beasts of burden, stricken with fever, and with deaths at the rate of over 100 per 1000 from disease alone; and considering the period of incarceration was only a few days less than the long-remembered and well-rewarded Lucknow, I feel sure, Sir, if this is permitted to meet the eye of those now in power, they, "on their deliverance from those great and apparent dangers wherewith they were compassed," will be substantially rewarded. Your obedient servant,

Jan. 12th, 1880. AMICUS EXERCITUS.

Dr. Izalardi.—Doctors who so act would in this country be excluded from the societies of honourable physicians.

Medical Student.—Some preliminary acquaintance with pathology is desirable before clinical work.

Dr. Thos. Radford.—We have no knowledge of any communication of the class mentioned.

ECZEMA OF THE NIPPLE.

To the Editor of THE LANCET.

SIR,—In your last issue (p. 92, col. 2, line 33) Dr. Thin is reported to have said that my case died "two years after operation, without local relapse." If correctly reported, I must have omitted to inform him of the important fact that the "obscure symptoms" (line 29) with which she died were, to my mind, traceable to the fear of a second operation suggested by me, some six months before her death, for the removal of a line of cancerous nodules along the old cicatrix.

I am, Sir, yours obediently,

East Rudham, Swaffham, Jan. 17th, 1880. ALAN REEVE MANBY.

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MIDWIFERY CONTRACTS.

THE *Cornish Telegraph* reports that in the Redruth County Court Mr. C. H. Butlin, Surgeon, Camborne, claimed 5*s.* from John Sims for bespeaking attendance on his wife in her confinement. His Honour asked if medical men could recover on retainers? Mr. Butlin said they could; it was a custom of the profession. Defendant said Mr. Butlin told him to go to someone else, as he could not pay the booking-fee of 5*s.* He did not get someone else, but an old woman attended his wife out of kindness. Mr. Butlin said never in his life did he refuse to come because the money was not paid. His Honour: It's not very likely. Judgment for plaintiff, payable 1*s.* a month.

Dr. Engleby Mackenzie will obtain the information he desires by reference to our advertising columns.

H.—We believe the same publication exists.

TOBACCO-SMOKING.

To the Editor of THE LANCET.

SIR,—I have read with considerable interest the letters of Dr. Pratt and of the late lamented Dr. Parkes on the above subject in your issue of the 3rd inst. The growing prevalence of smoking in our midst, the frequency of the question, "Is smoking injurious?" and the discrepant answers which medical men too often give in reply, make it especially desirable that the question should be fairly discussed, and something like agreement arrived at. Indeed, for the credit of the profession, the subject should undergo careful consideration. We cannot expect to command the respect of the more intelligent part of the community whilst we are unable to agree amongst ourselves about one of the commonest problems offered for our solution. I fear, however, that the letter of Professor Parkes will do little towards settling public opinion on the subject. He seems strongly to incline to the opinion that "when tolerance has been established," he has "never been able to make out any symptoms which implied injury." It is evident, however, that he is far from being satisfied in his own mind. He says: "In conclusion, I confess myself quite uncertain," and further admits that his views are "very indefinite."

That there are cases of "enormous smokers" who apparently receive "no injury" will be readily admitted; others have met with them as well as Professor Parkes. It is precisely the same we learn with regard to opium-eaters. Some of these persons consume daily very large quantities, and yet enjoy health to a late period of life; apparently they receive no harm. Still more common are the cases of opium-eaters who, indulging moderately, and having acquired "a tolerance," seem to suffer no injury. But even if in these cases it could be positively shown that no injury results, there would still be sufficient evidence of the pernicious effects of opium-eating in the majority of those indulging in the habit to justify our denouncing it as injurious to health. It must be remembered that the effects of small doses of a poisonous agent, though frequently indulged in, may not show themselves for long periods. There are persons who have for years been accustomed to drink water containing the sulphates of lime and magnesia, and there are families in Cumberland whose domestic supply of water is said to be distinctly impregnated with AsO, yet they seem to suffer little or nothing. So it is with impure air. Every sanitarian knows that owners of bad property and persons engaged in carrying on offensive trades deny that any harm results to health through their agency, and will readily bring forward instances where persons have enjoyed good health for long periods, though constantly inhaling the air which the medical officer of health emphatically condemns. The fact is that there are certain constitutions which are remarkably tolerant of obnoxious agencies, and seem to successfully defy what gradually undermines the constitutions of many others.

Now, must not all admit that tobacco-smoke, like so many other vapours, pollutes the air which the smoker breathes, and to that extent affects the health and vigour of his system? But it is alleged that smoking in moderation does no one any harm. Do we ever find any sanitary authority asserting that breathing an impure atmosphere in moderation does no one any harm? The plain unvarnished truth is that impure air always is injurious to the human system in proportion to the quantity which is inhaled. It is precisely the same as regards the use of tobacco; small doses do not apparently produce any ill-effects, but, for all that, ill-effects are produced, and, under frequent repetition, their specific effects become sooner or later apparent. Anyone desiring to know why tobacco-smoking is in the majority of instances so injurious would do well to consider the revelations of Drs. Vohl and Eulenberg. These gentlemen found amongst the gaseous products of tobacco-smoke, marsh gas, carbonic oxide, sulphuretted hydrogen, and hydrocyanic acid. The bases were nearly all found to belong to the picotin and pyridin series, known to be produced during the combustion of many vegetable substances. Pigeons and guinea-pigs exposed to the influence of these agents suffered from irregular cardiac action; tonic and clonic spasms, convulsions, and death. Other analysts, using possibly a tobacco richer in nicotin, such as is in common use in this country, have found that alkaloid in the smoke of tobacco. Thus it is not only that tobacco-smoke contaminates the air by particles of solid carbon or dust, but that there is diffused through the lungs of the smoker and those near him minute quantities of volatile poisons of the most virulent kind.

I have not space to refer to the seductive properties which the nauseous weed after a time exerts over too many of those who use it, nor yet of the relaxing effect which it too often exerts over the physical and mental faculties, leading to indolence, and too often creating the desire for a stimulant, and will briefly conclude by the following short but pregnant quotation on the subject under discussion:—"As it [tobacco-smoking] is of no use, and indeed injurious, by bringing men under the thraldom of a habit, it seems very desirable to discourage it" (Parkes' Practical Hygiene, second edition, p. 564).

I remain, Sir, yours &c.,

Manchester, Jan. 12th, 1880. R. M.

To the Editor of THE LANCET.

SIR,—The letter on Tobacco by the late Professor Parkes, given in your issue of the 3rd inst., certainly cannot be held to throw much light on the subject. The leading idea of the letter is that, "once tolerance is established," the use of tobacco in moderation does not appear to do any serious harm. There are, indeed, statements that go far to throw doubt upon this idea. The professor had not met with cases in which the giving up of tobacco seemed to do much good after it had been used for a considerable length of time. He speaks of parties suffering from various complaints who "were much better for leaving off smoking"—cases in which there "could be no doubt" the use of tobacco had an "injurious effect." But is it not a grave fact that in all cases, unless where there may be a decided hereditary predisposition, "tolerance" has to be "established"? Is not the *intolerance* which shows itself, when a healthy person smokes tobacco for the first time, *nature's protest* against the practice? Can that intolerance be overcome without injury to the system? Nature's protest against the use of tobacco is so universal amongst the healthy who attempt to smoke that it must be regarded as an emphatic condemnation of the practice. The simple fact that in every ordinary case "tolerance" has to be "established" before tobacco can be used without *obvious* evidence of serious injury should be enough to decide the question for ever, and justifies a high medical authority in saying that no tobacco-smoker is a thoroughly healthy man.

Yours &c.,

Jan. 1880. A. M.

To the Editor of THE LANCET.

SIR,—The view taken by the late Professor Parkes was similar in the main to the view so often put forth by advocates for the moderate use of alcoholic stimulants (which, like tobacco, are narcotics)—namely, that the evil lies not in the use, but solely in the *abuse*. Had Dr. Pratt consulted Dr. Richardson's "Diseases of Modern Life," he would not have been long in the dark as to the influence of tobacco. In that masterly work, the production of one who has devoted many years to the study of the question, may be found three chapters on the subject of Disease from Tobacco. Dr. Richardson deals with *facts* taken from extended and scientific observation; and the last three pages of the third chapter gives a *résumé* in the form of "Conclusions," which I consider any candid reader must deem conclusive against use of tobacco in any form.

Yours obediently,

Jan. 1880. MELIORA.

CONVALESCENT COTTAGE (THE PLAIN), EPPING.

THIS little convalescent home seems to be doing good work in a humble way. It is accessible to the East-end parishes. Since its opening, three or four years ago, 434 patients have been received; in the last year, 144. There are few greater luxuries or more binding duties than to support a convalescent home, even if it be a cottage.

THE WEATHER AT THE ISLE OF WIGHT AND AT THE RIVIERA.

To the Editor of THE LANCET.

SIR,—It may probably be interesting, considering the intense cold which prevailed in many parts of England and in France during the month of December last, to contrast the observations made at the several places of health-resort found in the south of England, and to that end I send you the results of the meteorological observations recorded at the Undercliff, Isle of Wight.

Both the months of November and December proved the finest on record for the last forty years. The weather during December, doubtless, was cold, but bears no comparison to the intense severity of the winter experienced in the centre of England and in France. The lowest temperature occurred during the night of the 4th, when the thermometer fell at Ventnor to 23°; at St. Lawrence to 22°; and at the Consumptive Hospital to 21·3°; so that at no period did the minimum reach 21°. The lowest maximum was also on the 4th, when the thermometer rose at Ventnor to 34°, and at the Consumptive Hospital to 33·5°. On the 3rd and 23rd the maximum was at 36°, and on the 1st and 2nd at 37°; so that on no one day did the thermometer continue at freezing-point during the twenty-four hours. The clearness of the atmosphere and the amount of bright sunshine during nearly the whole of the month was also remarkable. The number of days on which the sun shone, and that brightly, were 23, many of the days being perfectly cloudless; the sunsets beautiful, and the nights equally fine and clear. The amount of bright sunshine, at the most moderate calculation, amounted to 108 hours. The wind for the most part was from the north or east, but, in consequence of the absence of rain and the dryness of the atmosphere, did not partake of that piercing character too frequently the accompaniment of easterly wind. The rainfall during the whole month did not exceed one inch, 0·82 in. of which fell during the last four days. The mean temperature of the month was 37·90°, 0·50° above the mean of December, 1878. Doubtless much of the result thus obtained at the Undercliff, as regards tempera-

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ture, is due to its insular position; its protection on the north by the range of high cliff, and down rising immediately behind it, the latter to a height of nearly 800 feet; its direct exposure to the south and the terraced nature of the ground, sloping as it does to the sea, and which, of course, gave the influence to the sun's rays that under ordinary circumstances could not have been obtained. Some few of the days were misty, but there was a total absence of fog.

Yours faithfully,

South Bank, Ventnor, Jan. 6th, 1880. J. B. MARTIN.

To the Editor of THE LANCET.

SIR,—Some actual experience of the weather in the Riviera may be interesting to your readers. On arriving from England ten days ago the transformation was marvellous. Within twenty-eight hours of my departure from London a blue sky showed itself as the train neared Marseilles, and brilliant sunshine has prevailed ever since from sunrise to sunset, except during part of two days. This letter is indited out of doors, under a cloudless sky, amid green vegetation, and the sound of birds and insects. Similar weather is said to have prevailed since the beginning of December. On the other hand, the precautions commonly advised must on no account be omitted by the invalid. He should utilise all the sunshine, and guard against the great changes of temperature. The best plan for most persons appears to be to keep in the direct rays of the sun, and shun the chill shade out of doors; to avoid spending time amongst the shops in sunless streets; to have an overcoat or shawl always in readiness; to be indoors quite half an hour before the treacherous hour of sunset. Rooms must be on the south side of the hotel, pension, or villa; the windows closed before sunset, that the apartment may retain its warmth. On chilly days, and for delicate persons on all days alike, the log-fire should be lighted in the afternoon. At Cannes, for instance, the residence should be on the ascent, above the ill-odours which are still too common near the sea-level. The custom, prevalent in hotels and pensions, of dining early in the evening, and then soon retiring, happily tends to insure a long night's rest for the invalid. When out of doors it is easy to get milk at unsophisticated prices at the numerous laiteries, where in the afternoon no milking can be seen.

Lastly, a hint for those who are able to choose the time of year for their holiday. Why not come to the sunny Riviera whilst the English climate is at its worst, instead of waiting to go away when the climate is pleasant at home?

Yours obediently,

Cannes, Jan. 12th, 1880. W. WILBERFORCE SMITH.

THE LEGALITY OF CHARGES FOR SERVICES BY UNQUALIFIED ASSISTANTS.

WE have been favoured by the Registrar of the County Court of Carnarvonshire with a copy of the judgment of Homersham Cox, Esq., in the case of Pring *v.* Dewitt. The learned Judge was courteous enough to wish the Registrar to forward the judgment to us, as of great interest to the profession. We regret that, owing to great pressure on our space, its insertion has been delayed. It is noticeable that the services in question were obstetric charges, and that the Judge makes no observation on this fact.

"The sole question on which I reserved my judgment in this case on Oct. 6th was whether a registered medical practitioner could recover for professional services rendered by his assistant, who was not registered. The plaintiff is a member of the Royal College of Surgeons. He sent his brother, a medical student, who assists him in his business, to attend a woman in her confinement. The brother duly attended the woman, and the plaintiff seeks to recover from her husband the charges for attendance and medicine. By the 32nd section of the Medical Act of 1858, it is provided that 'no person shall be entitled to recover any charge in any court of law for any medical or surgical advice, attendance, or for the performance of any operation, or for any medicine which he shall have both prescribed and applied, unless he shall prove upon the trial that he is registered under this Act.' In the case of Turner *v.* Reynall (14 C.B.), N.S. 328, 32 L.J.C., p. 164) there was a decision on the construction of this section. The plaintiffs were partners; one of them was registered, but the other was not registered as an apothecary. It was held that they could recover for medicines and medical services rendered by the firm. If that case were upheld, I should infer that the plaintiff in the case before us could also recover; for if two partners can maintain an action for the service of one of them who is not qualified, it would follow that a sole plaintiff might recover for the services of his unqualified assistant. But this case of Turner *v.* Reynall is clearly overruled by the case of Leman *v.* Houseley (10 L.R., Q.B. 66). In the latter case Mr. Justice Blackburn says 'the intention of the Act was clearly to prevent unqualified persons from practising.' Mr. Justice Quain says that if the view taken in Turner *v.* Reynall 'were carried out, the essence and object of the Act would be defeated.' Mr. Justice Archibald adds: 'The intention of the Act was to enable the public to distinguish between qualified and unqualified practitioners.' I am of opinion that, having regard to this case of Leman *v.* Houseley, and also to the necessity of preventing evasions of the Medical Act, the plaintiff cannot recover. There will, therefore, be a judgment for the defendant, with costs. But having regard to the conflict of authorities, and to the well-known fact that qualified medical men do very commonly depute their assistants to attend patients, I think this a very proper case for an appeal, and therefore, if the plaintiff chooses to appeal, I will give him every reasonable facility. Judgment for defendant, with costs."

THE MUSEUM OF THE COLLEGE OF SURGEONS.

THE following circular has been issued by Professor Flower, the indefatigable Conservator of the Museum of the College of Surgeons, and to which we readily give insertion:—

"A new and thoroughly revised Catalogue of the Pathological Specimens in the Museum is at present in progress, its preparation having been entrusted by the Council to Sir James Paget, Dr. Goodhart, and Mr. A. Doran. The opportunity has thus been afforded of ascertaining the deficiencies in the series, which it is considered desirable, if possible, to fill up, so as to make the collection a complete exposition of the principal facts of pathological anatomy which are demonstrable by preserved specimens. The College having none of the facilities for obtaining and selecting specimens possessed by the museums attached to hospitals, where operations and post-mortem examinations are of constant occurrence, is entirely dependent upon the contributions of individual members of the profession. In the following list those desiderata are indicated which are most required for the completion of the series described in the first two volumes of the Catalogue—viz., those relating to general pathology and to the injuries and diseases of the organs of locomotion:—Blood-vessels enlarged for collateral circulation; parts enlarged or otherwise altered in consequence of nerve-disturbance; parts wasted through excessive use; fatty degeneration of muscles during fever; fatty degeneration of hypertrophied heart; any well-marked colloid degenerations; acute atrophy of liver or other organs; illustrations of healing by grafting illustrations of inflammatory softening of parts; specimens of elephantiasis mutilans; specimens of noma or cancrum oris; specimens of simple hyperæmia, passive or active; cystic distension of veins or lymphatics; cystic nævus; diffuse fatty growth, e. g., on the nape or under the jaw; nævous fatty tumour; pharyngeal fibrous polypus; painful subcutaneous tumour; keloids of all kinds; arterial angioma (aneurism per anastomosin); lymphatic angioma; fibrous tumours in nerves; sarcomata of all kinds, if authenticated or capable of authentication by microscopic examination; cylinder-celled epithelial cancer; clots of blood showing pigmental or calcareous change; clots of blood softened or with suppuration; atrophy of muscles in infantile paralysis; atrophy of muscles in pseudo-hypertrophy; atrophy of muscles in progressive muscular atrophy; effects of inflammation of muscles; syphilitic gummata in muscles; sloughing and other effects of inflammation of tendons or their sheaths; incomplete fractures ('green-stick' or others); enlarged condyles from cases of genu valgum or the like; elongated and curved tibiæ; soft ribs or other bones from insane persons; inflammatory exudation in bone; bones affected by arsenic; thickening or overgrowth of articular cartilage; any diseases of fasciæ; osteo-myelitis; congenital and infantile syphilis of skull &c.; puerperal osteophyte of skull; necrosis of epiphyses; joint distended with synovial fluid (hydrarthrosis); joints showing effects of acute rheumatism, of pyæmial disease, of exanthematic febrile, or of gonorrhœal disease; capsular (extra-articular) anchylosis; dislocations (recent or old) at wrist or ankle or in hand or foot; anterior curvature (lordosis) of spine; spondylitis deformans; diseases of joints in locomotor ataxy."

Dr. Henry Thompson's lecture has been received, and is marked for early insertion.

Mr. Nettleship is thanked. As soon as other contributions to the column are received, his note shall be inserted.

K. Y. Z. had better refer to our advertising columns.

J. B. S.—Our space is much occupied.

"THE EAST WIND AND ITS EFFECTS."

To the Editor of THE LANCET.

SIR,—Under the above heading in your last issue, the organism mentioned by Mr. S. Smith seems to me to bear a strong resemblance to the "goblet-cells" noticed in "Quain," vol. ii., p. 211; the mucus, in Mr. Smith's specimen, being collected at the attached end of the cell.

I am, Sir, yours respectfully,

Cambridge, Jan. 19th, 1880. H. OWEN, Student.

J. L.—We are not aware of any such work. We must decline to recommend tradesmen.

Mr. R. T. Cæsar.—We shall be glad to have the notes mentioned.

Dr. Thos. Cole.—One of the nursing establishments in connexion with large hospitals.

Mr. J. Rogers.—We do not prescribe.

ERRATUM.—By inadvertence the name of Dr. John Harley was mentioned as forming one of the Chloral Committee of the Clinical Society in our report of last week. It should have been *Dr. Dyce Duckworth.*

IT is requested that provincial papers sent for the information of the Editor may be marked so as to direct attention to the medical or sanitary matters it is desired to notice.

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COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Sturges, London; Dr. B. Hicks, London; Dr. Goodhart, London; Mr. Teevan, London; Dr. Duckworth, London; Mr. H. Smith, London; Mr. Gamgee, Birmingham; Dr. H. Thompson, London; Dr. H. Tibbits, London; Mr. Blackburn, London; Dr. Foster, Bicester; Mr. Nixon, Plymouth; Dr. Szalardi, Budapest; Mr. Brook, Huddersfield; Mr. Budd, Edinburgh; Messrs. Boyle and Sons, Glasgow; Mr. F. Shapley, London; Mr. Cable, Greenwich; Dr. Clifton, St. Leonard's; Dr. Eberle, Easingwold; Mr. Sealy, London; Mr. Morris, London; Dr. Galton, Anerley; Mr. Beedell, Tiverton; Dr. Macnab, Bury St. Edmonds; Dr. Alford, London; Surgeon-Major Curran, Warrington; Dr. Britton, Halifax; Mr. Trenerry, Bristol; Mr. H. T. Wood, London; Dr. Thin, London; Mr. Heather, Brighton; Mr. Lowland, Fulham; Mr. Austin, London; Mr. Spowart, Sheffield; Dr. Dolan, Halifax; Mr. Swan, Batley; Dr. Hardwicke, Rotherham; Mr. Green, London; Mr. Atkey, Chichester; Mr. Watkin, Kentucky; Mr. Porter, Malta; Mr. Puzey, Liverpool; Dr. Lovett; Mr. Kemp, London; Dr. Palm, Largs; Mr. Osborn, London; Dr. Hoggan; Mr. Southam, Manchester; Dr. Skerritt; Dr. Blake, Great Yarmouth; Mr. Manley, East Rudham; Mr. Barnard, Edinburgh; Mr. Nettleship, Wimbledon; Dr. Blandy, London; Dr. Bury, Pendleton; Dr. Tayler, Trowbridge; Mr. Owen, Cambridge; Dr. Cole, Bath; Mr. Penny, Wymondham; Mr. Cæsar, Shirley; Mr. Stodart, Edinburgh; Mr. Shepherd, Liskeard; Mr. Peart, North Shields; Mr. Burman, Bamburgh; Dr. Fleming, London; Messrs. Letts and Co., London; Mr. Frampton, Weston-super-Mare; Mr. Dow, London; Mr. Appleton, Highgate; Mr. Straton, Wilton; Mr. Jameson, London; Mr. W. C. Williams; Mr. Best, Tenbury; Dr. Ritchie, Edinburgh; Dr. Skinner, Harpurhey; Dr. Lane, Pembrook Dock; Mr. Harthill, Willenhall; Dr. Bantock, London; Dr. W. Cottle, London; Dr. Squire, London; Mr. Magnus, London; Dr. Dallas, New York; Dr. Ciarmally, Naples; Mr. Pitman, Cannes; Surgeon-Major Wolseley, Halifax, Nova Scotia; Mr. Delzey, Lesmahagow; Dr. Little, London; Dr. Radford, Higher Broughton; Mr. Rogers, Peckham; Dental; S. C. N., Oakham; X. M. A. S.; T. L., Cambridge; X. Y. Z.; &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Thomas, Egerton, Australia; Dr. Lattey, Southam; Dr. Symes, Halifax; Mr. Arnison, Stanhope; Mr. Prichard, Northampton; Mr. Mawes, Nottingham; Dr. Birchell, Kingston; Mr. Tainton, Hackney; Mr. Elliott, Carlisle; Mrs. Congdon, Liskeard; Mr. Lawson Tait, Birmingham; Mr. Harrison, Keighley; Mr. Bernard, Hemel Hempstead; Mr. Scott, Liverpool; Dr. O'Grady, Hyde; Mr. Fonmartin, Portland; Mr. Quinton, Hull; Mr. Johnson, Winchester; Mr. Gawith, London; Mr. Edwards, Buntingford; Messrs. Garraway and Co., Faversham; Mr. Clacher, New York; Messrs. Harthill and Co., Willenhall; Messrs. Black, Edinburgh; Messrs. Edis and Cooper, Huntingdon; Mr. Fisher, North Kensington; Mrs. Herring, Torquay; Mrs. Vincent, Lincoln; Mr. Dicey, Northampton; Mr. Edwards, London; Mr. Brocklebank, Islington; Mr. Wheeler, Ventnor; Mr. Glover, Shrewsbury; Mr. Rigden, Taunton; Mr. Smith, Redditch; Mr. Underhill, Edinburgh; Mr. Grace, Newcastle-on-Tyne; Mr. Staple, Crewkerne; Miss Smith, Braintree; Semper; G. F. E., Holloway; Epsilon, Maida-vale; A. B., York; Unqualified Assistant; R. J. S., Liverpool; S. D. S., M.D.; E. H. B., London; Gamma, Gorton; C. J. M., Dublin; M.D.; Sigma, Burnley; J. F., Derby; Radix; A. K., Horncastle; E. W. C., Cambridge; J. G. C., Brasted; W., Craven Arms; Ch.; Alpha, Norwich; N. R., Trengathel; M.D., Bath; X. Y., Blackheath; Tibia, Manchester; Medicus, Chipping Campden; K.; P. H., Stoke Newington; A. B.; F. G., Rochester; Y. Z., Huntley.

Daily Chronicle, Western Daily Press, East London Observer, Cornish Telegraph, Le Moniteur du Commerce, Dover and County Chronicle, &c., have been received.

NOTICE.

THE LANCET is now Enlarged to EIGHTY PAGES, giving additional space for the Scientific Papers of our Contributors. A first issue will be made each week at Seven o'clock on Friday morning, *for the Wholesale Houses only*, to facilitate the delivery in country districts soon after the arrival of the early trains. The Journal is also CUT AT THE EDGES. Another new feature is an INDEX to ADVERTISEMENTS, and their classification as far as possible, with NAMES of ADVERTISERS. (*See p. 2 of Advertisements.*)

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Medical Diary for the ensuing Week.

Monday, Jan. 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. Cockle (the President) will bring forward a Case of "Obstructive Aortic Disease" and a Case of "Double Ptosis."—Dr. Carpenter, of Croydon, "On the Treatment or Leucocythæmia."

Tuesday, Jan. 27.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

ROYAL INSTITUTION.—3 P.M. Professor Schäfer, "On the Physiology of Muscle."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Mr. Christopher Heath, "On a Case of Aneurism of the Subclavian Artery treated by Amputation at the Shoulder-joint and the Introduction of Needles into the Sac."—Dr. Vandyke Carter: "Contributions to the Experimental Pathology of Spirillum Fever."

Wednesday, Jan. 28.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

HUNTERIAN SOCIETY.—8 P.M. Dr. Braxton Hicks, "On Obliquity of the Pregnant Uterus."—Mr. Clement Lucas will show a Case of Aneurism by Anastomosis of half the Face.

Thursday, Jan. 29.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On Chemical Progress."

Friday, Jan. 30.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—8 P.M. Evening Meeting.—9 P.M. Mr. J. Marshall, "On the Proportions of the Human Figure."

Saturday, Jan. 31.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor T. Rupert Jones, "On Coal."

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Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

Agent for the Advertising Department in France—

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Observations

INTRODUCTORY TO CLINICAL LECTURES
ON THE

DISEASES OF WOMEN.

By ROBERT BARNES, M.D.,
OBSTETRIC PHYSICIAN TO ST. THOMAS'S HOSPITAL.

PART II.

WE have discussed the meaning of Specialism in medicine. We have seen that an absolute specialism, in the sense in which it is largely current, cannot be; and we concluded that a rational specialism can only be built on the basis that the several parts of the body are indissolubly interdependent; that each part is necessary to make up the whole—that is, a whole body, with one physiology and one pathology.

Now I want to pursue this subject, seeking to evolve the pathology of the female pelvic organs out of general pathology, and, in turn, to illustrate general pathology by the rational study of the particular pathology of the female pelvic organs.

It is not my business to make specialists or to encourage specialism. I understand my duty to be to lead you through the theoretical and clinical study of that branch of medicine the teaching of which is entrusted to me, to a better comprehension of medicine as a whole. Those who are destined for general practice will feel the advantage of this method at every stage; and those who devote themselves more especially to pure medicine or surgery may be led to take a broader view of their field of work, and to escape not a few of the pitfalls that entrap those who fail to take a full survey of the country through which they are travelling.

Addressing ourselves, then, to our task, let us first say a word or two about the means we have at our disposal in the investigation, that is about the organon of research. Although almost all the ordinary instruments and appliances which are useful in the investigation of the condition of other parts of the body are also brought to bear in the investigation of the condition of the pelvic organs, there is one instrument which here is of paramount utility: the index finger is our most universal guide. Now every man has an index, but that is not enough; he must know how to use it. An Egyptian monarch asked his victorious general to show him his sword; the general reminded the king that the sword was like any other sword, that the virtue lay in the arm that wielded it. So it is with the physician's finger. It must possess the *tactus eruditus*. Let us inquire for a moment how this is acquired. It means nothing less than the scientific culture of the mind, the acquisition of knowledge which alone can enable us to interpret rightly the sensations conveyed from the finger-tip to the centre of intelligence. In life you find very much what you put into it. Some people, even many, feel disappointed at the sight of Niagara, of Venice, of Rome. This is the natural result of want of cultivation, of ignorance. Niagara speaks with a voice deeper than the thunder of its precipitous waters to one who has studied the laws of the universe and sees in the mighty cataract one of the great forces of Nature at work. So the perishing stones of Venice and of Rome tell us the history of humanity from the birth of civilisation in all the phases of its progress through the ages, attesting, by the characters graven upon them, the thoughts, the deeds of the men who have gone before, bequeathing to us the heritage of imperishable genius.

Let me give a particular illustration. A tense piano-string will give back its own note when struck with the key or by the voice. If you sing a note which is not that of the string, the voice goes past and is lost; there is no response. So if you explore by finger, by stethoscope, by sound, or other diagnostic instrument, unless the understanding mind travel along it, you get nothing in return but a dull, confused, unintelligible answer. In every sensation there is, besides the actual message sent to the brain, something that we imagine and add to the message; that is, there is a part which comes from the external world, and a part which is supplied by the mind. Without going into metaphysical subtleties, we may state that the direct sensation is one thing, the interpretation of it is another thing. We may carry the illustration further, and say that if you bring to the inquiry a mind misinformed, prejudiced, you will be apt to get an answer false and misleading; so true is it that you find what you bring. But you may ask—How, then, are we to learn? How are we to gain the knowledge that is to bring the right answer? By starting with good sound anatomical knowledge of the natural features of the parts explored, and by losing no opportunity of testing and correcting the sensations and impressions acquired through one sense by the experience of other senses. The first condition is fulfilled by careful dissection and the study of good preparations and drawings, so as to hang up in the cabinet of the mind correct standard pictures of the natural state of the parts under investigation; the second is fulfilled by varying the mode of examining, by clinical cross-examination, and by cautious reference to the interpretations suggested by others who are more skilled than yourself. This last method—reference to the judgment of others—must, however, be adopted with extreme jealousy, lest you fall into the dangerous error of servile subjection to the words of the master. You must learn to see with your own eyes, to judge with your own judgment. In this way alone can you cultivate the true scientific spirit, and qualify yourselves not only to improve your own knowledge, but to add to the general store.

Any person, howsoever ill-informed, may feel the uterus by vaginal examination; but he may not even know that he touches it. It is even told that an advanced student declared that he felt the hymen whilst his finger was in reality gripped by the sphincter ani; and I have been told that an advanced practitioner—a graduate in honours—introduced a pessary up the rectum instead of the vagina. One a little better informed may know he feels the uterus, at least a small part of it, and yet be utterly at fault to determine its position or its other physical qualities. One with still more knowledge may make out its relations of size, solidity, relations, and other points with considerable precision, and then, bringing to bear his theoretical and scientific skill, he may elaborate out of these ascertained conditions what is called a diagnosis of the pathology of the organ he has touched. You see what a small part of all this process the mere physical examination really is. You may, from this reflexion, form an idea of the wide range of study you must cultivate in order to arrive at just clinical conclusions.

You will draw the distinction between scientific and technical or practical skill, and you will not forget that all rational and safe technical skill springs out of scientific skill. Specialism, in the sense in which some understand it, and in the way in which many would restrict it, is simply technical—that is, the practical application of what is known to a limited area of medicine. It supposes that the simple duty of the specialist is to detect the departures that occur from the health-standard in the limited area assigned to him, and to do his best to work upon these departures to bring back the health-standard of that limited area, without troubling his head about the complicating correlative departures from the health-standard of other parts, and without concern for the changes he may himself cause in other parts of the body, which are the territories of other specialists. Hard terms, so hard, fortunately, that they cannot be enforced. It is scarcely possible to degrade an intelligent man to the position of a mere empiric—a creature without brain or conscience. It is very true that a great part of our general therapeutical practice is empirical; but a great part of gynæcological practice is surgical. I dare not say there is no such thing as empirical surgery, but it is surely less empirical than medicine. Every operation presupposes the recognition of a lesion, and a rational method of treatment. Medical treatment is too commonly directed to the control of the more prominent symptoms, and in his therapeutics the physician is too often limited to the use of agents whose virtue are only known to him empirically.

Forgive me if I seem to diverge for a moment to make a general fundamental observation. The late Professor Clifford thus expressed the abstract principles which govern the growth of a living being:—"The processes which result in development are made up of *differentiation* and *integration*: differentiation means the making things to be different; integration means the binding them together into a

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whole. These are applied to the parts of the organism, the organism and surrounding nature, the organism and other organisms." Integration of parts means the connected play of them, so that one being affected, the rest are affected.

Applying this, we may say that Anatomy differentiates, Physiology reintegrates. Anatomy is analysis, Physiology is the synthesis that endows with life, and which, therefore, explains Pathology.

But the application to women goes further. The integration of man with surrounding nature is more essential to the understanding of his physiology and pathology than in the case of woman. To the woman the integration with man and with offspring assumes predominant importance. Man's ambition and daily work is the contest with the surrounding world, physical and moral; the ambition and the work of woman, more restricted, is the study and conquest of man. This relation governs her being, and is the secret of a great part of her physiology and pathology.

After this exordium, tedious it may be, but I venture to think not without useful application, let us compress into as small a space as possible what it is essential to grave upon the mind of the anatomy of the pelvic organs of woman. It lies outside my province to describe the abstract or pure anatomy of these parts. So much knowledge of this subject as may be learned in the dissecting room, in anatomical lectures and books, I must presuppose you to possess. But looking to the end directly in view, we cannot omit a careful study of applied anatomy in its relation to pathology.

We call to mind, in the first place, that in the pelvis we find all the tissues of the body represented, varying of course in their characters according to the constitution of the organs constructed out of them, and the functions which these organs are called upon to perform. We note that they are linked to the neighbouring organs by continuity of tissue. Thus, although the pelvic structures are as a whole shut off into a distinct region by the lower reflections of the peritoneum, this membrane which binds down the bladder, uterus, ovaries, and rectum, pursues its course over the intestines and abdominal walls. That is, there is continuity of the *serous membrane element* of the pelvic organs with the serous membrane of the abdominal organs. We shall trace by and by important pathological histories from this continuity, its enormous growth under pregnancy, and other enlargements of the uterus and ovaries. Then we find *muscular tissue* interspersed in various proportions with *fibrous tissue* in the uterus itself, in the broad ligaments, even in the ovaries, in the vagina, in the rectum, and in the form of distinct muscles in the floor of the pelvis and the vulva. There is a thin sheet of muscular tissue passing off from the surface of the uterus, and expanding in the broad ligaments, and also bundles of muscular fibres running along, as Rainey has shown (here are his drawings), the round ligaments, and losing themselves in the inguinal regions. This spreading sheet, or platysma myoides of the broad ligament, as we might call it, and these fibres in the round ligament, maintain a continuity of structure with the body of the uterus and its appendages. This continuity implies two things, if not more: first, these continuous muscles exert, by their contractile action, a distinct influence upon the position and relations of the uterus—an influence in health, physiological, concerned in the erection of the organ, and controlling its natural and constant changes of position, a function very much lost sight of in the treatment of uterine displacements; an influence, pathological perhaps in certain morbid conditions. Their action may be detected in early abortions, especially when they seem to pull up the uterus by its lower segment, counteracting to some extent the down-driving force of the abdomen, and expanding the roof of the vagina, forming a cavity, in a way that is almost characteristic.

In the body of the uterus muscular tissue predominates; in the cervix there is a larger proportion of fibrous tissue. In the vagina there is a new element introduced in order to meet the peculiar functions of this canal. It must have an enormous capacity of distension for the purposes of labour; it must have equal power of contraction to restore the parts to the ordinary condition. Muscle alone would be insufficient. Elastic tissue supplies the want. Hence in the vaginal wall we find a combination of this with fibrous tissue.

Then we come to the *mucous membrane element*. This, like mucous membranes elsewhere, presents special features in accordance with the special functions of the organs which they help to constitute. And as in the intestinal canal, for instance, its features vary for the same reason in different parts of its tract. These variations, you will remember, are chiefly marked by the different structure of the glands which form the main characteristics of mucous membranes everywhere. The uses and diseases of the utero-vaginal glandular system we shall endeavour to trace hereafter. I will now call to mind the familiar apparent anomaly that the utero-vaginal tract not only has an external outlet like all mucous membranes, but it has a special outlet into the abdominal peritoneum, presenting the singular condition of continuity between a mucous and a serous cavity. There is a vast field of pathology arising out of this continuity. We know that the main office subserved by this continuity is to keep open a road for the carriage of the ovum from the ovary to the Fallopian tube into the cavity of the uterus. But this road is sometimes blocked or turned from its proper uses, and is made to carry fluids in the wrong direction from the uterus and tubes into the peritoneal cavity; and then serious troubles result. It would occupy several lectures to treat of their history with adequate fulness. I will only stop now to observe that many of the worst cases of puerperal peritonitis arise from the overflow or escape of septic matter from the uterus by this route; that many cases of pelvic hæmatocele arise in like manner from the back-flow of blood from the uterus from obstructed menstruation and other conditions. You will thus see in this continuity another link which binds the pathology of the uterus to general pathology.[1]

Books have been written upon what is called pelvic cellulitis, and much discussion has been held as to whether this disease is a real thing, whether, in short, pelvic peritonitis has not been mistaken for it. For the present it is enough to state that as cellulitis is know elsewhere, so, *à priori*, we may infer that the connective tissue of the pelvis, exposed as it is in a high degree to causes capable of provoking inflammation, is not exempt, but falls, like other tissues, under the common pathological laws.

The *bloodvessels and lymphatics* serving the pelvic region present several peculiarities adapted to the physiological conditions of the organs. The arteries proceeding from the hypogastric and utero-ovarian arteries are remarkable for their free anastomoses, so that they really form, for the uterus especially, a kind of arterial network rather than distinct vessels. One effect of this arrangement is that the uterus is permeated by an arterial system every part of which communicates so freely with the rest that tapping it at any point may draw blood from the whole organ and its neighbourhood. This offers one explanation of the influence we can exert upon the body of the uterus by scarification of the vaginal portion. This disposition of the arteries is, no doubt, peculiarly fitted to meet the wonderfully rapid nutritive changes which attend the development of the uterus under pregnancy.

The *veins* offer corresponding features to those of the arteries. Everywhere they maintain the freest intercom-

[1] The forces that cause this overflow from the uterus through the tubes demand careful study. The most efficient one, long ago pointed out, is the active contraction of the uterus. Discussing the cases of death following intra-uterine injections in the first edition of the Clinical History of the Diseases of Women, 1878, I made the following observations: "It is not enough to know that patients occasionally die after injections are thrown into the uterine cavity; we want to know why they die." Referring to experiments by injection in the dead body, I say: "I will not relate or analyse these experiments, because they appear to me to be of little practical value. The conditions of the dead and of the living tissues are essentially different. For example, in the dead body there is no muscular contractility, no irritability under stimulus, no response of the nervous centres to peripheral injury; yet these are conditions which come into play when injections are thrown into the living uterus. .... It is certain that in some of the cases where fluid injected into the living uterus ran along the tubes the accident could not be accounted for by the very small amount of injecting force employed. Another power, therefore, must have been in action, and this could be no other than that exerted by the uterus itself contracting spasmodically upon the irritating fluid thrown into it. This force the lower or cervical orifice of the uterus, being closed, would pump the fluid onwards into the tubes." These passages are also found in the second edition, 1878, and the theory they express is illustrated in other parts of the work, and in several antecedent publications. It is, therefore, not without surprise, considering the known industry and erudition of German authors, that I find Dr. L. Bandl, in an elaborate memoir (*Die Krankheiten der Tuben, &c., 1879*) has the following passage: "An important circumstance in injection, or still more in the dropping of fluid into the uterine cavity, as in every form of intra-uterine medication, appears to us to be to watch the contraction of the organ. In a strange manner this circumstance has not yet been brought forward by anyone. ....' The resistance at the lower parts of the uterus may, during its contraction, be greater than at the tubal openings, and thus fluid may be passed into them, and cause the worst accidents." I, of course, acquit Dr. Bandl of having read my book, since it is not mentioned in his "Literatur."

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munication, and form large plexuses capable of the greatest variations as to the quantity of blood contained in them. Those in the uterus, according to Rouget, constitute a true *corpus spongiosum*. Both arteries and veins seem to depend more upon the muscular contraction and elasticity of the tissues in which they partly run for the regulation of the current in them than upon any active property in their own coats. Hence hyperæmia, congestion, and hæmorrhage are so often associated with defective muscular tone. Hence, also, the singular proclivity of the uterine substance to deviations from the healthy standard of nutrition. Hence, again, the remarkable readiness with which poisonous material is taken up and carried from the uterus into the general circulation. The veins then, like the connective tissue, constitute another toxicode—a word which appears to be wanted. I should call the connective tissue a *toxicode*. We know by multitudes of experiments on the lower animals, by the now familiar therapeutical experiment of subcutaneous injection of medicinal and nutritive fluids, and by daily clinical observation, how active is absorption from the cellular tissue.

We shall see some striking examples of this pathological process as we proceed. Closely allied to the bloodvessels we find the *lymphatic vessels and glands*. The lymphatics constitute another toxicode. The evidence of their full action may be seen in post-mortem examinations of some cases of puerperal metritis, in what used to be called lymphangitis. If we consider the frequency with which the vaginal and uterine mucous membrane, the muscular wall of the uterus, and the periuterine connective tissue are exposed to empoisonment, we might well wonder that the system is not more often infected. It is one of the strangest and most interesting problems in the history of syphilis that, women not seldom escape constitutional infection from the immediate contamination, but become tainted through the embryo in the womb. We see in the lymphatic glands one barrier, often effective, against the invasion of the centres; but there are probably others. These will come under discussion at a later period of our inquiries. We can only now take a very general and cursory glance at an extensive subject, reserving to future opportunities the task of more minute inspection.

The *nerves* rank second only to the bloodvessels in importance as links between the ovario-uterine system and the system at large. Often, indeed, we might be tempted to assign to them the first place. But, indeed, their reciprocal and joint action is so indissoluble that we cannot conceive of either acting without the other. All the different kinds of nerve are represented. All maintain the freest communication with the great nerve-centres.

We may look at the pelvic organs as a whole from the abstract anatomical or differential point of view. But we cannot help looking at the component tissues from the integral point of view. The tissues, connective, vascular, lymphatic, nervous, form the links that bind the pelvic organs in physiological and pathological relation with the other organs of the body. These tissues take and give the elements of nutrition, of disorder, of poison; they reveal the work of those subtle diatheses mysteriously inherited or acquired, which play so important a part in general pathology, and nowhere a more important part than in the pathology of the ovaries and uterus.

There are two methods before us of pursuing our object. One, perhaps the more practical, is that adopted in the "Clinical History of the Diseases of Women." It consists in first seizing the symptoms, subjective and objective, as they present themselves in practice; then, by the light of acquired general knowledge and reflexion upon the features of the particular case, determining the significance of these symptoms, thus reasoning out pathology, diagnosis, and treatment. The other, perhaps the more philosophical, is to take each component tissue separately, to trace its pathology throughout, from its abstract expression, through symptoms and progress, to its termination. This is the method that I now propose to follow more or less closely. To follow either the one or the other rigorously would be impossible. In pursuance of this plan, I propose to begin with the pathology of the utero-vaginal mucous membrane.

VACCINATION GRANTS. — Mr. D. Protheroe Saer, No. 1 district of the Pembroke Union, has received a Government gratuity for efficient vaccination in his district. Also, Mr. W. S. Simpson, of the Pontefract Union, £11 15*s*.

Clinical Lecture
ON
A CASE OF TYPHUS FEVER.[1]

Delivered at the Middlesex Hospital, Jan. 9th, 1880,

BY SIDNEY COUPLAND, M.D.,
ASSISTANT-PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—I desire to-day to occupy our time with a study of a case of fever,—not that it has exhibited in its course any unusual or striking phenomena, but because it is of a class now rarely seen within our wards, and because it affords scope for many considerations, especially those dealing with diagnosis.

Daniel O'L——, sixteen years of age, a coal-hawker, was admitted into Founder ward on Dec. 18th, 1879. He is a fair specimen of a tolerably intelligent Irish lad. Dark-haired and pretty well nourished, he was, when admitted, begrimed with dirt from the dust of his occupation. He appeared prostrate and depressed; his lips were covered with sordes; his tongue was dry, brown, glazed, and fissured; his eyes were injected and suffused. In a word, he seemed very ill. When questioned, he said that he had pain in his forehead, back, and belly; and there was undoubted tenderness over the lower dorsal spine, and also on the flexor surface of both knees, but no evidence of inflammation at or around these parts. As the bedclothes were raised, a distinctly musty odour could be perceived to emanate from his body, but at the time this was attributed to his dirty condition, although it should be said that before being seen he had had a warm bath. The skin felt dry and hot. The axillary temperature (after the bath) was 102·2° F. The skin was everywhere of a dusky-brownish colour, somewhat mottled, and scattered over the trunk and extremities were numerous vibices, which might well have been due to the bites of vermin, only close scrutiny failed to detect within them the characteristic central puncture of ecchymosis due to such a cause. Further, he was suffering from general bronchitis of moderate intensity, sonorous and sibilant rhonchi being audible over the whole chest, especially over the right front; whilst moist subcrepitant râles occurred scantily at the posterior bases, where the pulmonary resonance (elsewhere good) was notably impaired. The respiration rate was hardly explicable on mere bronchitis alone,—it was 50 per minute, and bore a ratio to the pulse-rate of 1 to 2, the latter being 108 per minute. The first cardiac sound was very feeble, occasionally reduplicate; but there was no murmur. The hepatic dulness was normal. The splenic dulness was increased, the lower border of the organ being also distinctly felt beneath the ribs. The abdomen was not distended, nor unduly tender in any part. His bowels had been constipated.

Pyrexia, prostration, pulmonary congestion and bronchitis, a mottled and petechial eruption of doubtful character, cardiac feebleness, and splenic enlargement, these were then the chief facts gleaned on the first examination of the patient. Naturally we turn to the history of his illness for further light; for we had to learn when his illness came on, under what conditions, and in what manner. I will give these historical data in their entirety. They were not all known to us at the time. Some of them did not come out till the following day, others were not elicited till several days had passed. Perhaps had they been all in our possession at first less difficulty would have been felt in arriving at a diagnosis.

He is one of a family of six children, who live with their mother in two rooms of a house in Butcher's-row, Newport-market, the father having died of phthisis in this hospital at the age of fifty-one. The mother suffers from winter cough, and two of her children have died, one from croup at the age of six. Beyond measles and whooping-cough in childhood this boy has had good health. On Monday, the

[1] This lecture is published because it has been represented to me that the possibly impending prevalence of typhus in St. Giles's parish may lend an interest to a record of one of the earlier cases.

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8th of December, he came home from work in the evening complaining of pain in the back and coldness of the feet. Next morning he awoke with severe frontal headache and increased pain in the back, and during the day he had a shivering fit lasting three hours, followed by a sense of heat all over the body. On the 10th he was taken out of bed to a dispensary, where he received some medicine and a plaster for the back, such symptomatic treatment pointing doubtless to the belief that he was suffering only from "cold" and "rheumatism." But he got no better; he became more feverish, lost his appetite, suffered from thirst; the pains affected his limbs as well as the back and head, and he kept his bed the following days until his removal here on the tenth day of his pyrexial attack. In the morning of this day he had complained of some soreness of the throat and difficulty in swallowing. The mother could give but little more information than this. She said that the "two rooms" inhabited by herself and family were, taken together, of about the dimensions of the special ward in which the boy was lying; that one of these rooms was occupied by them during the day, the other being used as a common sleeping apartment; that they have plenty of food, chiefly bread and butter, but little meat; that they never wanted either food or firing; that an older son (who does not live with them) had recently been in St. Giles's Infirmary with "fever"; that she knew of no illness in the house except the case of a young woman, who was attended medically for some months for a sore-throat. To this somewhat negative evidence must be added an important fact, which curiously coincided with the time of the lad's admission into the hospital. For, on the same day, the resident medical officer received a notification from the authorities of St. Giles parish that "typhus fever" had appeared there. It was notified to him to be on his guard for cases that might turn up at the hospital from that parish. This fact was not known to me until the following day, but I think it deserves very full consideration; for it must always be remembered that when epidemics of fever occur, cases of somewhat anomalous type arise, and the fact of the presence of an epidemic in a district whence a case of fever of doubtful nature comes should be enough to turn the scale in diagnosis.

At any rate, we knew this much, that the boy had reached the tenth day of a fever, the onset of which had been sudden, and, seeing that he could not have had much attention, it was not surprising that he was in so prostrate a condition. There was nothing on the face of it to exclude typhoid fever, and the case might have been one of masked rheumatism. In the hope that careful observation for twenty-four hours would help in the diagnosis, the treatment was mainly expectant, directions being given to have recourse to cold bathing if the temperature reached 104°.

At 7 P.M. the temperature did reach 104°. He was accordingly placed in a bath of 60° F. for ten minutes. At the end of seven minutes his pulse quickened and became small, and, on removal, so great was the reduction of his body-heat that at 8 P.M. his temperature was only 98·8° F. At 9 P.M., temperature 101°, pulse 112, respiration 48; my clinical assistant, Mr. Davis, found that there was some tenderness over the abdomen, especially in the right iliac fossa, where gurgling was perceived. He noted also that the patient was deaf, the deafness having come on after the bath; but his headache had left him. His bowels had been twice moved, the stools on each occasion being loose, copious, and dark. At 1.30 A.M. on the 19th, the temperature being 104·4°, a second bath (70° F.) was given for ten minutes. At 4 A.M., temperature 102·6°; at 10 A.M., 101·4°. The following note was taken at 1.30 P.M.:—"The boy seems drowsy, and is deaf; the skin of trunk, and slightly also of limbs, is markedly covered with a mottled rash, pinkish and greyish puncta, and ill-defined blotches, not fading on pressure. He coughs occasionally, and there is much audible wheezing with respiration. The tongue is dry, brown, and fissured transversely, the margins being moist; lips and teeth covered with sordes. The bowels have been moved in all four times since admission; stools watery, of an orange-brown colour, and neutral to test-paper; no abdominal tenderness; no fulness; no tâche. Has passed no urine since admission. About one pint was drawn off by catheter; it is pale, clear, acid, sp. gr. 1026, free from deposit and from albumen. There is a patch of redness on the sacral region." This was his state when Dr. Cayley kindly saw him with me. He considered that the points between enteric and typhus fever were pretty equally balanced, but agreed that it would be prudent to isolate the case. This was accordingly done, and the boy was transferred to the special ward.

Even yet you will see that it did not seem possible to be perfectly certain of the diagnosis. As it is just this question of diagnosis that I wish to make the main burden of my lecture, I will refrain at present from drawing attention to its various problems, but proceed with the narrative of the case, premising that if it were typhus it should shortly come to an end so far as the pyrexial phenomena were concerned, and that abruptly. We had reached the eleventh day, and in most cases of typhus that recover defervescence sets in suddenly,—the crisis occurs—at or about the fourteenth day.

At 5.30 P.M., the temperature having been over 103° for the space of five hours, he was again placed in a bath (70° F.) of ten minutes' duration. At 6 P.M. the temperature was 99·8°; at 10 P.M. it had reached 102·4° He passed voluntarily a large quantity of urine; had been slightly delirious; was now sleeping, moaning at times; bronchitis unabated. At midnight the temperature was 103·4°. Another bath was given, and at 1.30 A.M. on Dec. 20th the temperature was 100°. It reached 102·2° at 6 A.M., but never after that again attained that level. It was now the twelfth day of the disease. He had slept occasionally during the night, and had been slightly delirious. Again had retention of urine. Had ceased to complain of pain, but remained deaf and stupid. The tongue was even more dry and brown than before; it was protruded tremulously, another indication of the state of nervous exhaustion into which he had fallen. At 2 P.M. the temperature was 100·2°, pulse 100, and respiration 40; bronchitic signs very abundant. Ether draught ordered every three hours. Urine acid, 1020, no albumen; it had still to be withdrawn by catheter, although once in the evening he passed a small quantity voluntarily.

On Dec. 21st (the thirteenth day) the temperature was taking a lower range, not exceeding 101° at 1 A.M., and reaching 99·2° at 6 A.M., the mean being about 100°. There was evidently some improvement. He felt better, the bronchitis was less, and the air entered the lower lobes of the lungs more freely. The tongue was moister at the margins, but still dry and cracked on the dorsum. Once in the evening he had his urine drawn off, but in the morning he passed it voluntarily.

At midnight the temperature fell to 98·8°, and at 8 A.M. on the 22nd to 98·2°, the pulse to 80, and respiration to 36. An enema administered the previous evening had resulted in the passage of copious semi-solid pale fæces. He had sweated in the evening, and this morning complained of feeling hungry. The tongue was becoming cleaner and moister; the bronchitis was less; the delirium had ceased, but he was still deaf. On Dec. 23rd (15th day) he slept well; felt very hungry. At noon, temperature 97·6°, pulse 76, respiration 28. The next day he began fish diet; his appetite was good and he enjoyed his food. The tongue was quite moist. A few greyish spots alone remained of the cutaneous eruption, and the skin was everywhere dry, and in places actually desquamating. In fact, the fever had left him, and from that time to this he has continued slowly but surely to improve.

One or two facts in this post-pyrexial period must be noted, and then I shall have given all the essential features of the case. The bronchitis disappeared almost *pari passu* with the fall in temperature. The urine on the 26th deposited much lithates. The pulse-rate fell from 96 on the 24th to 56 on the 25th, 52 on the 28th, 48 on the 29th. On the 26th the first cardiac sound was noted to be rough and prolonged, and on January 2nd a distinct blowing murmur replaced the systolic sound at the apex. Note in this connexion the fact that on Dec. 31st he sat up for a short time, felt faint, and afterwards vomited; so that this, with the auscultatory evidence of the weakened condition of the heart, prompted the direction to maintain for some days the horizontal posture. In other respects all went well. His appetite was good and bowels regular, and at the present time he may be said to be fully convalescent. I am glad to say that the cardiac sounds are now normal, and in a few days he will be well enough to leave the hospital.

(To be concluded.)

MR. GEORGE FOWLER has been presented with an illuminated address by the Committee of the Ballygarvan Dispensary District, Cork Union, upon resigning as Medical Officer, after twenty-one years' service.

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ON THE

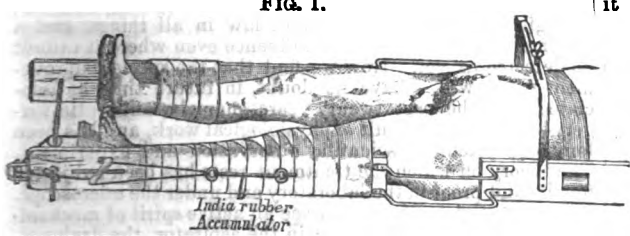
VALUE OF PARALLELISM OF THE LOWER EXTREMITIES IN THE TREATMENT OF HIP DISEASE AND HIP INJURIES,

WITH THE BEST MEANS OF MAINTAINING IT.[1]

By THOMAS BRYANT, F.R.C.S.,
SURGEON TO GUY'S HOSPITAL, ETC.

THE double splint (Fig. 1), to which I would draw attention, has slowly been built up at Guy's Hospital, under my observation, to meet the different requirements of such cases of disease and injury of the hip-joint as have passed under my care; and, as now completed, it seems to fulfil satisfactorily all the desiderata of surgery in the cases to which it is applicable.

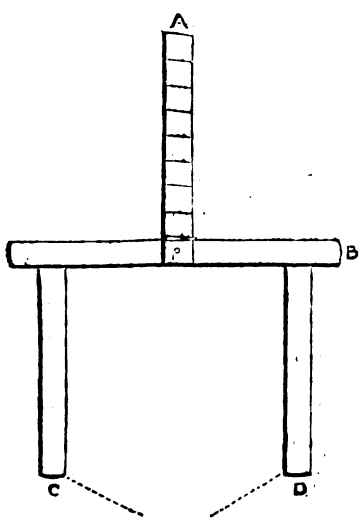
FIG. 1.



Its *advantages* are—(1) that it is far more comfortable to the wearer than any other splint that I have used or seen used; (2) that it most thoroughly immobilises the limb to which it is applied; (3) keeps up a well-regulated, steady, and persistent elastic extension, where extension is needed; and, what is of far greater importance, (4) maintains parallelism of the lower extremities; for I would draw attention to the fact that it is to the want of this parallelism of the lower extremities that many, if not most, of the deformities following a natural recovery with a stiff joint after hip disease or injury must be attributed.

I do not propose, however, on the present occasion to enter into all these points; indeed it is not necessary, since the first three are only to be determined by experience; and I must ask therefore to have them accepted on my testimony, and the last or more important I will now proceed to demonstrate. To aid me in this demonstration I have had constructed the present instrument (Fig. 2), in which the vertical column, A, represents the spinal column; the transverse bar, B, the pelvis, and the two suspended limbs, C and D, the lower extremities. I would recall attention to the fact that in a well-made and healthy subject the spinal column is vertical, and that the pelvis is placed at right angles to the spine, the lower extremities being suspended from their pelvic cups as movable pendents. It is well known, too, that in cases of disease of the hip or of injury to the joint associated with stiffness or anchylosis, this normal position is often greatly altered; and that whilst the positions greatly vary under these circumstances, they may as a rule be resolved into three—viz., those of *flexion*, *adduction*, and *abduction*.

FIG. 2.



Position of parts in normal posture. A, Spinal column. B, Pelvic bar. C D, Femora.

The special abnormal position will readily be recognised in any given case when the patient is placed on the back and the pelvis is brought at right angles to the spinal column. Indeed, this method of examination is the only right one to bring out the true condition of the limb, and should always be adopted.

With respect to the *flexed* position I have little to say: it of necessity causes some shortening of the limb and an antero-posterior curvature of the spine at its pelvic attachment when the patient is erect and attempts to bring the foot to the ground (lordosis); or when he lies down in the supine position and extends the flexed limb; but it does no more—it does not produce a lateral obliquity of the pelvic bar, as does *ad*duction or *ab*duction. Flexion of the thigh upon the pelvis, pure and simple, is however very rare; in most cases where it exists it is combined with either *ad*duction or *ab*duction, and more commonly the former, with some rotation inwards or outwards of the limb.

With respect to *ad*duction I have much more to say, for I think I shall be able to demonstrate that it is the chief cause of deformity in most cases of disease of the hip-joint associated with anchylosis, as well as in a large number of cases of fracture of the neck of the thigh-bone, and that even where, as a result of disease, displacement of the head of the femur or absorption of its neck exists, when of necessity there must be some shortening of the limb, this shortening is increased in the bulk of cases by *ad*duction. To illustrate this we have only to look to the instrument depicted in Fig. 3, when by fixing the right pendent, C, in the *ad*ducted position, and bringing the extremity downwards into the position a patient would naturally assume for walking purposes, the pelvic bar is raised on the affected and depressed on the sound side, with the effect of causing apparent shortening of the diseased and lengthening of the healthy limb; and, on the other hand, if we *ab*duct the right pendent, C, and bring the extremity down as before, for walking purposes, we lower the pelvic bar on the

FIG. 3.

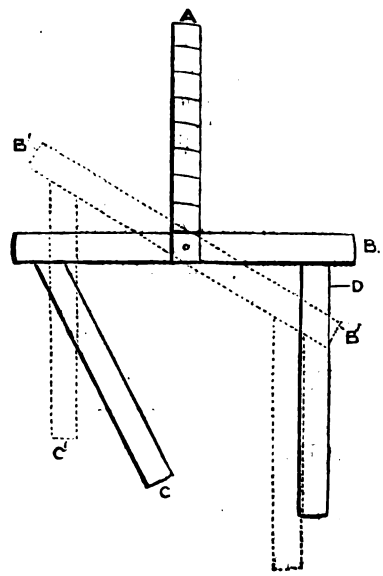


Diagram showing effects of *ad*duction of the right femur upon the position of the pelvis with patient walking. A, Spinal column. B, Pelvic bar in normal position, with C *ad*ducted limb and D straight. B', Pelvic bar tilted up on affected side (C') to allow of progression.

[1] Read before the Medical Society of London, Jan. 12th, 1880.

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diseased and raise it on the sound side; apparent lengthening of the diseased limb in early hip disease meaning its *ab*duction, and its shortening *ad*duction.

With these facts before us—for such they truly are, although they are not recognised as they should be—the conclusion is clear that it can only be by maintaining parallelism of the two limbs in cases of disease or injury of the hip that deformity is to be prevented; and under these circumstances I think the splint which I now recommend will be deemed the best we have at our disposal to carry out this end, since by its means both limbs are kept parallel, and adduction with flexion is guarded against; the diseased limb is kept immobile and extended by a well and easily regulated elastic force, and by means of the interruption over the trochanter and pelvic bones, no pressure is applied to tissues covering the bones to encourage movement or to cause discomfort.

In children, indeed, with acute hip disease the splint, well applied, so securely guards against joint movement that the nurse may turn the child over on to the sound side for purposes of cleanliness, and lift him for the performance of the natural functions with a freedom which to the beholder looks like indifference, yet she may do so with confidence that no harm or pain will be produced.

As a *corollary* I would draw attention to the fact that a little *ab*duction of the diseased limb is no disadvantage, since such a position, by tilting upwards the pelvic bar on the sound side, and thus raising the sound limb, tends to neutralise the shortening in the diseased one; some amount of real shortening generally attending or following hip disease or hip injuries. This abduction, when needed, can readily be maintained by this splint.

I would add also that with the evils of the *ad*duction of a diseased limb the advantages of maintaining parallelism of the lower limbs in all cases of injury of the neck or shaft of the femur is rendered clear.

As additional recommendations of the double splint, let me add that in the many hip cases to which it has been applied I have found it not only to answer every purpose for which a splint can be required, but it has done so in a far more satisfactory manner than any other with which I am acquainted; the splint, indeed, combining in itself all the advantages of every other, with some extra. It is moreover, as useful after resection of the joint for disease as it is in its earlier treatment.

In cases of fracture of the neck of the thigh-bone it is equally beneficial; and in support of this view let me add that I have discharged from Guy's Hospital thirty consecutive cases of such injury in subjects averaging seventy-four years of age, with useful limbs.

In fractures of the shaft a like good result may be recorded, for out of forty consecutive cases treated with it in only four—that is, one in ten—was there any important shortening, such as an inch; in twenty of the remainder there was no shortening, and in eighteen there was less than half an inch. In fact, it may with truth be said that there was no practical shortening in thirty-six out of the forty cases.

With these views, and supported by these facts, it will therefore readily be understood why it is that I am in the habit of using this splint in all cases of hip disease, of hip injury, and fracture of the thigh-bone.

THE ADVANCES IN SURGERY DURING THE PAST TWENTY YEARS.

The Presidential Address of the Border Counties Branch of the British Medical Association, delivered July 25th, 1879,

BY RODERICK MACLAREN, M.D.,
SURGEON TO THE CUMBERLAND INFIRMARY.

IN thinking over the subjects on which I might address you, it occurred to me that there was one which I could compass with considerable facility to myself (not an unimportant matter in the short time at my disposal),[1] and with, I hope, profit to us all. This was the progress of surgery since I commenced to study it, wellnigh twenty years ago. And I do not think that I could have set myself a more agreeable task, for it is pleasant to see one's occupation, or study, or science—call it which you will—marching onwards abreast with the van of human progress, and giving earnest of continued advancement. And though all cannot be leaders in the path of progress, yet each earnest follower helps on those in front. I think it may be said that surgery has been influenced by the character of the time. The forces which have been acting on men in general have been actuating surgical men also, so that lines of thought and action outside and inside our profession run parallel. This has been a time of vast progress in mechanical invention, and also one of great scientific advance, the result of slow and laborious research—not a period of vivid mental effort arriving at grand generalisations by the exercise of pure intellect. It has been characterised by a disregard of authority, a determination to accept nothing without proof, a longing to discern the reign of law in all things, and a belief that there is such an influence even where it cannot be detected as yet. Now we find that the special improvement which will, I have no doubt, in future time be associated with the past twenty years—namely, antiseptic surgery—is the direct result of physiological work, and has been built up by tedious scientific observation and experiment. The theory on which the treatment rests has been subjected to trial and proof in the laboratory and under the microscope. In a great variety of ways we see an active spirit of mechanical invention showing itself; in the aspirator, the drainage-tube, the thermo- and galvanic cauteries, in many operative procedures and new instruments.

In the subsequent remarks I do not pretend to strict historical accuracy—that is to say, if an improvement which became accepted by surgeons during the last twenty years had been invented many years before, but been allowed to lie dormant, I shall treat it not the less as an improvement belonging to the period named; for however much it may be to the credit of the individual to have advanced something new, yet, in speaking of surgery as a whole, one must take what is accepted and practised by the majority as the true index of its state.

The period preceding the commencement of my studies was one not less characterised by great advances than the subsequent one. The men who taught us had seen the introduction of chloroform rendering possible prolonged operations and an accuracy of surgical dissection which was before unattainable; they had seen the introduction of subcutaneous surgery, of excision of joints, of ovariotomy, and of the simplification of dressings. They were able to teach anatomy in a way in which it had never been taught until then, and they trained the men who have continued their work. Many of the advances of which I am going to speak to you were foreshadowed during their time: thus antiseptic surgery by the free use of disinfectant lotions and dressings and by the chloride-of-zinc treatment of compound fractures; the drainage-tube by setons, which for sinuses and abscesses simply acted as drains; the aspirator in its present form by several clumsier instruments, and subperiosteal surgery by experiments on animals.

The importance of securing and maintaining wounds in a condition free from putrefactive change has developed as a principle of surgical practice during these twenty years. Experimental inquiry has proved that this can be done by destroying and excluding certain organisms which constantly float in the atmosphere around us. Antiseptic surgery takes as its ideal a subcutaneous injury—say a simple fracture of bone. Such a lesion involves great injury to tissues, effusion of blood, and subsequent changes, which we call inflammation; yet, as you know, ninety-nine out of a hundred of such cases get well with trifling constitutional disturbance, without suppuration, and without infective involvement of other parts of the body, so long as the skin remains unbroken, and excludes the particles which produce putrefaction. Take a similar injury with no greater local destruction of tissue, except that there is an external wound communicating with the fracture, and adopt no special precautions. What happens? Almost certainly suppuration round the wound, in many cases diffuse suppuration of the limb, and not improbably pyæmia. Now, in another point, experimental research throws light on what we see in practice. It has been proved that each inoculation of a putrid animal fluid increases its activity something in this way: inoculate

[1] Owing to the death of the President-elect, Dr. Reeves, there were only a few weeks between the election of President and the delivery of this address.

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a wound with pus simply putrefying, you will probably get diffuse suppuration of a limb. Inoculate another wound with the discharge from this, and you will very certainly get pyæmia; use the discharge from pyæmia to inoculate with, and you get virulent septicæmia. When patients are aggregated in crowded wards it is easy to see how this sequence may occur accidentally, and why it was that pyæmia was the scourge of our hospitals. The nature of the violence causing a wound very much influences the dangers from putrefaction in it. A clean incised wound, supposing it does not heal by the first intention, discharges a fluid which, under proper management, ought to flow constantly away from it, and as a result the amount of putrefaction in that wound is small; while a contused wound containing sloughs is a favourable soil for developing a highly irritant and infective virus, and retaining it at the place where it is injurious.

The object of antiseptic dressings is to prevent putrefactive changes at the first stage. They contain germicides of various kinds, and hinder the access to wounds of septic particles. At the same time that they fulfil this object, they have to be so arranged that they allow the discharges to escape. They are of various kinds and applied in various manners. Carbolic acid, boracic acid, thymol, chloral, salicylic acid, and chloride of zinc are the germicides most commonly in use. In the case of wounds made by the surgeon, the doing of this under a cloud of spray prevents germs reaching them. When the wound has been already made before coming under treatment, some antiseptic must be brought into contact with every part of it, and then the dressings applied. It is a mistake to associate antiseptic surgery with the prevention of suppuration. We know that pus will form in parts of the body to which particles from without cannot get direct access; it is therefore absurd to expect that suppuration can always be prevented, but undoubtedly if we bring a wound to the condition of a simple fracture we will get healing without suppuration in a much greater number of cases than if we treat it so that the discharge assumes the irritating properties of decomposing matter. What antisepticity does prevent is pyæmia and septicæmia, which I believe to be merely different degrees or stages of the same ailment. The fluid exudation from a wound, if it is free from foreign organisms, may be absorbed again with impunity; in fact, its liquid portion either is the liquor sanguinis or is derived from it, and pus-corpuscles are indistinguishable from white blood-cells. Different altogether is the result of the absorption of this fluid in a state of decomposition; it may be that merely surgical fever occurs, or it may be that rigors, followed by profuse sweating, a temperature running up to 104° or 105°, with a daily range of four or five degrees, severe constitutional disturbance, and, if the patient lives long enough, abscesses in joints or organs, show that "the life of all his blood is touched corruptably."

What has antiseptic treatment done for surgery? It has enabled injuries, which formerly necessitated amputation, to be treated successfully; it allows operations to be performed which were formerly unjustifiable from their great risk, and it has put pyæmia among the preventable diseases. Let me give you an example of what it can accomplish—a case, I am bound to say, not less creditable to the system than to the surgeon who carried it out. Last year, when I was away on my holiday, a man was admitted into the Cumberland Infirmary suffering from the effects of an injury caused by a crane. His patella was fractured right across, and a wound two inches long communicated with the knee-joint through this fracture. The accident occurred thirty-six hours before his admission; the wound was smelling badly, and discharging sanious fluid. Mr. Smyth, who was then house-surgeon, spent two hours syringing out the wound and knee-joint with 1 to 20 carbolic lotion, and then put on the ordinary gauze dressings. When I first saw the case on my return home thirteen days after its admission, the wound had become superficial; a probe would only pass into it for a quarter of an inch. The knee-joint was perfectly free from inflammatory disturbance, and such discharge as existed was quite sweet. Very shortly afterwards the dressings were discontinued, and an extension apparatus applied to bring the fragments of the patella in contact, and they made in the long run a very good union. Now, according to experience under other forms of treatment, amputation would have been the only justifiable course, for otherwise the almost inevitable sequence would have been suppuration of the knee-joint, then of the inter-muscular planes, high fever, constitutional infection, and death.

The free use of disinfectant dressings, great attention to cleanliness, and guarding against the conveyance of discharge from wound to wound, even where absolute antisepticity is not aimed at, have of late years produced results which, compared with those of twenty years ago, are fairly entitled to be called brilliant, no doubt by preventing the development of a high degree of sepsis.

The drainage-tube is so essential an adjunct to antiseptic dressings that it comes in natural order to speak of it next. Whether used with these or without, it is an appliance of very great value in the treatment of all deep wounds and abscesses. It allows, in the first place, the blood and serous discharges to escape, while almost the whole of a wound can be kept in close apposition, and if suppuration occurs, it hinders the burrowing of pus, conveys it at once outside the tissues, and prevents the mechanical evils it would cause. In the treatment of abscesses it not only secures their thorough evacuation, but it enables this to be done with a very small incision; with a half-inch drainage-tube the largest circumscribed abscess in the body can be kept empty. Now, I can well remember the ever-recurring direction for the treatment of abscess when I attended surgical lectures: "Take a long, straight bistoury, and make a free incision." If a small incision can do more effectually what was accomplished by a large one, it needs no argument to prove the gain.

The aspirator is rather a development than an invention; by means of it fluid can be removed from the body with an almost imperceptible injury, and if very simple precautions be taken, there is no chance of introducing septic agents. A fine needle may be passed into any organ with almost absolute safety, the contents of any of the cavities may be removed, even the intestine can be pierced and it be impossible in the course of a few hours to ascertain the point where the puncture had been made. Perhaps its most frequent use to the surgeon is to make or confirm a diagnosis. There is a swelling; the most careful examination leaves a doubt as to whether it is a fatty growth or a chronic abscess. An aspirator-needle will settle the question at once. Pus is believed to be deeply seated in a limb, it does not form a circumscribed abscess, but is occupying a muscular sheath, no fluctuation can be felt; a hollow needle traversing the limb must bring to light the pus if it be there. The next most common use is to remove fluids from the cavities of the body, as, for example, synovia from distended joints or urine from the bladder. You get a case of impermeable stricture, no instrument will pass it, retention is urgent; if you push a fine needle into the bladder above the pubis, you can empty that viscus as completely as if you had passed a catheter, with hardly any pain and no subsequent local or general disturbance. In one instance I aspirated the bladder eleven times in six days, the patient all the time being so well that he would have gone to his work if I had consented. For abscesses I do not think the aspirator is of much service; it affords few advantages over incision, and is much less effectual, except when the abscess occupies some natural cavity, as the chest or a joint.

(To be continued.)

THREE CASES OF STONE IN THE BLADDER TREATED BY LITHOTRITY AND RAPID EVACUATION OF THE FRAGMENTS (BIGELOW'S METHOD).

BY WALTER J. COULSON, F.R.C.S. ENG.

CASE 1.—Francis A——, a clerk, aged fifty-four, came under observation Oct 2nd, 1879. He stated that about three years ago he passed three small calculi, and that about a year and a half afterwards symptoms of irritation of the bladder began to reappear, but did not become very urgent until quite recently. He now complained of frequency of micturition, pain in the region of the bladder and urethra, and occasional incontinence of urine, which contained a large quantity of mucus. The patient's general health was tolerably good. A calculus was readily detected on sounding.

On Oct. 13th, the patient being placed under the influence of ether, I crushed the stone about eleven times, using

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several lithotrites in succession. Bigelow's exhausting apparatus was then used, and by its means a great quantity of detritus was removed from the bladder. The instrument had to be withdrawn, as a fragment had become impacted in its distal orifice. After reintroduction a further quantity of débris was removed. The straight tube of Bigelow's apparatus was found to answer better than the curved one. After the operation the patient expressed himself as very comfortable. There was no trace of rigor; he slept well, and had to pass urine only three times during the night, though on first falling asleep a little escaped involuntarily.

On the following day the patient was able to hold his urine for three hours, and complained only of a little smarting along the urethra during micturition. The urine was tinged slightly brown, but was moderately clear, and contained some fine grit.

Oct. 16th.—Urine much clearer, but still contains excess of mucus. The patient can retain his urine for more than three hours; no incontinence, and no grit passed.

22nd.—I examined the patient with the lithotrite and sound in succession, but could not detect any fragments. The man can now hold his urine for four or five hours; there is neither pain nor straining in micturition, and no incontinence at night. The urine still contains a slight excess of mucus, to check the formation of which four ounces of decoction of triticum repens was ordered three times daily. The weight of the fragments removed during the operation was 130 grains.

CASE 2.—Thomas B——, aged seventy-five, artist, came under observation October 13th, 1879. He stated that he had always enjoyed good health, and never had gout or any serious illness. Some acute lumbar pains, which he had thirty years ago, would appear to have been of rheumatic origin. Three years ago he passed some reddish gravel, but none has appeared since. His present symptoms have troubled him for about a year. They are mainly great frequency of micturition, especially during the day, pain in the perineum during and after micturition, occasional retention of urine, but never any hæmaturia. The patient is a thin, healthy-looking man, not appearing as old as he is, and tolerably active. Florid complexion; no sign of arterial degeneration. Passes urine four or five times in an hour when moving about, but not more than once as a rule during the night. The urine is of a light amber colour, and acid reaction; sp. gr. 1018. No abnormal constituents beyond a little excess of mucus. There is no family history of stone or gout.

On October 15th, the patient having been placed under the influence of ether, I introduced a lithotrite, and discovered that the bladder contained two calculi. One of these, about three-quarters of an inch in diameter, was first seized and then crushed eleven times in succession with one instrument and nine times with a second. The second stone was then sought for, and crushed repeatedly, several lithotrites being used in succession. A large quantity of detritus was removed at each withdrawal of the instrument, and some difficulty was caused by portions of débris getting loose in the urethra. Before introducing the tube of Bigelow's apparatus it was found necessary to enlarge the meatus, owing to the smallness of that aperture. Both the straight and curved tubes were used, some considerable difficulty being experienced in introducing either tube through the prostatic portion of the urethra. Eventually the receiver of the apparatus was attached to the tube and the bag gently squeezed. Slight rotation of the straight tube caused it to pass onwards into the bladder. A considerable quantity of finely powdered detritus was then drawn into the receiver. The patient was under the influence of the anæsthetic for forty-two minutes. After the operation there was neither rigor nor discomfort except a little smarting, due to the enlargement of the meatus. The urine passed after the operation was blood-stained, and contained fine dust. Total quantity of detritus removed 195 grains. Temperature same evening 100·4°; pulse 120.

On the second and fourth days after the operation there was a rigor, followed by sweating, but the symptoms passed off without any ill effects. On the 22nd a lithotrite was introduced, and several small fragments crushed, and the operation was repeated a week later, when Bigelow's apparatus was again used, and a few fragments evacuated. After this date all the urinary trouble abated, and on the 7th November the patient declared himself to be quite well. Nothing abnormal could be detected in the bladder.

CASE 3.—Robt. C——, aged sixty-eight, came under observation Nov. 25th, 1879. Had suffered from symptoms of calculus for about eighteen months, but his sufferings had become much aggravated during the last four months. He complained of severe pain in the back and frequent calls to pass urine, especially during the night. The pain was much aggravated by exercise. No history of gout or rheumatism, and none of his family appear to have suffered from stone. The patient's expression was anxious, his tongue very dry, white and furred; great thirst; slept badly; pulse 114; temperature normal. Urine abundant, very high-coloured, with a fetid ammoniacal odour; reaction alkaline; albuminous (about one-tenth); deposits triple phosphates in abundance; no casts; sp. gr. 1015.

On examination with the lithotrite several calculi were detected; a rigor followed. The patient was kept quiet for a few days, during which the constitutional symptoms somewhat improved. The pulse fell to 90, and the nights were less disturbed. On Dec. 3rd, the patient being placed under the influence of ether, I crushed several stones, using the fenestrated and plain lithotrites in succession. Bigelow's curved tube was then introduced, and a quantity of very fetid urine escaped. A large quantity of detritus removed by means of the exhausting apparatus. The tube was then withdrawn, and the lithotrite again used, after which more detritus was removed. The patient was under the influence of the anæsthetic for fifty minutes, and bore the operation well. On examining the detritus several small calculi intact were discovered; these had escaped the lithotrites. The total amount of débris was three drachms. At the conclusion of the operation a few calculi and fragments appeared to be still in the bladder.

All the symptoms were relieved by the operation. The patient passed urine freely during the succeeding twenty-four hours, when it was thought expedient to introduce a catheter to remove any residual urine. About a pint escaped, muco-purulent and very offensive in character. The catheter was afterwards used every four hours, and the bladder washed out night and morning with dilute Condy's fluid. This gave much relief to the patient, and improved the character of the urine. A week after the operation, however, the urine was still muco-purulent, distinctly albuminous, and had an offensive ammoniacal odour.

Dec. 17th.—The character of the urine and the general symptoms having improved, the operation was repeated under ether as before. After several crushings with a fenestrated lithotrite, 270 grains of débris were evacuated. After the subsequent use of a plain instrument 110 grains were removed. The patient was under the influence of ether for forty-two minutes, and the operation was well borne. In the after-treatment the urine was withdrawn as before, and diluted Condy's fluid used to wash out the bladder. On the 21st the patient was reported as sleeping well, with pulse and temperature normal, and the urine comparatively clear and free from offensive odour. The quantity passed, also, which had been excessive, sometimes reaching as much as six pints in the twenty-four hours, was normal. On the 22nd I detected and crushed a small fragment, which was all that remained in the bladder. The patient was allowed to be up daily, the urine being still drawn off every four hours.

Remarks.—The three cases above detailed afford convincing evidence of the tolerance which the bladder exhibits of prolonged instrumentation, and of the advantages of Dr. Bigelow's modification of lithotrity. In the first case, in which the patient's symptoms were comparatively mild and of recent standing, the relief was immediate, and there was no drawback in the form of a rigor or local disturbance. On the tenth day after the operation the patient was well. The second case was one of greater severity, and there were two calculi to be dealt with. It was not, however, till the second day after the operation that any constitutional symptoms appeared, and these were comparatively trifling in degree, and soon abated. The difficulty experienced in introducing the evacuating tube was due to the fact that the lining membrane of the urethra, especially of the prostatic portion and near the meatus, had become coated by pulverulent débris, which obstructed the passage of the instrument. This difficulty was at once removed by injecting fluid through the tube passed down to the prostate, thus washing out the neck of the bladder. Under similar circumstances, Dr. Bigelow used the female blade of a small urethral lithotrite in order to remove the abundant and closely adherent calculous matter from the walls of the urethra. The condition of the third patient was in many respects unfavourable for any

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operative procedure. There was considerable constitutional disturbance, while the pain, the frequent micturition, the state of the urine and its unusual quantity, pointed to severe vesical and renal irritation. The result of the operation, however, proved that the proper course had been adopted. All the symptoms were forthwith ameliorated, and although the operation lasted fifty minutes, and involved protracted manipulation, it was followed neither by local nor constitutional troubles of any kind. The second operation was equally successful. The fenestrated lithotrite was found to answer better than the plain instrument. The former does not pulverise the calculus, but reduces it to small fragments which are not repeatedly caught by the instrument, but are sufficiently reduced in size to pass readily through the tube. Besides this the fenestrated lithotrite is readily freed from débris by simply screwing the male blade home, and thus the repeated withdrawals and reintroductions, necessary in the case of the plain instrument, are dispensed with. The escape of débris takes place more readily through Bigelow's straight tube than through the curved one. The difference was demonstrated by the quantity which escaped (110 grs.) in the second operation on the patient, after only three crushings with the plain instrument. The case altogether well illustrates the advantages of Bigelow's method. The total amount of detritus removed at the two operations was far greater than could have been got rid of in any reasonable time by the unaided efforts of the patient, while the freedom from secondary, local, and constitutional troubles, and the direct amelioration of all the symptoms, may fairly be attributed to the rapidity with which the bladder was freed from the source of irritation—an object which Bigelow's method satisfactorily accomplishes. The adoption of the method has the further advantage of enlarging the range within which lithotrity is applicable, and it encourages the surgeon to deal with much larger stones than was formerly the case. What the limits of the operation, as determined by the size of the calculus, really are, further experience alone can decide, but the prospect of greatly diminishing the number of cases subjected to lithotomy on account of the dimensions of the calculus—a class in which the mortality is especially great—seems almost certain to be realised.

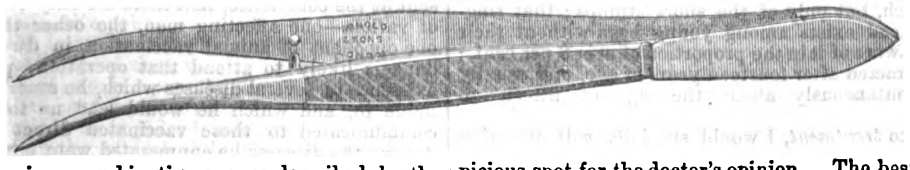
RINGWORM (OF THE HEAD): DIAGNOSIS AND TREATMENT.

BY ALDER SMITH, M.B. LOND., F.R.C.S.,
RESIDENT MEDICAL OFFICER AT CHRIST'S HOSPITAL, LONDON.

(Concluded from p. 55.)

IN some old chronic cases, where all the patches have disappeared and the disease has passed into the *disseminated variety*, I believe the best chance of a cure is to subject the entire scalp to a very close examination with a lens, and to place a drop of croton oil with a very fine sable brush wherever the isolated stumps or the black spots can be seen. (I consider a case where there are the black dots as the most difficult to cure.) The oil usually causes a pustule, and the loosened stump can then be removed with a pair of forceps. Mine are slightly curved towards the ends, are strong, yet fine, with minutely serrated points. (Fig. 2.)

FIG. 2.[1]



The glass I use is a combination one, as described by the late Dr. Tilbury Fox; but it is mounted on a firm stand with a ball-and-socket joint, so that it can be placed in any position, while both hands remain free for manipulation.

I manage to thoroughly examine the scalp by commencing at the top, and turning over layer after layer of the hair in the wrong direction with one blade of the forceps, while I hold down the hair just turned over with my left hand, until the whole back of the head has been inspected. During this time I examine the scalp minutely with my fixed glass or simple eyesight; then, turning the child round, look over the front part of the head in the same manner.

In treating a case like this, it is advisable not to have the hair cut too short, but to keep it about two or three inches long. It should be seen once a week, and an attempt made to pull out every stump as it comes into view, and then if it breaks off, which is most probable, a drop of croton oil should at once be applied to the follicle. At the next examination the oil must again be put on any stumps that break off, as well as upon any fresh ones that may appear. In a very bad case this may have to be done for weeks or months before a complete cure can be effected. During this time, if there are very many stumps about, I prefer, but it is not essential, to have the hair only about two inches long, and a large, thin poultice kept on day and night under an oilskin cap. The constant heat and moisture very much help the croton oil to produce the necessary pustulation, and by preventing the spots from drying render the extraction of the stumps easier. In fact, with a case like this, I like to have the scalp well bathed with hot water for ten minutes before I commence extracting the stumps; and also to have a small basin, with a sponge and some water in it by my side, on which to wipe off the extracted stumps from the forceps. This treatment must be continued until a fortnight or month passes by without any stumps being seen, and then the case may be considered cured.

For the last few years I have used a remedy, suggested to me by the late Dr. Tilbury Fox, where there are only a very few minute patches, and *where time is of the utmost importance*. This is a paste made of equal parts of crystallised terchloride of antimony and lard. It is most intensely escharotic, and always produces a bald place by destroying the hair-follicles wherever it is applied. Therefore *it must only be used in very exceptional cases*, and to places not larger than half a split pea. I have sometimes used it to a very chronic patch, when it was absolutely necessary to get it cured by a certain time, and often apply a very minute dot of it to the black spots so often mentioned before, as well as to any isolated stumps that cannot be removed under the croton oil treatment; but I must again warn anyone against applying it too freely, as it is sure to cause a slough, and, therefore, a bald place.

Even all treatment will fail sometimes, and I believe there are undoubtedly inveterate cases that cannot be cured, but such almost always get well spontaneously at about the age of fifteen to seventeen. I have hardly ever seen a boy leave this school at the age of sixteen with any stumps. When I have had such inveterate cases here I have continued to use the carbolic oil.

It is important to remember that, in very young children, almost anything will cure ringworm, and that strong remedies should never be used.

General treatment.—Disinfection of the clothes is advisable; caps, coats, neckties, &c., ought to be baked, and other things boiled. Brushes, combs, and towels must be kept separate, and the former cleansed with carbolic lotion. Boys at school should always have separate washing flannels, towels, brushes, &c.; and in schools the matron or other person in charge of a certain number of boys or girls ought to examine the heads weekly, and send anyone with a suspicious spot for the doctor's opinion. The best preventive I am acquainted with is carbolic oil, in the proportion of one to eight of olive oil. This should be applied to the heads of the other children when one in a family has ringworm; it can be used for months without producing any ill-effect.

The doctor should at first personally superintend the application of the remedies, and should show the mother or nurse how to epilate and to rub in the required ointment, &c.

Internally, in chronic cases, especially in weakly, ill-

[1] These forceps can be obtained of Messrs. Arnold and Sons, Smithfield.

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nourished children of a strumous or lymphatic diathesis, it is advisable to give cod-liver oil and other fats, together with a generous diet and steel. It is a remarkable and certain fact that children with chronic ringworm generally dislike fat. Change of air is also beneficial in these cases.

Isolation.—I believe the complete isolation, if possible, of recent cases to be most essential. Children suffering from any form of the disease should not be admitted into a school until they are quite cured, except, perhaps, when a child has been thoroughly well treated for a year or more, and yet a few isolated stumps remain that cannot be removed, or at any rate cannot under the usual treatment, even of the most skilful kind. These special chronic cases are brought up, as I too well know, for admission into public schools, at short intervals, for one or even two years, although constantly under the best medical treatment. What is to be done with such cases? With regard to Christ's Hospital, when boys reach a certain age they cannot be admitted, and therefore the time arrives sooner or later when a boy must either lose his presentation or be passed into the junior school suffering from chronic ringworm. When this time arrives I advise admission into this particular school rather than that a presentation should be lost, as I am strongly of opinion that these cases can be admitted with comparative safety to the other boys, provided they are regularly looked after, and some parasiticide, such as carbolic oil, used to the head, while the stumps are removed by the croton oil treatment. I have had many boys in the London School with these isolated stumps, and have not found that they have spread the disease. Again, it must be remembered that if chronic cases be admitted when they are apparently free from all stumps, they almost aways relapse, and thus a boy who has suffered from chronic ringworm is almost sure to have isolated stumps appearing for months. I therefore always allow old inveterate cases of disseminated ringworm, when already in the school, *and under proper supervision and treatment*, to mix with the other boys, and firmly believe it is a safe course to follow. I feel confident that the rest of the boys in a school run less risk of taking the disease from these disseminated cases, *under proper supervision*, than they do from mixing with other children in private families, *who constantly have ringworm without its being known, and who therefore are not under any treatment*, as proved by the fact that children supposed to be free from the disease, and who are brought for admission into this school, from all ranks, are found to have ringworm in the proportion of over 8 per cent.

In conclusion, let me again call attention to the principal points touched on in this paper. Firstly, as so many medical men consider ringworm well when it is in a most chronic state, it is important not to certify a case as cured, although the hair may have grown again on the diseased patches, until after a thorough examination of the scalp has been made, and we are certain that there is not a single stump remaining affected with fungus, or even a black dot or follicles with no hairs growing from them. Secondly, that children should not be certified as free from the disease and fit to enter a school, unless the whole head has been minutely examined.

Medical men should also bear in mind that there is such a variety as *disseminated ringworm*, where no patches exist, but only isolated stumps, and that this is one requiring very great care for its detection; that stumps are not finally removed if they only break off, which is commonly the case; that no reliance for diagnosis or prognosis can be placed on the microscopical examination of ordinary hairs taken from a diseased patch, but only of the short stumps; that ringworm of the head exists among young boys without their friends being aware of it in the proportion of over 8 per cent.; is rarely contracted after fourteen years of age, and usually gets well spontaneously about the age of fifteen to seventeen.

Finally, as to *treatment*, I would specially call attention to the use of carbolic-glycerine, or the ointment composed of carbolic acid, citrine, and sulphur ointments for recent cases, and to the important practical points, that they must be well and frequently rubbed in.

With regard to *chronic ringworm*, it must be remembered that the conidia exist at the very bottom of the follicles; that the difficulty in curing the disease is not to find a parasiticide, but to obtain one that will penetrate deeply; that the stumps are so diseased that they always break off on attempted epilation; that oleate of mercury is one of the best penetrating remedies; that it must be well rubbed in, and the head washed only once a fortnight; and that after a few months, if the disease is not absolutely well, kerion ought to be produced.

With regard to *kerion*, it should be remembered that the artificial production of it should only be attempted in old chronic small patches that have resisted all other treatment for months or years; that it should be produced by the daily application of croton oil, together with constant poulticing; that croton oil must be used with very great caution till the hairs get loose in the follicles, the great aim of the treatment being to cause inflammatory swelling of and effusion into the tissues around them; that the stumps must be removed time after time as they appear; and that great care must be taken to prevent the oil getting on to the face.

Lastly, with regard to the *disseminated variety*, it is best treated by touching each stump with croton oil, week after week, except perhaps in very exceptional cases, where a minute quantity of the antimonial paste may be required.

HUMAN AND ANIMAL VARIOLÆ: A STUDY IN COMPARATIVE PATHOLOGY.

BY GEORGE FLEMING, F.R.C.V.S.,
ARMY VETERINARY INSPECTOR.

THE recent conference held in London on Animal Vaccination will not have been without a useful result, if it has been the means of not only drawing attention to this particular subject, but also to the very meagre knowledge we seem to possess with regard to variola in animals, and, indeed, of all animal disorders which are communicable to mankind, and *vice versâ*. The discussions which took place at the meetings of the conference afforded another proof of the necessity for instituting what I have for years maintained should form a branch of medical study—a chair of Comparative Pathology at each of our medical schools. Surely a knowledge of animal diseases, in their relation to those of our own species, is of far more moment to the surgeon or physician in the practice of his profession, than an acquaintance with zoology or comparative anatomy. Such chairs are established in nearly all, if not all, continental medical schools, in which their value has long been recognised. Why is it, then, that we are so slow or so unwilling to adopt what is so manifestly and so urgently required in order to complete the student's education, and to render him a more useful and enlightened member of society?

From the opinions expressed at the conference, as well as elsewhere, I gather that the view is largely entertained among medical men in this country, that human and bovine variola, or vaccinia, are one and the same disease: the latter being dependent for its origin and maintenance upon the former, though undergoing a certain and special modification in the passage of its virus through the organism of the ox; so that, when retransplanted in the human species, it is no longer small-pox, though it offers protection, partially or wholly, permanently or temporarily, against an attack of that malady.

It would also appear to have been accepted by those present at the conference, that there are only two distinct kinds of variola—one affecting man, the other the sheep. And one opponent of animal vaccination, in dwelling upon the dangers likely to attend that operation, pointed out the existence of several diseases which, he asserted, bovines are liable to, and which he would lead us to infer might be communicated to those vaccinated direct from the calf. Among the diseases he enumerated were contagious pleuro-pneumonia, anthrax, glanders, certain disorders due to helminths, and "entozootic asthma."

Now, without at present claiming to be a supporter of animal vaccination, I may as well state that the apprehended danger from these disorders is more or less purely imaginary. Contagious pleuro-pneumonia is peculiar to cattle, and cannot be transmitted in any form to other species, not even by direct inoculation of its morbid products; glanders is not a bovine disease, and all attempts to convey it to the ox tribe have invariably failed; anthrax runs

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its course too rapidly and is too marked a disease to be considered in connexion with animal vaccination; the worm disorders have no relation to the subject under discussion; while as for "entozootic asthma," why, I never heard of it before, and I fancy nobody else, so that it may also be dismissed as unworthy of consideration. Candidly speaking, if I anticipated any danger in animal vaccination, from the presence of constitutional disease in the vaccinated calf—which I do not at present—I would rather be inclined to look upon the existence of tuberculosis with some suspicion; but this serious malady the speaker did not refer to. There is, however, no evidence that it can be conveyed to mankind by retro-vaccination; and, to my mind, the risk is so infinitesimal, considering that the calf is so rarely affected with the disease, at least in an active form, that I think it may not be taken into account just now.

Of infinitely greater importance is the relationship between human small-pox and cow-pox, which was treated as a merely collateral subject at the conference, but was, nevertheless, made the occasion for some strong opinions being expressed as to the absolute identity of the two maladies. The solution of the problem as to whether small-pox and cow-pox are one and the same disease, modified only in their manifestations by differences in the organism of man and the ox, or whether they are distinct and independent disorders having only a family or generic resemblance, well deserves the most serious efforts; constituting, as it does, a question of the very highest scientific and practical interest, and one about which there should be nothing speculative. Its practical aspect more particularly invites examination, for if it be demonstrated that the two are identical, the cow-pox being derived from small-pox, then there is no occasion to hesitate as to the selection of vaccine lymph; for we might, without compunction, take that which is directly elaborated in cows through inoculation with the small-pox matter of man, and thus save all the search and precautions at present imposed upon us in order to obtain a vaccine fluid which shall be innocuous, and at the same time sufficiently potent to afford protection from variola. But if, on the contrary, the small-pox communicated to the cow retains all its characters, and when again transferred to mankind merely reproduces itself in its dangerous, general eruptive and highly infectious form, then recourse to variolo-vaccination would be a serious and reprehensible step, and one which should be opposed. Or if the small-pox virus, in passing through the cow, should still retain its variola-producing attributes, but yet become so subdued as to be as harmless, and still as effective as vaccine, ought it to take the place of the latter altogether, or should it be employed simply as an auxiliary? These questions have been asked before, and I venture to ask them again, as a reply to them is of the greatest moment at this particular time, not only in regard to small-pox, but to other virulent affections. For if, notwithstanding the apparent differences in their characters, the human and bovine diseases are the same in nature, the virus only being beneficially modified or transformed by transference from the one creature to the other, it gives us reason to hope that the virulent principle of other contagious scourges which only attack once in a lifetime may be similarly attenuated by emigration from one species of animal to another, and still retain its protective influence. But if the human and the cow disease are due to a different virus, and the one has power to neutralise the other, the reciprocal neutralisation being greatly to the advantage of the creatures concerned, then also there is good reason for hoping that with other contagious maladies of the same, or even a different type, there may be discovered a similar means of destroying their germinative power.

Notwithstanding the immense importance of the question, the long time that has elapsed since vaccination was introduced, the multitude of works upon the diseases, and the great opportunities that have been afforded for clinical and experimental observation, it is indeed astonishing to find opinions still divided on the subject of human and animal variolæ and their relationship. Strange it is to note doubt and hesitation, and unfruitful discussions as to the nature, advantages, and dangers of vaccination, when we reflect that it has been practised for ninety years, and is universally adopted all over the world as a prophylactic against one of the direst of the pestilences which haunt the human family.

But so it is; and, as before observed, the tendency among medical men, at least in this country, appears to be in favour of small-pox and cow-pox being due to one and the same virus; in opposition to the Jennerian doctrine, that the cow-pox was derived from horse-pox, and had none but an antagonistic relationship to human variola. Their belief seems to be founded on the reports of certain experiments performed by four or five persons (Gassner, Thiele, Sunderland, Badcock, Ceely), in which positive results were obtained some forty or fifty years ago, and on accounts of a few instances in which small-pox was said to have been communicated from sick people to animals. Jenner, according to this opinion, was mistaken; his cow-pox was not derived from "greasy-legged" horses, but from the small-pox-stricken people who went about and handled the milch cows, and so infected or inoculated them. It follows that only cows were (and are now) affected; that cow-pox was much more prevalent in those days than now, because small-pox was more prevalent; that only mankind and sheep have a distinct variola of their own, for the simple reason that those who entertain this opinion never saw or heard of any other species being affected with variola; that failures in recent attempts to produce cow-pox, by inoculating cattle with small-pox virus, and the production of small-pox when the matter of the eruption was transferred from the cows to children, were due to the human virus being merely deposited in a little pouch in the animal's skin, where it did not undergo the supposed modification; and that, though all recent experimenters have failed in developing cow-pox from small-pox, yet at the period mentioned it was accomplished without difficulty.

Deeply impressed with the vast importance of arriving at the truth in such a grave question, I have for many years devoted much attention to it, and have already done what in me lay to settle it: at least so far as the variolæ of animals are concerned, as will be seen on referring to my work on "Veterinary Sanitary Science and Police" (vol. ii., p. 28); and I will now venture to dispute every one of the arguments brought forward to prove that human variola and cow-pox are due to the same virus, or are the same disease; or that there are only small-pox and sheep-pox as distinct variolæ. With regard to animals, I may at once state that I believe every species has its own independent and particular kind of variola, and I am unable to understand why man and the sheep should alone have the unhappy privilege of being the special subjects of different forms, and this privilege be denied to all the other creatures.

Whether these forms may have been originally derived from a common or primitive source or type, I will not now stop to inquire; but that they exist and compose a group of diseases rather than one malady, cannot be matter for doubt. That they more or less widely differ from each other, that in each species each form has a special character, and though that which is particular to one species may be transmitted to another species, yet the variola of this species need be scarcely a subject for dispute; while the fact that their differences are marked, not only with regard to their particular features, but also as to their capability of transference to other species, and their antagonism to each other, has been clearly demonstrated. Admitting that which I shall presently attempt to prove, that the cow has its own variola, we know that when this is communicated to man it does not produce small-pox, though it protects from it. The sheep-pox has been inoculated on man by many experimenters—among others, by Marchalli, Sacco, Voison, and Hering, but only a small localised group of pustules, quite unlike the eruption of ovine variola, has appeared at the seat of inoculation, and no protection from small-pox or vaccinia has been conferred. Neither human variola or yet vaccinia will give rise to sheep-pox, neither will their inoculation protect the sheep from its own variola. Horse-pox is communicable to the cow and mankind, and protects them from their variolæ, as well as the human species from vaccinia, while vaccination protects the horse from its pox. As we shall see immediately, though the virus of human small-pox, when deposited in the skin of the cow, does give rise to a local papulation—often very trifling, exceptionally very marked,—yet this is not the regular eruption of cow-pox, either in its appearance or course, and it does not prevent the cow being successfully vaccinated at the same time, though it appears to destroy the aptitude to receive vaccinia; while in two or three transmissions through the bovine species it becomes altogether impotent. The same results are observed in the horse, which, however, appears to receive the virus of human small-pox more readily, and to exhibit more marked local phenomena than the ox; while this inoculation also protects it partially, if not entirely, from the action of vaccine virus, which it otherwise so readily

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receives. As in the ox likewise, the small-pox virus soon loses its potency in being carried from one animal to another—it cannot be cultivated in them; and experiment has demonstrated, that no more in the organism of the horse than in that of the ox can human variola be transmuted, but that after passing through the bodies of solipeds, and again transferred to man, it has lost none of its characteristic feature.

Cow-pox can be very readily transferred to man, the ox, horse, and goat, the first three showing an equal aptitude for its reception; in them also the transmission of the disease is indefinite—i.e., the virus may be cultivated, without impairment, for a limitless number of generations, and it confers immunity against the variola of man and the horse, while the ox itself is protected. But while vaccination only produces in man and the ox a local and limited eruption, in the horse it often produces a startling pustular exanthem, which, in character and seat, differs in nothing from natural horse-pox. Another peculiarity in the action of the vaccine virus in the horse is its tendency to produce this vaccinal eruption, and at the same time to confer immunity, when introduced directly into the lymphatics or bloodvessels; while in the ox it does neither under this condition—all circumstances which would lend support to the opinion of Jenner, that the horse is really the true source of natural vaccinia.

Vaccination in the dog usually only produces small red nodules at the punctures, but nothing at all resembling the vaccinal eruption. It is the same with the pig. In the sheep a small papule generally forms at the seat of inoculation, with rarely a little vesicle that rapidly becomes encrusted. Revaccination from this to calves gives negative results.

Not only in their special characters do the variolæ of man and animals differ, but also in their apparent mode of extension. Human variola and sheep-pox differ widely from each other in some respects, particularly in their not acting antagonistically, and in the appearance of the eruption, but they are identical so far as their diffusion is concerned. They are both infectious and contagious, and can be transmitted by fomites, as well as by actual contact; while their virus possesses a vital resistance somewhat remarkable. Cow-pox, horse-pox, and the variolæ of other animals would appear to depend for their dissemination upon their contagious properties only, and their virus readily becomes deteriorated.

There are other peculiarities in the variolæ of man and animals which still further differentiate them, but these I shall not allude to here; so pass on to the consideration of the far more pressing question as to the identity of small-pox and cow-pox, and an examination of the arguments brought forward in support of this identity. But before doing so, I may as well confess that I do not for a moment hold with the abiogenetic or "spontaneous" origin of variola either in man or beast, and am prepared to maintain that whenever and wherever, and in whatever species the disease manifests itself, it is always due to its own special contagium, no matter how this may be conveyed.

(To be continued.)

POISONING BY DIGITALIS.

BY J. B. MAWER, L.R.C.P., &c.

POISONING by digitalis being so rare an occurrence, I think the following case cannot fail to interest the many readers of THE LANCET.

A married lady, thirty-four years of age, of fair complexion, nervous temperament, and somewhat anæmic, had been ordered to take two or three of Homolle's granules of digitaline daily for palpitation and other hysterical symptoms, each granule containing a milligramme of the alkaloid.

On the 25th of April, about 3 P.M., she swallowed, for some reason best known to herself, fifty-six of these granules—the whole, in fact, which remained in the phial. Immediately after this she went out to visit her sister, a quarter of an hour's walk, where she remained about an hour, and then returned home on foot. She felt no inconvenience, except a bitter taste in the mouth, until the dinner hour at six, when, on trying to take her soup, she felt very giddy and disposed to vomit. She at once went to bed, and, feeling still more indisposed, her servant-maid rubbed her neck and hands with rum. She then vomited two or three times at intervals of ten minutes, and began to suffer from pain in the stomach. The pulse was 65; temperature normal, and perspiration was breaking out on the forehead. At 7 P.M. she was seen by a medical friend, who prescribed two grains of tartar emetic, an ounce of sulphate of soda, in three ounces of water. Fortunately for her she only took two spoonfuls of this depressing potion, and even that she did not retain, for she continued to retch and vomit almost incessantly. At half-past eight he ordered her potion of Riverius six ounces, syrup of ether one ounce, but the stomach would absolutely retain nothing. The face now became dusky, the pupils dilated, the pain of stomach increased, the extremities grew cold, the pulse weak and irregular, numbering 48 in the minute, and she complained of great oppression in the precordial region; the breathing became slow, with deep and prolonged inspiration. At 11 P.M. I saw her for the first time, and found her in the state just described. I ordered her to swallow very frequently morsels of ice, and strong infusion of coffee also iced, sinapisms to be applied in succession to the stomach and legs and over the region of the heart, the trunk to be surrounded by bottles of hot water, and most strictly enjoined the horizontal position, forbidding any movement, even of the head from the pillow, during the retchings, which still persisted. I also advised a teaspoonful of cognac to be added to the coffee every half hour, and a dose of medicine to be given from time to time, composed of syrup of ether, ammonia, and cinnamon water, and to apply smelling salts frequently to the nose, which last, she said, afforded her much relief.

April 26th.—On visiting her this morning, I learned from the medical man who had remained in attendance during the night, that she had not slept at all, but had continued to retch about every hour, and the temperature of the body had been maintained only by the constant application of the hot bottles. I found her very weak; the pulse 44, feeble and intermittent; sighing respiration; the face almost livid; the pupils still dilated, but the intellect perfectly clear; there had been no evacuation from the bowels, but the urine had been abundant. As the continued irritability of stomach precluded all possibility of giving either medicine or food by the mouth, I ordered a strong infusion of serpentaria with ammonia mixed with an equal quantity of beef-tea to be administered per anum every two hours, and to continue only the ice pills and cognac by the mouth. As she complained so sadly of the precordial oppression, comparing it to a heavy stone lying on her chest, I ordered towels soaked in rum to be placed over the chest and abdomen, to be kept always wet by renewal.

On my second visit, about noon, I found her even weaker; the temperature still artificially maintained; the skin dusky, non-elastic, as in cholera; respiration prolonged and sighing; pupils still dilated; pulse 42, very weak and irregular, intermitting once in every two or three beats; mind intact. The vomiting having become much less frequent, I ordered her to take strong beef-tea with lemon-juice, two or three spoonfuls every half-hour, to continue cognac in the intervals, the compresses of rum, and the enemata with the addition of yelk of egg and Liebig's extract, and to ply the nostrils with ammonia, which gave her immense satisfaction. At 9 P.M. I found her decidedly better; the retchings had ceased; the pulse had risen to 52, though still equally feeble and intermittent, there being two beats and a pause, as before. She had retained the beef-tea and had taken strong coffee with cognac regularly. To go on with all the remedies and also two grains of musk every hour. By midnight the pulse had risen to 60, the intermissions one in four beats, the heat almost normal, and my patient began to get snatches of sleep twenty to thirty minutes at a time.

27th.—At 5 A.M. pulse 62, but still weak, with one distinct intermission in every five beats; feels much better; face and surface generally of natural colour, precordial oppression very much diminished. On my visiting her at 10 A.M. I learned the particulars just stated, from my colleague, who had again remained all night. I now found her much improved; pulse 60, but stronger and fuller, with much less frequent intermissions, one in every eight or nine beats. She had slept very nicely, and had taken light food in small quantities. Ordered to continue the same treatment, and on no account to quit the horizontal position.

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28th.—Improved in every respect. Sleeps comfortably and eats fairly. Ordered to leave off the nutritive enemata.

29th.—Going on so well that I allowed her to sit up in bed for the first time, while I had my finger on the pulse, which was 66 and quite regular, as it only rose to 78. Twelve pulsations continuing regular, I gave her leave to sit up in bed for a short time occasionally.

From this date she made rapid progress towards recovery, and excepting a slight eruption of urticaria, due perhaps to the action of the musk, she was soon perfectly well. I was not at that time aware of the antagonism which is alleged by Köhler to exist between digitalis and saponine, otherwise I should certainly have given the latter a trial.

Bucharest.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

STRANGULATED INGUINAL HERNIA, WITH RUPTURE OF SAC AND INTESTINE; CLOSURE OF WOUND IN INTESTINE WITH CONTINUED SUTURE; REDUCTION; RECOVERY.

(Under the care of Mr. JAS. ADAMS.)

THIS case is of interest in consequence of the impossibility of adopting the ordinary practice of leaving the ruptured intestine in the wound. The patient was a tall, big man, aged forty-six, very muscular, and with a great deal of fat about the abdomen. He was admitted on Aug. 7th, 1879, with a large scrotal hernia of the left side; it was dull on percussion, quite without impulse, but by no means tense or tender. He had worn a truss for seven years, and on the evening of his admission, while walking home, his truss broke, and he felt his rupture come down. He was admitted six hours afterwards, complaining of pain in and distension of the abdomen, and had vomited once a little. A moderate effort at reduction was made, but without any result. He was sent to bed, and an ice-bag was applied to the tumour. Four hours later a further attempt was made, under an anæsthetic, to reduce the tumour, but in vain. The patient vomited once after the anæsthetic. There being so little tension or tenderness, and the date of the descent of the hernia being so recent, it was determined to delay operating a little longer.

At 11.45 on the following morning—that is, sixteen hours after the descent of the hernia—another brief attempt was made to reduce it, but without any result; and at 3 P.M. Mr. Adams tried taxis himself, and some portion of the tumour disappeared; there was some gurgling, and the tumour became much softer. It was ascertained afterwards that before this attempt at reduction the patient had made a vigorous effort to replace the tumour himself, seizing it with both his powerful hands, and squeezing hands and tumour together between his thighs. This probably ruptured the sac and intestine, and accounted for the gurgling and increased softness of the swelling; but no constitutional signs of the accident were evident at this time. A few hours later the abdomen became enormously distended and painful, the countenance anxious, and vomiting frequent. Mr. Adams was sent for, who operated immediately (8 P.M., twenty-six hours after the descent of the hernia).

The scrotum was distended, and showed signs of bruising. When the neck of the sac was reached, a rent in it about an inch long was found just below the external abdominal ring. The sac was laid open more freely, and a large coil of intestine was found. It was evident that it had not been very tightly strangulated, being only of a brickdust-red colour, such as the intestines in the abdominal cavity frequently present in the earlier stages of acute peritonitis. The stricture at the neck of the sac was easily reached and divided, but the intestine would not go back. On displacing (without any force being required) the piece of intestine lying at the neck of the sac, a gush of rice-water-looking fluid took place, and the intestine collapsed, and a transverse rent in the gut, nearly an inch in length, was found. The first idea in dealing with this condition was to reduce all the sound part of the intestine, and leave the torn part attached to the wound, this being considered the routine practice. In consequence, however, of the distended state of the abdomen, it was found impossible to keep the rest of the intestine within the cavity; as fast as it was returned it came bulging out again by the side of the ruptured piece. Some surgeons, Mr. Adams remarked, would probably have punctured the intestines in the abdomen, to reduce the tension, but he thought that it was by no means an absolutely safe proceeding, and, thinking that if the whole of the hernia was reduced the ring might be kept closed, he sewed up the wound in the intestine with a continued catgut suture, and replaced all the intestine. The wound in the skin was closed, and there was no difficulty in applying pressure in such a way as to keep the ring secure. The result was most satisfactory. The patient made a most perfect recovery, the only incidents in his convalescence being a blush of inflammatory redness around the crest of the ilium, and some impaction of fæces in the rectum.

The patient was discharged cured on Sept. 8th, thirty-two days after admission.

RICHMOND HOSPITAL, SURREY.

A CASE OF POISONING BY BICHROMATE OF POTASH.

(Under the care of Dr. R. ARCHER WARWICK.)

FOR the following notes we are indebted to Mr. J. T. Gadsby, house-surgeon.

In THE LANCET of Sept. 27th, Dr. Dunbar Walker, in reporting an instance of poisoning with bichromate of potash, speaks of its rarity. The following case (one of intentional poisoning) was admitted about 3.30 P.M. on Oct. 6th, 1879, about whom the following history was elicited:—

A French polisher, aged thirty-one. He had had a quarrel with his wife and some of her relations, during which he had received two black eyes. On the morning of admission he went from London (where he lived) to Richmond, whence he started across Richmond-park for Kingston. Feeling very miserable he suddenly determined to take a lump of bichromate of potash which he had in his pocket, and which is used in his trade. He said that the lump was as large as the end part of his thumb, and weighed, as nearly as he could guess, half an ounce. He broke it up with his teeth, and swallowed the fragments. After a minute or two, during which he had walked some distance, he was seized with a horrible pain in the stomach and back, which doubled him up. Then he felt giddy, fell down, and lost himself a little, but he well remembered that he began retching violently. He got up again, and tried to walk on, but was unable on account of the pain and weakness. He fell down a second time, and was vomiting as he lay, when a gentleman passed in an open carriage, and, attracted by his groans, went to him, and learning he had poisoned himself, got him into the carriage and drove him to the hospital. He was retching all the way, and vomited some greenish fluid over the side of the carriage.

When admitted he was in a collapsed state, with clammy perspiration and a very weak radial pulse. He was very pale, and, having two black eyes, his face was not a pleasing object. He was constantly retching and groaning, and complained of horrible pain in his stomach. A quantity of warm water was given him, which returned mixed with some mucus which had a slight greenish tinge. Then milk and water was given which was brought up again, curdled, and once or twice the vomit was tinged with blood. About three-quarters of an hour after admission he had a loose motion, and during the evening five or six more, two or three of which contained blood. On examination, the vomited fluid did not give the ordinary tests for a chromate, so that almost the whole of the poison in the stomach must have been rejected before admission. The motions were not examined.

During the night milk and water was allowed him. He did not sleep at all, and vomiting was very troublesome. The next day he was decidedly better. There was considerable tenderness and burning pain in the abdomen, but the vomiting,

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although troublesome, was not so urgent, and the pulse was better. On 9th October, vomiting having ceased and the tenderness over the abdomen being very slight, beef-tea was allowed as well as milk. On the 10th, as the bowels had not been opened since the night after admission, a small dose of castor oil was given. On the 12th fish was allowed, and on the 14th he got up, feeling, however, very weak. The bowels not having been open again since the 10th, a black draught was ordered. On the 20th he was quite convalescent, and was discharged on the 24th.

LEEDS GENERAL INFIRMARY.

CASES OF NERVOUS DISEASE, WITH OPHTHALMOSCOPIC PHENOMENA.

FOR the notes of this interesting series of cases, commenced this week, we are indebted to Dr. E. H. Jacobs, late resident physician.

CASE 1.—*Cerebral Tumour; Optic Neuritis.*—J. B——, aged twenty-three, admitted Feb. 5th, 1878, under Dr. Heaton. His family history was good. Eight years before he had been kicked on the head, but with no apparent bad consequences. There was no history of syphilis. Four months before admission he was laid up with cough and shortness of breath, with pain in the left side; this was followed by an abscess in the thoracic wall, from which he said five pints of pus were extracted, but the incision healed in a week. For three months prior to admission he had suffered from sudden dizziness and loss of sight when he stooped, which disappeared if he stood up. He also complained of almost constant frontal headache, and had frequently vomited. Two months before he began to have an internal squint.

On admission, he was fairly nourished, looked strong, but had rather a dull expression. He complained of constant frontal headache. If he held his head down everything became dark, but his sight was good in the erect position. His tongue was protruded straight, slightly coated. He walked somewhat unsteadily, slept a good deal, and occasionally walked in his sleep. There was internal strabismus on the left side, and optic neuritis with considerable effusion. His appetite was good, bowels open. He was ordered five grains of iodide and ten grains of bromide of potassium three times a day. On the 13th he had much improved, could see even with his head down, and the headache was less severe. On the 20th there was some general weakness of the left side, and he walked with a slouching, running gait. He was discharged at his own request on March 2nd.

On April 30th he again applied for admission. He had been steadily getting worse since he left the infirmary, and said that about five weeks before he had "a bit of a stroke," and had not been able to walk since. The headache, too, was more severe. In bed he lay on his back, was very restless, kicking off the clothes, and complaining of pain in the head. There was considerable loss of power in the left arm and leg, and he could walk only if supported on both sides. There was considerable left internal strabismus. He could only count fingers at three feet. The tongue was protruded straight; appetite good, bowels regular, but he occasionally vomited. He could not feed himself; slept fairly at night.

On May 2nd he was very noisy at night; slept after a chloral draught. He was ordered fifteen grains of iodide of potassium three times a day. On the 4th he lay in a sleepy condition, but was sometimes noisy. He had great difficulty in swallowing. On the 6th the swallowing was improved, and he said he felt better. He became gradually more comatose, and died on May 12th.

Necropsy, eighteen hours after death. — Body fairly nourished. Brain: Convolutions much flattened, membranes normal; no adhesions. The right lateral ventricle contained a good deal of serum. On opening the ventricle there was seen to be a slight prominence between the corpus striatum and optic thalamus on that side. This was caused by a hard tumour, about the size of a walnut, which, apparently growing up between the two ganglia, encroached considerably on both. In the interior of the tumour was a cavity the size of a filbert, containing thick creamy pus. There was considerable softening and disintegration of the brain matter surrounding the tumour. The lungs were dark and engorged, with old pleural adhesions; liver soft and flabby, but with no trace of syphilitic disease; kidneys much congested; other organs healthy.

CASE 2.—*Cerebellar Tumour; Optic Neuritis.*—W. B——, aged seventeen, admitted Feb. 11th, 1878, under Dr. Eddison. He had had no previous illness. Six months before he began to have pains in the lumbar region and some cough. Three months ago he felt dizzy and occasionally lost his senses for a few moments, falling down, and feeling very weak afterwards. He had had some frontal headache, and was losing flesh.

On admission he was not very intelligent, but fairly nourished. He complained of symptoms as above. Pupils acted to light, but the right was slightly dilated. He could read large print. Motion of eye sluggish, but there was no strabismus. There was double optic neuritis. He was ordered eight grains of iodide and ten grains of bromide of potassium three times a day. On the 15th he still had intense frontal headache and complained of some difficulty of swallowing when lying down. He fell down on getting out of bed in the morning. On March 4th the optic effusion was increased. He walked very unsteadily. On the 9th the left eye was quite blind, and the sight of the right much impaired. He had intense vertigo on sitting up. On the 14th there was some loss of sensibility over the right side of the face. He had vomited. On the 22nd he had two attacks of loss of consciousness, "described as fainting." In the first he was pale in the face; in the second dark. He vomited frequently, and spoke indistinctly, but could protrude the tongue. The head was retracted. On April 15th he felt a little better. He was quite blind except in telling light from darkness. He heard a watch on contact with left ear, and at four inches with the right. The pain in the head was less. He was very weak, and could not sit up. On June 1st he lay quietly, but with occasional cries. His joints were very stiff, body much wasted, and the right side more than the left. He could lift his left arm, but not the right. On the 8th he became comatose; temperature 105°. He died on the 10th. The treatment consisted of increasing doses of iodide of potassium, with draughts of chloral and morphia when the pain was urgent.

Necropsy, eighteen hours after death.— Body emaciated. Bedsores on back and left hip. The cranium was extremely thin, and there was a large amount of cerebro-spinal fluid. The right side of the cerebellum was occupied by a large tumour, closely adherent to, and apparently growing from, the dura mater. The tumour did not encroach on the left side. The rest of the brain was healthy. The right lung was partially solid at the base. The other organs were healthy.

The series will be continued in a future number.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Aneurism of the Subclavian Artery treated by Amputation at the Shoulder-joint and the introduction of Needles into the Sac.

THE ordinary meeting of this Society was held on the 27th instant, J. E. Erichsen, Esq., F.R.S., President, in the chair. One paper was read—viz., a case of subclavian aneurism, in which the procedure recommended by Sir W. Fergusson—amputation at the shoulder-joint and distal ligature—was carried out; and this was followed by the introduction of needles into the sac. Mr. Heath contributed this paper, and deduced conclusions unfavourable to the operation suggested by Sir W. Fergusson, but advocated the use of needles rather than wire or horsehair to promote coagulation in the sac. Mr. Holmes, Mr. Baker, and Mr. Erichsen, however, thought that amputation in such cases was still on its trial, and Mr. Willett urged ligature of the carotid in addition to this procedure as worthy of adoption.

The following is an abstract of the paper on a "Case of Aneurism of the Subclavian Artery treated by Amputation at the Shoulder-joint and the introduction of Needles into the Sac," by Mr. CHRISTOPHER HEATH. After reviewing the recorded cases of amputation at the

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shoulder-joint for aneurism of the subclavian artery, the author narrated his case:—A man, aged forty-eight, subject to fits and paralysed on the left side, was knocked down in the street on Sept. 12th, 1878, and sustained a comminuted simple fracture of the left clavicle, and had several ribs broken, including, as was found afterwards, the first rib. The patient was admitted into University College Hospital for treatment, and was made an out-patient Sept. 29th. He was re-admitted on Oct. 31st on account of a pulsating swelling occupying the posterior triangle on the left side, which proved to be an aneurism of the third part of the subclavian artery. It being impossible to compress the artery between the heart and the aneurism, which rapidly increased in size, Mr. Heath amputated the paralysed arm at the shoulder-joint on Nov. 4th with antiseptic precautions, tying the axillary artery with a catgut ligature. There was secondary hæmorrhage to the extent of four ounces ten days after, when the antiseptic dressings were necessarily abandoned. The patient made a good recovery, but the effect on the aneurism, if any, was so transient as to be practically *nil*. The aneurism continuing to increase in size, a leaden shield was moulded to it for support. On two occasions a grain of ergotin was injected into the subcutaneous tissue without benefit. On Jan. 1st, 1879, Mr. Heath introduced into the sac three pairs of fine sewing needles, making each pair cross within the sac. Considerable clotting of blood took place around the needles, which were withdrawn on the fifth day. The aneurism gradually became solid, but bronchitis supervened, and the patient sank on January 18th. The post-mortem examination showed the aneurism to be cured, the sac being nearly full of dense fibrine, and communicating with the subclavian artery by a very small aperture close to the broken first rib. Mr. Heath concluded that Sir William Fergusson's suggestion of amputation at the shoulder for aneurism is not a satisfactory proceeding, and recommended the introduction of fine steel needles, as having all the advantages of wire or horsehair, with the gain of ready removal without hæmorrhage.—The PRESIDENT, in thanking the author, pointed out that two distinct points had been raised in the paper—viz. (1), as to the value of Sir W. Fergusson's operation in such cases, and (2) as to the *modus operandi* of needles or other solid substances introduced into aneurismal sacs.—Mr. HOLMES said that it must be allowed that Mr. Heath had to contend with great difficulties. At any time the treatment of subclavian aneurism was difficult, but here the vessel was probably much injured, the aneurism being apparently of traumatic origin. A few cases might be cited in which recovery had taken place, but they were mostly axillary rather than subclavian, allowing of the application of pressure on the proximal side. As to the value of Sir W. Fergusson's operation in such cases, it is quite possible that some may not be amenable to this procedure. But in Mr. Spence's case, quoted by the author, the patient lived four years after the operation. In Mr. Holden's case it was true no benefit resulted, but there was no harm done, and the patient was almost *in extremis*. Sir W. Fergusson's method allowed the surgeon to trace the vessel in the stump up to the sac and tie it there, and it was possible that this might be done with benefit in some cases. As to other measures he (Mr. Holmes), relying on Langenbeck's advocacy, had given ergotin a fair trial, but had found it utterly useless. Nor could he conceive the *rationale* of the use of ergotin, for it seemed absurd to argue from the effect of the drug on unstriped muscular fibre to its supposed effect on the walls of an aneurism. He had tried it in five or six cases. He agreed that needles were preferable to iron wire or horsehair, the use of the former of which caused the death of Mr. Moore's patient. But he had no experience on this head. Lastly, he would suggest that surgeons should not be daunted by the failures that had attended Fergusson's plan, for it gave a near access to the mouth of the sac.—Mr. WILLETT said that Mr. Holden in his case performed a preliminary ligature of the axillary artery. There was very slight loss of blood at the operation. In that case it had occurred to him (Mr. Willett) that ligature of the carotid (the aneurism was in the right subclavian), either simultaneously with the subclavian ligature or shortly after, might have been of service. In favour of this was the fact that pressure on the carotid manifestly diminished the pulsation in the aneurism, when this pulsation increased again ten days after the operation. Since then he had had under care a case much like that of Mr. Heath's. Tufnell's diet was enforced, and then the arm was firmly bandaged, a tourniquet placed on the distal side, and firm pressure applied by a shield over the aneurism. Death took place from rupture of the sac, but had this not unfortunately occurred Mr. Willett had intended to perform Fergusson's operation, and at the same time to tie the common carotid artery.—Mr. MORRANT BAKER trusted that Mr. Heath's case would not act as a discouragement to those who wish to carry out Fergusson's operation. The acute suffering experienced in these cases, and the fact that permanent good so rarely followed other measures, pointed to necessity for recourse to this operation. The traumatic origin of Mr. Heath's case, and the probability that the aneurismal swelling was mainly due to extravasated blood, made the case one which could hardly be expected to be much benefited by amputation at the shoulder. The good effects of the introduction of the needles were doubtless largely aided by the previous amputation lessening the volume of blood in the aneurism. He did not think, therefore, that there was sufficient experience upon which to say that Fergusson's operation was not justifiable in such cases.—The PRESIDENT agreed with Mr. Holmes and Mr. Baker in thinking that Fergusson's operation should not be discouraged by the results of these four cases, for the principle of the operation was physiologically and pathologically correct, and it could not be judged solely on clinical grounds. It involved the principle that if the vessel cannot be tied on the cardiac side of the aneurism, ligature on the distal side gives an opportunity for recovery. The removal of the limb restricts the flow of blood through the sac, for it does away with the need for collateral circulation. Mr. Spence's patient lived four years after the operation, and it was difficult to imagine that this did not have some influence, especially as the aneurism appeared to be one of the first or second part of the subclavian, and therefore not a favourable case for operative procedure. In Mr. Holden's case the operation was done as a *dernier ressort*. Mr. Heath had to deal in his case with an aneurism possibly of traumatic origin, associated with fractured clavicle. It seemed to partake of the character of a false circumscribed aneurism. Thus one of the four cases seemed to derive benefit; of another (Mr. Smith's) there was no evidence as to benefit or otherwise; whilst in the other two the disease had advanced so far, and the aneurism had such a very false sac, that scarcely any operation could be expected to produce any great good. These cases alone could not justify surgeons in discarding Fergusson's operation. But if had recourse to, it should be done early. For if these cases do not yield to ordinary treatment they generally become rapidly fatal, and the only chance of recovery then is to tie the artery as near to the external orifice of the sac as possible. As to introduction of foreign bodies into the sac to promote coagulation, he was of opinion that needles, which could be removed, were preferable to wire or horsehair. For in the latter cases—supposing recovery to take place—what would become of the foreign body?—Dr. ANDREW asked whether distal ligature might not in itself lead to harm. Cases occurred, especially of cerebral embolism in young people, where the obstruction of an artery is followed by the formation of an aneurism on the cardiac side of the obstruction. —Mr. HEATH was glad to hear the consensus of opinion as to the propriety of the operation, which, however, he did not think did any good in his case. Careful perusal of Mr. Spence's case showed that it had but little effect on the sac itself. In Mr. Holden's case the patient was *in extremis*, but the sac gave way; and so in Mr. H. Smith's case, where an intrathoracic portion of the aneurism ruptured. Mr. Baker had referred to a case under Mr. Hulke's care. That patient had been previously seen by Mr. H. Smith, who proposed amputation. He then came under Mr. Hulke's care at the Middlesex Hospital, where an apparent cure was effected under diet, &c. He had looked up the authorities on the subject before coming to a conclusion. He was not aware of any case where the carotid had been ligatured, except one recorded by Butcher in his Operative Surgery, where that vessel was secured by mistake. He was glad to hear that Mr. Holmes had not found any good effect from ergotin. The effect of the needles in his case was good, and had he known that the aneurism was so sacculated he should have inserted more than he did, for he thought this a procedure which might be more widely pursued. The risk of hæmorrhage from the insertion of fine needles was very slight; and the risk of the carrying any of the clot into the general circulation was no more than occurs under any form of treatment. Attempts to produce coagulation by the injection of fluids into the sac had been proved to be disastrous.

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CLINICAL SOCIETY OF LONDON.

President's Address.—Subastragaloid Dislocation.—Bullet wound of Lung.—Suppurative Pyelitis treated by Incision.—Chyluria, followed by Glycosuria and Polyuria. —Test Pellets.

THE ordinary meeting of this Society was held on the 23rd inst. Dr. E. H. Greenhow, F.R.S., in the chair. After a brief address from the President, Mr. Pick read notes of a case of successful reduction of subastragaloid dislocation. The subject of bullet-wound of the lung was raised in a case communicated by Mr. Adam. A successful case of suppurative pyelitis, treated by incision, by Dr. Habershon, raised the question of the feasibility of exploratory surgical measures in cases of doubtful diagnosis of renal calculus. Dr. Habershon also communicated a case of glycosuria and polyuria following chyluria. Dr. Allen Sturge exhibited a case of Trade Neurosis.

The PRESIDENT, on taking the chair, thanked the members sincerely for his re-election, and proceeded to refer briefly to the nature of the work which it was proposed at the formation of the Society that it should undertake—a question that rarely came before them. He said: "The Clinical Society was founded for the exclusive purpose of receiving and debating reports of interesting cases, and not for that of reading any other kind of communication, however interesting or important. There are several other societies to which such papers may properly be sent; and as we have our own work cut out for us, we do not desire to intrude upon the functions or province of these societies. I think we shall do well to keep this fact always in view. Further, it was designed that the cases read before us were to be very accurately and fully reported as regards all their essential facts. There was to be—I quote almost the precise words of the original resolution passed at the meeting when the Society was founded, and afterwards incorporated in one of the laws of the Society—there was to be a complete record of the state of the patient when first seen, investigated according to the most approved clinical methods; a statement of the family and personal history of the patient, including a narrative of his present illness previous to his coming under observation; a record of the state of the patient when last seen, or, in fatal cases, a record of the post-mortem examination, together with an abstract of the progress and treatment of the case since first observed. The first Council resolved, after due deliberation, that, as a rule, ten minutes would be long enough for ordinary communications, and directed the President to stop any paper which exceeded this length, until the Society had expressed its opinion as to the propriety of the communication being continued. Almost of necessity this rule has been liberally interpreted by your Presidents, who have sometimes allowed papers which seemed very interesting to be continued beyond the fixed time. It is possible that the rule may not always have been enforced with sufficient strictness, but it has undoubtedly tended much to lead contributors of cases to condense their reports. And I may observe that it does not follow because a case as read before the Society is short, it may not, with the sanction of the Council, be amplified for publication in the Transactions. It may be most useful to detail many facts for future study and reference, which would, if read in full at a meeting, have so complicated the narrative that it would have been difficult to discuss it. If I may be permitted to offer a suggestion as to our future work, it would be to express a hope that we shall be able to devote a larger share of our attention to therapeutics. Accurate knowledge of the action of medicines is, perhaps, the greatest desideratum of the present day. This was one of the objects set before us by Sir Thomas Watson when he inaugurated the first meeting of the Society for scientific work, and I fear that the remarks which he then made are still not altogether inapplicable to medical practice. He said that it had been a lifelong wonder to him 'how vaguely, how ignorantly, how rashly drugs are often prescribed. We try this, and, not succeeding, we try that, and, baffled again, we try something else.' Now nothing would conduce more to the accuracy of therapeutics than series of cases carefully treated upon a similar plan, and brought to the test of a searching debate before this Society. Improved methods of investigating disease have given greater accuracy to diagnosis, and, mainly from the labours of our sister, the Pathological Society, our acquaintance with the effects of disease upon the organs and tissues of the sick, as seen after death, has, of late years, been greatly enlarged; but our knowledge of the precise action of drugs and other appliances for the treatment of disease still leaves much to be desired. I said last year, on taking the chair as President, what is, I believe, universally admitted, that the Society has already done good service, but I also expressed a hope that we should all of us endeavour to do still better. It is with the aim of enforcing, as far as I can, this view, that I have ventured to submit these remarks to your notice."

Mr. PICK read notes of a case of Subastragaloid Dislocation. A gentleman fell off the roof of an outhouse, and caught his foot in falling. When seen, the foot was so twisted that the sole looked outwards, whilst the astragalus formed a marked prominence below the inner malleolus beneath the tightly-stretched skin; the os calcis projected beyond the outer malleolus, and the lower end of the fibula was prominent. It seemed that the os calcis and scaphoid had been displaced outwards and backwards. Attempts at reduction under chloroform, and after division of the tendo Achillis and peronei tendons, failed. Much force was used, the foot was brought more into the natural position, but still the relative positions of the os calcis and astragalus remained unaltered. Subcutaneous injection of morphia and chloroform inhalations were had recourse to for the relief of the severe pain experienced. The next day, in consultation with Sir J. Paget, Mr. P. Hewett, Mr. Henry Lee, and Mr. Gage Brown, another attempt at reduction was made under chloroform. At Mr. Lee's suggestion a bandage was placed round the fore part of the foot, and by this means Mr. Lee made extension forwards, whilst Mr. Pick made lateral movements. The attempt was successful, and, with the exception of a superficial sloughing of skin, where it had been so much stretched, the case made an uninterrupted recovery. It is now three years since the accident, and, beyond a slight limp, there is nothing perceptible in the limb. The contour of the foot is perfect. Mr. Pick then described what he thought to have been the condition in this case. He had seen similar dislocations reduced by slight extension, but in the majority of cases reduction was very difficult, owing partly to the tibial tendons being caught behind the astragalus, but mainly to the interlocking of the bones. The foot is thus displaced backwards, and also laterally. Mr. Hancock had shown the value of forward extension, with the bones of the leg fixed, in the reduction of such dislocations.—Mr. BRYANT said this was an interesting example of a rare form of injury, and he agreed with the author as to the great difficulty of reduction in such cases. In a case he met with some time ago he concluded that the difficulty was due to the cause pointed out by Mr. Pick—viz., that the posterior edge of the astragalus was caught between the articular facets of the os calcis. It was not until he read Mr. MacCormac's paper in St. Thomas's Hospital Reports that he saw these cases of so-called "dislocation of the astragalus" in their true light. Mr. Lee's ingenious mode of reduction favoured the anatomical explanation given. — Mr. H. LEE pointed out that in literature, especially French, such dislocation was regarded as a very formidable affair, calling for amputation or excision, or the retention of a useless foot. The whole of the foot was carried outwards; the sole was turned directly outwards. He had thought much about the reasons of failure on the first attempt at reduction, and, taking this with other cases, he concluded that, with the exception of Mr. Hancock's case, the failure lay in the fact that extension had not been made in the right direction. It had been made parallel to the axis of the limb; but as there were two displacements to deal with—viz., that of the os calcis from under the astragalus, and that of the scaphoid also,—he concluded that traction of the scaphoid *forwards*, and not downwards, was the right course to pursue.—Mr. JAS. ADAMS mentioned that in the London Hospital museum there was a dried specimen showing outward dislocation of the astragalus. There was no history, but he had no doubt the foot had been amputated owing to impossibility of reduction.

Dr. HEWAN then read (for Mr. Adam) notes of a Case of Bullet-wound of the Lung, which he thought might be of interest in connexion with the case recently communicated by Surgeon-Major Alcock. In 1862 a ship's carpenter was

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shot by the captain by a large Colt's revolver. The bullet entered near the left nipple, and lodged under the skin near the inner edge of the scapula, whence it was extracted. Some hæmoptysis followed, and continued for some days, but under rest, simple dressing, and sedatives, the patient was well enough to be removed at the end of the fortnight, and eventually entirely recovered.—Dr. C. T. WILLIAMS thought it remarkable that the heart was not injured. He had attributed the good results in Mr. Alcock's case to hygienic conditions, which also would have had good influence in this case.—Surgeon-Major ROBINSON said that the procedure adopted in the treatment of such injuries in the Crimean war was that of perfect rest and non-interference, precisely opposed to the frequent bleedings, &c., carried out in the Peninsular campaign and advocated by Guthrie. He recalled one case of a Crimean officer who recovered from the wound of the lung, and was sent home, when unfortunately he died from diarrhœa.—Mr. H. LEE contrasted the treatment with that in vogue in Guthrie's day, and recalled the case of an officer shot through the lung in a duel at Portsmouth, when Guthrie recommended bleeding, and Sir B. Brodie declined to interfere. The officer died. Antisepticism of course could not be carried out in such injuries. —Mr. PARKER mentioned that several cases of gunshot wound of the lung in the Franco-German war recovered. It was generally thought that the form and rapid travel of the Chassepot bullet produced a wound more approaching to an incised than a contused wound, like that which the old form of bullet made.—Dr. MAHOMED raised the question of the treatment of the pleural hæmorrhage in such cases. He remembered a case at St. Mary's Hospital where the pleura became full of blood shortly after the injury. Some days later the man had rigors, and the question of paracentesis thoracis was discussed, but not adopted. The man eventually recovered. He referred also to the case of Dr. Duncan, recently wounded near Cabul. Symptoms of pleurisy followed, but it did not appear that any operation was performed.—Surgeon-Major ROBINSON could not recall any cases of paracentesis for hæmothorax in military surgery.—Dr. HEWAN, in reply, said that the ship on which the patient was, was lying at anchor in a river of a notably malarial district. He referred to a case recently recorded in THE LANCET where a large ball, three ounces and a half in weight, penetrated the lung, was extracted, and the patient recovered.

Dr. HABERSHON read notes of a "Case of Pyelitis; discharge of pus; incision in the loin; recovery." The patient, aged twenty-eight, a carman, of phthisical stock, was admitted into Guy's Hospital on the 29th January, 1879. Four months before, he had noticed blood in the urine, and had experienced pain at the end of the penis during micturition. For some time previously he had had pain in the left arm, side, and thigh. A month later a swelling appeared in the left loin, and the severity of the pain compelled him to keep in bed. One night the swelling disappeared, and he passed about half a pint of pus with his urine, and continued passing a little pus for three or four weeks. On admission, he appeared ill and distressed, his sleep was disturbed, and movement gave pain. There was tenderness in the left loin; and dulness from the eighth rib to the crest of the ilium on this side, as well as fulness, but no defined swelling. Harsh breathing at apex of right lung, but no dulness except at the left base, where breath-sounds were absent. The urine was clear, specific gravity 1022; free from pus, blood, albumen, sugar, or phosphates; it contained a few squamous epithelial casts. Evening temperature 102°. Morphia was given to relieve pain. Diagnosis—disease of pelvis of left kidney, probably strumous; but it was doubtful whether there had been tubercular disease at the commencement, and the symptoms did not indicate calculus. On Feb. 8th six ounces of clear, light-green fluid, followed by two ounces of pus, were withdrawn by means of a fine trocar and cannula introduced between the ribs and iliac crest. The fluid had a fetid odour; it contained no urea or uric acid, nor hydatid, but pus-cells and fibrin. On the 14th the temperature was high; the tumour distinctly felt. Mr. Davies Colley made an incision under carbolic spray in the left loin, about three inches in length, just beyond the edge of the quadratus muscle. A firm thick-walled abscess was found and laid open, evacuating nearly two pints of pus. The abscess extended beneath the ribs to about the eighth rib, and downwards about two inches below the crest of the ilium, forwards to the edge of the rectus. Its walls were lined with calcareous material. A drainage tube was introduced, and the wound dressed antiseptically. Quinine was given. On March 21st temperature 102°, the wound had healed, and Mr. Colley reopened it, evacuating half an ounce of pus. From that time he continued to improve, leaving hospital on May 15th. The sinus was still left open, and he was directed to come to the hospital every third day, to have the side dressed. Dr. Habershon remarked that the family history and appearance of the patient suggested the probability of tubercular disease. It was not easy to give a decided opinion as to the cause of the hæmorrhage. The pain at the end of the penis suggested vesical irritation, as from calculus. Perhaps a calculus had blocked the ureter, and led to distension and suppuration in the pelvis of the kidney; but the alternative view of tubercular disease or caseous inflammation, followed by chronic suppurative pyelitis, was more feasible, and was borne out by the semi-calcareous state of the diseased pelvis. The relief afforded by the operation was so marked that Dr. Habershon felt sure that had it been postponed the man would soon have become exhausted, and he suggested that it might be more frequently resorted to in such cases with benefit and the saving of life. It would be well if the whole gland could be safely removed. He mentioned a case of a man who, from the age of sixteen or seventeen, suffered from periodic discharges of pus from the bladder, the discharge of pus being preceded by the formation of a large projecting sac, extending from the ribs to the iliac fossa on the right side. He lived to the age of sixty-four, dying from cancer of the remains of the kidney, and it was found after death that a calculus blocked the ureter, and that pus collected until the distension of the ureter made the passage free. In a note appended to the case that had been read, Mr. Colley states that the chambered character of the sac indicated its being an enlargement of the pelvis. The discharge continued until the end of October, and when last seen in November the wound had been healed two weeks, and no signs of any abdominal tumour remained. Mr. GOLDING BIRD endorsed Dr. Habershon's statement as to necessity for early operative interference, and further suggested that surgical aid might be had recourse to for the purpose of diagnosis. In a case under his care, with painful symptoms of prostatic and probably also renal disease, where there was a swelling in the neighbourhood of the kidney, he cut down upon that organ, and explored it thoroughly. The operation gave no relief, but it was performed only for diagnosis. When there were symptoms of calculus in the kidney, surgical aid might be called in to establish the diagnosis. It only required a simple incision, and the risk to the patient was *nil*.—Mr. WALSHAM said there was another method by which this end could be attained—viz., exploration by the whole hand in the rectum. Simon had thus detected stone in the renal pelvis. He (Mr. Walsham) had employed this method in five cases, and had easily reached the kidney. He had never found any ill result occur.—Dr. HABERSHON said there was sometimes great difficulty in distinguishing between an abscess of perinephritic character and one of pyelitic origin. The value of operation was well illustrated in the case he had brought forward.

Dr. HABERSHON also read notes of a Case of Chylous Urine after ague in India; Albuminuria; cessation of Chylous Urine, with the development of Glycosuria and Polyuria. The patient, a female aged fifty-nine, was in India from the age of two years till she was forty; then after a stay of two years in England, returned to India for ten years more. She had had twelve children, being married when she was about fifteen years of age; and at sixteen she had her first attack of ague, and afterwards had repeated attacks before she left India. For three years she noticed her urine to be white and milky-looking; this condition lasting till admission into Guy's Hospital on July 12th, 1876. The liver was enlarged. Appetite good; great thirst. Urine 1025, milky in appearance, containing both albumen and sugar. Opium and quinine were given. On July 18th the urine passed before breakfast was lighter in colour, but that passed afterwards was opaque and milky. The quantity was nearly five pints. She was placed on restricted diet, with gluten bread. The urine remained milky, but the sugar lessened. On August 7th the quantity of urine passed was four pints twelve ounces, but it was free from sugar. Various specimens of urine and of her blood were examined for filariæ, but none were found; when allowed ordinary diet the sugar returned. On September 20th there was no sugar in the urine, its sp. gr. 1020, but the sugar returned after the allowance of ordinary bread. On October 10th Mr. Higgens found opacity of the

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lenses, and on the 17th performed iridectomy on the left eye. November 11th, the urine passed after breakfast became clear; 15th, it was clear, of sp. gr. 1012, free from albumen, but it contained sugar; about four and a half pints of urine were passed during the day. When the ordinary bread was allowed the sugar increased, and on Nov. 23rd the specific gravity was only 1010, but the urine still contained sugar. On Dec. 2nd she passed nine pints of urine in the twenty-four hours, clear and pale, sp. gr. 1010, free of albumen, but containing sugar. On the 19th eight pints and a half of urine, sp. gr. 1014, contained 242 grains of sugar. During the whole of January the urine was about the same, clear, eight to ten pints in quantity, sp. gr. 1010 to 1012, and it contained sugar, and on Jan. 27th there were 1800 grains of sugar found. On Feb. 5th she passed nine pints, sp. gr. 1010, and after fermentation the specific gravity was 1006, and about 730 grains of sugar. She remained in the hospital till Feb. 21st; her general health had improved, the chylous urine had ceased, the albumen had also disappeared, but the urine continued of low specific gravity, and contained sugar. This case was one of chylous or of lymphous urine, for there was spontaneous coagulation, but it was associated with glycosuria. Albumen soon disappeared, but the sugar remained. At first the sugar ceased when the diet was restricted, but it afterwards became more decided and permanent. Search was made many times for filariæ, but none could be detected in the blood after careful microscopical examinations. In recorded cases of chylous urine the condition has been referred to change in some of the lymphatic vessels connected with the kidney, but its association in this instance with glycosuria suggested the idea that both conditions, the presence of chyle and of sugar in the urine, might be referred to change in the liver. Of the hepatic disease there was no positive proof, and the connexion with the liver must be regarded as conjectural, at any rate as regards the chylous state.—Dr. PAVY said the patient had been subsequently under his care for several months. The chyluria had wholly disappeared, but she continued to suffer from a mild form of saccharine diabetes conjoined with polyuria. He had seen one or two of these cases. On putting the patient on a restricted diet, the sugar disappears, but the polyuria continues. He thought it likely that the vaso-motor paralysis, to which he attributed diabetes mellitus, might account also for this occasional conjunction with diabetes insipidus. He held that in diabetes mellitus there was vaso-motor paralysis affecting the chylopoietic viscera, so that the portal blood was not sufficiently dearterialised, and he had shown that when such was the case saccharine urine was produced. He did not think the chyluria had anything to do with the glycosuria, and he read a short note of a case where chyluria disappeared during pregnancy, but reappeared after parturition. He believed that in such cases there was an abnormal communication between the absorbents of the chylopoietic viscera and those of the renal tract. It was impossible that it should be due to connexion of absorbents with the arterial system, for the higher tension of the arteries would not allow of a flow from the absorbents into the bloodvessels. If the natural passage of the chyle were obstructed, it might find its way into the absorbents of the urinary tract; but he did not see how the liver could be concerned in it.

Dr. PAVY introduced to the notice of the Society a new form of Test for Sugar. He considered the cuprie test by far the most reliable, and this view stood in accord with that which was generally entertained by analytical chemists. It had been hitherto the practice to employ the test in the form of a solution, prepared by mixing an alkaline tartrate with sulphate of copper and either potash or soda. When freshly prepared this solution fulfils all that can be desired; but there is the disadvantage belonging to it that, after being kept for some time, especially if exposed to light and air, it is liable, without the presence of sugar, to throw down a certain amount of reduced oxide on boiling, and thus possibly to mislead unless precautions are taken to provide against it. Dr. Pavy had long felt that it would be very desirable if the ingredients of the test could be incorporated and kept in a solid form; and some years ago he made a fruitless attempt to attain this object. Latterly he had given his attention afresh to the subject, and the test pellets shown were the result of this. They contained the solid ingredients of cupric test solution in a dry state, and they were brought into the condition of a coherent mass by compression. The preparation had been placed in the hands of Mr. Cooper, of Oxford-street, who most successfully met the difficulties that were unexpectedly encountered. There appeared no reason why the pellets should not keep for an indefinite time without undergoing change if preserved in a closed bottle away from moisture. In using them all that was necessary was to place one in a test-tube with about 3 cc., or rather under a drachm, of water, and to apply heat until complete solution had occurred. It formed a clear, deep-blue liquid, which actually constituted the cuprie test solution. At present it was only as a qualitative test that the pellets were introduced, but there was no reason that hereafter the preparation should not be conducted with sufficient attention to accuracy of weighing to render them applicable for quantitative analysis.

MEDICAL SOCIETY OF LONDON.

A Rare Case of Aortic Disease, with absence of Arterial Pulsation.—The Treatment of Leucocythæmia.

AT the meeting of this Society on the 26th instant, Dr. Cockle, President, in the chair, proceedings commenced by the PRESIDENT reading notes of three cases under his observation. The first was one of Double Ptosis; the second and third of Cardiac Disease. The last was most anomalous. Eleven years ago Dr. Cockle, with Dr. Anstie, brought this case before the Clinical Society. The patient, a man, was then forty years of age, and presented a remarkable instance of almost total absence of sensible pulsation in all the accessible arteries. His mother had cardiac disease, and he himself had always been delicate, and for many years had palpitation of the heart. When twenty-five he had typhoid fever, followed by severe and periodic headache. In 1868 he began to suffer from attacks of giddiness. About this time he fell on the ice, striking his head violently, and from that date the headache and giddiness became constant. His habits then were not very temperate. Physical examination revealed normal area of heart's dulness and impulse; but at the sternal border of the second right interspace was a small well-defined area of dulness, where a thrilling impulse could be felt and seen. Here also a harsh systolic murmur was audible, conducted to clavicles, but not heard at apex nor in carotids. The second sound was loud and dull. A committee, consisting of Drs. J. C. B. Williams and Sanderson, reported on the case. They detected pulsation in one radial artery, and obtained a sphygmographic tracing which indicated aortic stenosis. They also detected an occasional grating bruit replacing the aortic second sound, and concluded that there was a saccular aneurism of the first part of aorta, the absence of pulsation in the arteries being attributed to narrowing or nearly complete obstruction of the aorta beyond the dilatation. For eight years out of the eleven which have since elapsed the patient has been constantly under Dr. Cockle's observation, and the view of aneurism seems no longer tenable. Pulsation can now occasionally be detected in the radial and crural arteries. A loud diastolic murmur has developed, and the systolic bruit is now audible in the carotids. There is also evidence of dilated hypertrophy of the left ventricle. The headaches have ceased, but he is subject to attacks of giddiness and faintness, and has a tendency to bronchial catarrh. Dr. Mahomed had obtained sphygmographic tracings indicative of aortic stenosis, without any evidence of dilatation. Dr. Cockle remarked on the singular fact of the long-delayed appearance of ventricular enlargement, and said that a defect in both irides went to support the view of some congenital malformation.—Dr. GOWERS remarked that but little was known of aneurism complicated with stenosis of the aorta, which may probably have a conservative effect.—Dr. ROUTH said that several years ago he saw a similar case following acute rheumatism. There were presystolic and diastolic murmurs varying with position.—Dr. SYMES THOMPSON referred to effect of exercise in developing murmurs.—Dr. CRISP mentioned a case he had published forty years ago, where arteritis led to gangrene. Amputation was performed without the need of the tourniquet. A short time since he saw the patient again, and pulsation could then be detected in the arteries.—Dr. DOWSE suggested that the patient might have had an aneurism, the sac of which had

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become spontaneously filled up. He had seen a case where pulsation, which had been visible over a large area, had disappeared, and where life was prolonged to old age. After death the aorta was found to be nearly blocked up, only a channel being left.

Dr. ALFRED CARPENTER then read a paper on the Treatment of Leucocythæmia. The author pointed out that there was something wanting in the present plan of dealing with therapeutics, inasmuch as members of the medical profession are continually trying processes for the cure of diseases which have been shown to be useless, and that text-books continue to recommend medicines which have never done any good. He then gave the history in general terms of two cases of leucocythæmia which he had met with in private practice, and in which there were singular symptoms, one being associated with intense neuralgia, the other with recurring priapism. The neuralgic case was treated by means of iron, stimulants, and narcotics. In the opinion of the author the remedies only increased the intensity of the pain. He always found that the internal as well as the cutaneous administration of narcotics left the patient more sensitive after the effect of the dose had disappeared, that they were useless in arresting the course of the disease. He entered a protest against the cutaneous administration of narcotics as only another form of intoxication, and he objected to medical men making themselves parties to so reprehensible a practice. He had found iron and stimulants unable to arrest the course of leucocythæmia, and he urged that their use was only a waste of time. The second case was treated by means of bromide of potassium, iron, quinine, and turpentine. The priapism had recurred at regular intervals for some time; it had not been controlled by any of the ordinary remedies used, but it seemed to be mastered by the use of galvanism. He deduced five points as worthy of record, and which the author considered to be in a great measure proved by the results of this case (fortified as they were by his experience in the treatment of others). Point 1 was that bromide of potassium did not arrest the course of the disease, and had no effect upon the enlargement of the spleen in this disease. Point 2, that quinine did not have any beneficial effect in leucocythæmia, and it seemed by this result to separate the disease entirely from those affections of the spleen which are associated with malaria; that even in the large doses which were given for nineteen days—viz., twenty-grain doses three times daily—there was no reduction of temperature and no decided alteration in the course which the disease took, the daily rise of temperature being the same as before quinine was administered. The 3rd point, that the hæmorrhagic tendency (which is one of the symptoms of the disease) was not in any way arrested by the use of perchloride of iron. Point 4 was shown in the inability of turpentine to stay its progress, and which seemed to show that iron and turpentine would be beneficial in those cases in which the blood had not altered from its natural state, but that both were useless in conditions such as arose in leucocythæmia. The 5th point was that aperients were worse than useless. The author concluded by pointing out the possible connexion between the disease and eczema. All the cases he had met with had been preceded by that disease, and he asked members of the Society to give a good trial to arsenic in any cases which might come to their notice, and to publish the result, but not to waste their energies in using bromides, quinine, salicin, iron, turpentine, stimulants, or narcotics.—The PRESIDENT, in thanking Dr. Carpenter, mentioned a case which came under his care at the Royal Free Hospital. At first the signs of disease were not well marked, but after a few weeks the spleen began to enlarge, and rapid wasting set in. The patient left the hospital, and died ten days after. Oxide of silver was the only remedy that appeared to do any good in this case. The leucocytes in the blood were in the proportion of about one in ten of the red corpuscles.—Dr. GOWERS considered the great lesson taught by Dr. Carpenter's paper was the hopelessness of the treatment at present adopted in the later stages of this disease. He thought that the priapism in the second case was malarial, coming on as it did every three days. He believed that leucocythæmia is often due to malarial influences, and that the influence need not be recent. Quinine is useless when the disease is far advanced; but in the earlier stages it should always be given. Enlargement of the spleen could be reduced by galvanism. He had also seen much good done by arsenic at the commencement of the disease, but when much enlargement of the spleen had taken place this remedy was of no use. He thought Dr. Carpenter's observation about purgation was most valuable. It was considered that constipation congested the spleen, whereas the author had shown in his paper that purgation was prejudicial in leucocythæmia.—Sir W. GULL said he had come to learn, and not to discuss this question. However, he had seen a good many cases of leucocythæmia and their treatment, and he thought that miasmatic influences were potent agents in producing the disease. The case which he saw with Dr. Carpenter was a severe one. One peculiarity was the large size of the leucocytes, which were in the proportion of one to thirty of the hæmocytes, and varied in size from $\frac{1}{1500}$ to $\frac{1}{1000}$ of an inch. There was also splenitis and capsular mischief, and diseased kidneys. In these cases early recognition was most important, if the treatment is to succeed. Iron, quinine, and arsenic are the best remedies that can be used.—Dr. CRISP referred to enlargement of the liver as being a very important feature in these cases. In one case, where the spleen weighed 9 lb., the liver was also much enlarged. In another case he had seen—of a young man—leucocythæmia came on after violent exercise, and terminated fatally in a year. Both spleen and liver were enlarged. He believed that intermittent and violent exercise may produce this disease; and stated that he had examined the spleen in 130 London cab-horses, and in many of them there was great enlargement of this organ.—Sir W. GULL stated that there was malaria all over London, and he would like all these patients to take both quinine and arsenic.—Dr. CARPENTER, in reply, said that in his second case, although there was no definite history of malaria, yet he thought it might have had some share, for the patient had travelled through a malarial district in America, and had also lived in Lambeth. In Case 1 he thought there was more mental than malarial influence at work. In Case 2 the spleen weighed nine pounds, and the liver was about double its usual size. He could not approve of quinine in the later stages of the disease, but arsenic might be useful. He hoped that the Society would organise some plan for thoroughly testing certain remedies in this disease.

EPIDEMIOLOGICAL SOCIETY.

Relapsing Fever of India.—Epidemic Diseases in Man and Animals.

AT the meeting of this Society held at University College, Gower-street, on Wednesday, Jan. 7th (President, Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S.), two papers were read. The first was by Dr. NORMAN CHEVERS, entitled "Notes on the Relapsing Fever of India," of which the following is an abstract:—Relapsing fever, having been recognised in Europe in 1842, was first distinctly observed and described in India by Dr. Robert Lyall, in 1852–53. Our knowledge of the disease, however, enables us to perceive that very extensive and destructive epidemics of Indian relapsing fever occurred in the North-West Provinces in 1816 and 1836. In giving histories of these epidemics, the author remarked that it is particularly noteworthy that the first visitation of Pali plague prevailed in Western India from 1815 to 1819, and that the outbreak of relapsing fever in 1816, described by Mr. Jameson, occurred in the Upper Provinces only a few months previous to the commencement in Lower Bengal of the great cholera epidemic of 1817. So also, when, in 1836, the Pali plague, commencing in Marwar, spread rapidly and attacked thirty-two villages of Meywar, a destructive epidemic, which must have been relapsing fever, made its first appearance in the town of Bareilly, and committed serious ravages in Mynpaorie and in the districts round Delhi. The history of the outbreak of relapsing fever in 1852–53 in the Yusufzie Valley, situated about forty miles from Peshawur, was then given from Dr. Lyall's narrative. In this epidemic were displayed all the most distinctive characteristics of the relapsing fever in India, which, unlike the cognate disease of Europe, is very destructive of life—an extremely prevalent and fatal epidemic or endemic fever, arising among the poor and starved, and spreading to the well-to-do inhabitants by force of its contagiousness. The tendency to relapse is very marked, convalescence is tardy, there is generally jaundice, and

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quinine has no specific power as an antidote to the fever-poison. Dr. Joseph Ewart, who was the first person who recognised the existence of true enteric fever in India in 1855, noticed what he considered to be some cases of relapsing fever in Upper India at about the same time. Several years, however, had still to elapse before the occurrence of relapsing fever in the gaols of Upper India was generally suspected. A very destructive contagious fever appeared in the Central Gaol at Agra in 1860, and was described by Dr. Walker. It again prevailed in a very deadly form in the Agra gaol in 1864, and in Etah; and the following year it appeared in the gaols of Umballah, Futtehghur, Allyghur, Jypore, Malwar, &c. It was described by the several reporters as true typhus, contagious fever, typhoid fever, and, in the words of the sanitary report, "some again believe it to be identical with the relapsing fever of Europe." Dr. Gray, Dr. Beatson, and Dr. Dallas clearly recognised this disease, as it occurred at Agra, Lahore, and Umballah, as relapsing fever. The whole question was most fully and ably reviewed by Dr. David Boyes Smith in the *Indian Medical Gazette* for 1867 and 1868, and, although his verdict met with a good deal of opposition (especially from the medical side of the Indian Sanitary Commission), he brought forward very strong arguments in favour of the opinion that the contagious fever of the up-country gaols was nearly identical with the relapsing fever of Ireland, Scotland, Germany, and America. Indeed, the Sanitary Commission went so far as to admit that the disease resembles the famine fever of Europe in many important particulars. The history of the outbreak of relapsing fever, which commenced in Bombay in April, 1877, was then given from the reports of Drs. Hunter and H. Vandyke Carter, and many facts were brought forward in support of the argument that, although relapsing fever has not appeared in Lower Bengal of late years, that country was subject to its ravages up to and beyond the end of the last century.

In the second paper, "Remarks on Epidemic Diseases, in Men and Animals, in the Colony of Natal," by Surgeon-General Ross, C.I.E., the author, after describing the geographical position of the colony of Natal, pointed out that the inhabitants of the colony, at the close of 1878, are believed to have numbered 22,654 whites and 302,558 natives, 12,000 being natives of India. The area in square miles is stated to be 21,150, giving 1·07 whites and 14·7 blacks to the square mile. With so recent a history of colonisation (between twenty and thirty years), and with such a sparse population, no occurrence of epidemics would be anticipated. The climate of the colony has proved exceedingly healthy for men, women, and children; it is therefore an anomaly that, with such a healthy climate for whites and blacks, the country should be so unhealthy and so subject to disease and epidemics among animals. Cholera has never been known; small-pox only once caused a few cases on the Zulu border of the colony. During 1878 there was a small outbreak of typhoid among the residents of Durban, due to defective conservancy arrangements and imperfect water-supply, and a few scattered cases occurred during the first half of 1879. Typhoid fever was the principal if not the only disease which affected the troops during the recent campaign in Zululand. The disease which affected the troops shut up in Ekowe the Medical Department classifies as typho-malarial, being a fever of malarial type with rose spots and well-marked lesions of Peyer's glands. There are probably two forms of typhoid fever, the one, which might be called European, arising solely from sewage contamination; the other, or more eastern type—prevalent perhaps in certain latitudes where there is the same type of fever—more due to climatic than filth causes. Horses and mules are affected by horse sickness, which is described as anthrax fever resulting from the action of a poisonous agent ingested with the food, impairing vitality, and inducing a morbid state of the system, with congestive inflammation of the lungs and often external tumours. It is believed to be identical with the "poodianah disease" of India, and to be due to some poison in the grass of certain lands, probably parasitic fungi. Horses are also liable to a form of diarrhœa popularly known as "squitters." The diseases of oxen are "lung sickness," "red water," and "quarter evil." The first of these is identical with pleuro-pneumonia; it occurs all over the colony, is worse in some parts than in others, and is not affected by climate. "Red water," or hæmo-albuminuria, is a blood affection attended with more or less derangement of kidney, liver, and stomach. It lasts for five or six days, and is most fatal and prevalent after the rains of early summer. It is said to be due (1) to feeding on grass containing an excess of water, or on grass containing parasites or fungi, and (2) to bad drinking water. "Quarter evil" is a species of malignant anthrax affecting the legs and hams. Sheep suffer from "heart water," a disease in which there is fever and effusion into the serous cavities, and is said to be caused by bad pasturage, dry rearing, &c.

In the discussion which followed the reading of the two papers Sir Joseph Fayrer, Surgeon-General Ewart, Inspector-General Lawson, Dr. Buchanan, Dr. Greenfield, Mr. Netten Radcliffe, and Dr. Thorne took part.

Reviews and Notices of Books.

The Royal London Ophthalmic Hospital Reports. Edited by J. HUTCHINSON. Part III., Vol. IX. December, 1879.—Amongst the original contributions in this part are:—A Series of Groups of Amaurosis, being a continuation of a previous paper by Mr. Hutchinson. The groups here given comprise neuritis after otorrhœa; amaurosis after injuries of the head or of the fifth nerve; optic neuritis from unascertained causes and from renal disease; progressive amaurosis, with atrophy of the optic discs, following intemperance in wine, tobacco, or sexual indulgence, or accompanying old age, or resulting from embolism, lead-poisoning, and other causes. This paper is illustrated by a large number of cases drawn from Mr. Hutchinson's own experience. Dr. Renton gives a case of Enucleation for Sympathetic Ophthalmia. Dr. Landolt contributes a good paper on Myopia, which he defines to be "the sign of a disproportion between the refractive power and the length of the eye." Hirschberg, of Berlin, describes various refraction-ophthalmoscopes. He approves of oblique reflectors. The most important paper, however, is by Dr. W. A. Brailey, the Curator of the Museum of the Moorfields Hospital, on the Pathology of Increased Tension. This embraces the consideration of no less than 149 cases in which the tension of the eye was accurately determined and recorded at the time of excision. Dr. Brailey notes that in almost all the cases of pure glaucoma a most important change is observable in some or all of the bloodvessels of the interior of the eye, which consists in a great enlargement of their calibre accompanied by thinning of their walls. This condition is chiefly observed in the vessels of the ciliary region and affects the arteries more than the veins. It appears to precede the atrophy of the ciliary muscle which is present in advanced glaucoma. Dr. Brailey finds that in almost all cases of glaucoma, with increased tension, the periphery of the iris is applied to the adjacent corneal margin, and the applied base of the iris generally presents some slight inflammatory appearances. The canal of Schlemm was completely closed in 50 cases, barely visible in 61, of moderate size in 39, large in 19, and the general conditions were such that it could rarely act as a means of escape for the fluids of the eye. No changes of importance were noted in the retina, nor in the choroid or sclerotic. The vitreous was often discoloured, and contained more fluid than usual. In a second group of cases, in which the glaucoma originated in some injury or attack of disease, the same alterations of the principal tissues and membranes of the eye were observed as in pure glaucoma. The conditions present in isolated cases of glaucoma, [associated with intraocular tumours, are next detailed, and Dr. Brailey describes a fourth group originating in irido-cyclitis, and a fifth where glaucoma followed corneal staphyloma. This paper does great credit to Dr. Brailey, and contains] the results of a large amount of patient microscopical work on an obscure subject. The last article in the number is by Priestley Smith on Bilateral Deviations of the Eye.

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Annals of Chemical Medicine, including the Application of Chemistry to Physiology, Pathology, Therapeutics, Pharmacy, Toxicology and Hygiene. Edited by J. L. W. THUDICHUM, M.D., F.R.C.P. Vol. I. London: Longmans, Green, and Co. — The first volume of the new periodical which Dr. Thudichum proposes to issue for the purpose of advancing the sciences which are fully enumerated on the title-page, has remained some time on our hands. As, however, the materials of which it is composed have already appeared in "various repertories of original information," and so have been brought under the notice of the profession, we make no apology for the delay. The title of Dr. Thudichum's new work is unfortunately misleading; for the profession will be led to suppose that it embraces contributions from the foremost labourers in the field of medical chemistry at home and abroad; whilst, in reality, this volume is, as far as we are able to judge, filled with contributions by the editor which have appeared in the "Reports of the Medical Officer of the Privy Council, 1866, 1876," "Reports of the Medical Officer of the Local Government Board, 1876 to 1879," "Journal of the Chemical Society," &c. The explanation of this exclusion of fellow-workers is indeed apparent from the preface. "There are professed physiologists in this country and abroad, who though very imperfectly acquainted with either the theory or practice of chemistry, have nevertheless affected to speak as persons having well-founded convictions on the subject; with their pretended convictions, however, resting on no better basis than the haphazard opinion of some professed chemist or other, or the conceited and sensational papers which, in chemistry as elsewhere, are written for mere claptrap and without research. Among the professed chemists there has sometimes been equal absence of knowledge, but in such cases, as a rule, more discretion. Nevertheless, men of externally high position have persistently done all they could—sometimes by silence, sometimes by innuendo, sometimes by obstruction—to thwart the endeavours which others have made to advance medical science by original chemical researches." In short, till professed physiologists and chemists educate themselves to the high standard indicated by Dr. Thudichum, their contributions will not, it seems, be deemed worthy the pages of the "Annals of Chemical Medicine." Although unsupported through the unworthiness of the teachers of the day, we hope Dr. Thudichum will not despair, but will continue to fill the pages of his periodical with his own researches, even though he has to act as his own editor.

Skin Diseases, including their Definition, Symptoms, Diagnosis, Prognosis, Morbid Anatomy, and Treatment: A Manual for Students and Practitioners. By MALCOLM MORRIS, Joint Lecturer on Dermatology at St. Mary's Hospital Medical School, &c. Smith, Elder, and Co. 1879. —Mr. Malcolm Morris has lately added another to the now numerous existing manuals of skin diseases. We shall not here discuss the utility of the multiplication of such text-books, because we recognise in the fact the growing attention paid of late years to this much neglected branch of medicine, and a proof of the increased number of workers in this field. This manual originated in the notes arranged for Mr. Morris's lectures at St. Mary's Hospital Medical School, and his object has been, not to interfere with or attract from the study of more elaborate works, but to present to the student with limited time and to the busy practitioner a more condensed account concisely written and arranged according to an easily intelligible method. Mr. Morris divides skin diseases into two great sections—viz., diseases of the skin proper, and diseases of the appendages of the skin; and then proceeds to subdivide into classes and subclasses, according to Hebra's method mainly, modified in some respects by the adoption of Dr. Bulkley's views, such as the dissociation of zoster from herpes febrilis and preputialis, and its arrangement under the neuroses. Syphilis is considered in connexion with the exanthems. The anatomy of the skin is illustrated by, amongst others, some of Klein's figures, but is briefly considered, and the physiology very briefly. A useful and concise chapter on morbid anatomy follows, and then Mr. Morris proceeds to discuss the subclass of exudations induced by contagion much more fully than is usual in a work of this kind, not limiting himself to a description of the skin phenomena, their diagnosis and morbid anatomy, but introducing, for instance, the prognosis and treatment, and discussing the differences between the throat lesions in diphtheria, tonsillitis, and herpetic sore-throat. We are inclined to think this a mistake. In the remaining bulk of the manual the views set forth are mainly those of Hebra and Hutchinson. The danger in such books is to become sketchy in the attempt to be simple and brief and not to overload the subject with details, and a further danger lies in not adjusting the consideration of each subject in proportion to its relative importance. We think Mr. Morris has not completely escaped either of these dangers; the definitions of disease appear to us to be often unsatisfactory, and the suggestions for treatment meagre and frequently by no means showing a hopeful spirit. Having made these criticisms, we must add that the book is clearly and concisely written, and the subject handled in a way calculated to be readily intelligible to students. The type is excellent, the work neatly got up and of a convenient size, and the manual ought to be very useful for the purpose for which it is intended.

A Manual of the Practice of Surgery. By W. FAIRLIE CLARKE, M.D. Oxon., F.R.C.S., late Assistant-Surgeon to Charing-cross Hospital. Third Edition, revised, enlarged, and illustrated by 190 engravings. London: Henry Renshaw. 1880.—The third edition of this, the smallest of the English manuals of surgery, shows signs of many improvements upon the former ones. The descriptions of many diseases are, however, defective. Thus, on turning to the chapter on Constitutional Syphilis, we find no mention of gummata, nor any reference to the special changes in the teeth and cornea so often met with in congenital syphilis. The order in which the subjects are treated also detracts from the value of the book; injuries, diseases, inflammations, and tumours follow in the oddest manner, while the text is not characterised by that masterly grasp of the subject, that power of sketching broad general outlines and principles in a few words, or of grouping and classification, which makes some small books invaluable to students.

Atlas of Skin Diseases. By LOUIS A. DUHRING, M.D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania, &c. Part VI. J. B. Lippincott and Co. 1879.—This part contains four plates—viz., of Syphiloderma (pustulosum), Erythema Nodosum, Seborrhœa, and Eczema (papulosum). The high expectations raised by the earlier parts of this atlas continue to be abundantly satisfied, and there is certainly no falling off either in the care with which the subjects have been selected or in the beautiful execution of the chromo-lithography. Dr. Duhring's efforts in this Atlas have been crowned with great success, and he is giving us portrayals of skin diseases by far the most truthful that have yet appeared.

Anatomography, or Graphic Anatomy. By WILLIAM DARLING, M.D., F.R.C.S. Eng., Professor of Anatomy in the University of New York.—These tables are intended to assist the student to remember the many anatomical details gathered from books and dissection. Experience alone will fully test their value, but there is the fact that such synopses are of but little use unless drawn up by students themselves.

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THE LANCET.

LONDON: SATURDAY, JANUARY 31, 1880.

STRANGE and painful as have been the incidents attending the retirement of Dr. FARR from the position of chief of the Statistical Department of the General Register Office — a contingent result of the resignation of Major GRAHAM as Registrar-General, — good may come out of evil if such changes should now be made in the Statistical Office as are necessary to facilitate the establishment of a central consolidated department of public health. We are not prepared to recommend or to fall in with the suggestion that the administration of the Health Acts, together with *all* vital affairs, should be concentrated under the ægis of the Local Government Board. So far as we can form an opinion from the general working of the department just mentioned, it has already as much to do as it can well manage; and unless it is once for all conceded that State Medicine is never to grow out of or to be rescued from the toils of parochial medicine, there can be little of hope in a policy which entrusts the practical control of health throughout the country to the keeping of a department which so persistently defers to local influences as does the Board of Local Government at Whitehall. In short, we have scant confidence in the organisation which has been created by the amalgamation of the old Poor-law Board with the central registry of local Acts, and we doubt whether it can ever be reasonably expected to discharge the functions of a State Department, considering its inherent constitution and the heterogeneous elements whereof it is composed. Added to this last-mentioned fact is the political circumstance that, however greatly the Local Government Board may be strengthened and developed by the right honourable gentleman who now occupies the office of President, or by his successors, a department of the Administration originated as this has been must long, if not permanently, remain subordinated to the Privy Council, and that august body is quite sure to interpose with its veto, or conflicting authority, in any critical conjuncture — for example, the sudden appearance of an extensive epidemic, whether newly imported or resuscitated from the buried, but not devitalised, débris of some old contagion. We must face the awkward fact that in spite of the most adroit piecing together and cementing, the Local Government Board is a composite body, made not developed, and while it would on many accounts seem natural to bring the machinery of vital statistics into the closest practicable relations with any executive by which the health of the population is to be promoted and human life prolonged, we are not, as we have said, prepared to think the amalgamation to which recent rumours point as the most judicious or promising that might be devised.

The need of the country is a Ministry of Public Health, with a *political* head, who shall have a seat in the Cabinet and a voice in the Government, more particularly now that health is justly deemed to be paramount among the factors of public prosperity. We oppose the project of instituting a *medical* Minister of Health on grounds in strict harmony with those on which we have condemned the proposal to place a layman in the chair of the Medical Council. Any Minister of Public Health should be competent to treat measures for promoting the physical welfare of the people as integral parts of the State policy—as a whole. The Medical Council must, on the other hand, be wholly medical in its instincts and proclivities, or it can never fulfil the primary purpose of legislating *for* the profession. The Council stands in the same relation to the medical profession as the amalgamated board of the Inns of Court bears to the profession of Law. It would be monstrous to place a layman at the head of the lawyers, and it would be equally absurd to appoint a lay president to the Medical Council. Meanwhile public health is an affair of State in which the medical profession has only a limited interest. We may advise, but it is impossible to assume that those who are authorities on the question of scientific expediency are equally well informed on subjects of political economy. Nothing can be gained by claiming more for Medicine or medical men than is their due. It is not our function to make laws, but the best interests of the country require that Medicine should have a voice in the highest counsels of the nation, and this condition of public prosperity will not, we are convinced, be satisfied until a political Minister of Public Health is appointed.

The intimation that the new Registrar-General is to be placed under the superintendence of the Local Government Board by a special provision is not one which ought to be allowed to pass without discussion; but in its present vague shape we scarcely know what opinion to form as to the proposal. If it be the fact, as alleged, that Mr. SCLATER-BOOTH has in view the ultimate erection of his department into a Government of Health, he will do wisely to lay aside some of the bâtons he has been previously induced to wield, while taking in hand new and important duties. It is the local element in the Board we fear. That has been the source of weakness and confusion heretofore. No Administration in affairs of sanitary policy can hope to reconcile the narrow interests of localities with the broad exigencies of national health. Many able men have been misled by the notion that because the health of the population seems to be an aggregation of the healths of individuals, therefore a sound sanitary policy may grow out of the successful working of local Health Acts. This fallacious method of reasoning will, it is to be feared, be confirmed, rather than corrected, by the official cognisance of such returns as are made to, and such impressions as are commonly drawn by, the Registrar-General. Members of our profession who have given any serious attention to the subject will not need to be reminded that every county and district in the kingdom may be able to show a low death-rate, while the population, as a whole, is neglected in its vital Health interests, and left wholly unprepared to cope with any invasions of disease. In short, the Registrar-General's Returns may supply a good indication of the variations in local health, but they can never serve the more important purposes of a barometer of national health vicissitudes. We see much reason to dread the increased use of vital statistics at Whitehall, unless the returns which are included under that designation are

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viewed from a standpoint, and subjected to a scrutiny, from which they have never been regarded or examined before. If the "transfer"—for such it seems, although it is, in fact, only carrying out an old and almost forgotten arrangement—should be effected, as rumour says it will be, we can only hope the returns will be made to, and their practical value estimated by, the Medical Department of the Local Government Board, rather than directly from the Registrar-General to the chief; in the latter case, and in proportion as they are held to indicate the measure of local success in self-government, they will assuredly mislead.

THE part played by schools, particularly Board, National, and other schools of the same class, in the dissemination of infection, is only now beginning to be apprehended by any considerable proportion of the population. For some time medical officers of health have been urging that the assembling together of children in schools constitutes one of the most formidable sources of those local outbreaks of the infectious diseases of children, and particularly of scarlet fever and diphtheria, which we have too frequently to record; and the official inquiries of the medical inspectors of the Local Government Board as regards certain of these outbreaks, would appear to show that this view is not exaggerated. It can be readily understood how the conditions of school life are peculiarly favourable to the transmission of infectious diseases, whether the infection be conveyed from an individual in the early stage of a spreading disease, or from the infected clothes of children coming from a house where infection exists. It can, moreover, be as readily understood how in the first instance a consideration of this sort could not be expected to influence (even if it had been present to their minds) the promoters of compulsory education, in view of the difficulties they had to contend with in securing the primary objects at which they aimed. But now that preliminary difficulties have been overcome, and the organisation for a general education of the young of the population is now fairly in operation, the time seems to have arrived when the question of infection in relation to school attendance should receive serious attention. There can be no wish, even on the part of the most enthusiastic supporter of education, that our schools, while serving their primary object, should serve also as breeding-grounds for infectious diseases. But that they constitute such breeding-grounds there seems no sort of doubt. We must be careful, however, not to exaggerate this incidental evil of school attendance, and particularly not to take extravagant views of what may be required to obviate the evil. We cannot be too solicitous that whatever is done to this end should be done on obvious necessity, and so as to disturb as little as possible the ordinary course of education. There is not wanting a good deal of experience on this subject, throwing important light upon our present needs with regard to it. When the sanitary authority and the managers of schools work cordially together, no difficulty has been experienced in closing or otherwise regulating the management of a school, so as to exercise a most important influence in limiting the spread of serious infectious disease among the young. On the other hand, where cordial relations have not existed between the sanitary authority and the school managers, the school has too commonly remained a hotbed of contagion. It may be taken that where school managers will it, there is no real difficulty in preventing the school becoming a centre of infection; but, on the other hand, it must be confessed that the interest of all connected with the management of a school is so adverse to any interruption of its proceedings, that a ready acquiescence in plans designed to control the spread of infectious disease cannot, as a rule, be anticipated. The Education Department of the Privy Council Office could probably do much to facilitate action on the part of managers and teachers by obviating certain difficulties in detail. It ought to be possible so to devise regulations that acts required to be done for the public good should not have to be performed at the cost—that is to say, at the direct loss—of either managers or teachers, which unfortunately is too generally the case now. Nor ought it to be required of school inspectors that they shall secure the attendance of children at schools irrespective of the fact that they may come from families in which infectious disease is existing at the time. But, much as may be done by amendments of detail in the regulations of the Education Department, this would not suffice to remove the cardinal difficulty which arises when the managers of a school are unwilling to meet the requirements of the sanitary authority in face of an extending epidemic. What some managers find it possible to do in such circumstances without serious detriment to their schools, all may find possible; and it is becoming more and more obvious that it will be necessary for the Legislature to take some measures for overcoming the unwilling by imposing duties on school managers, in relation to infectious diseases and to the sanitary authorities, which do not now exist. The Legislature has already admitted the necessity of this in principle, for last session it passed certain local Acts (Derby, for example) which gave the sanitary authority power to close temporarily or suspend the operations of private or public day-schools in neighbourhoods threatened or affected with infectious diseases. What the Legislature has here permitted for local purposes requires to be included in the general Acts affecting the public health of the whole kingdom.

THE frequency with which retinal changes are found in kidney disease has been variously stated by different authorities. Earlier statistics were based on affection of vision, and the frequency assigned was altogether too low, while some ophthalmic surgeons, seeing cases only in which sight was impaired, have thought that retinal changes were almost invariable. WAGNER found albuminuric retinitis in 9 per cent. of the cases, GALEZOWSKY in 33 per cent., and LAUDOUZY in almost every case. It is, however, well known that the frequency with which retinal changes occur varies much in different forms of kidney disease, and it is, therefore, desirable that in observations which are made, the forms of kidney disease should be distinguished. This has been done by Mr. EALES, of Birmingham, who in an interesting communication to the current number of the *Birmingham Medical Review*, has described an investigation of the state of the retina in one hundred cases of granular kidney, the primary object being to determine the percentage of cases in which retinal changes are present. For the

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diagnosis of the renal disease in every case Dr. SAUNDBY was responsible. The results contained confirm nearly the statement of GALEZOWSKY, alterations being found in one-third of the cases. They confirm also the fallacy of taking sight as the test of retinal integrity. In forty-six cases inquiries were made as to the state of vision before atropine was instilled; in twenty-eight of these complaint of bad sight was made, but in only six (that is, a little more than one in five) could any obvious abnormal condition be discovered in the retina; while in eighteen persons, who stated that their sight was good, retinal changes, such as specks, were found in five. The frequency with which considerable retinal changes do not materially impair sight is shown by six cases in which vision was carefully ascertained by test-types and lenses, and found, even with dilated pupils, to be nearly normal, and yet in all considerable changes were found in the retina.

The number of cases in which some abnormal change was found in the retina was twenty-eight, in twelve of which the changes existed in both eyes, while in sixteen they existed in one eye only. Observers have usually described the changes as bilateral, and Mr. EALES thinks that his observations can only be reconciled with those of others by supposing that the affection often attacks one eye before the other, and that it gets well in one eye before the other. In the twelve cases in which changes were found in both eyes, four had diffuse retinitis, with "fibrinous" patches and œdema, and also whitish glistening patches; one had diffuse retinitis in one eye, with only one hæmorrhage in the other eye; five had many whitish round patches, "of the atrophic kind," and two had only similar small patches. Of the sixteen cases in which changes were found only in one eye, in six several white round patches were found, in five one or two spots only; in one there was a single hæmorrhage near the disc; in two a few black specks were found, associated in one case with white specks, the black being in the centre of the white speck. In addition to these twenty-eight cases of retinal change, three others presented slight changes in the papilla, commencing or subsiding neuritis. In fourteen cases opacity of the lens existed, double and incipient in eleven cases, single in three cases. The presence of these alterations bore some relation to the amount of albumen in the urine, and one in every two patients with constipated bowels presented retinal changes, while such changes were found only in one in every six with open bowels.

WE have already noted the general statistical results of the official Report recently issued on the Health of the Navy for 1878. We have now to notice certain particulars in which this report differs from previous reports on the subject, and which, we fear, will detract much from its interest. The Report, prepared by Fleet-Surgeon J. N. DICK, R.N., has been subjected to the pruning scissors of the Parliamentary Committee on Official Statistics, and it is issued with an abridged letter-press, condensed tables (and, as we have already had occasion to point out, tables insufficient both in number and arrangement to admit of a comparison of results for a series of years), and without any original papers which it had become customary to attach to it. It is true that a sort of promise is given that papers of the class referred to may be printed from time to time in a separate volume, but this is a poor consolation to those who have become habituated to look for them; and the reason given for their excision—namely, that they were out of place in a report of this description—does not mend the matter. For it was obviously a convenient mode in which to give selected papers annually to the medical officers of the navy and to the public. Moreover, there were special reasons why original papers relating to the "fever," which disabled so many men in the navy as well as in the army at the time of the occupation of Cyprus, should have been included in this report. Even the summary account of this "fever" proves how desirable it would be to have had the observations on which they are founded published early in detail. The account is as follows:—

The fever which made its appearance in the Mediterranean Fleet at Cyprus, in the month of July, was remittent with certain peculiarities, and almost identical with that which prevailed at Besika Bay and on the coast of Syria in 1876-77. Cyprus, with a somewhat similar climate to that of Syria, has a geological formation of limestone rising in the centre of the island to a great height, with spurs running down towards the sea; the soil of the intervening ravines and plains is composed of a sandy loam, with strata of marine shells, which crop out at various parts of the island; in some places the soil is dry to the depth of ten or twelve feet, but in others water is found near the surface, with here and there beds of water-worn pebbles. Some of these plains are reported to be malarious, more especially as the sea level is approached, not altogether on account of their less elevated position, but also from the surface-drainage of the irrigated lands collecting the malaria in its downward progress. In the higher parts of the island the water was found to be good, and if conveyed in proper pipes to the various towns on the shore and elsewhere, it is unlikely that fever would result from its use. In the absence of such pipes it would appear to be unsuitable for drinking or culinary purposes.

The outbreak of the disease was preceded by a few cases of sunstroke and solar febricula. The first case of fever appeared on July 16th at Larnaca. In typical cases the general symptoms were shortly as follows: rigors accompanied by mental depression, lassitude, headache, and pains in the trunk and limbs; the face was flushed, eyes suffused, and the temperature suddenly rose to 104° or 105°, with a pulse of 120, and a coated tongue, which soon became brown and dry in the centre; in some instances nausea and vomiting proved troublesome. These symptoms, with exacerbations and remissions, increased more or less rapidly, according to the severity of the attack, and culminated in profuse perspiration or diarrhœa, the temperature falling, and the patient being left in a debilitated condition. The tendency to irregular relapses was very marked.

The number of cases of remittent fever contracted by the fleet at Cyprus exceeded 360.

THE death is announced (by telegraph) of Dr. George Gibson, of Jamaica, which took place on the 21st inst., by a fall from his horse. Deceased was a graduate in Medicine of the University of Dublin, and held the post of surgeon to the Royal Naval Hospital at Port Royal.

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Annotations.

"Ne quid nimis."

THE BARNARD DAVIS COLLECTION.

THE Hunterian Museum of the Royal College of Surgeons of England is about to receive an important addition to its treasures. For more than fifty years Dr. Barnard Davis, a physician residing at Shelton, in Staffordshire, has been accumulating a rich collection of crania and skeletons, illustrating all the varieties in the human species found in every known part of the world. He has exhumed the barrows of the early inhabitants of our own island, and carefully preserved the osseous remains found in them. He has begged and bought from travellers and collectors from every clime, from Greenland to Patagonia in the New World, from Siberia to Tasmania in the Old. From the various islands of the Pacific specimens were obtained before the aboriginal people were either destroyed or modified by new ways of life introduced by the English settlers. Though, from the accident of its local position, this collection was personally known to few, its fame has been spread far and wide by the excellent descriptive catalogue which its possessor has published, a work of great labour, containing detailed measurements of upwards of 1800 specimens.

As the owner of this valuable collection is now advanced in years, some anxiety has naturally been felt as to its future destiny, as the progress of the science it illustrates is greatly concerned in its being kept intact, and placed in circumstances which will render it available to those who are working at the subject. It has also naturally been felt that it is desirable that it should be retained in this country, as the specimens in it are eminently illustrative of the ethnology of the British Isles and of its colonies and foreign possessions, and have nearly all been collected by British explorers and travellers. In almost every other country the duty and expense of acquiring and preserving such a collection would be looked upon as an affair of the Government, as all the great collections of similar nature on the Continent are maintained at the public expense; but the College of Surgeons having voluntarily, when it took charge of the Hunterian collection, taken upon itself to maintain an anatomical museum, which in extent, arrangement, and facilities afforded for public inspection and study is truly national, has acted in this matter in the same spirit in which it has always fulfilled its trust. To obviate any chance of the collection being lost to English science, the Council of the College and Dr. Barnard Davis have, by an arrangement creditable to the liberality of both, agreed to its transfer to the Museum of the former in Lincoln's-inn-fields. It will probably be some time before the whole of such an extensive series of specimens can be moved and arranged in its new locality; but we trust that the indefatigable Conservator, Professor Flower, will before the year is over be able to announce that we have at last in London an anthropological collection scarcely, if at all, equalled in extent, in richness, and in variety by any in the world. At the present moment Mr. Flower is superintending the packing of the collection for removal to the Museum of the College of Surgeons.

THE TRANSMISSION OF SCARLET FEVER BY MILK.

A REPORT has been issued by the Local Government Board on a sudden outbreak of scarlet fever at Fallowfield, near Manchester. The outbreak included thirty-five persons, *belonging to eighteen families*, and of the individuals who *suffered not* less than twenty-four were attacked within *thirty-six hours*, between Sunday morning, August 3rd, *and Monday evening*, August 4th. Dr. Airy was directed by the Local Government Board to investigate this outbreak, and the results of his investigation are given in the report now before us. The outbreak was quite local, and the different details elicited tended to the general result that the infection had been distributed to the families through the agency of a particular milk-supply. The facts bearing on this point do not well admit of any other interpretation. The question of the mode in which the milk could have become infected was not so fully cleared up, but it is shown that one of the milkers on the dairy farm lodged in a farm-house where scarlet fever was present at the time when the milk presumably became infected, and it is suggested that the infection was communicated to the milk, in some way undetermined but not inconceivable, through his agency. The report throughout is of very considerable interest, and forms an important contribution to our knowledge of the *mechanism*, if we may so write, of certain of the observed phenomena marking the progress of infectious diseases.

ROYAL UNIVERSITY OF IRELAND.

THE Charter of the new University in Ireland, which received the Royal Assent last August, has now been published. Its provisions are briefly as follows:—The Senate will consist of the Chancellor and not more than thirty-six members, all of whom are appointed by the Crown, and these, along with the graduates, will form the Corporation; whilst the Vice-Chancellor will be a member of the Senate elected by them, will hold office for three years, and will be eligible for re-election. Convocation consists of the Senate of the University and of registered male graduates of two years' standing; and the members of Convocation of the Queen's University in Ireland at the date of the charter may become members of the latter on making application and complying with the prescribed conditions, whilst all the graduates and matriculated students of the Queen's University in Ireland are secured corresponding rank and standing in the Royal University. All degrees except those in Theology may be conferred by the University, also on men who have distinguished themselves in science or literature or in the public service. Matriculation in the Royal University, compliance with the necessary conditions, and passing the prescribed examinations, entitle any student, male or female, to a degree; no residence in a college nor attendance at lectures being obligatory except for a degree in medicine or surgery. The examiners will be appointed by the Senate, also a Secretary and Registrar; whilst visitors will in due course be appointed by the Crown.

A CHINESE "HYGEIOPOLIS."

DR. RICHARDSON has been anticipated in one of his most brilliant exercitations for the promotion of public health; nay, more, he has not merely been anticipated, but, strange to say, while he was contented to picture forth a possible hygienic elysium for the edification and emulation of longing occidentals—an elysium which had no trace of Boards, local or general, and which was purged of contentious chemists and sanitarians — an "Hygeiopolis" was actually in existence. Of course, as our readers will surmise, there is but one part of the world where this could happen, a part sufficiently remote to exonerate Dr. Richardson from blame in not knowing the fact—the land of the Princess Badoura, the land of Aladdin—China, to wit. The "Hygeiopolis" in question is Wen-chow, a newly-opened port on the east coast, and its discoverer is Dr. W. Wykeham Myers, surgeon to H.B.M.'s Consulate, Takow, Formosa, and to H.M.S. *Centaur*. This gentleman assisted at the "occupation" by the officials which marked the opening of the new port, and in a detailed account of Wen-chow, which he has com-

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municated to the *Japan Mail*, he boldly and graphically parallels the place with Dr. Richardson's "Hygeiopolis," as he gathers that sanitary ideal from our pages in October, 1875. He is not prepared to say that the parallel is perfect, but he observes, "the similarity is close enough (especially when associated with our preconceived ideas of the existing state of matters in China) to warrant my alluding to even this high standard." All the main and pleasant features of "Hygeiopolis" above-ground are to be found in Wen-chow. We shall not follow Dr. Wykeham Myers in the different items of his comparison. We feel too humiliated to learn that the irrepressible Chinese should, even in the remotest fashion, have outstripped us in our public-health courses; and even the hygienic shortcomings in Wen-chow indicated by Dr. Myers afford but scanty consolation, for whatever these shortcomings may be, Dr. Myers states that he was "surprised at noticing the more than passing resemblance presented by Wen-chow" to Dr. Richardson's ideal. It seems to us that this resemblance leaves no choice to the Health Section of the Social Science Association but to visit Wen-chow, with Dr. Richardson as president.

DR. ANDREW DUNCAN.

THE latest intelligence with regard to the condition of Dr. Andrew Duncan reports that he had safely reached Lahore. During the march, however, from Cabul the front wound reopened and discharged a quantity of unhealthy pus. At Lahore the wound was examined by Professor Lawrie, who extracted five pieces of cloth. Professor Lawrie's opinion is that the bullet went round between two ribs, grazing the pleura and diaphragm; the rib in front had also been broken. It is, however, satisfactory to learn that since his arrival and sojourn in the warmer climate of Lahore he has made rapid progress towards recovery, and hopes, instead of being obliged to take three months' leave, to go again to the front early in February. For this purpose he has applied for the vacant surgeoncy of the 23rd Pioneers, and which no doubt he will obtain. At the same time we cannot help expressing a regret that Dr. Duncan's talents should be wasted in the performance of regimental duties. Dr. Duncan made his mark in London whilst at St. Mary's Hospital as a teacher of Surgical Pathology and Histology, and we venture to think the Indian Government would act wisely in securing his services as a teacher for the Bombay or Calcutta Colleges.

VACCINATION IN QUEENSLAND.

"AN OLD PRACTITIONER," writing to the *Queenslander*, gives a curious account of the state of vaccination in the colony. He affirms, as matter of common notoriety, that the practice of vaccination there has fallen into disuse, "the difficulties attending the operation being nearly insuperable." There is, it appears, no vaccine institution, the rooms formerly used for the purpose having been annexed by the Museum. The supply of lymph for the colony is usually obtained from vessels arriving with immigrants, and is often unreliable after a long voyage. When vaccination has been started, the greatest difficulty is met in maintaining it from the irregularity of attendance of mothers, and their unwillingness to have their children's arms operated on. Moreover, the summer of the colony is, "An Old Practitioner" avers, too hot to admit of the operation being successful, and the winter too dry! What then, he asks, is to be done? To which he answers, "Let well alone." In other words, small-pox for Brisbane is a foreign disease, and has not been known in the colony, according to this gentleman's statement, for the last fifty years. The quarantine arrangements may be relied upon to keep it out, if their strictness is not meddled with. Moreover, if by chance small-pox should get into the colony, have we not heifers? and cannot we readily cultivate lymph to any required amount by retro-vaccination?

There is an easy-going ring about "An Old Practitioner's" letter which strikes us with astonishment. It is difficult to enter into the feelings of colonists with whom an evil so familiar in the old country as small-pox is simply a matter of hearsay. Nevertheless, we question the prudence of "An Old Practitioner's" advice, and demur to the difficulties he asserts as accompanying the operation of successful vaccination in Queensland. If the maritime commerce of Queensland augments as its colonists hope, the time will come when quarantine will prove a very fallacious protection against small-pox; if small-pox once gets among its imperfectly protected population in an active form, no retro-vaccination will probably furnish lymph in quantities sufficient to enable the authorities to overtake the disease, and, even if it did, the organisation to use that lymph effectually will be wanting. In view of the terrible results which too often accompany the progress of small-pox among populations partly or wholly unprotected by vaccination, Queensland would do well to place her public vaccination arrangements upon a sound basis, and endeavour to carry out systematically and continuously the vaccination of her people. Vaccination, to be done effectually, must be done carefully, slowly, and regularly. Vaccination, in face of a small-pox epidemic, is too commonly frustrated by the hurried and inconsiderate way in which it is put into operation.

DR. GERRARD-SMALL, OF ROME.

THE *malesuada fames* (the "hunger, counseller of ill"), has prompted the Italian proletariat to many deeds of violence, but to none so dastardly as that which has just been perpetrated on Dr. Thomas Gerrard-Small, for wellnigh fifty years the physician of the Anglo-American colony, resident or migratory, in Rome. Dr. Gerrard-Small has lately been living in honoured retirement in the Via Farini, one of the new streets constructed on the Esquiline, a region lonely indeed, but figuring seldom in the *cronaca nera* of the police. On the morning of the 23rd inst., in the temporary absence of his servant, two decently-dressed youths presented themselves at his door, and, saying they wanted "soldi" (sous), forced their way into the hall, and pushing the doctor into his study, threw him on the floor. Relieving him of his purse, containing 200 lire (£8) and of his keys, one of them went straight to a escritoire, where he kept his money, while the other held him down by kneeling on his stomach and clutching him forcibly by the throat. When so nearly strangled as to be speechless the ruffian next dug his fists into the doctor's eyes, to prevent him seeing the accomplice, who, finding no money in the escritoire, went from drawer to drawer in every table in the house, ransacking each and all in vain. By this time they had satisfied themselves they had got all the money accessible, while from motives of prudence they refrained from taking their victim's watch and chain or other valuables by which they could be traced, so they proceeded to bind him hand and foot with a stout cord they had brought with them, and throwing a heavy curtain over him, decamped. The doctor had lain for some time in syncope, till on coming to himself he disengaged his hands and feet, and, on his servant's return, lodged a full account of the robbery with the police. Later in the day he was visited by a medical friend and colleague, who found him much contused about the throat and face, suffering from almost complete aphonia, and still somewhat agitated. Laryngeal mischief, which at one time appeared imminent, was, however, averted, and on the last visit (the 26th inst.) the doctor was progressing favourably. Meanwhile the police, with whom Mr. Rösler Franz, the British Vice-Consul, co-operated, effectively succeeded in tracing the malefactors to one of

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their haunts, and found them to be confederates of an ex-domestic of the doctor's, who had been dismissed for negligence and misconduct. From him, no doubt, the aggressors had ascertained at what hour the doctor was usually alone, and where he was in the habit of keeping his money.

THE NON-OBLIGATION OF MASTERS TO SICK SERVANTS.

WHEN there is anything like leisure to attend to domestic questions, perhaps the duty of masters to domestic servants overtaken with sickness in their service may come in for a little attention. At present the master is under no legal obligation to provide medical attendance. He may detain a servant in a state of considerable illness, and let him or her drift into an incurable state, and yet not be blamable in the event of death ensuing. A case somewhat in point has occurred at West Stockwith, Notts, in which, as alleged at the inquest, a servant was ill for eleven days and had no qualified medical attendance until within an hour of her death, when Dr. Wright was called in only to see that she was *in articulo mortis* from pneumonia. But no law has been broken. She was under the care of that class of persons whom Mr. Serjeant Simon thinks are gifted with medical inspiration. We do not say that a master should be made responsible for finding medical advice for his servant. A law to this effect would often operate harshly. But he should be responsible for seeing that some proper medical advice is got for a servant detained in his house, even if it be that supplied by the Poor Law. He is in some sense *in loco parentis*, and can only gain by a humane anxiety for his servant's interest. The barren verdict in this case was, "Died from inflammation of the lungs brought on by a cold."

THE THAMES NAVIGATION AND THE SEWAGE OUTFALLS.

THE arbitrators in this inquiry have by no means an enviable position. Engineer is being pitted against engineer, and chemist against chemist, in bewildering fashion. The inquiry, after already occupying twenty days, has been adjourned for five weeks. The Thames Conservancy has completed its case, and the Metropolitan Board of Works has now entered upon its rejoinder. The chemical evidence promises to be of exceptional interest. Professor Frankland has given evidence in favour of the view entertained by the Conservancy Board, that the banks impeding the navigation of the river off Barking and Crossness consist of sewage mud. The chemical evidence to be presented by the Board of Works will traverse this conclusion. The outer interest in this question consists in the fact that the chemists employed by the Board of Works are understood to have followed the same methods of analysis as those adopted by Dr. Frankland. Whence, then, the apparently irreconcilable difference in their conclusions? This will, no doubt, have to be made fully clear to the arbitrators, and the explanation will prove of general interest.

THE INFLUENCE OF PHOSPHORUS ON THE URINE.

A SERIES of experiments undertaken by M. Cazeneuve, the results of which have been communicated to the Académie des Sciences, seem to show that phosphorus, given in toxic doses, increases the amount of urea, of phosphoric acid, and of sulphuric acid, and also the total excretion of nitrogen and of iron. The observations were made upon dogs and cats, and the following serves as an example of the experiments. The daily excretion of a dog having been found to be about 2½ grms. of urea, ·15 grm. of phosphoric acid, ·18 grm. of chlorides, nitrogen 1·26 grm., and no iron, a centigramme of phosphorus, dissolved in oil, was injected, and in a few days the daily secretion of urea was 7½ grm., of phosphoric acid ·88 grm., of chlorides ·55 grm.; the total amount of nitrogen being 4·9 grm., and the quantity of iron appreciable. There was a trace of albumen, but no blood or bile, although urobilin was present. The excretion of each constituent gradually lessened, and bile pigment appeared in the urine. The excretion having fallen until it was considerably below the normal, 200 grms. of milk were given, which had the effect of raising the excretion of each substance almost to the point reached immediately after the phosphorus had been injected. Phosphorus is supposed, when given in toxic doses, to destroy the red blood-corpuscles, and such destruction seems to explain the change observed in the urinary secretion. Modern physiology is inclined to regard the liver as the chief seat of the formation of urea; and M. Brouardel has drawn an argument for this theory from the fatty degeneration of the liver which is produced by the administration of large doses of phosphorus. M. Cazeneuve believes that his results support this theory.

METROPOLITAN ASYLUMS BOARD.

THE report of the last fortnightly meeting of this Board contains no allusion to the expected motion of Sir Edmund H. Currie in reference to the exclusion of small-pox cases from Stockwell and Homerton Asylums. Both of these asylums are being used for fever cases, which now constitute the chief care of the Board: 223 fever cases were reported in Stockwell, of which 210 were scarlet fever, 7 enteric, and 4 typhus. In Homerton there were in all 201 cases, of which 145 were of scarlet fever, and no less than 56 enteric fever. At the Small-pox Asylums of Deptford and Fulham there were 82 cases of small-pox.

Questions of general administration came on for discussion. It transpired that very various prices for common and necessary articles of food were paid by the different asylums. Thus the article of cheese cost the Board many thousands a year, and while at one asylum 42*s.* a cwt. was considered enough, at another 60*s.* was paid. So with tea. A motion was carried referring this subject to the chairmen of the several asylum and hospital committees, with a view to co-operation and uniformity in food supplies.

TRICHINOSIS.

THE *Veterinarian* for February has a very comfortless article on trichinosis. It draws attention to the extremely small amount of knowledge we have of the extent of prevalence of trichinæ in home-fed pork, to the certainty of this form of parasite infesting largely American pork, and to the difficulty of discriminating trichinosis in man from enteric fever and acute rheumatism. From these considerations it argues that trichinosis is probably of more common occurrence among human beings in this country than has hitherto been conceived, and suggests the necessity of some steps being taken by the Government or the Legislature to ensure some greater degree of safety in this matter than now exists. Our contemporary confesses that it is much easier to advise than to act; but inertness under such circumstances is unjustifiable.

DEATH OF THE SULTAN'S SISTER.

THE *Commercial Advertiser* (Constantinople) gives particulars respecting the cause of death of her Imperial Highness Refigé Sultana, daughter of the late Sultan Abdul Medjid, and sister of the present Sultan. Born in 1842, she was married in 1857, and had one child, which died soon after birth. For several years she suffered from dropsy of the ovaries, but could not be induced to undergo the radical operation for cure, which ovariotomists in this country have made so facile and comparatively safe and famous. She would submit only to tapping. Twelve times this operation

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was performed with more or less relief to the patient. After the twelfth operation it became obvious that if the radical operation were deferred much longer the patient's life would be sacrificed. She still delayed, however, notwithstanding the urgent advice of Dr. De Castro and Dr. Sarell; and on the 2nd of January grave symptoms of rapidly failing vital power supervened. In deference to her entreaties, a thirteenth tapping was performed, but it gave only a transitory relief, and she died on the 3rd. The deceased Sultana is described as having been of warm heart, very intelligent, and possessing more cultivation than commonly falls to the lot of the fair inmates of harems.

EFFECTS OF INTRAVENOUS INJECTION OF SUGAR AND GUM.

MM. R. MOUTARD-MARTIN and CH. RICHET have studied the effects of the intravenous injection of sugar and of gum, and their researches have some bearing on the physiology of the renal secretion, for on determining the blood-pressure with a hæmometer, they have ascertained that the injection of gum materially increases the blood-pressure in the arteries, raising it from 0·03 to 0·05 mm. of mercury, whilst the injection of sugar has no influence on the pressure. Here then we have two substances, of which one, sugar, causes polyuria, but has no influence on the blood-pressure; whilst the other, gum, augments the blood-pressure, but, far from producing polyuria, arrests the urinary secretion. What, then, becomes of the theory which explains the urinary secretion as a function of the blood-pressure?

AT a meeting of the members of the Liverpool Medical Institution, held Jan. 22nd, 1880, Mr. Newton, Vice-President, in the chair, it was unanimously resolved—"That this Institution desires to express its sense of the great service rendered to the country by Dr. William Farr, who, by his unrivalled abilities and long and successful work as a statist, has not only done more than any other man to stimulate our national sanitary progress, but as well to advance the study of vital statistics throughout the civilised world; and to record its surprise and regret that his paramount claims for the office of Registrar-General have been disregarded, and the post bestowed on a gentleman whose name as yet is entirely unknown to the country in connexion with statistical science."

THE Medical Superintendent of the Nottinghamshire County Lunatic Asylum has issued, with commendable promptness, his annual report for last year, showing that the institution contained 398 patients at the end of the year, an increase of eight upon the number at its commencement. The admissions during the year were 99, and the discharges 91; of the latter, 50 were deaths and 30 recoveries. With regard to the admissions, the usual complaint is made of these including so large a proportion of epileptic and harmless imbeciles from the union workhouses, who merely require the attention of a sick nurse. The recoveries were in the proportion of 30 per cent. of the admissions, including the transfers.

WE regret to learn from a correspondence in the local journals that sanitary matters are by no means in a favourable state in Chesterfield. The borough is reported to be practically without bye-laws, to have highly defective slaughter-houses, and badly ventilated sewers. Chesterfield's crooked steeple seems to beget crooked sanitary ways in its municipality.

A SOCIETY for promoting medical science by means of communications, cases, specimens, discussions, &c., has been formed in Cambridge, and is called the "Cambridge Medical Society." The meetings are to be on the first Friday in every month except September, at 3 P.M., and at 8 P.M. on alternate months. Professor Paget has been elected President, Professor Humphry Vice-President, and Dr. Creighton Secretary and Treasurer. The Society has been joined by most of the medical men in the town, and by some of those in the neighbourhood.

CHARCOT ON THE PATHOLOGICAL ANATOMY OF PULMONARY PHTHISIS.

(Concluded from p. 963, vol. ii. 1879.)

D. Specific Lesions of Propagation.—It is a fact gained by science of the present day, that tuberculous matter arrived at the stage of caseification possesses the property of propagating tubercle from place to place. It seems to be then ripe and fit for the production of seeds, which may be detached from the softened mass and be carried by the lymphatics to germinate at a greater or less distance. From this point of view tubercle is a truly malignant infecting new growth, and this property of infection has been well brought to light by the labours of Virchow, Rindfleisch, Lépine, Ponfick, and Charcot.

It is indisputable that among the tubercular lesions of phthisis there are some which should be considered as lesions of secondary origin, radiating around primary foci. Viewed in this light, tubercular lesions are often better understood as a whole, and often also their clinical interpretation gains by it. This diffusion of tuberculous matter around caseous foci takes place within very variable limits, and we may, according to M. Charcot, establish three stages in it: local or direct infection; infection at a greater or less distance by the lymphatic vessels; and, lastly, generalised infection, dissemination of the grey granulation throughout the whole organism. The grey granulation is, in fact, the form taken by tuberculous matter emanating from caseous foci.

Professor Lépine has insisted, and rightly, on local infection by simple contact. If the pleura covering a tuberculous lung be examined, tubercles will be seen to be propagated there, in what manner will be stated later. This is what is seen. The visceral pleura is studded with grey granulations, which have not, however, excited any reactionary process in their vicinity; no false membranes are to be found at their level, no adhesions with the subjacent parenchyma. But if the parietal pleura of the part immediately corresponding to the granulations on the opposite layer be examined, columnar masses of superficial granulations will be found on it. Their development evidently results from contact with the primary focus; there are no traces of tubercle on the parietal layer, except in places corresponding to the tubercles on the visceral layer. But the development of the secondary granulations does not take place solely from immediate contact; it seems as if the seeds emanating from the principal focus have been sown to a certain extent in all parts of the pleural cavity. These secondary, erratic tubercles are found especially in the neighbourhood of the tendinous leaflets of the diaphragm, around which they form crowns, the subpleural lymphatics being very superficial there (Bizzozero), and presenting stomata. However that may be, it is not unreasonable to admit that the process in the pulmonary parenchyma is much the same as that in the pleura; that a certain number of the granulations there seen are produced through direct contact of the granulations with the constituent elements of the organ, and in that way the marked confluence of the granulations in certain parts may be explained.

Infection by lymphatics, if the disposition of the lymphatic system as described by Grancher be borne in mind, will readily account for the propagation of granulations in all parts of the parenchyma in the visceral layer of the pleura, and in the tracheo-bronchial glands. Tracheo-bronchial adenopathy is very common in tuberculous children. Parrot has said that these glandular lesions are all consecutive to lesions of the pulmonary parenchyma, only at a more advanced stage. This relation is established by the lymphatic paths, and the lymphatic may

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often be traced, if a superficial focus be in question, as a nodular cord connecting the primary pulmonary focus and the secondary glandular focus. Histological analysis enables two distinct elements to be distinguished—(1) the lymphatic channel, generally filled with leucocytes in a state of granulo-fatty degeneration, or with caseous detritus proceeding possibly from the focus; (2) nodules or swellings at different distances, which are simple or compound tuberculous granulations. The lymphatic gland itself also contains a number of grey granulations, remarkable, as Schüppel has well shown, for the predominance of giant-cells; they are seated in the follicles of the gland. The nodules may be readily studied in another episode of pulmonary phthisis. If a tuberculous ulcer of the bronchial mucous membrane be examined, there is seen under the muscular coat a stellate cavity containing a tuberculous granulation and endothelium; it is a lymphatic the calibre of which is narrowed by a tuberculous nodule, proceeding from the primary focus, arrested in it. The nodule may become in its turn the point of departure of secondary nodules by direct infection of the neighbouring tissue. In that case it attacks lymphatic capillaries hollowed out in the connective tissue without distinct walls. But the same disposition is met with in lymphatics of a more complex organisation; for instance, tuberculous lymphangitis of the lacteals, which convey, as Cornil has demonstrated, tubercles from intestinal ulcers to mesenteric glands.

The lymphatic system may be invaded in its whole extent up to its entrance into the circulatory system. Ponfick has lately recognised in the thoracic duct traces of the passage of tuberculous material. There, too, these traces consist in the presence, at intervals, of small nodosities, which are no other than granulations developed in the wall of the vessel. In these cases there was generalised tuberculosis. It is well to bring into prominence these phenomena of propagation, for hereby tubercles diverge from simple inflammatory products and approximate to the malignant new growths.

E. We have seen that everything is explicable without the intervention of phlegmasia of the pulmonary tissue. This phlegmasia does certainly take a share in the tuberculous process; but to what extent and how does it intervene? "Tubercle, it has been said, determines the nosological species, but the pneumonia which succeeds it constitutes the gravest lesion of tuberculosis; it determines the acute or the chronic form. It is this which governs the general state, which determines the fever; it is this which produces cavities. In pneumonia lies all the danger of phthisis; it is this which must be arrested and combated." In other words, predominance of pneumonic lesions—passivity of tuberculous lesions. M. Charcot declares that for many organs these propositions are exaggerated, that for others they are absolutely false.

The main process of lung destruction is, in the majority of cases, independent of pneumonia. Further, whilst recognising the importance of the pneumonic element in phthisis, and that phthisical people may die from the occurrence of pneumonia, M. Charcot is of opinion that this latter event is rare; that, as a rule, the process of destruction and the chief symptoms of phthisis are independent of the pneumonic element; that, in fine, this element may be wanting throughout the whole evolution of the phthisis.

It should here be remembered that tubercle is always *sui generis;* but that, according to circumstances, it offers anatomical varieties in relation to its tendencies of evolution. Thus at the two extremes of the series are found on one side tubercles ending rapidly in caseification, on the other tubercles of fibrous evolution; and the causes of these modifications should be sought in the tubercle itself, and not in the pneumonia that often accompanies it.

What are the forms of pneumonia which are associated with the tuberculous neoplasm to form pulmonary phthisis? Lobar pneumonia must be excluded. This variety may doubtless be associated with tubercle, but in a transitory way, and, so to speak, clinically. It is different with broncho-pneumonia. It is this which forms the second element already pointed out by Cruveilhier; acute in acute tuberculosis, chronic in the slow tuberculous evolution. There is nothing peculiar about these forms of broncho-pneumonia associated with the tuberculous process. In the acute form are found characteristic fibrinous or purulent masses with the lesions of splenisation; in the chronic form, carnification and all varieties of metamorphosis of the alveolar contents. These contents may present granulo-fatty degeneration, but here the mass of degenerated epithelium remains in some sort free in the alveolar cavity, whilst it may be remarked in passing that the caseous metamorphosis which attacks the embryonic tissue of the tuberculous neoplasia fuses into one mass the contents and walls of the alveolus.

If we do not rest contented with such generalities, but enter into the detail of the clinical forms of pulmonary tuberculosis, we shall perceive better how much the *rôle* of pneumonia has been exaggerated. Acute granular phthisis occurs under two principal forms—a slow *apyrexial* form, where the granulations accumulate in successive crops, or which is only manifest by asphyxia, and kills by asphyxia (post-mortem examination reveals no pneumonia, which clinical study could not otherwise explain); a *pyrexial* form, especially notable for its very grave general symptoms, consisting in a typhoid state and a kind of hæmorrhagic diathesis. In view of this pyrexia the defenders of pneumonia triumph, and MM. Hérard and Cornil, for instance, maintain that the pyrexial phenomena are due to pneumonia. Unfortunately for this theory pneumonia is often absent at the autopsy. Thus, while M. Charcot was delivering these lectures, M. Landouzy communicated to him two cases of acute pyrexial phthisis which occurred in two young girls, who succumbed about the fifteenth day of a disease during which the stethoscopic signs had been absolutely negative, whilst the temperature oscillated between 39° and 41° C. Nor at the autopsy was pneumonia demonstrated. Here and there were a few trivial epithelial changes, but no trace of fibrinous or purulent exudation. Thus, then, in this form of pulmonary tuberculosis pneumonia is often wanting, and these general symptoms can and should be explained otherwise than by a concomitant pneumonia.

What now can be said about so-called acute pneumonic phthisis, which is the clinical counterpart of broncho-pneumonia? When the patients succumb after a duration of the disease of about one or two months, it is very certain, as we have already seen, that there will be found, in addition to tubercles, the lesions of catarrhal pneumonia. Hérard and Cornil do not hesitate to relate the symptoms of evolution, especially the fever, to this broncho-pneumonic element. But it would be necessary that a precise relation should exist between the extent of the pneumonic change and the intensity of the general symptoms. Now, when these cases are carefully read, it will be seen to be not so; that the general state is proportionate to the extent, not of a few broncho-pneumonic nodules scattered here and there, but of the caseous masses; and there is no need to demonstrate here that these masses are tubercular and not pneumonic foci. In a fair number of cases, it must indeed be said that the general state appears connected with other conditions more or less determined. So here also the pneumonia is accessory.

In subacute phthisis—so-called galloping phthisis—the process is destructive *par excellence*, and rapidly ends in the formation of cavities. At the autopsy the lungs appear stuffed with tubercles so confluent that their mass takes the aspect of a lobar pneumonia; at the apex, and slightly in all parts, the tissue is already hollowed into cavities. It may be said that in some cases there is no pulmonary tissue intervening between the tubercles, and consequently no place for the development of an inflammatory process of any value.

It must be added that, in a general way, it is especially at the period of tuberculous disintegration, of the formation of cavities, that grave general symptoms, the *summum* of fever, are produced. The same remarks are still more applicable, if it be possible, to the evolution of chronic phthisis, discrete or diffuse, which is only differentiated from subacute phthisis by a slower course. Catarrhal pneumonia may intervene, but its *rôle* is always effaced. From the first period the fever is marked by evening exacerbations, which, moreover, do not reach 39° C. (Williams); and it is certain, as Sidney Ringer has shown, that this fever may exist before any local symptoms. At other times the fever falls—disappears nearly completely during the full morbid evolution. Is it possible to invoke pneumonia here? At the period of softening characterised by moist crepitation and the expectoration of elastic fibres there is doubtless fever with nocturnal exacerbation, which may attain 39° C. (maximum); but this fever is readily explained as a result of the resorption of the softened products. And then how account for the intervention of pneumonia in cases where fever does not exist, or to a very slight degree?

As to the production of more or less voluminous cavities,

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we have seen how this is readily conceived apart from any pneumonia, and that Cruveilhier was deceived when he fancied the tubercular process incapable by itself of producing cavities, and that for this the aid of suppurative phlegmasia of the organ was necessary.

Thus, then, since recent researches have demonstrated that caseous pneumonias are not pneumonias but tubercular agglomerations, pneumonia is no other than a scarcely common complication. It often accompanies, and in variable degree, the tubercular neoplasia; but it is only an accessory element, in no way indispensable for the anatomical evolution or the interpretation of the clinical phenomena.

HEALTH OF LARGE ENGLISH TOWNS.

THIRD WEEK OF 1880.

UNDER the influence of lower temperature the recorded mortality again showed a marked increase last week. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly a third of the entire population of England and Wales, 5290 births and 3741 deaths were registered during last week. The births exceeded by 105, and the deaths by 466, the average weekly numbers during 1879. The deaths showed an increase of 257 upon those returned in the previous week; and the annual death-rate, which had been equal to 24·0 and 24·2 in the two preceding weeks, further rose last week to 26·0. The lowest death-rates last week in the twenty towns were 19·0 in Oldham, 19·2 in Sunderland, 20·6 in Sheffield, and 20·9 in Brighton. The rates in the other towns ranged upwards to 27·1 in London and Plymouth, 28·3 in Liverpool, 28·6 in Hull, 30·3 in Nottingham, and 30·7 in the city of Manchester.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 607, 541, and 518 in the three preceding weeks, rose again to 544 last week; they included 198 from whooping-cough, 145 from scarlet fever, and 129 from measles. Whooping-cough showed the largest proportional fatality in Salford, Newcastle-upon-Tyne, and London; scarlet fever in Leicester, Norwich, Bradford, and Bristol; and measles in Hull, Plymouth, Nottingham, and Leicester. Of the 17 deaths referred to diphtheria, no less than 13 were registered in London. The fatality of fever, principally enteric, was unusually small. Small-pox caused 4 more deaths in London and its outer ring of suburban districts, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 77 and 75 at the end of the two preceding weeks, rose to 84 on Saturday last; during the week 21 new cases of small-pox were admitted to these hospitals, against 30 and 8 in the two previous weeks.

The fatality of lung diseases showed a further increase, due to the severe cold. The deaths referred to diseases of the respiratory organs in London, which had been 455 and 512 in the two preceding weeks, further rose last week to 559, and exceeded the corrected weekly average by 104; 372 were referred to bronchitis, and 120 to pneumonia. The deaths referred to these diseases were equal to an annual rate of 8·0 per 1000 in London, and in Liverpool the rate from the same diseases was equal to 8·2 per 1000.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The usual Quarterly Court of the Directors of the above Society was held on Jan. 14th, in the rooms of the Royal Medical and Chirurgical Society. The chair was taken at 5 P.M. by the President, Sir George Burrows. One new member was elected, two sent in their resignation, and the death of one was reported. Grants, amounting to £1284 were made to fifty-nine widows, fourteen orphans, and three orphans on the Copeland Fund. Fresh applications were received on behalf of one widow and two orphans. A legacy of £500 from the executors of Miss Hurst was announced by the treasurer. The expenses of the quarter were £56 12*s*. On the motion of Mr. Steet it was resolved to propose to the next annual meeting an alteration in the-bye laws, to extend and define more certainly the area of the operations of the Society, by making all medical practitioners residing within a twenty-mile radius of Charing-cross eligible to become members.

Correspondence.

"Audi alteram partem."

LITHOTRITY AND THE REMOVAL OF FRAGMENTS.

To the Editor of THE LANCET.

SIR,—I have read the clinical lecture by Sir Henry Thompson on "Lithotrity at a Single Sitting" with great interest. He therein fully admits the value of the principle of rapidly removing fragments of stone after it has been attacked by the lithotrite. The recent movement to this kind of practice has been given by Dr. Bigelow, who by the adoption of his own particular method has shown the facility and safety of the plan of treatment.

I must, however, in justice to the memory of my revered master and teacher, Sir William Fergusson, call attention to the fact that many years ago he prominently referred to the importance of removing fragments from the bladder by mechanical means rather than leaving their expulsion to nature. It is true that Sir William's method of removing them was different from that practised by Dr. Bigelow and Sir Henry Thompson, but the principle inculcated—viz., that of clearing the bladder at one or two sittings—was the same. Lying before me is the volume published by Sir William Fergusson in 1867, termed "Lectures on the Progress of Anatomy and Surgery," and at page 101 will be found the following words: "It may be justly said of successful lithotrity that neither weeks nor months are long in comparison with the advantages gained; but, for the credit of surgery, it may be claimed as an advantage to do that *in a few minutes* which nature might take weeks or months to accomplish. The chief object I have in view in these remarks is to establish this practice. Supposing a stone crushed and its fragments comminuted, my proposal is, that these should be removed at the same time or as soon thereafter as may be." Sir William then goes on to describe the method he adopted, which consisted, after the stone was broken up, in removing the fragments by means of what he terms "a small lithotrite and scoop." Many years before this was written I had often assisted him in this manipulation, and I have repeatedly practised it myself with great advantage.

Whilst, however, maintaining that the object aimed at—viz., the rapid clearing of the bladder—was the same, I am willing to admit that the means adopted by Dr. Bigelow and Sir Henry Thompson are preferable; and I am sure, were Sir William Fergusson living, he would follow the same plan, for from the fervid manner in which he used to speak, both publicly and in private conversation to myself, regarding the propriety of removing fragments from the bladder, I am convinced he would have made use of any means by which this desirable object might be attained.

I am, Sir, yours, &c.,

Wimpole-street, Jan. 20th, 1880. HENRY SMITH.

THE PREVENTION OF HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—The boy alluded to in my letter of December 16th died from unmistakable hydrophobia on Dec. 18th. He was under the immediate care of Dr. Dobie, Keighley, and was seen by me with Dr. Rabagliati, of Bradford. Dr. Lauder Brunton kindly came down from London to give the benefit of his advice. The history of this boy will probably appear in the forthcoming report of the Hydrophobia Committee of the British Medical Association. In the Keighley case the saliva test was unfortunately not tried, as an accident happened to the vessels containing saliva. I quite agree with your remarks that carefully conducted experiments are necessary to test the accuracy of the suggestion I have advanced, and I trust Professor Greenfield will have an opportunity of verifying the results obtained by Reynaud. In all investigations certain conditions are necessary for success. The insertion of vaccine in some cases is not followed by the results desired. Though at Manchester the rabbits resisted the poison, this negative result may have depended on some causes which may admit of further explanation.

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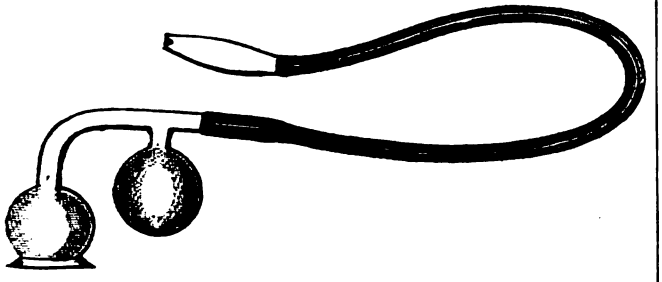
We cannot overlook Reynaud's evidence. In *Le Progrès Médical*, 16th November, 1879, it is stated that Reynaud not only produced rabies in rabbits by injecting the saliva of the patient who died under his care at the Lariboisière, but that he continued the chain by extirpating the submaxillary glands of the first series, and inoculating or inserting them into a second series, obtaining positive results again. What are the conditions necessary for successful inoculation? What portions of the saliva are the most virulent?—From one side of the mouth or the other? How long does the saliva possess its virulency? Is it affected by heat? These and other questions (which will suggest themselves to the mind of such an expert in the art of investigation as Professor Greenfield) require solution. The Brown Institution is the place for solving them.

Through the courtesy of the police authorities of the district I was enabled to send to Professor Greenfield, Brown Institution, the body of the dog which inflicted the injury, and which was killed on the day the boy was bitten.

Cauterisation was within a brief period resorted to in this case. A very important question springs from this, one upon which there has existed, and still exists, a great diversity of opinion—viz., as to whether cauterisation should be employed without previous suction, so as to drain off any virus and cleanse the wound. The principal objection against cauterisation is, that an encysted condition of the virus may be produced. Some of the older writers advised dilatation of the wound, and keeping it open for some time. I believe it would be better in all cases to incise the wound and draw off some blood, and then apply some caustic.

Sir Thomas Watson has cautioned the public against suction by the mouth; and though I do not agree with his opinion, yet I cannot overlook the weight which must necessarily be attached to the pronounced utterances of a physician of his eminence and experience, and I have no doubt the influence of his teaching will deter a large number from performing a humane and harmless action. Suction may be made in another way, and I submit to you a small instrument made at my suggestion by Aitkin and Co., surgical instrument makers, York. The accompanying drawing



will explain the principle of action. It is very simple, and when at hand might be usefully employed, before cauterisation. The blood will not fall back upon the wound, as it will ascend into the secondary bulb, and all risk of infection by the mouth is obviated. I intend fixing a small gutta-percha rim round the open bulb, so that the aperture will be narrowed and the air more speedily exhausted.

Preventive and preservative measures are of paramount importance in relation to hydrophobia; I trust my little contrivance may be found useful, and that its merits and defects may be freely criticised.

I remain, Sir, yours faithfully,

TH. M. DOLAN, F.R.C.S. Edin.

Horton House, Halifax, 20th Jan., 1880.

*** The instrument forwarded by Mr. Dolan appears well calculated for its object, if only it be at hand when needed. It appears also suitable for use for a similar purpose in dissecting rooms.—ED. L.

SMALL-POX AT BATH.

To the Editor of THE LANCET.

SIR,—Your article, "Small-pox at Bath," conveys a misapprehension which I hope you will allow me to remove, as far, at least, as the board of guardians is concerned. You say that the "Poor-law Guardians' Hospital, a ruinous cottage adjoining the workhouse, is adapted to receive only three or four cases." This is so far true that the guardians did purchase some years ago a cottage near the workhouse in order that any sporadic case of infectious disease, whether occurring within the house or brought in from the outside, could be at once isolated; but this was, of course, totally inadequate for use (except in special cases) for the present epidemic, which (as far as the guardians are concerned) has been dealt with in a large-hearted and practical way. Last year, upon my representation, a new wing containing three wards was built by the board for the accommodation of female venereal cases and "offensive sick." This wing was finished and about to be occupied when, more cases of small-pox being sent in than the cottage could accommodate, a committee of the board consulted me, and at once decided on devoting this wing exclusively to small-pox cases. On the male side a corresponding wing was utilised for men. These wings are continuous with, but quite separate from, the other sick wards, and the cases are admitted from the outside without passing through any part of the house.

As you will see by the enclosed report adopted at their last meeting, the Board do not consider (as I do not myself) that any arrangement which brings a formidable epidemic into close proximity with 700 persons is a satisfactory one, and they strongly object to pauperising many whom they feel should not have been sent to the workhouse at all; but difficulties existing as to their joint action with the Town Council in the matter, they have simply, in the face of a sudden and difficult emergency, done their best to meet it. Although the Board requires no eulogium from me, yet I can truly say from twenty-five years' experience of them, that no exertion on their part is at any time wanting to provide all the accommodation &c. possible for the sick poor, and I have never yet made a suggestion or expressed a wish in connexion with my duties that has not been most attentively considered, even if circumstances prevented its being completely carried out.

I am, Sir, yours obediently,

ROBERT BIGGS, M.R.C.S.E., L.S.A.,
Medical Officer to Bath Workhouse.

Frith-street, Bath, Jan. 22nd, 1880.

To the Editor of THE LANCET.

SIR,—Your edition of the 17th inst. contained a short paragraph headed "Small-pox at Bath," which you state is founded on information "from Bath." Had this paragraph appeared in a less widely circulated or less influential journal than THE LANCET, I should have treated it with contempt, and possibly informed the Editor that he had been made the innocent victim of a mendacious hoax. As Medical Officer of Health for the city of Bath, and also in my private capacity as a citizen of this well-abused city, I solemnly declare that the information you have received on the subject is untrue and groundless.

I shall briefly take, *seriatim*, the charges brought against the Sanitary Authority and the Poor-law Guardians of Bath by your *mis*-informant—

1st. That "hospital provision for infectious disease is *lamentably* insufficient, and is equally unavailing for averting disease and for providing for suffering." Both assertions are untrue. As officer of health, I have the supervision of the removal of all such cases, in conjunction with the sanitary inspector, and up to the present date the hospital accommodation afforded by the sanitary authority and by the Poor-law authorities has been not only sufficient for the emergency, but positively has never been completely occupied. The sanitary authority, in addition to their hospital, erected an additional auxiliary hospital, which as yet has been unoccupied. To relieve the pressure put on the Poor-law authorities, by the great number of admissions to the union hospital, the sanitary authority have had conferred upon them, by the Town Council as urban sanitary authority, power to erect still further accommodation, and thus enable them more fully to give admission to others than those of the *non*-pauper class. I would fain hope that this wise precaution may prove almost unnecessary, as symptoms of subsidence of the outbreak are beginning to show themselves. The arrest of the disease has been proved by its comparative limitation.

2nd. As to the character, position, and local circumstances of the "villa" turned into an excellent hospital, your correspondent must be either ignorant or misinformed. This building, purchased, with the ground adjoining, some years

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since by the sanitary authority at a considerable price, and transformed into a hospital at considerable outlay, is situated on a flat table-land about two miles from Bath. The approach is certainly up-hill, but as good a road as any in England. This hospital, capable of containing about fifteen patients, is completely sheltered from the cold north winds by a noble belt of trees. The view is scarcely to be surpassed in England. There could be no more favourable spot whereon to build a hospital or sanatorium.

3rd. I again assert that even this hospital has never been completely full.

4th. I have no doubt that the medical officer of the workhouse hospital can give an equally satisfactory refutation of your informant's assertions regarding the workhouse hospital accommodation.

In support of my own assertions I beg to forward a local paper containing my annual report; and I will conclude with a request, or I may say a challenge, to your informant if he lives in Bath, to call upon me any day, and I shall be happy to hear his reasons for making unfounded assertions, equally injurious to the interests of the city and to the public character of those who have done and are doing everything possible to arrest the increase of a much exaggerated outbreak of disease.

I remain, Sir, yours faithfully,

A. B. BRABAZON, M.D.,
Medical Officer of Health, Bath.

*** We propose to print the portion of Dr. Brabazon's annual report referring to the subject under consideration, and a report adopted by the Board of Guardians on the same subject, with which Mr. Biggs has favoured us, in our next impression, pressure upon our space preventing us giving place to them this week. We may state, however, that Dr. Brabazon's letter and report raise a much wider issue than we were prepared to expect, and which will receive our attention.—ED. L.

ON THE

PREVENTIVE AND REMEDIAL EFFECTS OF MOLASSES IN SCURVY AND DISEASES CONNECTED WITH CHRONIC STARVATION.

To the Editor of THE LANCET.

SIR,—As it is probable from the accounts in the daily press, that the distress now increasing in the West of Ireland may assume the proportions of a famine, or at all events such gravity that some of the diseases incidental to slow starvation may become manifest, I shall feel obliged by your giving me some little space to draw the attention of the profession, and in particular that of the Poor-law medical officers in the suffering districts, to the affections, principally of a scorbutic type, which, while acting as civil surgeon of a district containing two millions of people, during the late famine in Southern India, came under my notice, together with the powerful calorifacient, antiscorbutic, and assimilation-assisting properties of Jaggary (uncrystallised palm sugar), which is analogous in its composition and action, though differing in consistence and appearance, with the molasses or treacle with which all are so familiar in this country. The therapeutic powers of this substance I first brought to the notice of the Indian public in June, 1877, having been induced to do so from information received ten years ago, as to its efficacy, from a sea captain in Halifax, Nova Scotia, who had used it for a period of twenty years, and in whose experience, and that of many of his friends, it was more efficacious, more economical, and more palatable than lime-juice, among the substitutes for which I fail to see it mentioned either by Parkes or other writers on this subject.

Thus impressed by memory, and being surrounded by disease of a scorbutic character, though brought about by causes far removed from sea influences and salt provisions (these latter cannot be set down as causes of scurvy in the Indian famine, as the very bullocks often died from want of it, owing to the heavy salt-tax; it was due more to starvation, and to the effect of roots, nuts, wild aloe, prickly pear, and such inedible matters), I was enabled, with the permission of the late Surgeon-general of the Madras Army, Dr. Smith, and with the help of Mr. Longley, the commissioner, to introduce it into all the famine camps in his district; and later on, when its period of probation had passed, and its value became somewhat recognised, more generally among the famine-stricken people of the Madras Presidency.

In its limited, as well as in its more extended use, according to all unbiased opinion, professional and lay—amongst which I may mention the written testimony in its favour of twenty medical subordinates who served under me in the famine—it has been the means of saving numerous lives; and from its sweet and pleasant taste, independent of its more useful properties, the hour of its distribution has been the one bright spot (the plum pudding and mince pies) in the daily life of the miserable little beings who crowded the famine camps, whose careworn and aged features and emaciated frames once again, under its influence, assumed a sleek appearance, with a natural smiling and childlike aspect.

It is possible, however, that in temperate climates the diseases due to prolonged abstention from wholesome and digestible food, at a time when digestible and easily assimilated food becomes daily more desirable, may differ from what appertains in the tropics. At the same time, as far as I am aware (speaking under correction) there is no valid reason they should do so, beyond the fact that dysentery, whether in the acute or scorbutic form, and affections of the liver, are rare in higher latitudes with these exceptions. *Ceteris paribus*, there is no reason why passive dropsies and hæmorrhages, weak ulcers, joint effusions, bleeding and spongy gums, prolapsus ani, mesenteric disease and famine diarrhœa—the diarrhœa of non-assimilation, with stools resembling (but resembling only) cholera evacuations—may not prevail in Ireland as in India. On the contrary, it appears to me there are some special reasons why they should do so, which are as follows:—

The Indian meal or maize-flour and bean-meal, in common use among the Irish poor, and on which, particularly the former in times of famine, owing to the failure of the potato crop, they mainly subsist, are very similar in chemical composition and indigestibility with the cholum (Sorgum vulgare) and dholl (Cojanus indicus), dry grain largely used in India; all of which, though rich in nitrogenous and fatty matters, are indigestible and fruitful sources of diarrhœa, and are if given alone, or in any quantity, eminently unsuited to a starving individual with an impaired assimilative apparatus. And it is under such circumstances that a few ounces of molasses per diem (it is very cheap) will help digestion, and cause the absorption of food that would without its aid pass through the system unaltered, as the following experiment will show.

Experiment No. 1.—Twelve men, emaciated inmates of a relief camp, were weighed on four occasions in the space of a fortnight, their diet being principally rice, one pound and a half, with six ounces of jaggary per diem. They, with two fever-stricken exceptions, increased in weight *ab initio*, and at the end of a fortnight had almost assumed their normal state; while it was the general experience that the chronically starved lost weight for at least a week after admission, no matter how well fed, unless the sugar was given.

No. 2.—Twelve men, prisoners in gaol, not so reduced as those in No. 1, were weighed three times in a fortnight. Their diet was the ordinarily mixed full dietary of the gaol, being a mixture of rice cholum (Sorgum vulgare), with mutton and vegetables twice a week, but without the jaggary. At the end of a week five had reduced in weight, six were in the same state as on admission, one had fever, and was not noticed. At the end of a fortnight six had increased in weight, while the rest were in the same state as on admission. After this they all improved.

These experiments show clearly enough the great utility of the palm sugar, or jaggary, in helping the more weakly, emaciated, and worse-fed men to assimilate their food from the beginning, while the others, with a more varied and extensive dietary, failed to do so.

Having said so much on the value of this substance, I will not encroach on your valuable space further than to suggest that its antiscorbutic properties may in some measure be due to a partial acetous fermentation, which suggestion may possibly seem superfluous to those who remember that the universally acknowledged antiscorbutic property of the potato is due to the large quantity of sugar it contains. The physiological explanation of its property of aiding in assimilation, which I consider most important and deserving of attention, may be found in some power which

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the *Sucrose* group of carbo-hydrates, so easily assimilated in themselves, and so readily convertible into fat, may possess, of retarding, arresting, and preventing those fatty degenerative changes of the intestinal mucous membrane and its glands which I as well as others have found, post mortem, as the last and most fatal pathological phenomena of chronic starvation.

As the themotic power of molasses, for similar reasons, is self-evident, it only remains for me to recommend it to the naval and merchant services, and again, in conclusion, to my professional brethren who may have the misfortune to meet with the diseases incident to famine, with the hope that it may prove as useful to my poor countrymen across the Channel as I think I have shown it to be to the people of India.

I am, Sir, yours, &c.,

D. H. CULLIMORE, F.R.C.S., M.K.Q.C.P. I.,
Late Residency Surgeon at the Court of the King of Burmah.
Connaught-square, 7th January, 1880.

"ERRONEOUS IMPRESSIONS OF PROFESSIONAL WORK."

To the Editor of THE LANCET.

SIR,—In an editorial note appended to my letter in to-day's LANCET you state that you were "not aware that the paragraph in a lay contemporary was written by Dr. Tibbits, or that he was responsible for the statement concerning electricity to which we took exception."

I beg to say that I did *not* write the paragraph in question, and that I knew nothing of it until I saw it, in common with yourself, in the ordinary course; also that I should not have troubled you with any communication had not the "statement concerning electricity" been quoted by your contemporary as an extract from the "annual report of Dr. Herbert Tibbits." I am sorry to encroach again upon your space, but your note, if uncontradicted, would convey the impression that I write upon medical subjects in the lay press, a thing I have never done and never intend to begin doing. I am, Sir, your obedient servant,

HERBERT TIBBITS.

New Cavendish-street, W., Jan. 24th, 1880.

*** If Dr. Herbert Tibbits will look again at the paragraph which appeared in a lay contemporary, he will see that the passage cited by us, and to which we took and still take grave exception, as reflecting on "the majority of the medical profession," is not stated to be an extract or distinguished by quotation marks. However, the fact that it *is* an extract does not alter our opinion of it as a reflection on the profession. The matter must now drop.—ED. L.

THE NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—If the new Naval Medical Warrant has not appeared before you receive this letter, I should feel much obliged by your publishing it.

In my opinion it cannot be too strongly impressed on the Admiralty that if the new Warrant simply gives the naval medical officers the same pay and retirement recently granted to the army surgeons, it will most certainly not induce any prudent man to enter the navy.

The Admiralty ought to seriously consider that if the Army and Navy Warrants were identical as to pay and retirement, the army medical officer in India would receive more than double the pay and allowances of the naval one on the same station, or any other station. Most persons will concede, also, that the great majority of doctors would infinitely prefer eighteen shillings a day on shore to a pound a day and the restrictions and discomforts of ship life. Under such circumstances, it requires no laboured argument to prove that if the navy desires to compete successfully, for one moment, with the army for medical candidates, the Admiralty must be prepared to offer more liberal pay and retirement than obtains in the army, and either a shorter period of service for retirement—to allow for the loss of time on compulsory half pay—or a fair portion of half-pay time to count as full-pay time. Without such concessions being granted it is perfectly idle to hope for candidates.

With regard to the question of cabins, which has been frequently discussed in THE LANCET: anyone conversant with the service will know that it is requisite for the safety of the ship that the navigating officer should have a cabin as near the upper deck as possible; but, most decidedly, with this exception, cabins ought to be "given according to relative rank"; and chaplains, who have no naval rank, preferring, for good reasons, to have none, most certainly ought not to have a cabin in preference to any other civilian, of whatever seniority or standing.

In conclusion, I think it would conduce very much to the content of the Naval Medical Department if exchanges were permitted, as in the army.

I enclose my card, and am, Sir, yours &c.,

HOPE.

INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—In your issue of November 15th, you devote a leader to the Army Medical Department. My present purpose is to solicit your powerful advocacy for the removal of some real grievances of the Indian Medical Service. To begin with, it is a strictly military service, although certain officers are lent for the performance of civil duties. Yet, although a military service, it is the only department in which staff allowances are not granted. For example, the pay of a surgeon-major above twenty years' service is 1056*r.* per mensem; this is the pay of rank. The consolidated pay laid down for charge of a regiment by an officer of this standing is 1000*r.*, such consolidated pay being actually less than the pay of rank. True, the the medical officer is not mulcted for doing work, since he is permitted to draw the pay of rank; but is it not an anomaly that consolidated pay should be fixed at a rate which is practically useless, since it is never drawn? There is no staff pay for holding charge of a regiment. An officer receives 1056*r.* while waiting for a charge, and precisely the same sum when in charge. The pensions are old-world, and out of harmony with the time; those of officers of the A.M.D., although they may serve at home or in good climates, being actually higher. Surely the man who is compelled to serve in the tropics all his time, and whose sick leave does not count towards service, should have a higher instead of a lower pension—at the very lowest £1 per diem after fifteen years' actual service. A Madras surgeon-major, in an able letter to Lord Cranbrook, treats of the past and present of the Indian Medical Service, and gives a fair estimate of its prospects. He therein clearly shows there is a "block," and conclusively proves that an immediate saving to the State of one hundred thousand per annum would result from pensioning off liberally one hundred surgeon-majors. According to his view the days of the service are numbered, and the sooner it is wound up the better. Supersession is the order of the day.

One word to intending candidates. The pay of rank of a surgeon is 286*r.* per mensem; true, a charge may be held in a year or two, but more likely for the first five years the youngster will be bucketed about from pillar to post. Now 286*r.* a month, in consequence of the depreciation of the rupee, is under £24, which is scarcely a living for a gentleman in India.

I am, Sir, yours obediently,

M. A. D.

PARIS.

(From our own Correspondent.)

M. MAGNAN commenced his course of lectures on Nervous and Mental Pathology on the 18th instant, taking Aphasia as the subject of his opening lesson. Setting aside glosso-plegia, glosso-ataxia, and other cases in which the instrument of speech is at fault, the lecturer confined his attention to the study of two forms of aphasia, depending upon disturbances occurring in the psycho-motor region of the brain. Of these, the first, verbal amnesia, would appear to result from lesions either of the third frontal convolution or of the cortical part of the insula, and the function of speech is lost because its organic substratum is destroyed. In logoplegia, on the con-

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trary, the memory of words remains clear, but the subject is unable to reproduce them, and here we find that the cortex is intact, and that the disease is localised in the bundles of fibres emanating from it. An interesting variety of aphasia is word-blindness. After an attack of right paralysis, a man aged sixty-four, who was shown by the lecturer, remained aphasic, naming wrongly objects presented for his inspection. A sentence being written in large letters on the board, the patient was unable to copy it, and yet when told to write it down, the same words having been pronounced, he acquitted himself extremely well. Another man of the same age, who had also suffered from right hemiplegia, was able to make a written communication of considerable length on the state of his feelings, but was incapable of reading a single line of his own writing. The explanation of such cases was simple enough. "The encephalic centre which elaborates expression has remained intact, and the fibres which join it to the peripheral organ continue their function. If reading is impossible, it is because the graphic symbol, through some rupture in the conducting fibres, does not reach its centre, and does not there awaken a corresponding idea." It will be seen that M. Magnan is a partisan of what Brown-Sequard calls the *clavier* theory.

Surface thermometry continues to attract much attention at the medical societies. Professor Broca showed an instrument devised by Dr. Mortimer-Granville, at the Academy of Medicine, and M. Laborde made a communication relative to the same instrument to the Société de Biologie. Other thermometers, but differing little from those generally in use, have been presented to the Academy by Drs. Voisin and Colin, and a crop of observations concerning local temperatures may be predicted with confidence.

M. Briquet, a veteran in the Academy, and the author of a treatise on Hysteria which is one of the standard works on the subject, read a report which was expected to excite considerable attention. The views of an important school of neurologists were criticised somewhat sharply, especially as regards the relation between compression of the ovary and the development and arrest of the hysterical crisis. It was thought that Professor Charcot would have replied, and an interesting discussion was anticipated; but, contrary to all prevision, M. Briquet was allowed to lodge his protest without eliciting any answer from the Salpétrière physician.

Obituary.

EDWARD CATOR SEATON, M.D.

DR. SEATON was the son of a surgeon in the Naval Medical Service, who, having retired on half-pay, had settled in the town of Rochester. He received his early education there, and afterwards studied for the medical profession at Edinburgh, of which university he became a graduate.

The period of his studentship was always looked back upon with pleasure, for it was then that he formed some of his longest and most valued friendships. He was intimately associated with Dr. Allen Thomson, and was the pupil and close friend of Dr. Sharpey, to whom he was warmly attached, and to whose pleasant companionship he owed many happy hours during the last few years of his life.

After terminating his career at Edinburgh in 1837, he studied for a short while in Paris, and then joined his father at Rochester, holding the appointment of surgeon to the North Aylesford Union. In two or three years' time he left that neighbourhood, and having purchased the interest in a small practice in Chelsea, he settled in Sloane-street, where he remained for twenty years. He succeeded in establishing there a fairly good practice, which latterly would have become much more extensive had it not been for the occasional official work which he undertook. Whilst in Sloane-street he took a very active part in founding the Western Medical Society, of which he was the secretary and librarian, and afterwards president; he also held the appointment of surgeon to the Chelsea Dispensary. As a private practitioner he was much liked and respected by his professional brethren, and his departure from among them was greatly regretted. He was connected with the Epidemiological Society at its foundation, and in later years became its President. It was in connexion with this Society that he first became associated with that branch of the Public Health work with which his name has become so intimately associated. The first subject that engaged the attention of this Society was "Small-pox and Vaccination," a committee of its members being appointed to conduct inquiries connected therewith. This committee, having obtained from foreign governments the communication of most important statistical facts as to the decline of small-pox, reported, *inter alia*, their results to the Society, and soon afterwards this valuable report (specially the work of Dr. Seaton, honorary secretary to the committee), was ordered to be printed for presentation to both Houses of Parliament.[1] The Compulsory Vaccination Act of 1853 was mainly the outcome of this report. He contributed important papers about this time to the Transactions of the Society, especially a paper on the "Protective and Modifying Power of Vaccination." In 1858 Mr. Simon, who had then become Medical Officer to the Privy Council, and with whom Dr. Seaton had previously been in relation as medical officer to the General Board of Health, enlisted his services as an inspector in that department. For the first two years the work was only occasional; it then became continuous, and, as will be seen by reference to the periodical Reports, he was constantly engaged in inquiring into and reporting on the state of vaccination in the metropolis and various parts of the country. The result of these investigations, and those of his colleagues, went to show the great deficiencies in the arrangements for public vaccination, and to procure an amendment of the law for Compulsory Vaccination. During the next four years he was more unsparing of himself than ever; for not only did he carry on his arduous official duties as inspector, but all his leisure time was occupied with the subject that so much engrossed him. The article on "Vaccination" in Reynolds' System of Medicine appeared in 1865, and in 1868 he published his well-known Handbook of Vaccination, a work which cost him a large amount of labour. These writings, together with his Report on Animal Vaccination (1869), and that in the new Local Government Board series in 1874 on the recent small-pox epidemic with reference to vaccination, constituted his chief contributions to the literature of the subject. But these represented a part only of the important services rendered by him to the public in relation to vaccination. It was by his constant and earnest devotion to the details of administrative work that he was enabled to afford such material assistance in bringing about an improvement in the state of public vaccination which, judged by the results, is certainly most remarkable. For the accomplishment of this task he brought to bear qualities which of themselves greatly contributed to success—great power of organisation with rare tact and judgment combined with firmness, qualities which enabled him to overcome or conciliate much of the opposition with which he would otherwise have had to contend. Some idea may be gathered of the amount of attention he gave to the work of administration by the simple statement of the fact that after the Medical Department of the Privy Council was transferred to the Local Government Board all the public contracts were revised, every one of them (upwards of 3000) under his supervision, with an accuracy of detail which could not be surpassed.

Though chiefly known in connexion with his work on public vaccination, Dr. Seaton also paid considerable attention to other sanitary subjects. He was one of the representatives of Great Britain in the International Sanitary Conference held at Vienna in 1874, and his valuable report and memoranda on this subject are contained in the new series of the Local Government Board Reports.

In 1876 he succeeded Mr. John Simon, C.B., as medical officer to the Local Government Board, to which he had previously acted as assistant medical officer. In this capacity he had to deal constantly with questions of general sanitary service and administration, in which his sound, clear judgment proved of great value.

Dr. Seaton may be said to have enjoyed very good health until the last two or three years of his life. He was very regular and careful in his habits, seeming to delight in work of every kind, though at the same time he never neglected to take a healthy amount of bodily exercise. A little more than a year after he became medical officer to the Board his health began to fail. The work had, from various reasons,

[1] *Vide* Simon: Papers relating to the History and Practice of Vaccination, 1857.

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been most unusually trying to him, and of a nature that would probably have taxed the strength of a much younger man. It was then he suffered from an illness which, looked upon by the light of subsequent events, must be regarded as the first evidence of the disease which carried him off. He went on, however, with his work, and it was not until a year later that he yielded to persuasion, and consented to take medical advice. Sir William Jenner, whom he consulted, recommended rest and change for six months, and he had already made his arrangements for carrying this recommendation into effect, when he received news from India of the sudden death of his youngest and dearly-beloved son, who was killed by a fall from his horse on Christmas-day, just as he was entering upon a career of bright promise. This disaster made a profound impression on Dr. Seaton, but, notwithstanding the depressing circumstances, he adhered to his original intention of taking the latter and chief part of his leave abroad. On his return in June he appeared to be better, and declared himself to be so. But the improvement was only apparent, for in October, while on a short visit in Warwickshire, he was seized with an attack of right hemiplegia. As soon as he could be moved with safety, he was brought to the residence of his son-in-law at Notting-hill. Here he seemed to be making steady, though rather slow, improvement, and there was every appearance of his securing at least such an amount of recovery as would enable him to enjoy life for some time to come, when on Jan. 19th he was seized again, and died on the 21st instant. He was buried at Kensal-green, and a notable assemblage around the grave of men famous in the public-health service of the kingdom testified to the great honour and respect in which he had been held.

J. LOCKHART CLARKE, M.D., F.R.S.

THE medical profession, which in the past year had many losses from its ranks, has already in the present year to deplore the death of a member who shed a lustre on it, and who throughout the world of biological science was held in deserved esteem. Dr. Jacob Augustus Lockhart Clarke, who was born in 1817, died on January 25th, 1880.

His mother was left a widow, with a competency, when Lockhart was a boy, and removed to France, in order to give her children, of whom she had seven, educational advantages. On her return to England, in 1830, Lockhart, who up to this time had displayed no unusual ability, and was regarded by his family as lazy, began to show a desire for study, and, selecting the medical profession, to which his elder brother belonged, and which his grandfather had followed, commenced his studies at Guy's and St. Thomas's Hospitals. On obtaining the licence of the Apothecaries' Company, he commenced practice in Pimlico, living with his mother. Here, amidst the constant interruptions of his professional calling, he started and carried on the investigations into the anatomy and pathology of the nervous system which have made his name so universally known. His researches were characterised by patient and laborious study, and by extreme accuracy and care. So much is this the case, that his anatomical studies are accepted facts, and have been of great service in the elucidation of the physiology of the nervous system. Not only did he explore a territory then almost unknown, but he introduced a new method of preparing and examining tissues that has revolutionised histological research, and has been not less fruitful in the hands of others than in his own. His investigations were chiefly published in the Philosophical Transactions, and their value was so appreciated that he was elected a Fellow of the Royal Society, and received the Royal Medal of the Society in 1864. He published also valuable papers in French and in German. In 1867 he was made an Honorary Fellow of the King and Queen's College of Physicians, Ireland, in recognition of his scientific work. In 1869 he graduated at St. Andrews. Soon after this he took the Membership of the College of Physicians, London; left general for consulting practice, and was elected physician to the Hospital for Epilepsy and Paralysis, Regent's-park. He was a man single of purpose, of noble independence and honesty, wholly free from ambition, and wanting in that knowledge of the world necessary for making way in it. What measure of success he obtained in consulting practice it is difficult to gauge, but he will be remembered, not as the popular physician, but on account of his patient and laborious researches so fruitful to medical science. He was of a singularly retiring and reserved disposition, and hence few knew of his illness. He was seen by Mr. Henry Smith, by Dr. Hughlings-Jackson, and by Dr. Stephen Mackenzie, but fell a victim to pulmonary disease, to which there was a family tendency.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on the 22nd inst.:—

Butler, George Robert, Yarmouth, Nova Scotia.
Farmer, E. W. White, Boulogne-sur-Mer.
Gubbin, George Frederick, Brixton-road.
Harper, Charles John, Hadleigh, Suffolk.
Harris, F. W. H. Davie, Ivy-bridge, Devon.
Hatton, George Stokes, Newent, Gloucestershire.
Hawkins, F. D. Cæsar, Clapham.
Garrard, Jacob Henry, Southsea, Hants.
Peck, Edw. George, M.B. Cantab., Cambridge.
Powell, Henry Albert, University-street.
Winterbottom, Charles, Sloane-street, Chelsea.

The following gentlemen were admitted Members of the College on the 23rd inst.:—

Atkin, Charles, Sheffield.
Billiald, Richard Atherstone, Nottingham.
Bissill, Arthur Kent, L.S.A., Sleaford.
Buckell, Arthur Edward, Chichester.
Gilkes, Malim D'Oyley, L.S.A., Leominster.
Harries, Arthur John, Llanelly.
Henty, Sydney Haviland, Camden-road.
Knight, William, Sutton.
Mathews, S. R. Harvey, Bickley.
Palmer, John, Langford, Somerset.
Phelps, Philip, Weston-super-Mare.
Phillips, L. W Kinglake, Brighton.
Sers, Clement Henry, Lewisham-road.
Smith, James Snowden, Salisbury.
Towlson, Harry Joseph, Wingfield, Derby.
Whitworth, William, St. Agnes, Cornwall.

Of the 133 candidates examined during the last week, 77 passed to the satisfaction of the Court and obtained their diplomas; 7 passed in Surgery, and when qualified in Medicine will be admitted Members; the remaining 49 failed to reach the required standard, and were referred for six months' further professional study. Eleven candidates who had passed in Surgery at previous examinations, having subsequently obtained a medical degree or licence recognised by the College, were also admitted Members.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Jan. 22nd:—

Baines, Harold Athelstane, Saxon Villa, Lincoln.
Bissill, Arthur Kent, Sleaford, Lincolnshire.
Conolly, Paul Bennett, Somerset-terrace, Kilburn.
Chenai, Eduljer Sorabjee, Chandos Villa, Lorne-road, Brixton.
Hakim, Hormasji Merwanji, " " "
Karaujia, Merwauji Dhunjibhai, " " "
Kelawala, Maneckshaw Jamshedji, Cromwell-road, Bayswater.

The following gentlemen on the same day passed the Primary Professional Examination:—

Arthur Orton, Queen's College, Birmingham; W. Noble Puddicombe, Guy's Hospital; Walter Trelfving Williams, London Hospital.

At the Preliminary Examination in Arts held at the Hall on Jan. 23rd and 24th, 100 candidates presented themselves, of whom the following passed and received certificates of proficiency in General Education:—

FIRST CLASS (in order of merit).—1st: C. H. Upham. 2nd: Mary Royce. 3rd: C. H. Conolly and Arthur Wright. 4th: A. F. Messeter, 5th: E. E. Batt, R. H. Castor, B. Rigby Johnston, T. G. MacLaren, and F. H. Mead.

SECOND CLASS (in alphabetical order).—H. W. Austin, Arthur Badcock, E. E. Barclay, R. S. Betts, A. H. Bird, E. J. Bower, Gilbert W. Brooks, J. P. Brooks, K. F. Brown-Constable, G. C. Buchanan, F. J. Calvert, J. A. Coles, E. P. Collett, R. Cordiner, H. A. W. Coryn, W. H. Crago, W. E. Eppstein, R. Fetherstonhaugh, E. Gumpert, Kathleen H. Graham, E. Gregson, H. Gurney, E. M. Hassard, W. Hook, T. Hurlbutt, H. Hutchinson, H. W. Husbands, C. H. Jackman, F. P. R. James, S. H. Johns, Osborne Johnson, David E. Jones, H. G. Jones, C. R. King, A. G. V. Leech, Wm. J. Lewis, H. E. M. Long, Montague Moore, R. Powell, J. P. Roughton, H. S. Saunders, J. B. Sutton, George Thorpe, A. H. Vlieland, J. Wilding, Charles Wisken, H. P. Ziemann.

SIR WILLIAM MILLER, M.B., Knt., has been appointed to the Commission of the Peace for the Borough of Londonderry.

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THE salary of Dr. Carre, medical superintendent of the Castlebar Lunatic Asylum, has been increased by £30 yearly.

MR. JOHN VINALL, F.R.C.S. Eng., late Medical Officer for the No. 5 district of the Hackney Union, has obtained a superannuation allowance of £30 per annum.

A valuable timepiece, with handsome vases, have just been presented to Dr. Ashton, surgeon, of Disley, prior to his leaving the neighbourhood, by his patients of Furness Vale and Disley, in recognition of his skill and kindness.

STEEVENS' HOSPITAL MEDICAL SCHOOL, DUBLIN.—A report has lately been circulated to the effect that this medical school will shortly be amalgamated with another institution.

TOBACCO POISONING.—An inmate of the Glencree Reformatory, aged eighteen, died suddenly last week in consequence of having swallowed a portion of tobacco, which, it appears from the evidence given at the inquest held, he was in the habit of chewing.

THE Messrs. Bolitho, of Penzance, have presented to the managers of the West Cornwall Infirmary a donation of £1000, with the request that the principal and interest should not be expended in defraying the ordinary expenses of the institution, but be applied to the extension of the Infirmary, either by the addition of a new ward or by some permanent improvement of the existing buildings.

ON the evening of Wednesday, Jan. 21st, some of the past and present students of St. Mary's Hospital, to the number of about forty, met at the Pall-Mall Restaurant, on the occasion of a complimentary dinner to Mr. James R. Lane, who has for twenty-eight years filled the office of surgeon to the hospital. The chair was taken by Dr. Broadbent, who, after the usual loyal and patriotic toasts were disposed of, presented Mr. Lane with a handsome silver epergne and illuminated address, subscribed for by upwards of a hundred of Mr. Lane's pupils at the hospital, and, in an eulogistic address, alluded to Mr. Lane's long and valuable services to the hospital, his contributions to surgical literature, and his uniform kindness and courtesy to all with whom his arduous and multifarious duties brought him in contact. Mr. Lane replied in a long and appropriate speech.

Medical Appointments.

ALDRIDGE, R., M.D., has been appointed a Consulting Medical Officer to the Yeovil District Hospital, on resigning as Medical Officer.

ALLEN, A., M.D., C.M., has been appointed Medical Officer and Public Vaccinator for the Keelby District of the Caistor Union, Lincolnshire, vice Burnham, resigned.

BRYAN, F. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Inspector of Seamen for the Port and District of Littlehampton.

BUTLIN, H. T., F.R.C.S., has been appointed Assistant-Surgeon to St. Bartholomew's Hospital, vice Willett, appointed Surgeon.

CAMERON, H. C., M.D., F.F.P.S.G., has been appointed Surgeon to the Royal Lunatic Asylum, Gartnavel, Glasgow.

COATES, E., L.F.P.S.G., has been appointed Medical Officer to the Workhouse, Portumna Union, co. Galway, at £60 per annum, and £5 10s. per annum as Medical Officer of Health, vice S. Coates, M.D., deceased.

COCKRAN, C. H., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Caversham District of the Henley Union, vice Young, resigned.

COYLE, Mr. D., has been appointed Public Analyst for the Southern Division of the County of Derby, at £42 per annum and 10s. 6d. per analysis, when exceeding sixty in any one year, vice Goode, deceased.

CROWE, J. W., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Hartlepool District of the Hartlepool Union; also to the Hartlepool Union Workhouse, vice Moore, resigned.

DE LA HUNT, Dr. J. J., has been appointed Medical Officer, Public Vaccinator, &c., for the Lawrencetown Dispensary District of the Ballinasloe Union, co. Galway, at £112 per annum and fees, and £15 per annum as Medical Officer of Health, vice Brodie, resigned.

DREW, J., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Stirling, vice Beath, deceased.

DYER, T. B., M.D., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Superintendent of the Metropolitan Asylum District Asylum for Adult Imbeciles, Darenth, near Dartford.

GARLAND, E. C., L.R.C.P.Ed., M.R.C.S.E., has been appointed a Consulting Medical Officer to the Yeovil District Hospital, on resigning as Medical Officer.

GRAHAM, B. G., M.R.C.S.E., has been appointed Medical Officer to the Workhouse, Irvinestown Union, at £70 per annum; and Medical Officer, Public Vaccinator, &c., for the Irvinestown No. 1 Dispensary District, at £100 per annum and fees, and £15 per annum as Medical Officer of Health, vice Irvine, deceased.

GRUGGEN, W., L.K.Q.C.P.I., L.F.P.S.G., has been appointed Medical Officer and Public Vaccinator for the Silkstone District of the Penistone Union, Yorkshire, vice Rowley, resigned.

HAWKINS, W. R. T., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the No. 6 District of the Barton-Regis Union, Gloucestershire.

HAYDON, W. R., M.D., C.M., has been appointed Medical Officer to the Hearts of Oak Friendly Society new Medical Club, Tiverton, Devon.

JONES, D. J., M.D., has been appointed Junior Assistant Medical Officer to the Kent Lunatic Asylum, Barming-heath, vice Thurston, resigned.

KING, E. J. S., M.D., Ext. L.R.C.P.L., has been appointed Medical Officer of Health for the Dulverton Rural Sanitary District, Somersetshire, at £50 per annum, vice Blyth, whose appointment has expired.

MARSH, C. J., M.R.C.S.E., has been appointed an Honorary Medical Officer to the Yeovil District Hospital.

MEAGHER, Dr. E. P., has been appointed Medical Officer, Public Vaccinator, &c., for the Templemore Dispensary District of the Thurles Union, co. Tipperary, at £100 per annum and fees, and £10 per annum as Medical Officer of Health, vice O'Connell, deceased.

SLOAN, A., M.B., has been appointed Out-door Accoucheur (Northern District) to the Glasgow Maternity or Lying-in Hospital, vice Brock, appointed an Assistant Physician-Accoucheur.

SMITH, T. O., M.B., C.M., has been appointed Medical Officer, Public Vaccinator, &c., for the Gweedore portion, Cross Roads (Falcarragh) Dispensary District, of the Dunfanaghy Union, co. Donegal, at £100 per annum and fees, and £10 per annum as Medical Officer of Health.

STAFF, G. T. A., L.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the No. 3 District of the Penzance Union, vice Hunt, resigned.

TAYLOR, W. C. E., L.R.C.P.Ed. & L.M., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Scarborough Union Workhouse, vice Rablah, deceased.

TICEHURST, A. R., M.R.C.S.E., L.S.A.L., has been appointed Surgeon to the Hastings and St. Leonard's Convalescent Home for Children, for the ensuing year.

WADE, A. L., M.D., has been appointed Senior Assistant Medical Officer to the Kent Lunatic Asylum, Barming-heath, vice Powell, appointed Superintendent of the Nottingham Borough Lunatic Asylum.

WOOD, R. E., M.B., C.M., has been appointed Resident Physician to the Royal Edinburgh Hospital for Sick Children, vice Turner, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BENTON.—On the 25th inst., at The Cottage, Bushey-park, the wife of Samuel Benton, Esq., M.R.C.S., of 2, Bennett-street, St. James's, of a son.

FENNINGS.—On the 25th inst., at Clarendon-road, Notting-hill, the wife of Allen Fennings, L.R.C.P.Ed., of a daughter.

GRANGER.—On the 24th inst., at Sutherland-terrace, Downhill, Glasgow, the wife of Dr. J. R. Granger, of a daughter.

HARDWICKE.—On the 25th inst., at Parkfield House, Sheffield, the wife of Herbert Junius Hardwicke, M.D., of a daughter.

NAISMITH.—On the 20th inst., at Alloway-place, Ayr, N.B., the wife of W. J. Naismith, M.D.Edin., of a daughter.

PLETTS.—On the 22nd inst., at Kent House, Ryde, Isle of Wight, the wife of J. Menham Pletts, M.D., of a son.

WALKER.—On the 22nd inst., at Parkhurst, Isle of Wight, the wife of George Edward Walker, L.R.C.P.L., of a daughter.

MARRIAGES.

STRATHY—GRANT.—On the 15th inst., at the Parish Church, Alford, Aberdeenshire, Frederic R. L. Strathy, M.D., to Mary, daughter of D. R. L. Grant, Esq.

URQUHART—REID.—On the 21st inst., at St. Luke's, Kepplestone, Aberdeen, by the Rev. J. Mitford Mitchell, B.A.Cantab., assisted by the Rev. Henry Cowan, B.D., Alexander Reid Urquhart, M.D., Physician-Superintendent, Murray's Royal Asylum, Perth, to Agnes, youngest daughter of George Reid.

DEATHS.

BEATH.—On the 18th ult., Andrew Beath, L.R.C.S.Ed., of Stirling.

BELL.—On the 15th inst., at Lhanbryde, James Nicholas Bell, M.D., Surgeon-Major, Army Medical Department (on half-pay), aged 49.

BENSON.—On the 21st inst., at Fitzwilliam-square, Dublin, Charles Benson, M.D., aged 83.

GIBSON.—On the 21st inst., George Gibson, M.D., Surgeon, Royal Naval Hospital, Port Royal, Jamaica.

HALTON.—On the 25th inst., at Headfort-place, Kells, co. Meath, Richard Joseph Halton, L.K.Q.C.P.I., aged 40.

KEY.—On the 18th inst., at Edinburgh, Thos. Key, late Superintending Surgeon, Madras Army.

MORGAN.—On the 17th inst., at St. Giles-street, Norwich, Arthur Morris Foster Morgan, M.R.C.S.E., L.S.A.L.

NAYLOR.—On the 22nd inst., at Stockport, James Naylor, L.S.A.L., formerly of Halifax.

ROBBS.—On the 22nd inst., at Grantham, after a few days' illness, Charles Henry Denny Robbs, M.D., aged 47. The only intimation

SEATON.—On the 21st inst., at Ladbroke-grove, Edward Cater Seaton, M.D., aged 64.

THOM.—On the 19th inst., at Brampton, Cumberland, Alexander Thom, L.R.C.P.Ed.

WILLIAMS.—On the 29th ult., at Thrapston, Hugh Williams, M.R.C.S.E., aged 88.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Jan. 29th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jan. 23	29·46	E.	37	36	..	40	29	...	Overcast
,, 24	30·47	N.E.	37	33	..	37	35	..	Overcast
,, 25	30·39	S.E.	32	..	..	35	29	..	Fine
,, 26	30·32	S.E.	27	..	..	34	23	..	Foggy
,, 27	30·36	S.E.	23	..	..	35	20	..	Foggy
,, 28	30·33	S.E.	24	..	..	29	20	..	Foggy
,, 29	30·24	W	23	..	..	27	20	..	Foggy

Notes, Short Comments, and Answers to Correspondents.

SLIGHTLY INCONSISTENT.

IN a conspicuous part of the shop-window of a butter-seller in one of the best-known West-end streets there has appeared for months past a printed bill, headed "A Word to the Merciful. A petition to the Houses of Parliament against Vivisection lies for signature within." The position of this announcement is immediately below that of a very large consignment of pâtes de foie gras, and alongside of "Belgravian rolled ox-tongues." Does the worthy butterman know the kind of torture to which the Strasburg geese are subjected for lengthened periods in order to bring about the fatty condition of the liver, which forms the basis of these pies? Is he aware that the ox, whose tongue is so prized, is an animal which has been submitted to a terribly cruel operation without anæsthetics, and without a licence from the Government authorities? Or are we to take it that proceedings which are undertaken by men of science, with all the safeguards afforded by professional reputation and the aid of anæsthetics for the avoidance of sufferings, necessitate this appeal to the "merciful," the tickling of whose palates is of such immense consequence that any amount of cruelty to the lower animals may be indulged in with impunity?

Mr. H, Vigurs.—We cannot advise. Consult a practitioner.

ON ERGOT IN CONGESTIVE DYSMENORRHŒA.

To the Editor of THE LANCET.

SIR,—A year ago I was called to see an unmarried lady, aged twenty-eight, who was in great pain, and had been so for about four hours, with dysmenorrhœa. I learnt that for about twelve hours before the commencement of each period she suffered extreme pain, becoming worse just before the beginning of the flow. She would often lie down and roll about in the greatest agony. Her two unmarried sisters suffered in the same way and as much, and the same was the case with one married sister until her marriage. All three were strong, healthy-looking girls, though all were the subjects of that common affection of women, chronic constipation, the bowels often remaining for a week together without acting. I am not now going to speak of the radical treatment of these cases; but having been called in during a paroxysm of pain I had to endeavour, in the first place, to relieve it. I accordingly prescribed ergot in doses of half a drachm of the liquid extract every quarter of an hour. The pain began to diminish before the second dose had been taken, and after the third the flow had commenced, and the pain entirely gone. It may be objected that I am calling what was only *post hoc, propter hoc;* but this is not so, and for the following reasons:—On this occasion the young lady had been in pain only about four hours before treatment, so that the duration of pain was now only about five, instead of twelve, hours, as on previous occasions. Secondly, she and her sisters have ever since kept a bottle of medicine, according to prescription, in the house, and they have recourse to it on each occasion at the very earliest warning of the period, and they hardly suffer any pain. I am, of course, disposed to treat them radically—i. e., by prescribing for and giving instructions as to the bowels, to endeavour to do away with the necessity for specific treatment of the symptoms, but they are perfectly satisfied to have a remedy for these on each occasion.

Now, a rational system of therapeutics is far more satisfactory than an empiric one. I may, therefore, be excused if I draw attention to my theory of the action of the drug in these cases, my recourse to it in the first instance being founded on this theory.

Ergot is supposed to cause contraction of the muscles of organic life. I do not compare its action in cases of congestive dysmenorrhœa to that on the uterus at term. I suppose that here it acts not on the muscular fibres of the uterus so much as on those of its vessels; contraction of the uterine small arteries being the cause of relief from congestion, then, the congestion and general pressure being removed, the menstrual flow comes on.

Yours truly,

Ladbroke-grove, W., Jan. 1880. H. B. BLACKBURN.

AMALGAMATED FRIENDLY SOCIETIES AND MEDICAL INSTITUTES.

Mr. A. Wyer omits from his letter information on the very points on which it is wanted—viz., the rate of remuneration given to medical men in such amalgamated Societies as compared with that given in the most reasonable Friendly Societies, and as to the care taken to exclude persons whose means make it possible for them to pay proper fees to medical men. If he will deal with these points, we shall try to find room for a letter from him, though it is our custom to insert letters only from medical men. Nobody doubts that the members of such amalgamated medical institutes benefit themselves by arrangements which, it is alleged, are bad for the profession.

Dr. Boileau.—The paper has been received, and is marked for insertion.

TOBACCO-SMOKING.

To the Editor of THE LANCET.

SIR,—There died recently in the Isle of Skye, N.B., a woman who had outlived a century by several years, and yet was said "never to have had the pipe out of her mouth." Some reader may be able to verify the facts; but, assuming them to be as stated, the inference seems warranted that tobacco-smoking is not a chronic poisoning, for it is against every probability that an individual continually subjected through a long period to the influence of a seriously hurtful agent should attain to an *extreme* old age. Statistics can throw no light on the matter; but one such instance outweighs much theoretical objection and even Richardson's physiological facts, for it is not to be supposed that these do not apply to the case of the old woman of Skye. Support is also given to our conclusion by the fact that the nations most addicted to smoking lead the van of civilisation. The fact seems to be that we require indulgences and dissipations—the stronger less, and the weaker more,—and it is good that these should be as varied and innocent as possible; while for a man whose energies are feeble to spend them on a silly asceticism is simply to render himself a churlish companion and a worthless citizen.

Tobacco-smoking, again, is not to be condemned because it becomes a habit. Habit is the inertia of the mind, and as all-important there as its analogue in the world of physics. To be a slave indeed is disgraceful; but to minds of a certain calibre it is simply a question of masters. An allied but positively injurious habit is inordinate newspaper-reading, which, cramming at every leisure moment with the elaborated product of other men's thinking, destroys the ability to think for ourselves. This habit (tobacco-smoking) counteracts by enabling us to do nothing gracefully, and doing nothing means setting the intellectual house in order—restoring the mental balance. Whatever be the subtle charm of the weed, it is at least powerful, and to recognise and attempt to analyse it would give more force to the arguments of opponents than sweeping assertions of uselessness addressed to those whose personal experience must be infinitely more potent in determining their opinions than any theoretical objections propounded by the uninitiated.

I am, Sir, yours truly,

London, Jan. 25th, 1880. W. M'L.

To the Editor of THE LANCET.

SIR,—I presume the insertion in THE LANCET of the late Professor Parkes' defence of smoking tobacco, "when tolerance has been established" (i. e., when the healthy action of the nerves has been damaged by the poison) is inserted to provoke replies.

I lived so long ago as to have been a supporter of the then custom of injecting tobacco-smoke in cases of strangulated hernia, till rather too many patients having died suddenly under the operation put an end to using the deadly poison.

An intimate smoking friend of my own so suffered from shaking palsy of his hands that the offer of £10,000 to fill his wineglass without spilling any would merely have caused his head to shake sadly. To attempt shaving himself would have been suicide. A few months ceasing to smoke the poison entirely cured his palsy.

Like other thoughtless folks, I used to smoke till I observed that, however impatiently hungry I was for food, a pipe for a time destroyed that natural healthy sensation—evidently from the poison paralysing the nerves placed by a wise God to warn me when my body required food. So, of course, on observing this, I dared not continue to gratify my vitiated palate by using the poison so injurious to my health. For a Christian shrinks from anything that he observes is likely to injure his health, and thus, merely for the sake of pleasing his self-vitiated palate, offend God. There are many degrees in the act of suicide. He has, moreover, to consider lest his actions may tempt others to imitate him in what is wrong. It may be that, "in moderation," he himself seems to suffer slightly from the poison; while his friend, imitating him, may forget the moderation limit, and become in truth a suicide. Just as with alcohol: seemingly a slow poison to some, a quicker poison to others—an unchristian drink for everyone in health; while tobacco is bad for everyone in health or in sickness, Christian or heathen.

Yours faithfully,

Jan. 1880. J. MACKENZIE, M.D., &c.

M.B. Lond., F.R.C.S. Eng.—Our correspondent does not do justice to the curriculum and examinations of the Scotch Universities. His main suggestion might, however, be put in a form which would not involve any injustice to these institutions, which are doing valuable work.

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MEDICINE IN THE PROVINCE OF ARKHANGEL.

THE province of Arkhangel appears to be suffering from a dearth of medical practitioners. The province has an area of 750,000 square versts, and a population of 299,912. This population includes seventeen medical men only—one for every 47,000 inhabitants. Of these medical men, eight only have any public professional duties, two live in the capital of the province, and six in the rural districts.

Mr. J. S. Dunlop and *A Medical Salt.*—Application should be made to some of the large shipping agents and owners, also to the representative of the Queensland Government for emigration.

Virus will find the reply on page 115 of our issue of Jan. 17th.

THE DIAGNOSIS OF HEPATIC ABSCESS.

To the Editor of THE LANCET.

SIR,—I have just read in THE LANCET of October 4th, 1879, Mr. Boyd B. Joll's remarks on my report of the case of Hepatic Abscess, published in your journal of Aug. 23rd, and I am not surprised that he has failed to reconcile the notes with the diagnosis and remarks. Mr. Joll has apparently overlooked a very important part of the description of the previous history of the patient's illness. The chill on the night of July 13th was not followed by symptoms of pneumonia, but by pains in the right side and abdomen, which lasted several days, and recurred frequently until July 27th, when pain in the right side below the ribs became violent, and during the next few days was felt in front from the right nipple to below the ribs, and behind from the lower angle of the scapula downwards. The pneumonic symptoms first appeared on Aug. 1st, and at my first examination on Aug. 3rd there was hepatic enlargement upwards in front and behind. The right mammary line of dulness extended upwards to the nipple, and the right dorsal line close to lower angle of scapula, and the lower half of the normal right mammary and median lines of hepatic dulness was resonant. There was also at base of right lung, as evidenced by weakened vesicular murmur and faint crepitation, a slight degree of pneumonia. Such were the physical signs, which were regarded by Dr. Henderson and myself as indicating the probable existence of an abscess of the right lobe of the liver, pointing through its convex surface, pressing on the base of the right lung, attended with peri-hepatitis, and a slight amount of pneumonia at base of lung. The collateral symptoms were pyrexia, cough, dyspnœa, and severe pain over the region of the liver.

Mr. Joll states that the above case appeared to him to be the exact counterpart of one described in THE LANCET Hospital Mirror of March 2nd, 1878, as empyema complicated with pneumonia. I have read Mr. Joll's notes of the latter case, and fail to perceive the slightest resemblance between them. In Dr. Gowers' patient the symptoms and physical signs of a large effusion in the cavity of the pleura were complete, and the patient was in imminent danger of perishing from suffocation. In my patient there were no symptoms or physical signs of fluid in the pleura, but merely a very limited degree of pleuro-pneumonia, which produced very little disturbance in respiration, and never caused any anxiety whatever. There was certainly no need to have the aspirator "driven" into the cavity of the pleura, nor was it ever there; but there was urgent necessity to explore the liver, and fortunate it was for the patient that the abscess was discovered and aspirated. With reference to the two apparently contradictory statements in my remarks, which "startled and amused" Mr. Joll, what I meant to convey was, that "suddenly on the 27th July the symptoms of hepatic suppuration first showed themselves." In all probability deep-seated suppuration was going on for some time previously; but it was only when the peri-hepatitis and pneumonic symptoms appeared, with acute pain and enlargement of liver, that the diagnosis became almost certain. Mr. Joll states that he has not been fortunate enough to see a case of acute tropical abscess of liver. I have met with a great many cases during the last sixteen years both in hospital and private practice, and I regret to say many were fatal. Fortunately antiseptic surgery has come to our aid, and is already diminishing the mortality from this disease. During the last four months I have operated antiseptically on two cases of acute tropical abscess of liver (one in hospital, the other in private practice), and both patients made excellent recoveries. At the present time I know of three more cases which quite recently have been similarly operated on in Shanghai, and two of the patients are already convalescent.

Yours faithfully,

Shanghai, Nov. 29th, 1879. JAMES JOHNSTON, M.D. Edin.

Senex.—The cost of a journey to Paris or Vienna depends upon the route taken. The minima are about 30*s.* to the former and £7 to the latter. The cost of living in either city depends upon the habits of the traveller. In simple lodgings the expense in Paris is about equal to that in London, and in Vienna (in the suburbs) rather less.

Dr. Robert Bell.—Soon.

Mr. C. Lowther Kemp.—It does not surprise us very much.

ORGANISM IN SPUTUM.

To the Editor of THE LANCET.

SIR,—In reply to the suggestion of Mr. H. Owen in respect of the organism observed by me, permit me to observe that the great difference which existed between its size and that of the cell described by Quain alone sufficiently negatives such a view of its nature.

I am, Sir, yours truly,

Bristol, Jan. 26th, 1880. SAM. SMITH.

ROYAL COLLEGE OF SURGEONS OF ENGLAND: PROFESSIONAL EXAMINATIONS.

THE following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the candidates at the pass examination for the diploma of Member of the College on the 16th inst., when they were required to answer at least four, including one of the first two, out of the six questions:—

1. Describe the several structures which must be divided in an amputation of the thumb and its metacarpal bone.
2. Describe the course, relations, and anastomoses of the deep epigastric artery.
3. What is a node? Give the anatomical characters of its various forms, and the treatment you would adopt in each case.
4. Describe the defects of vision which may exist, unconnected with disease. Explain their causes, and state how they should be remedied.
5. Mention the causes of perineal abscess, its symptoms, course, and treatment.
6. Mention the various injuries which produce—(1) lengthening, (2) shortening of the lower extremity.

On the succeeding day the following questions on the Principles and Practice of Medicine were submitted to those candidates who had not passed a recognised medical examination:—

1. What conditions give rise to fluid in the pleural cavity, of what kinds may it be, and what are the signs which indicate the presence of each kind? What treatment should be pursued in different circumstances?
2. What are the chief modes by which mechanical obstruction of the bowel is produced, the symptoms proper to, and the treatment to be adopted in each?
3. What are the uses and doses of the following drugs?—Salicylate of soda, acetate of ammonia, liquor arsenicalis, sulphate of potash, vinum antimoniale, infusion and tincture of digitalis, sulphate of zinc, liquor potassæ, subnitrate of bismuth, extract and tincture of stramonium, calomel, and hydrargyrum c. creta.

MEDICAL SERVICE IN BRITISH GUIANA.

To the Editor of THE LANCET.

SIR,—In your issue of Nov. 15th, p. 748, is a letter from "A Bengal Civil Surgeon," who seems to have forgotten that "Caparisons is odourus." In the interests of possible applicants for vacancies in the Medical Service of British Guiana, kindly permit me to overlook that Sketchly proverb, and make some statements that may prevent my juniors misreading the Government Blue-books. Your correspondent's Scotch friend, if a medico, must have been my senior. *Tempora mutantur.*

1. The districts should be calculated, not by mileage, but by number of hospitals and number of patients—i. e., on average, five hospitals and 4000 patients a year, the hospitals requiring alternate daily visits, often daily.

2. There is one surgeon-general, resident surgeon, &c., not in the same department, and giving no claim to promotion or transfer.

3. There are two districts at £500 a year: one has never been filled up; the other is at the Dutch extremity of the colony, and has only one neighbouring medical officer, who has to do all the work for half the pay—when a practitioner of foreign qualification cannot be got to live or die in the district.

4. On nomination, a candidate may expect to get £300 a year, and may expect to keep himself in Georgetown on that sum for, say, six months in every two years.

5. The British Guiana Medical Service has not been established for ten years, so there can be no man staying at a smaller station for twelve years; but there are some who can find their services so well appreciated as to see juniors at £900, themselves getting £700.

6. In British Guiana the pay is at 4*s.* 2*d.* the dollar. However, I believe the expenditure of one rupee in India would produce as much as one dollar produces in British Guiana.

7. Excepting in town districts, which are also healthy, private practice can seldom exceed £100 a year, and will not reach this amount if medical officers bow to the Court of Police, and take fifty cents for each private patient treated.

8. Bengal civil surgeons' table of districts and salaries, if placed in apposition with a table of the same when altered, as is now proposed by Government (*vide British Guiana Royal Gazette*, May 31st, 1879), will show that the Government intend to save £2900 in the medical salaries of the Immigration Department—e. g.: *Anteâ*, 4 at £1000, 8 at £900, 1 at £800, 5 at £700, 6 at £600, 2 at £500. *Futuro*, 0 at £1000, 5 at £900, 8 at £800, 1 at £700, 5 at £600, 4 at £500. This means that 26 medical officers receiving £21,000 are to be replaced by 23 men receiving £18,100.

Intending candidates for the British Guiana Medical Service should understand that in British Guiana they will have to pay twice as much for manufactured goods and produce, and four times as much for labour, as in England.

Superannuation is allowed to all officers of more than ten years' service at the rate of 1-50th of the salary they are drawing when retiring for each year of service. Leave, on half-pay, *may* be obtained once in five years if the medical officer can afford it and the Government can find a substitute for him.

Believing that these notes may be of importance to the present candidates for colonial service, I remain, Sir, your obedient servant,

Dec. 25th, 1879. A BRITISH GUIANA SURGEON.

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Palmam qui meruit ferat.—There is no uniformity. There is a growing inclination on the part of lay committees and governors to adopt the recommendations of the Medical Committee. Perhaps the best arrangement is a composite election committee, composed of representatives of the general body of governors, of the lay committee, and of the honorary medical and surgical staff.

J. L. S.—The instruments can be tested at Kew.

Mr. J. L. Nixon.—There is no reason to doubt the fact.

AMPUTATION AT THE ANKLE-JOINT.

To the Editor of THE LANCET.

SIR,—Owing to my residence in this remote colony, and consequent delay in receiving my LANCETS, I am thus tardy in forwarding a few remarks, called forth by a letter on the above subject in your issue of November 1st, 1879. I trust you will consider them worthy of insertion in your invaluable journal.

Mr. Maxwell Adams, being impressed by the frequency of sloughing in the heel-flap in Syme's operation, suggests a modification, which a knowledge of the following facts may render less needed.

Authorities recommend the incision to slope from the malleoli *towards* the heel, and Erichsen even goes further, and advises that the incision be carried over the point of the heel. Gross, of Philadelphia, is the only surgeon of eminence, I believe, who teaches that the incision should be nearly vertical to the malleoli.

As the success of the operation depends on the vitality of the inferior flap, it is obvious that that incision which least interferes with its blood-supply ought to be preferred. My friend Dr. John A. Wyeth, of New York, finding that in his dissections of this region the arterial distribution as given by Gray, Wilson, and Leidy in their text, and Quain in his diagrams, did not correspond with what he found, resolved to investigate the matter thoroughly, and to this end made 80 consecutive dissections. The results were published in the *American Journal of Medical Sciences*, April, 1876, and have since been reprinted, together with similar investigations on other parts, in book form "Essays in Surgical Anatomy and Surgery," Wood and Co., N.Y.) "In 72 out of the 80 cases," says Wyeth, "the posterior tibial bifurcated into its plantar branches on a line between the lower border of the inner malleolus and the middle or centre of the heel's convexity. In 4 of the remaining cases the separation occurred one-fourth of an inch, and in the other 4 cases one-half inch below this line. Any variations in the point of division *tend in all cases towards* the line of incision in amputation in this region. In 38 out of 80 dissections (almost half) there was not a single calcanean artery derived from the posterior tibial. So it must follow that any line of incision that approximates the terminal bifurcation of this vessel will, in a great many cases, endanger the blood-supply, and consequently the success of the operation. In 80 cases, 51 calcanean branches were derived above the bifurcation. In 80 cases, 18 were derived opposite the point. Out of 80 cases the number of calcanean branches derived from the external plantar artery and distributed to the posterior or calcanean flap, safely within the line of Gross's incision, was 221, or more than three times the number, and carrying, without the least exaggeration, twice the volume of blood of those derived opposite to and above the bifurcation."

Erichsen's objection to an incision well forward is the formation of a cup-shaped cavity, in which pus &c. may accumulate; but this ought not to be raised in these days of antiseptic surgery.

Feeling assured that if the anatomy of the heel, as correctly described by Wyeth, were generally known, we would have less sloughing flaps and consequent secondary amputations, I have taken the liberty of thus using the work of another.—Your obedient servant,

J. H. ARTON, M.D. Coll. P. & S., New York.

Bermuda, January 7th, 1880.

Mr. E. F. Coste.—We cannot name an institution. Our correspondent's medical adviser will direct inquiries into the proper channel.

Dr. Heywood Smith.—Shortly.

Mr. W. Berry.—We shall be glad to receive the "notes."

PREGNANCY AFTER OVARIOTOMY.

To the Editor of THE LANCET.

SIR,—Perhaps you may be able to find room for the following brief report of a case, which seems worthy of record.

Mrs. R—— was delivered of her third child on Sept. 17th, 1876. On examining the abdomen after delivery, a tumour was discovered apparently in connexion with the womb, and evidently ovarian. Subsequently she attended Peterborough Infirmary as an out-patient until March, 1879, when the tumour, which was rapidly increasing, and had attained a large size, was removed by Dr. T. J. Walker under the antiseptic treatment. She recovered without one bad symptom, and left the infirmary five weeks after, quite well. During the summer she noticed her abdomen enlarging, and, fearing a return of the tumour, again went to the infirmary, where she was pronounced pregnant. Catamenia had not appeared since the operation, the last time being in the last week of February. Ovariotomy had been performed on March 20th, and she left the infirmary on April 26th, 1879. She was delivered of a female child, full term, on January 24th, 1880. When I saw her the child had been born an hour. The placenta was loose in the vagina, and there had been very little loss. On Jan. 26th she was progressing favourably.

Yours truly,

Whittlesea, Jan. 27th, 1880. C. F. HARDING, M.D.

TYPHOID FEVER AND ASCARIS LUMBRICOIDES IN CHILDREN.

To the Editor of THE LANCET.

SIR,—On the evening of November 11th I received an urgent message from a distance to visit a child. On arriving there with as much dispatch as possible, I found a well-developed little girl, five years of age, in a dying, comatose state. On making inquiries I learned from the friends that an older child in the same house was just convalescent from typhoid fever, and that great care had been taken to disinfect and remove the excreta &c. to a distance. The child to whom I was called had always enjoyed good health, never suffering from restlessness, convulsions, or anything to lead one to suspect intestinal irritation until four days before, since which she had been rather ailing, her bowels very slightly relaxed, and twice during this period had vomited a large round worm, all this time being able to run about with other children, when suddenly she became sleepy and heavy, and was put to bed. This continued when I saw her three hours afterwards in the alarming condition above mentioned, her state not admitting of a very prolonged examination. The face was calm, not pinched or indicative of pain; eyes wide open, the pupils dilated equally, turned upwards, and responding but little to either light or touch; the skin bathed in a clammy perspiration; tongue covered with a brown fur; pulse 120 per minute, weak and easily compressible. The abdomen on inspection presented no spots, was distended and tympanitic. On pressure, especially in the right iliac region, I detected gurgling, and a faint expression of pain passing over the child's features. Profuse diarrhœa commenced simultaneously with the head symptoms, the stools very loose, of a pea-soupy character, with no appearance of hæmorrhage. I should mention the legs were not flexed. A stimulant slightly revived the little patient, but only temporarily, for she gradually sank, expiring painlessly five hours after my visit.

I calculate this case to have progressed to about the end of the first week in a decidedly latent or "ambulatory" form. This period is too early to account for the severity of the final symptoms as the result of perforation, but rather the presence of worms, which, with the abnormal condition of bowel, must have caused intense irritation along the alimentary tract, and yet no tendency, as we might have expected, to spasmodic twitchings or convulsion, but the reverse—insensibility and coma. The presence of worms ought to be taken into account in treating young cases among the poorer classes, and, being such an important item in the prognosis, should be investigated and treated at an early period of the disease. Yours faithfully,

Bicester, Oxon., Jan. 1880. NELSON S. FOSTER, M.B.

Mr. E. Taylor (foreman of jury, Stockwith, Gainsborough), and *A Lover of Justice*, are referred to our annotation on the subject.

E. H.—See Erichsen's work on "Hospitalism."

SEWAGE DISPOSAL.

To the Editor of THE LANCET.

SIR,—I have long been of opinion that all the efforts hitherto made to treat with this abominable nuisance, sewage, and turn it to good account and perhaps profit, as it ought to be, have been at the wrong end, as it were; if it is not absolutely wasted and worse than wasted, discharged into rivers or the sea, so as to be got rid of in the easiest and quickest way, it is collected in vast tanks, and then, after having had all its most valuable material washed away, what remains has to be treated with chemicals, and rendered too expensive to distribute to the land for agricultural purposes; or irrigation is resorted to, and this barbarism naturally fosters the spread of certain diseases. I propose to begin at the other end of the sewers, the house end. Intercept the flow into the sewers; let nothing but water get into the sewers, not even the soluble salts, the urates and phosphates, not even the free ammonia; do not waste an atom; keep the rivers clean, and let the agriculturists have the whole of the sewer matter throughout the length and breadth of the land, and banish sewer-bred diseases for ever. The enclosed printed paper will explain how I propose to do this. The gases must be absorbed by the charcoal or conveyed away, and the earth will take up all the soluble organic matter and salts. The solid organic matter in the top vessel, the galvanised iron one, can be very readily absorbed by the land where it is to be utilised as manure; it should be placed in layers three or four inches thick, and covered with earth to the depth of five or six inches for three months. It will then be found transformed into a fine dark-brown or black loam. This is not by a chemical action; it is a vital organic action in the soil, an eating and digesting by invisible minute living organisms.

The other day an engineer, who was summoned from London to Chester, told the authorities at the Chester County Asylum the only thing they could do was to join on to the Chester sewers at an expense of £6000 (they end in the Dee). The justices said it would cost £12,000. I have offered them my scheme, free of all patent rights or royalties, to put it in practice in the cheapest way they can; with land all round them the cost of carriage will be *nil*. I also offer the free right to every hospital and every charitable institution to get these earth-filters set up for themselves in the cheapest way they can, compatible with efficiency, irrespective of my patent. The Underground Sub-railway was disallowed in the patent by the Attorney-General. He declared this to be "matter for another patent," which might be taken up by a Company in connexion with mine. Yours truly,

Edinburgh, Jan. 12th, 1880. GEORGE BARNARD.

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COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Fayrer, London; Dr. Barnes, London; Mr. Savory, London; Dr. H. Tibbits, London; Mr. Tyson, Folkestone; Mr. Sheleview, Glentranmoss; Dr. Blake, Great Yarmouth; Mrs. Bedingfield; Mr. Simpson, Pontefract; Dr. Kelly, Felling-on-Tyne; Mr. Jeffreys, Chesterfield; Mr. Murphy, London; Dr. R. E. Thompson; Dr. Flinn, Kennington; Mr. Roland, Richmond; Dr. Boileau, Overdale; Dr. Arton, Bermuda; Mr. Beard, Bessbrook; Miss Corbould, Liverpool; Mr. Kemp, London; Dr. Symes, Halifax; Mr. M'Lean, London; Dr. Hewer, London; Dr. Salisbury, Illinois, U.S.A.; Dr. Wyer, Grantham; Mr. H. Smith, London; Dr. Dickinson, Jersey City, U.S.A.; Dr. Budd, Exeter; Mr. Biggs, Bath; Mr. Leihy; Mr. Coste, Islington; Mr. Lucas, India; Mr. R. Owen; Dr. Sinclair, Dundee; Mr. Orton, Kensington; Mr. Sutton, Sittingbourne; Messrs. Burroughs and Co., London; Dr. Voubin, Nantes; Mr. Husban; Mr. Blackett, London; Dr. Hill, Oldham; Mr. Dolan, Halifax; Mr. Fleming, London; Dr. Mackenzie, London; Dr. Pavy, London; Mr. J. F. Clarke, Somerset, Cape Colony; Mr. Cullimore, London; Dr. Brabazon, Bath; Mr. Warren; Mr. Jones; Mr. Dunlop, Blandford; Mr. Berry, Wigan; Mr. Tallack, London; Mr. Gawith; Mr. Smith, Bristol; Mr. Unsworth, Liverpool; Dr. Bell, Glasgow; Messrs. R. and J. Beck, London; Mr. J. L. Smith, London; Dr. Ormerod, London; Mr. Vigurs, London; Mr. J. H. Walters, Reading; Mr. Elliott, Cardiff; Miss Henley, Rugby; Mr. Accacio da Gama, Bombay; Dr. Harding, Whittlesea; Dr. Ashton, Bealey; Mr. Parker, Norwich; Mr. Sarjeant; Messrs. Garbutt and Co., Gateshead; Mr. Rahu, Ipswich; Messrs. Richardson and Co., Leicester; Mr. Gattan, London; Mr. Ceely, Aylesbury; Mr. Browne, Liverpool; Mr. Butlin, London; Dr. Johnstone, Danville, Kentucky; Mr. Coward, Huddersfield; Mr. Lewis, Edinburgh; Captain Sibbald, Georgina, Canada; Mr. Olden, St. John's, New Brunswick; Messrs. Hutchinson and Co., London; Messrs. Evans and Co., Wrexham; Mr. Binks, Wakefield; Dr. Tibbets, Warwick; Mr. Kelsall, Ashton-under-Lyne; Messrs. Smith and Son, Dublin; Dr. J. Williams, London; Dr. Lambart, Liverpool; Mr. Crowe, Hartlepool; An Occasional Correspondent; W. M. L.; M. A. D.; Virus, Preston; A Lover of Justice; C.; Hope; British Guiana; L.R.C.P. Lond.; Y.; Guianese; A Medical Salt; M.B. Lond., F.R.C.S.; S. P.; B.; J. P.; Gamma; T. S. M.; B. S.; M.R.C.S.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Sturges, London; Mr. Buckby, Rugby; Mr. Storington, Pulborough; Mr. Harrison, Liverpool; Dr. Robertson, Glasgow; Dr. More, Rothwell; Mr. Masters, Thrapston; Dr. Blomfield, Norwich; Dr. Pletts, Ryde; Dr. Bowes, Elham; Messrs. Roberts and Co., Festiniog; Mr. Badger, Burntisland; Dr. GreatRex; Mr. Deeping, Leicester; Dr. A. B. Squire, London; Dr. Aitken, Woolstone; Dr. Kennedy, Dublin; Mr. M'Bean, Newcastle-on-Tyne; Mr. Jones, Conway; Messrs. Jolly and Sons, Norwich; Mr. Claydon, Bury St. Edmunds; Dr. Hardwicke, Sheffield; Mr. Cartwright, Brookfield; Mr. Westmoreland, Cheetham; Mr. Heslop, Church Stretton; Mr. Elliott, Carlisle; Mr. Ernst, London; Dr. Naismith, Air; Mr. Stuart, Wigan; Mr. Masters, Grantham; Dr. Wallace, Cleckeaton; Mr. M'Millan, Penistone; Mr. Ambrose, Church Gresley; Mr. Poole, Rusholme; Mr. Herring, Torquay; Mr. Woolley, Derby; Dr. Gill, Stratford; Dr. Davies, Maesteg; Dr. Walker, Cheltenham; Mr. Filtington, Elton; Mr. Thornton, London; M. O. P.; L. E. L., Brighton; A. D., Litchfield; E. P., Brockley; N., Buckden; Medicus, Glasgow; Alpha, Earthlingborough; Medicus, Newcross; W. R. P., Moreton-in-Marsh; M.R.C.S.; Zero; L.R.C.P., Salford; L. M., Birmingham; F. L. S., Great Yarmouth; Meta, Cannock; Surgeon, Newcross; W. S.; E. K., Bayswater; A.; Medicus, Carlisle; M.R.C.S., London; L. A. C.; R. N., Plymouth; F.R.C.S., Hornly; W. F. B., Brodribb; Medicus, Birmingham; Omega, Stoke-on-Trent.

Derbyshire Courier, Dover and County Chronicle, Derbyshire Times, Carlisle Express, Gardeners' Magazine, Westmorland Gazette, Dorset County Chronicle, Bridlington Gazette, &c., have been received.

NOTICE.

THE LANCET is now Enlarged to EIGHTY PAGES, giving additional space for the Scientific Papers of our Contributors. A first issue will be made each week at Seven o'clock on Friday morning, *for the Wholesale Houses only*, to facilitate the delivery in country districts soon after the arrival of the early trains. The Journal is also CUT AT THE EDGES. Another new feature is an INDEX to ADVERTISEMENTS, and their classification as far as possible, with NAMES of ADVERTISERS. (*See p. 2 of Advertisements.*)

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Medical Diary for the ensuing Week.

Monday, Feb. 2.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.
MEDICAL SOCIETY OF LONDON. — 8½ P.M. Lettsomian Lectures: Mr. W. F. Teevan, "On Stone in the Bladder."

Tuesday, Feb. 3.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Schäfer, "On the Physiology of Muscle."
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Casts illustrating Joint Disease in Locomotor Ataxia; Cases of Locomotor Ataxia, with Osseous and Articular Lesions (living specimens); Diseased Bone; Congenital Occlusion of the Duodenum; Gangrene of the Colon; Tumours from Abdomen; Drawings of Cancer; Drawings of Skin Diseases: Psoriasis and Acute Pemphigus; Epithelioma of Pharynx; Congenital Syphilis of the Larynx; Ento-laryngeal Epithelioma; Secondary Tumour after Removal of Breast; Epithelioma of Penis; Melanosis of Finger; Optic Neuritis; Diseases of Supra-renal Capsules; Miliary Tubercle of Bladder.

Wednesday, Feb. 4.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
EPIDEMIOLOGICAL SOCIETY (University College). — 8 P.M. Dr. Squire will exhibit Micro-photographs, by Dr. Sternberg, of the Blood in Yellow Fever.—Dr. Joseph Ewart, "On Enteric Fever in India, with some Observations on its probable Etiology in that country."
OBSTETRICAL SOCIETY OF LONDON. — 8 P.M. Specimens; New Instruments, by Dr. Heywood Smith; Moles and Fibroid Tumour of Vagina, by Dr. Herman. — Annual Meeting; Election of Officers; Changes in Bye-laws; President's Address.

Thursday, Feb. 5.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Dewar, "On recent Chemical Progress."
HARVEIAN SOCIETY. — 8½ P.M. Mr. Osman Vincent "On Congenital Talipes in the Adult." — Mr. Walter Pye, "On the present Position of the Operation of Nerve-stretching."

Friday, Feb. 6.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M
ROYAL INSTITUTION. — 8 P.M. Evening Meeting.—9 P.M. Dr. Huggins, "On the Photographic Spectra of Stars."

Saturday, Feb. 7.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Pauer, "On Handel."

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Clinical Lecture
ON
THE ELUCIDATION OF THE NATURE AND TREATMENT OF THE DISEASES OF THE EAR,
BY A REFERENCE TO OUR BETTER KNOWLEDGE OF THE NATURE AND TREATMENT OF THE DISEASES OF THE EYE.

Delivered at University College Hospital on Thursday, January 29th, 1880,

BY PROFESSOR WHARTON JONES.

GENTLEMEN,—In the clinical lecture I lately delivered here on keratitis and kerato-iritis from inherited syphilitic taint, I necessarily had to bring under your particular notice the *deafness* which so frequently supervenes in the course of that remarkable inflammation of the eyes. I stated that, so far as we can make out, the deafness in question is owing to inflammation in the first instance of the membrana tympani, more especially the inner layer of it, which is continuous with and forms the mucous constituent of the fibro-mucous membrane lining the tympanic cavity, whilst the character of the inflammation is similar to that of the inflammation of the cornea which it accompanies.

In discussing the subject I accordingly took occasion to dwell on the *analogies*—not *homologies*, observe—between the eye and the ear. I remarked that these two organs, though at first glance so very different, do really resemble each other in many respects, both anatomically and pathologically. Moreover, I argued that as the diseases of the eye are more open to investigation than those of the ear, and therefore better understood, a cautious use of the analogy referred to between the two organs is calculated to prove of material service in elucidating the less understood nature and treatment of the diseases of the ear. Practically, indeed, I find it so both in facilitating my diagnosis and guiding my treatment of the diseases of the ear, according to something like scientific principles.

Considering all this, I have thought that I might, advantageously to you, extend my observations on the subject, and devote this lecture specially to a comprehensive view of the nature and treatment of the diseases of the ear, as illustrated by the light reflected from our better knowledge of the nature and treatment of the diseases of the eye.

In the first place let me observe that though no doubt diseases of the ear are in larger numbers beyond medical and surgical control than diseases of the eye, I am satisfied from long observation and careful inquiry into the history of cases, that this is partly owing to neglect or mismanagement at the commencement of an attack of otitis, for example. The hearing, it is to be remembered, may be much impaired from disease without the defect being noticed, and unless the patient suffers pain, attention is not for a long time attracted to the complaint; and even when there is pain, the treatment adopted is often by no means the best calculated to subdue effectually the inflammation occasioning the pain. The inflammation is accordingly allowed to fall into a chronic state, and so becomes less amenable to treatment than in the early acute stage. Earache is, in fact, too frequently viewed as unconnected with any local inflammatory action, so that the really existing inflammation is left unheeded and unchecked, while its unsuspected progress is leading to deterioration of structure such as to cause serious and irreparable impairment of hearing. In my last lecture I instanced the membrana tympani, and especially its inner layer, as one of the parts involved in the inflammation of the ear which so often supervenes in the course of keratitis and kerato-iritis from *inherited* syphilitic taint. I have now to add that in patients *affected* with scrofulous or phlyctenular ophthalmia, of *which the* cornea is equally the focus of the morbid process, a *scrofulous* inflammation of the membrana tympani is in like manner not unfrequently met with. And as in scrofulous or phlyctenular ophthalmia ulceration of the cornea, even to penetration, with all its disastrous consequences to the eye, is prone to take place, so in scrofulous inflammation of the membrana tympani, ulceration, even to penetration of it, is not a rare occurrence. Again, as in catarrho-rheumatic ophthalmia the cornea is also liable to be penetrated by ulceration, and the integrity of the eye seriously endangered thereby, so we have to encounter catarrho-rheumatic otitis in which the membrana tympani is the focus of the inflammatory process, and equally liable to corresponding deterioration of structure.

Notwithstanding this pathological resemblance of the membrana tympani to the cornea, there is, as I mentioned in my last lecture, no correspondence between the two parts in respect to analogy such as we recognise between the conjunctiva and the lining membrane of the tympanic cavity. I showed that the membrane of the fenestra rotunda of the labyrinth in the ear is the part which really corresponds in analogy to the cornea in the eye, but that if a membrane extended between the borders of the two eyelids at the inner edges, uniting them and closing in the oculo-palpebral space of the conjunctiva, we should have in it a structure analogous to the membrana tympani. Such a structure, I informed you, is actually found in serpents and the guecko tribe of lizards in front of their eyes, and has been mistaken for their cornea. I should mention that in the reptiles referred to the eyelids proper are small and rudimentary. Such a structure, moreover, I said we have exemplified in the congenital malformation affecting the human eye, sometimes met with and known by the name of *mediate anchyloblepharon*, or union of the borders of the eyelids by an intervening membrane consisting of a layer of skin and a layer of conjunctiva.

However this may be, both the histological characters and the pathological affections of the membrana tympani have a remarkable resemblance to those of the cornea, and, accordingly, the general treatment called for in inflammation of the one is indicated in inflammation of the other.

I stated to you, however, in my last lecture that the deafness from otitis which may have supervened in the course of keratitis or kerato-iritis from inherited taint, becomes in many cases worse in proportion as the eye recovers from the inflammation affecting it; and this though the treatment employed for the eyes was evidently that indicated as most appropriate for the affection of the ears. The progressive deterioration of hearing under such circumstances is most likely owing to supervention of inflammation in the labyrinth, just as in the eyes propagation of morbid action from the cornea to the internal tunics is liable to take place. But why the ears should become worse while the eyes get better is a curious example of what we may call inverted sympathy, though examples of such are not wanting between the two eyes. For example, in a case of kerato-iritis limited to the left, and which had seriously damaged it before the patient came under my care, as soon as the destructive inflammatory process was arrested by the operation of iridectomy, the right eye, hitherto sound, became affected, and was saved only by medicinal treatment, supplemented by evacuation of the aqueous humour, and subsequently, as a last resource, by iridectomy.

In regard to the treatment of scrofulous inflammation of the membrana tympani with earache, the application of two or three leeches close behind the ear in the region of the stylo-mastoid foramen, and a few doses of mercury with chalk (two grains) and powdered leaves of belladonna (one grain), with warm-water fomentations, will usually arrest the inflammation, and relieve the pain, as you so often see the same treatment do in cases of scrofulous ophthalmia.

In catarrho-rheumatic or rheumatic inflammation of the membrana tympani, with severe earache, the treatment which you daily see so beneficial in catarrho-rheumatic ophthalmia—viz., venesection or the application of leeches behind the ear, with calomel and opium—will afford equal relief. Placed as the membrana tympani is between the auditory passage and the tympanic cavity, it necessarily becomes more or less implicated in inflammation of the walls of those parts of the ear; or, on the other hand, those parts of the ear are liable to participate in inflammation originating in the membrana tympani.

To speak first of inflammation of the walls of the auditory passage. The auditory passage is lined with skin, a delicate continuation of which, or of its epidermis, forms the outer layer of the membrana tympani. In the region of the

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osseous part of the auditory passage, the tegumentary lining contains embedded in it the ceruminous glands.

In inflammation of the skin and ceruminous glands there is discharge from the ear, and the wax, if any, presents itself mixed with the matter and exfoliated epidermis. Sometimes we find a continuous portion of epidermis in the form of the point of the finger of a glove, which has been exfoliated entire from both the wall of the passage and outer surface of the membrana tympani. In chronic inflammations of the auditory passage, vitiated wax mixed with exfoliated epidermis collects and forms a plug obstructing the passage. It is, however, to be remembered that the mere removal of this plug is not sufficient treatment. The surface of the skin of the passage remains red and raw, and this state requires for its treatment pencilling with a nitrate of silver solution or the application of a red precipitate ointment.

These affections of the auditory passage, it is to be observed, are very much akin to the chronic inflammations of the tarsal borders of the eyelids, including the mouths of the Meibomian glands. On the other hand, the inflammation of a furuncular character, terminating in a small abscess or boil, which occurs in the skin at the entrance of the auditory passage, is akin to hordeolum or stye. There is severe pain at the commencement, but when the abscess is opened, or bursts of itself, relief speedily ensues.

In passing now to the consideration of inflammation of the lining membrane of the cavity of the tympanum, it is to be observed that that part of the eye which is the seat of some very important ophthalmiæ is the conjunctiva—a mucous membrane investing the anterior surface of the eyeball. In the ear some of the most common causes of impairment of the hearing consists, in like manner, in the morbid condition of a mucous membrane, or rather a fibro-mucous membrane, the mucous membrane being here incorporated with the periosteum of the labyrinth—that, namely, lining the cavity of the tympanum, which, being situated on the peripheral surface of the labyrinth, bears an exactly similar anatomical relationship to it as the conjunctiva does to the eyeball.

Again, the derivative lachrymal passages, comprising puncta lachrymalia, canaliculi lachrymales, saccus lachrymalis, and ductus nasalis, which maintain a communication between the conjunctival space and the nasal cavity, are the seat of some most troublesome affections of the eye. The Eustachian tubes, or passages from the tympanic to the nasal cavities, resemble the lachrymal passages in their relationship to the nostrils, and likewise in their pathological states. But, it is to be observed, that whilst obstruction of the derivative lachrymal passages prevents the due drainage of tears and mucus from the conjunctival space into the nose, obstruction of the Eustachian tubes prevents the due admission of air into the tympanic cavities, and thus seriously interferes with the function of hearing, inasmuch as the air which fills the tympanic cavities forms an important part of the apparatus and mechanism of the ear. The morbidly thickened state of the lining membrane of the tympanic cavity which accompanies the morbid condition of the Eustachian tube, preventing the free admission of air, further contributes to the deterioration of hearing.

In the normal state, the Eustachian tubes are not exactly continuously open, but the mechanism by which the passage of the air between the nasal and tympanic cavities through them takes place is this. The guttural orifice of the Eustachian tube is not habitually wide open, but in the state of rest the outer and inner walls of the cartilaginous and membranous portion lie collapsed and in contact. By this arrangement the tube is as if provided with a valve, opening either way, but so weak as to be readily forced. In the act of deglutition, the alimentary morsel is prevented from entering the posterior nares, as you know, by the elevation of the soft palate, and the approximation of the posterior pillars of the fauces, whereby and with the help of the uvula, the upper compartment of the pharynx, with which the posterior nares communicate, is completely partitioned off from the lower compartment with which the mouth communicates, and through which the morsel is passing. Such being the case, it is clear that if during the act of deglutition the external nostrils be kept closed, the air in the nasal cavities must be subjected to pressure in consequence of the diminution of the capacity of those cavities caused by the elevation of the soft palate. The result of this is that some of the air is forced through the Eustachian tubes into the tympanic cavities and distends them.

I have said that the air in the tympanic cavities plays an important part in the performance of the function of the ear, so that in this respect the Eustachian tubes, by which the air is transmitted, have no analogy with the lachrymal passages which naturally are the channel for the drainage of tears and mucus only, though if you make a forced expiration, as if through the nostrils, keeping the nose and mouth shut, air will be found to gurgle up through the puncta lachrymalia.

To come now to the transmission of *sound* to the expansion of the *auditory* nerve, as compared with the transmission of *light* to the *retina*. The distinguishing characteristic of the parts of the eye which transmit the light is *transparency*, that of the parts of the ear which transmit sound is *vibratility*. Whilst both these physical properties are prone to be impaired or destroyed, the special nervous expansion peculiar to each organ may have its energies enfeebled or annihilated by various morbific influences; and so there is blindness in the one case and deafness in the other, against which we have to struggle.

The membrana tympani being thrown into vibration by the sonorous undulations which the air in the auditory passage has received from without, communicates undulations to the air in the tympanic cavity, which undulations again throw the membrane of the fenestra rotunda or cochlear fenestra of the labyrinth into vibration. From this vibrating membrane of the cochlear fenestra undulations are propagated to the *perilymph*, the watery fluid which fills the scalæ of the cochlea and intervenes between the walls of the rest of the osseous labyrinthic cavity and the membranous labyrinth. The membranous labyrinth, within which are the expansions of the auditory nerve, together with the viscid fluid named "endolymph" and certain calcareous concretions named "otolites," is struck by the sonorous undulations from the perilymph, and so the auditory nerve receives the impression of sound.

Whilst comparing the membrane of the cochlear fenestra with the cornea, we might compare the cavity of the cochlea with the chambers of the aqueous humour, the perilymph with the aqueous humour itself, the lamina spiralis with the iris, the helicotrema—or aperture by which the two scalæ of the cochlea communicate with each other—with the pupil, the endolymph with the vitreous humour, and the calcareous concretions with the lens. But all this only in passing.

To return to the middle ear. You have thus seen how the air in the tympanum is an important constituent of the organ of hearing. If, therefore, air is not duly received through the Eustachian tubes, and the integrity of the tympanum otherwise broken in upon by inflammation of its lining membrane, with thickening or the like, sonorous undulations are only imperfectly transmitted to the labyrinth, and so there is defective hearing, even although the internal ear be little or not at all affected.

The ossicles in the tympanic cavity—the malleus, incus, orbiculare, and stapes,—articulated together so as to form a chain extending from the membrana tympani to the fenestra ovalis of the labyrinth, and moving on each other by the action of proper muscles, have been often supposed to be the medium through which sound is transmitted from without to the internal ear; but the chain of ossicles with their muscles seems rather to serve the purpose of bracing the membrana tympani, on the one hand, and the membranes of the labyrinth, on the other, so as to adjust the ear for different degrees of sound.

The treatment which has been most commonly employed in cases of deafness from obstruction of the middle ear, is to introduce catheters from the nose into the Eustachian tubes, and to inject through them air, or stimulating vapours, or lotions, into the tympanic cavities. This local medication is not without its use if reasonably employed; but you will see, from what I have before said, that such applications do not operate with the same advantage to the ear as drops and lotions do to the eye.

Perforation of the membrana tympani in order to admit air into the tympanic cavity in cases of impervious Eustachian tubes was an operation introduced by the late Sir Astley Cooper, and much vaunted at the time. It has, however, as might have been expected from a consideration of the pathological condition in such cases, proved a useless operation at the best.

The mastoid cells, you know, communicate with the cavity of the tympanum, and perforation of the mastoid process is an operation which has been performed for the purpose of throwing injections into the tympanic cavity. The unfortunate result of the operation many years ago on the person of a physician

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in Denmark, however, more perhaps than a just perception of its uselessness, brought perforation of the mastoid process into discredit, as a means of treating deafness. Of course, in cases in which there is matter in the mastoid cells, and which is pointing at the place already softened by caries, it is proper to perforate to give issue to the collection.

Lastly, it is to be observed that a connexion between the auditory nerve and the brain exists similar to that between the optic nerve and the brain. Hence, morbid processes with failure of function, similar to what are met with implicating the optic nerve and giving rise to amaurosis, we find as was to have been expected, implicating the auditory nerve and giving rise to real nervous deafness.

Clinical Lecture
ON
A CASE OF TYPHUS FEVER.

Delivered at the Middlesex Hospital, Jan. 9th, 1880,

BY SIDNEY COUPLAND, M.D.,
ASSISTANT-PHYSICIAN TO THE HOSPITAL.

(Concluded from p. 158.)

THE case I have just related is a well-marked instance of typhus fever of a moderately severe type. That it is typhus fever there can be no shadow of doubt; but it was sufficiently puzzling at first sight. I do not think that even the acuteness of its onset would have negatived its being enteric fever—by far the more common of the two; for we have had cases of this latter fever with as definite a history of apparently sudden onset as this boy had. Such are the cases of so-called "ambulant typhoid," where the disease may have existed long without much marked discomfort. I might enforce this more strongly by alluding to the case of one of ourselves—happily, I have reason to believe, now proceeding surely to convalescence,—who was attacked suddenly with severe pyrexia (reaching 103·8° on the second day of the declared attack), which moderated a little towards the end of the week, when a copious rose rash appeared. Indeed, the more we know about enteric fever, the less can we rely solely for its diagnosis upon the manner of its onset. Some cases will have a continued malaise of a month's duration before any definite pyrexial phenomena appear, and such contrast markedly with the type of which I have just spoken. But if we are at a loss sometimes to discriminate between these two forms of continued fever—typhus and typhoid—at the onset, the study of the course of the pyrexia in each instance brings to light marked divergences. Contrast for the moment the two thermometric curves I have placed before you. In both, the tracing begins on or about the tenth day; in the enteric case it was not possible to be certain as to the precise day, but it was between the eighth and tenth. This chart was from the case of a child six years of age, in Murray ward from April 1st to May 21st, 1879. Neglected and ill-nourished, with a skin covered by flea-bites, but presenting at no time any typical rose spots, she passed through a somewhat severe attack of enteric fever,—diarrhœa with typical motions, bronchitis, and splenic swelling marking its course. The pyrexia took a high range, the lowest morning remission during the first five days being 102°, and the highest evening rise 104·8°. On April 5th to 6th she had a succession of baths, her temperature on being placed in them being successively 104°, 103·4°, 103·4°, 103·6°, and 103·6°. From that time—i. e., the sixteenth day—until the twentieth day the morning level was about 101°, the evening 103°; and then came the defervescence, rather more rapidly than usual, so that on the twenty-first day the normal was reached; and after that the prolonged period of convalescence was marked by a series of subnormal temperatures. The pulse-rate, which had been as high as 156 during the fever, fell to 88 and 100, but sometimes exceeded this, even when the body-heat was low. Now turn to the other case. It was late in its course when it came to us, and the pyrexia must be considered to have been at its height and to have reached this days before. The first recorded temperature—102·2°—being taken just after the boy had been having a bath, was probably not a true indication of the height it had attained. Five hours later it was 104°. How much higher it would have risen if left uncontrolled I cannot say, and you see, at any rate, the tendency it had to reach a high level, beaten down as it was by the cold bath. Temperature records are nowadays sadly complicated by reason of the employment of this never-failing antipyretic measure, whilst the days of "hyperpyrexia" are numbered, save in the case of rapidly-recurring or rapidly-vanishing fever, such as complicates local inflammations, various forms of septic poisoning, or those quasi-specific diseases, pneumonia and facial erysipelas. Indeed, in typhus fever the arguments for having recourse to this agent are less strong, perhaps, than those in favour of its use in enteric fever. But they are almost as strong, to my thinking, on the view that high fever *per se* is an element of danger. It was to control the pyrexia then, and not in the belief that we were dealing with typhus fever, that these four cold baths were given. Their effect was decidedly beneficial. *Cæteris paribus*, we can estimate pretty accurately the severity of a febrile process treated by the cold bath by the rapidity of the *after-rise* of temperature. Note that, in this case, after bath No. 1 the temperature rose 4·6° (98·8° to 104·4°) in three hours and a half; after bath No. 2 the temperature rose 1·4° (101·2° to 102·6°) in two hours, and then, after a slight fall, rose to 103°, and remained there till the third bath, after which it rose 3·6° (99·8° to 103·4°) in six hours; and, lastly, after bath No. 4, it rose 2·2° (100° to 102·2°) in five hours and a half, the comparative effects of each bath being represented in the rate of rise per hour, as 1·4°, 0·7°, 0·6°, and 0·3° respectively. Such a comparison shows fairly well that the pyrexia had already reached its height, so easily was it controlled by the bath. Then following the chart see the somewhat abrupt fall to the normal on the thirteenth and fourteenth day, shared in also by a like fall in the pulse-rate. The "crisis" here is not very striking, but it is marked enough and abrupt enough to contrast with the slower decline of enteric fever towards defervescence. The course of the pyrexia, then, proclaims in favour of typhus fever.

Now as to the *eruption*—the exanthem. Appearing, as a rule, about the fourth or fifth day, as a pale pinkish erythematous mottling, it rapidly assumes a browner colour, and, losing its hyperæmic character, it ceases to disappear on pressure, and later—from the eighth to the tenth day—it often becomes petechial. There are cases in which it never becomes petechial, and a very few where there is no eruption at all. In O'L——'s case the skin generally had a dirty, yellowish-brown mottling; and scattered about it, especially on the abdomen, were small purplish and greyish vibices. More than once—aye, many times—have these appearances been mistaken for flea-bites, and, seeing that the fever is *par excellence* a fever of the neglected and ill-cared-for, a combination of the lesions due to the parasite and those due to the fever often does occur, and adds to the difficulty. Cardanus, who wrote on this disease in 1545, describes it under the name of "morbus pulicaris," thereby indicating his own view of the resemblance, whilst at the same time he is careful to point out that some authors confound it with measles. In 1874 a female patient, aged seventeen, was admitted here with indefinite but not severe febrile symptoms, and a peculiar rash thought to be due to flea-bites. The doubtful character of the case caused the authorities to isolate her. A probationer nurse contracted the fever from this case, and died on the ninth day; a second nurse in attendance on the two foregoing also contracting the disease. It is this occasional ill-defined character of the rash, going as it does with a mild type of the fever (not the less contagious, however), that renders the diagnosis sometimes so difficult. Of late years cases have been few, and in a hospital such as ours, where means of isolation are limited, our chances of seeing many cases upon which to build up experience are but small. To study them we should by rights go to the fever hospitals, where all cases of undoubted typhus coming here are at once forwarded.

Let me now rapidly run over the leading features of the case, all of which strengthen the diagnosis of typhus fever. The unusual predominance of persistent headache and pyrexial pains in the back and limbs was striking. These pains lasted from the very onset until the time of his admission on the tenth day. They mark possibly the presence of a fever of severe type. Seldom—at least I can hardly

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recall an instance myself—do we note such a prolonged continuance of these subjective phenomena after the commencement of an attack of enteric fever. So predominant were they and so marked was the hyperæsthesia, that it was almost justifiable to think the case one of acute rheumatism without articular manifestations, an event which does sometimes happen, especially in the young, explaining one kind of "growing pains," as the laity term them. But there were, added to this, great prostration and marked feebleness of pulse, showing that the disease, whatever it was, had taken firm hold on the boy, and had reduced his vitality to a low ebb.

Another very striking sign, and, I believe, an unusual one, was the dry, brown, and fissured tongue. It was like the tongue at the end of the second or in the third week of enteric fever, and it differed much from the moister cream-furred aspect usually present in typhus, except in the severer cases. But beware of putting too much trust in one sign alone. I would by no means disparage the study of the tongue; it is a valuable index, sometimes for diagnosis, often for treatment, especially as regards the administration of alcohol, and also of prognosis. It is one of the most time-honoured observations in medicine; but in our case it would not have been wise to have placed too great reliance upon this single sign. The lad had come from a crowded home, with an overworked mother as his only nurse, and a mild case of typhus was converted into a severe one by reason of neglect and ill-attention.

Then he had a tendency to diarrhœa. Although somewhat exceptional in typhus, this symptom does occur. The stools, however, differed widely in character from those of typhoidal evacuation. They were very loose, but deeply bile-stained; and although later they became paler, they became also more formed, and their colour was but in the nature of things, seeing how profoundly the function of the liver itself must be modified by the febrile state. Note also the obvious enlargement of the spleen. I remember to have heard it said—I do not know why—that splenic enlargement was the rule in enteric, the exception in typhus fever; and some stress has been laid on this as a diagnostic point. Although since then, it is true, that I cannot speak from any extended personal acquaintance with the latter disease, yet I have been assured, on good authority, and I have gathered it from reading, that there is enlargement of this organ in typhus fever also; and I accept this statement implicitly, for wherever there is high pyrexia—from whatever cause—there does occur more or less swelling of the spleen, as of liver and kidneys. One's experience of the post-mortem room suffices for this. No doubt in the prolonged pyrexia of enteric fever this swelling may attain a higher degree or may persist longer than in other pyrexiæ of briefer duration. I may add that the abdominal distension in this disease often prevents the ascertainment of this swelling during life. But I am sceptical about attaching any specificity to the swelling in the case of enteric fever, although in doing so I fear I run counter to views held by high authorities. The retention of urine, deafness, &c., marked the great degree of nervous prostration; but it is interesting that there was only very slight delirium, and that not of an active character. Lastly, the case was complicated by severe and general bronchitis, with evidence of hypostatic engorgement of the lungs. This, too, may be regarded as a measure of the intensity of the fever. A certain amount of it is almost invariably present in enteric fever, but it occurs also largely in typhus.

Therefore, whether we deal with isolated symptoms, or, what is preferable, study them all in a group, we may fitly conclude that, as against enteric fever, the reasons in favour of typhus grow strong, and I have already pointed out how the course run by the pyrexia was confirmatory of them. Absolute proof is, however, not always forthcoming. In this case it has so come to pass as to leave no shadow of doubt, and that in the fact that it has led to typhus in another patient. Typhus can only breed typhus, and by a backward look we learn the nature of the tree by its fruit. This clinching proof has happened in this wise: The nurse first set in charge of this patient, complaining of headache, was relieved from her duties. She did not take the disease itself, but conveyed it to the next patient of whom she happened to be in charge. This was a girl, debilitated by a severe attack of erysipelas of the leg, from which she was convalescing. Five days after she began to be attended by this nurse she developed well-marked typhus symptoms. She was at once transferred to the Fever Hospital, where she has done well. Now, unless overwhelming proof can be shown to the contrary, one must refuse to admit any other explanation than that we have here an instance—rare indeed in the etiology of typhus—of the transmission of the disease to a third person, the carrier of the contagion not being affected. For it is one of the best-known facts that of all contagia that of typhus is most easily rendered innocuous by free dilution. In other words, that it requires a tolerably concentrated *dose* of the poison to be received before the fever can be reproduced. The subject of the infection must have been peculiarly susceptible to typhus contagion to have been poisoned by so small a dose. As to the conveyance through the medium of a third person, I find that Dr. Murchison relates an instance almost parallel to this one, which occurred in this hospital thirteen years ago. He says: "In January, 1867, a patient in a surgical ward of the Middlesex Hospital was seized with typhus. He had been in the hospital four and a half months, and in bed all the time. There were no other cases of typhus in the same ward or on the same floor; but a nurse in attendance on a typhus patient downstairs, though in good health herself, had been in the habit of visiting this patient daily."[1]

But the incubation period was unusually brief; it was only five days, supposing that the case was infected on the very first visit of the nurse. In the majority of cases *twelve days* has been clearly shown to be the period intervening between exposure to the poison and the declared attack. The development of the poison, however, be it chemical or vital, is not strictly confined within narrow time-limits; and accordingly we find exceptions to this rule to be tolerably frequent. It has been found (Murchison) that the tendency is to a shorter rather than a longer incubative period than twelve days. Some even have been said to have been attacked instantaneously on exposure to the poisonous influence. All this is conceivable if we admit the fact that variations in the length of incubation depend upon (1st) the intensity of the poison, and (2nd) the susceptibility of the recipient. The experimental researches upon the types of septic poisoning bear this out; and in typhus fever itself it is held by good authorities that the greater the exposure to the poison, the shorter is the period of incubation. But how dilute was the dose in the case that has arisen here! Not even the medium of the contagion, the nurse in attendance, contracted the disease. So we are forced to conclude that if the period of incubation really is governed by the causes I have named, the patient in Queen ward was remarkably susceptible to its influence.[2]

To return to the case of our boy. There are a few points in the after-course of his illness worthy of note. The change wrought in him by the crisis was marvellous, not only in his aspect, but in the cleansing of his tongue, in the disappearance of bronchitis, in the restoration of appetite—all these and more, going with lowered pulse-rate and temperature. So marked was the change that I even ventured to do that which would have been almost criminal in the case of enteric fever—viz., to put him on fish diet on the sixteenth day of his illness, although, even in his case, this was a little premature for good digestion, and after two days we had for a short space to interdict the fish, in spite of his growing appetite. At the same time the administration of alcohol had been continued undiminished until a week after the crisis, when port was substituted for brandy. The alcohol was not given because the case was one of typhus, but because the feeble pulse and faint cardiac systolic sound showed that the heart was failing and required extra stimulation, and it was continued in the early convalescence because the indications of cardiac failure still persisted. The pulse indeed became abnormally slow; probably the ventricle lagged lazily in its contractions, as if it were almost too great an effort to keep up the weary round of systole. Another indication of the weakening of the ventricle, and a rather grave one, as pointing to dilatation of the cavity, was the appearance of a definite systolic murmur on January 2nd. It showed that the mitral valve was incompetent, probably from stretching of its orifice or weakening of its muscles; but I am glad to say that it has now disappeared. With so slow a pulse as the boy had, digitalis was not given; we trusted rather to improved nutrition affecting the heart-muscle. That the heart-muscle, like other muscles, undergoes degenerative changes in fevers has long been known. The late Dr. Stokes was the first to

[1] Continued Fevers, 2nd ed., p. 86.

[2] In the case of typhus contracted here in June, 1874, the nurse was attacked just *six* days after assisting the patient to bed on her admission into the hospital.

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draw marked attention to this and to its clinical indications. It is in full knowledge of this, and of its gravity, that it behoves us always to watch closely for these signs of cardiac failure, in order that we may not withhold the administration of alcohol when it is most urgently needed.

But little remains to be said. A veil of mystery hangs over the origin of this case. We know not when the boy contracted his fever; and it is curious, to say the least, that, so far as we know, no one in the house, nor in the room he shared with six others, should have taken the disease, seeing that for ten days he was lying there sick with it, and for the latter part of that time had reached the stage when it is most contagious. We do know that the fever was prevalent—to a sufficient extent, at least, to cause the sanitary officers to call attention to it—in the district whence he came; and it may be that this and another case of which we have since heard are but the vanguard of an epidemic. Of late years typhus fever has not been very prevalent in London. In this hospital (where, however, only doubtful cases are admitted, and even then sometimes transferred to the Fever Hospital) there was one case admitted or treated in 1873, six in 1874, none in 1875 or 1876, one in 1877, none in 1878, and one in 1879. But in London, as in all large cities, typhus is endemic; and although sanitarians do all they can, the conditions for the development and propagation of the fever cannot but exist in their midst. Especially is this the case with London, which annually receives an ever-increasing influx of vagrants from the country, seeking and not finding employment in the metropolis. Overcrowding, destitution, semi-starvation, and uncleanliness—these are the conditions that have bred typhus fever in the past; they abound on all sides in London at the present; and if typhus become epidemic, as it is like enough to do, it will require the utmost vigilance on the part of the sanitary authorities to limit its spread.

P.S., Feb. 4th, 1880.—Since the publication of the first part of this lecture I have learnt from Mr. Lovett, medical officer of health for the St. Giles district, that the fears above expressed have fortunately, so far, not been verified. He writes: "I am happy to inform you that at the present time no typhus (to the best of my knowledge) exists in the district. From the beginning of August to the end of November a serious outbreak occurred amongst our people, the full particulars of which you will find in a paper which I read before the Society of Medical Officers of Health, and reported at length in THE LANCET of 29th November last. The 'notification' you mention, received by your resident medical officer, was sent by the Sanitary Committee at my suggestion, because I discovered that several patients from this district had been received into one of the metropolitan hospitals, suffering from typhus fever, and no information given to me or my sanitary authorities, so that the dwellings of those patients remained infected,—for the spread of the disease."

THE ADVANCES IN SURGERY DURING THE PAST TWENTY YEARS.

The Presidential Address of the Border Counties Branch of the British Medical Association, delivered July 25th, 1879,

BY RODERICK MACLAREN, M.D.,
SURGEON TO THE CUMBERLAND INFIRMARY.

(Continued from p. 161.)

CONTINUOUS tension is an agency which has received application to a great extent of late years. It can be effected in two ways—by means of india-rubber or by a weight. Its power is very great. A piece of taut india-rubber will cut through any tissue; a few pounds hung to a limb will weary out the strongest muscles; an india-rubber bandage wrapped tightly round a limb will empty its blood-vessels entirely, and then an india-rubber cord fastened where this stops will keep them empty, enabling operations to be performed with the precision of the dissecting-room, and with entire absence of hæmorrhage. A limb thus rendered bloodless will keep alive for a couple of hours at least, and aneurisms have been successfully treated by emptying all bloodvessels except the sac, and leaving the limb in this condition for some time. The elastic ligature seems to be rather a surgical curiosity than of much practical use. If anyone chooses to do it, he can cut off breasts, tumours of some kinds, and piles, or he can lay open sinuses with it. But I fancy very few do choose to do so; it involves a painful and tedious process. Occasionally an elastic band is useful for removing a piece of dead bone from the interior of a case of new bone; if the india-rubber is fastened to the sequestrum, and then made tense, it will cause it to cut its way out in a few days. So, too, if a silk ligature has included a piece of tissue as well as the vessel, and does not loosen and come away at the usual time, two or three ounces tied to it, and allowed to hang over the side of the bed, speedily sets it free.

The treatment of many fractures has been improved by this means. The cases in which it is useful are: first, those in which the position prevents a mechanical lock—as, for example, the neck of the thigh-bone; secondly, those cases in which a similar result occurs from the obliquity of the fracture. In both instances the great displacing cause is muscular action; and if a weight of sufficient power is attached to the limb it will so weary and exhaust the muscles as to render their tonicity inert. That this is its mode of action is shown by the fact that a weight may take several days to reduce a riding fragment, which would not be the case if it simply pulled the bone straight. The long splint is now largely superseded by extension for fractures of the thigh-bone, with the result that appreciable shortening is an uncommon result. With fractures of the tibia, of the humerus, and of the radius and ulna, where reduction and splints fail to keep the bones in a straight position, extension will usually do so. After excision of the knee, by far the best retentive apparatus is a weight attached to the leg, and box splints to prevent lateral movement. The extension keeps the rough surfaces of bone apart, and obviates pain and starting. So also with inflamed joints, the separation of the surfaces and the securing of muscular rest are generally attended with the best possible results, present relief of pain and gradual subsidence of the disease. In the treatment of deformities tension is now largely used: a muscle or muscular group is more or less paralysed or injured, so that its action is impaired, consequently the opposing muscles are freed from the usual check, and the limb is pulled in their direction only. If no treatment be adopted a deformity results, which in time becomes permanent, so that it cannot be rectified without division of structure, and most cases which come under observation have reached this condition. Now what tension does in those cases is to imitate the natural tonic contraction of the enfeebled muscles: an india-rubber cord is made to pull on two points—one as near the origin, the other as near the insertion, of these muscles as possible; in early cases without previous tenotomy, in chronic cases after it. The action is not only palliative, it is curative. When a muscle is partially paralysed it helps it in its work and gives it rest; when its tendon is ruptured, it also approximates the ends. With fractured patella, which is essentially a ruptured tendon, the results of this method of treatment compare most favourably with all other plans except Malgaigne's hooks, and it is free from the undoubted risks which attend these. In some instances the displacing cause, instead of being muscular, is mechanical, as in flat-foot, where it is the weight of the body. Something—say too much standing, or an injury—incapacitates the tibialis anticus, the arch of the foot is not supported as it ought to be, and the scaphoid sinks, rendering the inner border of the foot straight or convex, instead of concave. In slight and recent cases, if the foot gets rest, the muscles recover their tone, and the parts resume their natural form; in chronic and aggravated cases rest will not suffice, but a stout rubber cord, having its upper end fastened just below the head of the tibia and its lower end under the instep, acts exactly in the direction of the feeble muscle.

It sometimes happens that the flaps of an amputation do not unite speedily, but retract, threatening to expose, or actually exposing, the bone; here again extension proves of the greatest service by pulling the flaps forward and keeping them so until union occurs.

Experiments on animals have shown that bone grows by continuous deposits from its investing membrane, and that if the bone itself be removed the periosteum can reproduce it, the result closely resembling the original. Further, it is proved that it is in the young animal that this power is most active; in the aged it is altogether lost. Clinical observation confirms the existence of this reproductive power. I have fortunately the opportunity of showing you marked

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examples. You have before you three casts, all from patients at present under my care in the Cumberland Infirmary. The first of these is the leg of a woman aged fifty-four. When two years old she had acute inflammation of the tibial periosteum, and the whole tibia eventually came out, the process extending over many years. The leg is curved like a scimitar, and has frequently given her trouble from ulceration; but still it has been a fairly useful limb, and has done much hard work; it is about an inch and a half shorter than the other limb. The next one has, as you see, two tibias—one outside, the other inside. This was the condition on the patient's admission. The story was that three years ago there was an acute inflammation of the limb, resulting in death of the bone, while the periosteum retained its vitality; openings formed in front, which allowed first pus and then the bone to pass out; meanwhile a new tibia was being formed behind. The old tibia was quite detached, and was taken away with the finger and thumb. The new tibia is a stout, serviceable, and not unshapely bone. On such clinical experiences subperiosteal surgery rests. The third cast is of a limb from which I removed the whole shaft of the tibia four months ago in consequence of its death by acute periostitis of thirty days' duration; in nine weeks a good tibia had replaced the old one, and it is still developing; the limb is equal in length to the other. Contrasting the last case with the other two shows forcibly the gain in operating. Compare it with the first, and you see how much better a limb is left, and it will still improve; compare it with the second, and you notice the great gain in time, for, while the one occupied three years, the other was healed in three months, and I believe that within six months of the operation the patient will be able to use the limb. Thus art improves on, while she imitates nature. Not only in cases of necrosis, but also with extensive caries, subperiosteal surgery gives gratifying results. I show you here a photograph and specimen, where the upper third of the humerus was taken away, and of this two-thirds was reproduced, leaving a limb more useful than I have ever seen by the ordinary method of excision.[1] By keeping underneath the periosteum in performing excisions several other objects are gained: there is the least possible injury to soft parts, ligaments and attachments of muscles are not destroyed, and there is the least risk of hæmorrhage; the result more closely resembles the original joint than by the ordinary method. I have seen, for example, after an excision of the elbow, a new olecranon develop when its covering had been left. The usefulness of the hand is much increased by sparing this membrane in excision of the wrist. I have seen the limb shortened by only about an inch from the elbow to the finger-tip, though the removed bone represented a much larger portion of the limb; and not only so, but the wrist remained movable—an immense gain over a rigid joint. In excisions of the os calcis it is on record that it has been entirely renewed, making a good heel. It is noteworthy that, though the reproductive power of the periosteum was determined far more than twenty years ago, it is only recently that this knowledge has borne fruit in an improvement in practice. The same fact constantly meets us—work done from purely scientific motives, and with the sole object of increasing knowledge, bearing a rich harvest in improved methods of treating, or even of avoiding, disease. This periosteal reproductive power becomes of service in many ways; for example, in trephining, if the membrane is first reflected, instead of the opening being closed by soft tissue, it will be filled by bone. In removing a case of new bone round a sequestrum, for the sake of getting it out, the sparing of the periosteum will give a stronger bone as a result than if it be taken away. I have seen a whole metacarpal bone reproduced, after its removal for caries, thus saving the finger which it supported. In certain cases it is useful to transplant periosteum, as in forming a new nose from the brow.

I regard subperiosteal surgery as the very highest development which surgery has yet reached; there is nothing equal to it in all else that we can do. That the main support of a limb, that which constitutes it a limb, which gives attachment to all its muscles, can be taken out, leaving a molluscous mass of soft tissues, and that in a few weeks this is replaced by a bone which in form and function is all that the original one was, really approaches a creative art.

In the treatment of caries of bones a change has come over practice. Amputation and even excision are less common than they used to be, and simply the entire removal of all diseased bone much more the rule. Antiseptic surgery has helped to this, but even when antisepticity is not available, it is now known that scraping away the soft bone with great freedom is followed by the best possible results. This is specially the case with caries invading the bones of the foot. It has been believed that opening the joints of the tarsus was a bar to free removal of carious bone; but if it be done with an unsparing hand, with considerable disregard of anatomy, and if a free and effectual drain be provided, the disease usually stops, the removed bone is replaced, and a limb of much usefulness left. It is not the opening of a joint which does harm, it is pent-up discharge in it, and putrefaction lurking in its remote corners; therefore the essential conditions of success are a free opening, good drainage, and the avoidance of putridity as much as possible. Of course there still are limbs which require removal from their carious bones, and there are still bones and joints which require excision from this same cause, but they are often neglected cases, and are, I think, becoming fewer. I am convinced, moreover, that limbs are less frequently amputated for joint disease than they were twenty years ago owing to the greater frequency of excisions, and also to the greater appreciation of the good results which follow long-continued rest with extension and pressure. This is greatly due to the establishment of the fact that far more diseases of joints than were supposed (in fact some surgeons say all chronic inflammatory cases) date from a local injury. So local treatment takes a more prominent place than the general measures which were appropriate when a strumous diathesis was supposed to be at the root of almost all of them.

Coming now to injuries to bones and joints, the only change which remains to be mentioned is in the reduction of dislocation of the hip. Instead of powerful pulleys and great extending force we have now a few simple manipulations to use, slipping the head of the femur back into its locket.

In the treatment of deformities of bone, whether the results of disease or injury, subcutaneous osteotomy does what tenotomy has done for deformities of the soft parts. A chisel or narrow-bladed saw divides the bone, and retention in a straight position completes the rectification. It is applicable to knock-knee, bow-legs, anchylosed hip-joint, and misplaced fracture; it involves no more risk than attends a broken leg. I question if the chisel operation will stand the test of time; I think the saw will displace it, from having the advantages of smaller external incision, of precision, and of simplicity. The forcible breaking up of adhesions in fibrous anchylosis of joints has grown in favour of late years. Considering the great amount of violence required, it is singularly free from untoward results.

Increasing boldness in the use of the knife, scissors, and écraseur is the change in the treatment of cancers and tumours which I have to bring under your notice. The cancerous tongue, rectum, or uterus has been removed with freedom and with the result of relieving pain and somewhat prolonging life. Tumours are taken away from positions which require long and careful dissection, and the cavities of the body no longer protect them from removal.

In the surgery of bloodvessels we have had acupressure and torsion added to our means of controlling hæmorrhage. The ligature of bleeding veins in stumps is now a regular practice, replacing a superstitious dread of interfering with these vessels. Aneurisms, which were formerly beyond the reach of treatment, are now amenable to it: thus abdominal aneurisms have been cured by rapid pressure on the aorta at the level of the epigastrium; galvano-puncture has arrested thoracic aneurisms, and there seems good reason to believe that double distal ligature will cure many cases of aortic and innominate aneurism. The use of an absorbable animal tissue, such as catgut or tendon, has diminished the risk of secondary hæmorrhage in these operations, for a compression of the vessel is effected which does not cut through its inner coats, and thus leaves the continuous integrity of the vessel unimpaired. The various forms of rapid pressure by the fingers, tourniquet, or elastic cord, have reduced considerably the number of cases in which the Hunterian operation is necessary. They all act in a similar manner; they slow the current of blood in the sac, so that coagulation of its contents occurs. Light has been thrown on the causation of aneurism; the starting-point is an inflammatory softening, allowing the blood-pressure to produce dilatation there. Very recently the sphygmograph has

[1] THE LANCET, June 7th, 1873.

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helped the diagnosis between the various kinds of thoracic aneurisms. The observations published are not yet very numerous, but in all probability the diminution of pulse-waves in the vessel beyond an aneurism, when compared with the recorded impulse in other vessels of the same individual, will indicate with more certainty than any means hitherto at our command where the aneurism springs from. The sac, acting as a governor or regulator, allows the impulse to be expended, and converts the normal intermittent into a continuous blood-current.

(To be concluded.)

THE ALKALINE, SALICIN, AND SALICYLATE OF SODA TREATMENT OF ACUTE RHEUMATISM.

BY ROBERT SINCLAIR, M.D.,
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THE idea first suggested by Prout that lactic acid is the *materies morbi* of rheumatism has been the basis of much of the modern treatment. What actually is the rheumatic poison remains to be proved, though the general success of the alkaline treatment, and the recent observations of Drs. Kuely and Balthazar Foster[1] lend a very high probability to Prout's theory, in spite of the failure of the unscientific experiments of Dr. Richardson. That the results of the alkaline method, which does not exclude the use of other well-selected drugs in combination with alkalies, have been very satisfactory, no one who examines the figures placed on record can deny. That in many hands the alkaline method has proved a miserable failure is equally certain. But I shall probably not be very far from the truth if I suggest that the latter result has been largely owing to a too implicit faith in the efficacy of the *vis medicatrix naturæ*, and a prevailing scepticism of the value of drugs, with the practical result of prescribing remedies in an exceedingly slipshod fashion.

As the physiological action of alkalies gives us some very distinct clues to their probable effects in disease, and some equally decided hints of the dangers of their imprudent use, it may be well to premise a consideration of their application to the treatment of rheumatic fever, by a brief *résumé* of their effects on the healthy organism.

The salts of potash and soda have a strong affinity for water and a high diffusive power, they increase the alkalinity of the blood, neutralise acids in the stomach and intestines, and render the urine alkaline; they promote oxidation, and are rapidly eliminated by the kidneys and intestines. The neutral salts are rapidly converted into alkaline carbonates in the system. Potash salts in large doses powerfully depress the circulation and the spinal cord. The nitrate of potash, if freely given and not well diluted, causes inflammation of the gastro-intestinal tract. If long continued in large doses, the salts of potash and soda cause anæmia and wasting of the tissues. "The soda salts have none of the depressing action on the heart which we have seen to be possessed by potash."[2]

The alkaline carbonates and vegetable salts have been administered with the view of protecting the tissues from the rheumatic poison, by neutralising and eliminating it, as well as for the purpose of producing a sedative action on the circulation and increasing the tissue metamorphosis and chemical changes.

So many plans of administering alkalies in rheumatism have been tried that it would be impossible, even were it desirable, to describe them all. Some practitioners have erred in giving too small doses; some in continuing alkaline medication over absurdly long periods of time; and very many have committed the no less serious error of prescribing these remedies with a total disregard for method. Dr. Fuller's directions, in his late writings, are so clear that no apology is needed for bringing before the profession a short account of what he regarded as the best mode of treating a case of acute rheumatism. Believing that potash and soda have somewhat different actions, and that the free and neutral salts have also different actions, all of which are desirable, his usual plan was to administer the neutral salts of *both*, along with a certain preparation of free carbonate of one of them. "A favourite formula is the following: half a drachm or two scruples of the acetate of potash, together with a drachm and a half of bicarbonate of soda, dissolved in three or four ounces of water, rendered effervescent by the addition of half a drachm or two scruples of citric acid, or one ounce or an ounce and a half of lemon-juice. The result is the administration of acetate of potash and citrate of soda, with about half a drachm of uncombined bicarbonate of soda. If the bowels are torpid I vary the form of this draught by prescribing half a drachm or two scruples of potassio-tartrate of soda instead of the acetate of potash, and tartaric acid instead of citric acid."[3] The above draught was repeated every three or four hours, according to circumstances, till alkaline urine was produced—a result that was usually accomplished in twenty-four hours. If the urine remained acid for a longer period the cause was usually to be found in constipation, which was met by appropriate treatment. On the production of alkaline urine the draught was repeated at intervals of six hours, and afterwards twice in the day. "If that dose suffices to keep the water alkaline for two days more, quinine or bark is given in combination with half or less than half of the alkali contained in the former draught; and as the tongue clears and the symptoms subside, the quantity of alkali is cautiously diminished until a simple quinine draught is taken. Meanwhile, when the tongue has cleaned satisfactorily, a little fish or meat is allowed, in addition to the beef-tea or broth, to which the diet had been hitherto restricted. Such is the treatment I would have you pursue in rheumatic fever. Its success is sufficiently attested by its results."[4]

What are the results to which Dr. Fuller here and elsewhere in his papers refers with so much pride and satisfaction? Prompt relief from the agony of rheumatic pains; rapid recovery of his patients; a sound heart at the end of the illness. In 116 consecutive cases, spread over a period of six years, the average residence in hospital was 20·1 days. If we include 28 cases in which pericarditis existed on admission, the average residence was the remarkably short period of 22·2 days. But here is the most startling fact of all. He treated 439 hospital and private cases without a single death, and with only 9 cardiac complications, 6 of which appeared within twenty-four hours of the commencement of treatment. Contrast these figures for a moment with the 114 instances of cardiac inflammation in 246 cases of acute rheumatism treated on other plans in St. George's Hospital during Dr. Fuller's registrarship. "Nor are the results of our experience at St. George's inconsistent with those of other observers. Dr. Latham at St. Bartholomew's, and Drs. Basham, Wm. Budd, Taylor, and others, have arrived at nearly the same conclusions."[5] Contrast Fuller's results again with Sibson's cardiac inflammations in 50 per cent. of his cases under the do-nothing treatment, and the conclusion is irresistible that the profession has committed a grave error in drifting away from a well-tried system, and seeking vainly for anchorage in shoals and quicksands.

But it may be quite legitimately asked, Have competent judges recorded results at all similar to Fuller's? Unquestionably they have. In Dr. Aitken's experience the pulse has generally been "tranquillised within forty-eight hours from the commencement of treatment."[6] But he very properly reminds us that "to be effective the remedy must be carried out with energy and perseverance."[7] Dr. Austin Flint, whose admirable work is an indispensable part of every physician's library, says that "it can hardly be doubted that the alkaline treatment is to be considered as an important improvement in practical medicine. In addition to the evidence of its positive efficacy, it has the negative merit of not doing harm if it fail to do good."[8]

The *Dublin Quarterly Journal* for May, 1869, contains the opinions of a number of eminent Dublin physicians regarding the alkaline treatment. Unqualified approval of its results is

[1] **Clinical Medicine**, by Balthazar Foster, M.D., pp. 143-157.
[2] **A Guide to Therapeutics**, by R. Farquharson, M.D., &c., p. 104.
[3] **The Alkaline Treatment of Rheumatic Fever**, by Henry William Fuller, M.D. Practitioner, March, 1869.
[4] Ibid.
[5] Ibid.
[6] **The Science and Practice of Medicine**, by Wm. Aitken, M.D., vol. ii., p. 33.
[7] Ibid., p. 34.
[8] **The Principles and Practice of Medicine**, by Austin Flint, M.D., p. 957.

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recorded by Drs. Samuel Gordon, Henry H. Head, Hudson, Henry Kennedy, Lyons, Wm. Moore, and Charles H. Robinson. Dr. Hayden, while satisfied of its good results in relieving pain, did not feel himself justified in saying that even full doses of alkalies "confer certain immunity from cardiac complications." Dr. Freke was "strongly of opinion that, although we can mitigate symptoms, we at present know of no means whereby we can cut short the disease, or with any approach to certainty reduce its duration." Dr. Charles Benson was in favour of a mixed plan of treatment, which embraced alkalies, digitalis, colchicum, and opium. From this remark it will be readily inferred that Dr. Benson was not an exclusive disciple of the school of Wright and Fuller. More than this, he disapproved of their liberal doses of alkalies. He found such a plan of medication "too lowering for the citizens of Dublin."

Whether, or in what respects, the constitutions of the inhabitants of the Irish metropolis differ from those possessed by mankind generally, is apart from the scope of this paper. The main interest, at present, of this compendious criticism centres in the fact that it contains the only accusation, except, of course, that of failure in certain cases, that has been brought against the alkaline method, and if the objection were inherent in the system it would be one of no small consequence. But it is, in fact, less real than it seems. Large doses of alkalies, continued over long periods, will, doubtless, cause anæmia and emaciation. But neither Dr. Fuller nor any other judicious exponent of the alkaline method ever suggested such a course, nor does the disease demand it, as a rule, if properly treated from the first. To begin with, no doubt the patient must be saturated with alkalies; but it is precisely one of the merits claimed for the system that this early saturation, this vigorous initial onslaught, so to speak, by effecting a prompt and powerful impression, enables the physician rapidly to diminish, and, in a short time, to entirely omit, the use of the drugs. If Dr. Fuller's directions are carefully and intelligently followed, a very temporary depression—not to be compared for a moment with that frequently caused by the usual doses of salicylate of soda—is the only annoyance that need be feared. The remarkable case related by Professor Reid, of Belfast, will be in the recollection of many members of the profession as an instance of what alkalies *may* do if used with insufficient caution. The case was that of a youth, sixteen years of age, living in the midst of comfort, who, while under a mixed alkaline treatment for acute rheumatism, became affected with a series of alarming scorbutic symptoms, which Professor Reid attributed to the irritation of the system by some twelve ounces of Rochelle salts. This circumstance "should not," Dr. Reid very wisely says, "cause us to abandon the administration of alkalies during the treatment of acute rheumatism, but only inculcates the necessity of our insuring their non-retention in too large amount in the system, by a combination of purgatives with them."[9]

This commentary may be appropriately terminated by placing together some of the statistical results arrived at by a few eminent physicians who have fairly tried the alkaline treatment. Dr. Furnivall had no cardiac complications in about 50 cases; Dr. Chambers had 9 in 174 cases; Dr. Garrod, in 51 consecutive cases, had no complications after the exhibition of alkalies for forty-eight hours; Dr. Dickinson treated 48 cases with one cardiac complication, while he had 35 such in 113 cases otherwise treated; Dr. Senator had cardiac complications twice in 34 cases. In 22 cases treated otherwise they occurred four times. The average duration under treatment in Dr. Garrod's male cases was 6·2 days, in his female cases it was 7·3 days.

SALICIN,

the active principle of willow bark, is a non-officinal drug with tonic properties. From time to time it has been tried in the treatment of ague and neuralgia, but with, on the whole, little success. Under the influence of oxidising agents it is "converted into salicylol or salicylous acid ($C_7 H_6 O_2$); this is identical with the oil of Spiræa ulmaria, and exhales the same peculiar odour."[10]

For this addition to our remedies for rheumatism we are indebted to Dr. Maclagan of London, and lately of Dundee. Several causes contributed to arrest the attention of the reader of Dr. Maclagan's first paper on the subject in THE LANCET of March 4th and 11th, 1876. Among these may be mentioned his rejection of the usual comprehensive etiology of rheumatic fever in favour of an exclusively miasmatic one, his industrious search for a remedy suited to his theory, his energetic application of salicin when its use was decided on, the good results obtained, and his somewhat hasty generalisations.

The number of cases published in support of his views was eight, seven of which were cases of acute and subacute rheumatism, and one of chronic rheumatism. The quantity of salicin administered in twenty-four hours varied from 72 to 180 grains. In a later paper (THE LANCET, Oct. 28th, 1876) he advocated the use of quantities varying from 120 to 240 grains daily. In every one of Dr. Maclagan's cases the relief of pain and the reduction of temperature were promptly and permanently produced, and a rapid convalescence completed the agreeable picture. The publication of these results naturally led to a tolerably extensive trial of the drug, the record of which is scattered through the medical periodicals of the last three years. The search that has been made in these for carefully-recorded experiences has led to the discovery of two classes of cases quite incapable of proving anything except the simplicity or carelessness of the writers. One class consists of isolated successes, the other of decided failures, probably due in a large measure to quite inadequate dosage. Dr. Maclagan very properly says that "to give thirty to sixty grains per diem is to do justice neither to the patient nor the remedy," and he justly insists on full and frequent doses as the only means of estimating its value. To which I may add a caution against the too hasty abandonment of the drug when improvement becomes manifest. The dose should be gradually reduced, and the drug completely omitted only after a week's complete freedom from pain and elevation of temperature. Sufficient evidence has been forthcoming, however, to show that in many cases salicin is a valuable remedy, though it has hardly fulfilled the high hopes of its introducer. At this date we would probably have been in possession of the results of many extended trials, but for two causes—the high price of salicin and the almost simultaneous introduction of salicylic acid.

Unfortunately, the experience of trustworthy observers has not confirmed all Dr. Maclagan's important conclusions. He assured us that "salicin does not cause troublesome symptoms; that its beneficial action is generally apparent within twenty-four, always within forty-eight hours; that, given sufficiently early and in sufficient doses, salicin prevents cardiac complications."[11] Every one of these dicta has been contradicted. Headache, giddiness, and tinnitus aurium have been recorded as unpleasant effects. In spite of the early and free administration of salicin, the course of the disease has, in certain cases, run unchecked, and has carried in its train pericarditis, endocarditis, pneumonia, pleurisy, and fatal hyperpyrexia. These occurrences are doubtless exceptional. But it may be quite reasonably argued that they are exceptional under many other systems. It is well for us all to know that they *may* occur during the use of salicin, and that they have been recorded by men of the stamp of Dr. Curnow of King's College, Dr. Sturges of the Westminster Hospital, and the able physicians of the Leeds General Infirmary.

Without going into the question at issue between Dr. Senator and Dr. Maclagan as to the changes that occur in the body after the administration of salicin and salicylic acid, and which will be found fully discussed in THE LANCET of June 21st, July 19th, and August 2nd, 1879, it may be well to state that Dr. Maclagan's original views of the *therapeutic*, as distinguished from the purely *chemical*, effects of these drugs have been strengthened by his subsequent experience. He is convinced now, more than ever, that salicin is superior to salicylic acid, inasmuch as the effects of the former are tonic, those of the latter depressing. Increasing experience has taught him that salicin is the safer drug of the two, and that it should be given in larger doses than he recommended at first. He now administers thirty grains every hour till an ounce has been consumed, when the patient is usually free from pain and fever. Another ounce is then given, divided into thirty-grain doses, every two or three hours; and a third ounce, divided similarly, three times a day, to prevent relapse. This total quantity of three ounces Dr. Maclagan finds is usually sufficient to effect a cure. But the weak point in his argument is the absence of statistics on a sufficient scale.

[9] Dublin Hospital Gazette, June 15th, 1861, p. 178.

[10] The Essentials of Materia Medica and Therapeutics, by A. B. Garrod, M.D., F.R.S. Third edition, p. 316.

[11] THE LANCET, October 28th, 1876.

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The only group of cases of any value which he has ever published is the group of eight cases in the March numbers of THE LANCET in 1876; and these are obviously too few for comparison with the statistics of other systems.

My trial of salicin has been too limited for statistical purposes, and therefore I need not tabulate my results; but a very short experience served to dispel the illusory hopes with which I began the use of the drug. I have had successes, or what seemed such, and I have had failures. The same has happened with every remedy hitherto proposed for rheumatism. Salicin has not, in my experience, caused unpleasant symptoms to anything like the extent of salicylate of soda. In two cases only have I encountered disagreeable effects. In one headache and sleeplessness, and in the other headache and delirium, compelled me to omit its use. My simple continued cases have, as a rule, done well under salicin. In a case of puerperal rheumatism, not long ago, the friends of the patient and I were much impressed with the rapid recovery. But I have had failures, and these most notably in my relapsing cases. Of three relapsing cases treated with full doses of salicin—one was thirty-three days in hospital; one was fifty-nine days, and had pleurisy; and one was fifty-nine days without complication. In two instances I have seen pericarditis.

The relapsing case last mentioned is so instructive as a failure that it is well worth placing on record. The patient, a healthy male, aged thirty-three, was admitted, under my care, at the infirmary, on the seventh day of an attack of acute rheumatism. From this date, March 31st last, till the 21st of April, the quantity given varied from two to six drachms daily. In these twenty-one days the patient swallowed the large quantity of ten ounces of salicin, and with, I regret to say, no perceptible influence on the course of the malady. On several occasions, it is true, temporary improvement occurred. But, while still taking undiminished doses, new joints and muscles were repeatedly attacked; and, on the twenty-first day of treatment, it was impossible to say that the man was any better than on admission. It was then decided to give salicylate of soda a trial, in similar doses. The result of this was not more satisfactory. Final cessation of pain and a normal evening temperature were not obtained for three weeks longer. That is to say, the patient was seven weeks ill, and six weeks under the influence of our fashionable remedies before he could be pronounced convalescent. It cannot be averred that the dosage here was inadequate. Still less can it be said that conspicuous success attended the efforts of the physician.

Last winter I suffered from an attack of relapsing, subacute rheumatism, after a suppurating tonsillitis; and I employed both salicin and salicylate of soda, but at different periods of the disease. My case was hardly a fair test of the power of either drug in checking the course of the malady, as I was frequently at work when a temporary diminution of pain allowed me the use of my limbs. But still my experience taught me something which may be of a little value as a contribution to practical therapeutics. Both drugs relieved the pain, tenderness, and swelling, when frequently repeated in full doses. But the taste of the salicylate was to me disagreeably sweet and sickening, and a few twenty-grain doses caused copious perspirations, disinclination for food, cardiac depression, singing noises in the ears, and a feeling of depression that was almost unendurable. On the advice of Dr. Maclagan, whose kindness I can never forget, I then took salicin. Under its use the pulse and digestion improved, the disagreeable symptoms disappeared, and the pain was more rapidly relieved. The pleasant, bitter taste of salicin was itself an agreeable change from the horrible sweetness of the salicylate of soda. Neither drug had any perceptible effect on the fever or joint affection, except when taken in scruple or half-drachm doses every hour for from six to twelve consecutive hours. Half an ounce was a very ordinary amount in twenty-four hours. On one day I took no less than an ounce of salicin, with decided benefit. After more than a month's active medication the disease showed a tendency to become chronic—at least it was judged so,—and the outlook was by no means cheerful. This result was doubtless due more to frequent exposure in very bad weather than to any fault in the therapeutics. The salicin was continued in smaller doses; large quantities of sulphur were applied to the affected joints and muscles; the diet was made more generous; a few glasses of particularly fine old port were taken daily; and in little more than a week the pain and stiffness took their departure, and have not returned since.

A time of sickness is often a time of good resolutions. I formed one resolution during my illness—namely, that, if it should ever be my evil fortune to suffer from a similar attack, I shall bargain with my medical friends on no account to torture me with salicylate of soda.

(To be concluded.)

A CASE OF ABSCESS OF THE KIDNEY, IN WHICH NEPHROTOMY, WITH SUBSEQUENT FREE DRAINAGE, WAS ATTENDED WITH SATISFACTORY RESULTS.

BY CHAUNCY PUZEY,
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THE case here recorded is one in which long-continued stricture of the urethra, with resulting chronic retention and cystitis, was followed by suppuration in the kidney. As my space must be limited, I will confine my remarks mainly to the latter feature of the case, merely premising that the subject was a coloured seaman, forty years of age; that he had suffered from stricture of the urethra for more than twelve years; and that he had, previous to his admission into the Northern Hospital, undergone various operative measures, including, I believe, internal urethrotomy and perineal section.

The patient first came under my observation on Aug. 12th, 1878; at which time he was unable to pass any urine by the penis, but every fifteen or twenty minutes he was out of bed straining an ounce or two of thick ammoniacal urine (mixed with pus, mucus, and blood) through a very small opening in the perineum. I did a perineal section, and, having passed a full-sized elastic catheter through the penis into the bladder, was enabled to keep up constant syphon drainage, by means of a long india-rubber tube carried from the catheter to a vessel containing some carbolised fluid and placed under the bed. By this means, combined with frequent irrigation of the bladder with warm weakly-carbolised water, and the usual general treatment of cystitis, rapid improvement took place, and the patient's health steadily progressed towards recovery; but after a time it was observed that, although the man seemed in fairly good health, he frequently suffered from pain in the right loin and groin, and that although the urine was now quite sweet, clear, and of normal acidity, it frequently contained a quantity of thick creamy pus, which, from its appearance, could not be due to cystitis. It should be noted that at this time he could pass a full stream of urine without the slightest difficulty, although the perineal fistula still remained.

He was sent to the Convalescent Hospital at Woolton, and remained there some weeks; but the weather was cold, and he did not, in consequence, reap much benefit from the change.

On Jan. 19th, 1879, he was readmitted into the Northern Hospital, and a few days later his condition was thus noted: "He has a weary, anxious look; complains of pain in the right lumbar region, the pain occasionally shooting down to the right testicle, and along the inner side of the thigh. There is deep-seated tenderness in the neighbourhood of the right kidney; he has occasional slight rigors, followed by rise of temperature in the evening, and there is frequently a deposit of pus in his otherwise healthy urine." These symptoms gradually became aggravated, and a deep-seated but distinct swelling could be made out in the region of the right kidney anteriorly. In the loin there was some apparent fulness, but it was questionable whether this was not due to muscular rigidity, the patient constantly bending his body to the right, evidently to take off pressure from the diseased kidney. Gradually it became evident that there was a distinct relation between the size of the swelling, the distress of the patient, and the amount of pus in the urine. So marked was this that, after a while, a glance at the temperature chart, or even at the man's face, would tell us whether there had been a free discharge of pus; or, if we first looked at the glass vessel containing the last twenty-four hours' urine, we could anticipate the state of the patient. Thus, one day, the temperature would be found

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high, the tumour distinct, and the urine almost normal, the patient at the same time suffering much distress; next day he would be much better, with a normal temperature, and several ounces of pus would be found lying at the bottom of the glass measure full of urine.

There could, then, be little doubt that the right kidney was distended with pus; careful observations made by myself and colleagues showed pretty clearly that the left kidney was healthy, and it became evident that the only way to prevent death from pain and exhaustion was the free evacuation of the swelling. The man was willing to submit to any operation, and it was decided that the kidney should be cut down upon through the right loin; that if perinephritic suppuration was found, and the kidney could be enucleated, that *that* should be done; but that if (which seemed most probable) the pus was contained altogether in the kidney, and that organ was firmly fixed by adhesions, then a free opening into the kidney, followed by drainage, would be the only alternative.

Therefore, on April 2nd the patient was chloroformed, and, with full antiseptic precautions, the kidney was cut down upon in the manner suggested by Mr. Bryant—that is, the incision was much the same as for lumbar colotomy, but reaching rather nearer the spine. On cutting through the transversalis fascia, it was found intimately adherent to the capsule of the kidney. The kidney itself was paler in tint than normal. A trocar and cannula was pushed into it, and thick pus welled out. A narrow bistoury was passed into the opening made by the trocar, and the kidney was laid freely open upwards and downwards to the extent of two or three inches; a large quantity (probably more than a pint) of thick, odourless pus escaped, and then the cavity was well irrigated with a stream of carbolic water, large masses of phosphatic and other deposit being thus washed out. The bleeding from the cut surface of the kidney (here about half to three-quarters of an inch thick) was very free; the edges were therefore seared with the thermo-cautery. On examining the interior of the kidney digitally, which could be fairly done when the abdominal walls were well pushed backwards towards the spine, the dilated calyces and the entrance to the ureter could be clearly distinguished. The anterior surface of the kidney was much thinned, and the finger moved about in it could be felt by the hand pressing upon the abdomen. The dilatation had evidently principally occurred at the expense of the anterior portion of the kidney, and it was evident that there was so much matting together of neighbouring structures that the organ could not be enucleated. One or two stitches were passed through the thickened capsule on each side of the incision and attached to the skin, so as to draw these two structures as much as might be together, and thus to assist in preventing extravasation of pus and urine among the muscular layers which had been, of course, freely divided. A large drainage-tube (half an inch in diameter), doubled up, was passed into the kidney, the ends projecting externally, and the wound, which still oozed, was filled with oiled gauze, the dressing being completed antiseptically.

The patient appeared somewhat collapsed for an hour or two after the operation, but warmth and stimulant enemata soon brought him round. He was made to lie on the wounded side. At 8.30 P.M. the dressings were found moist and were changed. The man passed a good night. At 8 P.M. the temperature was 104°; pulse 116; at 10 P.M. the temperature was 103°; at 8 A.M. next morning 101°. Five or six ounces of clear amber-coloured urine was passed during the night. The dressings were changed twice during the next day, there being much thin sanious discharge from the wound. That night the temperature was 104°; fifty ounces of urine were passed during the first thirty hours after the operation. On the 4th April the morning temperature was 100·2°; in the evening 99·4°; pulse 86°. Forty-four ounces of urine passed in the twenty-four hours.

After this, the progress was uninterrupted. The large double drainage-tube was removed on the fourth day after the operation, and a single piece of the same calibre and about eight inches long was passed into the kidney (and ureter?). There was no redness or swelling about the wound, and the antiseptic dressing answered admirably under the careful management of Mr. Hughes-Jones, the house-surgeon, the wound remaining throughout perfectly clean and sweet, and there being very little pus in the dressings, but generally a deposit in the urine. The temperature remained normal, there being only one rise (on the 21st and 22nd April), when the thermometer marked 103·4° and 102·4°; there was then some pain in the right kidney, and a little blood appeared in the urine. It seemed probable that these symptoms were due to the kidney contracting on the end of the drainage-tube, which was therefore partly withdrawn and shortened, after which the pain and flow of blood ceased, and the temperature at once fell to normal. The average daily quantity of urine passed for the first fortnight was forty ounces, and during the next month between forty and fifty; of course some escaped through the wound into the dressings.

Eight weeks after the operation, the man being, so far as concerned his general health, well, the urine having been for two or three weeks almost free from pus, and the wound being completely closed with the exception of a small sinus which was kept open by the drainage-tube, I removed the tube, hoping that the patient might be considered cured. At this time he said that he felt better than for twelve years previously. To my great disappointment, however, in a day or two his temperature ran up to 103·4°, and he had a return of the old feeling of pain and fulness in the right hypochondrium. There was also a little pus in the urine. With regret, therefore, I reintroduced the drainage tube, and very soon the temperature fell again to normal, and the patient was easy again, though disappointed like myself. The sinus was dilated with a laminaria tent, so as to admit a larger drain, and at the end of a month the patient went to Woolton. There he remained for six weeks, and then, having no home, he was readmitted into hospital. He was then in good health; told me that he had gained nearly two stone in weight (by the scales) in a little over two months, but he was most anxious to have the opening in the loin closed. The drainage tube was therefore removed; but a speedy return of the old symptoms once more necessitated its reintroduction. The question now arose, why could not the small quantity of urine secreted by the kidney pass through the ureter into the bladder? And it struck me that the ureter might be strictured or distorted, and that it might be catheterised, at all events through its upper portion. After a long and cautious trial, I was able to introduce a No. 2 gum catheter, with a slightly curved stilette, into what was evidently the upper part of the ureter, and then, withdrawing the stilette, to push it along until only about two inches remained outside the wound. It was tied in, and the next day a size larger was passed. It caused no inconvenience, and the man dressed himself and walked about as usual. Later on, as it had been urged upon me very strongly that there must be a calculus in the ureter, I determined to try to reach the bladder through the ureter, and clear up that point. I obtained some long French bougies, eighteen or twenty inches in length, and on at least two occasions passed one of them in nearly up to the waxed end. The patient declared that he felt the end in the bladder, and I felt it impinge against something hard, probably the bony floor of the pelvis. However, I failed to prove by injections of coloured fluids that the bladder had been entered, and I have now no doubt that the point of the bougie stuck at the vesical orifice of the ureter. That the catheters arrived thus far is, I think, proved by the patient's own sensations, and by the fact that when removed, after being tied in for forty-eight hours, they retained this shape, or very near it, the dotted line representing the opening in the loin.

No progress having been made in the direction of opening up the flow of urine towards the bladder, and it appearing likely that the quantity of urine excreted by the kidney was after all very small, it was decided that the best plan would be to re-open the wound and kidney, and keep it widely patent as long as possible, in the hope that the organ would contract and ultimately altogether cease its functions.

Accordingly, on the 4th September, the patient having been chloroformed, the wound was re-opened to about two-thirds of its extent; the kidney bled profusely and the thermo-cautery was used freely. The state of affairs was now very different from that observed in April. The portion of kidney which could be explored was now much contracted, the finger passing into one cavity (dilated calyx)

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upwards, and into another funnel-shaped one downwards towards the ureter.

Excepting some pain and tenderness in the neighbourhood of the kidney, no inconvenience was felt from this operation. The wound was kept as freely open as possible; and in ten days or a fortnight the patient was walking about again; and things seemed to promise well. He passed from two to three pints of healthy urine in the twenty-four hours; had no pain; and the drainage from the wound was fast diminishing. But the man looked feebler; for several weeks he had been losing the bright and glossy look (characteristic of the healthy coloured man) which had returned to him in the summer; and he was losing flesh. He was allowed to go out every fine afternoon by the riverside; and on the 4th of October, his temperature having been for the previous fortnight normal, he had a slight rigor, and the temperature rose to 101·2°; he also had a headache and felt sick. Next morning his temperature was 105°, and he was complaining of pain in the right chest and of cough. Examination of the chest showed signs of right broncho-pneumonia; and from this he gradually sank and died on the 11th October.

A post-mortem examination showed the upper lobe of the right lung in a state of grey hepatisation, the section of which gave exit to abundant exudation of semi-purulent fluid. The bronchi were thickened, inflamed, and filled with muco-pus; the other two lobes were congested; there were some old adhesions at the base, and slight recent adhesions over the upper lobe; the lower lobe of the left lung was œdematous, otherwise healthy. The liver was adherent to the tissues round the right kidney, and its capsule was thickened; it weighed six pounds and a half (the normal weight being three to four pounds), was very soft, lardaceous, and showed signs of amyloid degeneration. The left kidney was greatly enlarged, weighing, when first removed, fourteen ounces and a half (the normal weight being four ounces and a half to six ounces), but some of this excess was lost by subsequent drainage of serum; its substance was pale, gave no amyloid reaction; its ureter was slightly hypertrophied, and the vesical orifice enlarged and patent. The tissues around the right kidney were much thickened and infiltrated by inflammatory material, the capsule being thickened and adherent to the surrounding structures; the finger passed through the sinus in the loin into the pelvis of the kidney and down towards the ureter; very little kidney structure remained anteriorly; the cortical and medullary portions were diminished in size, and the calyces enlarged. The ureter was shortened, its calibre much diminished, its walls thickened and bound down throughout by firm adhesions; the canal was, towards its lower part and at its vesical orifice, partially obliterated by adhesions of its mucous surface, which, however, were easily broken down with a probe. The bladder was somewhat hypertrophied, but otherwise fairly healthy. The membranous and prostatic portions of the urethra were much dilated, and communicated by a funnel-shaped opening with the perineal fistula, but the stricture of the urethra was completely cured. No calculus or calculous deposit was found, nor was there any purulent deposit, nor the slightest granulating surface found throughout the whole of the tract from the sinus in the loin to the fistula in the perineum.

Although the history of this case terminates with the death of the patient, I think I may claim that the operation was not in any way the cause of death; but that, on the other hand, it prolonged life, gave great relief, and would most probably have resulted in a complete cure had it not been for the diseased condition of the liver. With such a liver, and with only one kidney, the man was in a pre-eminently favourable condition for an attack of pneumonia, and in an equally unfavourable state for recovery from that complication.

Whether it would have been better to attempt complete removal of the kidney is a matter on which there may be some difference of opinion. In this case my own opinion is that it would have been impossible, without tearing away part of the peritoneum. In a similar case I should certainly adopt the same plan as I did in this instance; but I should not take any trouble to re-establish the flow of urine towards the bladder, but rather trust to free opening and drainage, and hope for contraction of the kidney. When this case was read before the Liverpool Medical Society, a member suggested that, with this end in view, the organ might be freely cauterised and destroyed. This plan would, I think, be dangerous, but I see no reason why, as long as a sinus remained, the wound should not be from time to time laid open deeply, and the exposed surface of the kidney well cauterised, thus doing just as much as, and no more than, would probably suffice for the desired purpose.

It is somewhat remarkable that one kidney only should have been affected consequently upon the bladder mischief. I should be glad to know if any readers of this paper can suggest a good reason for the fact. There have been several cases recorded lately of pyelo-nephritis in which one kidney only has been affected, but they have differed from mine in their origin. It is somewhat remarkable also that in some of these instances the diagnosis has been very difficult; in one case the symptoms all pointed to bladder trouble. In the case recorded in the last volume of THE LANCET by Dr. Pratt of Newtown, Montgomeryshire, the kidney was found converted into a large cyst full of pus, which probably might have been opened with a successful result. A similar case occurred quite recently in the practice of my friend Dr. Young, of Bootle, near Liverpool.

One word as to the incision. Having tried several times on the dead body the plan recommended by Mr. T. Smith of St. Bartholomew's (vol. lii., Medico-Chirurgical Transactions), I came to the conclusion that the incision as for colotomy, as suggested by Mr. Bryant, was easier, and exposed the kidney more freely. There must be also, by the latter, less division of nerves of the lumbar plexus; although in my case I presume that I divided the ilio-inguinal nerve, as the patient for a long time afterwards felt the right groin and scrotum quite numb.

THE DIAGNOSIS OF OVARIAN TUMOURS FROM THE CHARACTERS OF THE FLUIDS CONTAINED IN THEM.

BY LAWSON TAIT, F.R.C.S.

I NEED hardly point out the importance of this question to everyone engaged in the practice of ovariotomy, and I need not repeat here what I have said elsewhere as to the disappointment I have met with from both chemical and microscopical examination of the fluids removed by preliminary tapping.

A final effort has been made by my friend Dr. M'Munn, of Wolverhampton, to discover a help to diagnosis in the spectroscope. The details are given in his able work on "The Spectroscope in Medicine," now before me; and I regret to say his investigations lead only, as all others have done, to negative results. That there should be no mistake, I supplied him with fluids from tumours *removed*, so that their nature was definitely ascertained. His conclusions may be summed up in one of his notes (p. 129): "The microscopic and chemical characters of this specimen (ovarian) were almost the same as those of the last one (parovarian); . . . . and hence (for reasons given in detail) the spectroscope will not enable parovarian to be distinguished from ovarian cysts." He further says that "the presence or absence of the band of lutein will not help the diagnosis, as serous fluids yield the spectrum of this body." This upsets the hope that Thudichum gave us that the presence of this body might have a diagnostic value.

Whilst on this subject may I point out that a frequent statement concerning parovarian fluid, that it is always or generally limpid, is, in my experience, an error. Dr. Matthews Duncan says, in his recent lectures, "It is almost pure water, very little albumen in it, but appropriate tests show the presence of the chlorides of sodium and potassium. In the sediment there may be occasionally detected cylindrical epithelial cells, &c." He further says that it is generally of low specific gravity, though he has seen it like honey in consistence, and like coffee-grounds in appearance.

In the majority of my cases of parovarian dropsy the fluid has been thick, even to viscidity. Dr. McMunn gives a description of two such fluids from my practice, one of which was in thick layers, almost black, with a greenish shade; its specific gravity was 1024·6, and its quantitative analysis gave—water 90·346, solid organic matter 8·736, inorganic salts ·918. The inorganic salts consisted of chlorides, sulphates, phosphates, and carbonates, and iron was also present.

In such parovarian fluids I have seen all the microscopic

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appearances said by some writers to be characteristic of ovarian tumours, and, therefore, I have come to the conclusion that we have nothing trustworthy but the experience of our finger-ends to help us in diagnosis.

Birmingham.

A NEW INSTRUMENT FOR ILLUMINATING AND MAGNIFYING THE ANTERIOR PORTIONS OF THE EYEBALL.

By JAS. E. ADAMS, F.R.C.S.,

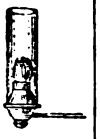
SURGEON TO THE LONDON HOSPITAL; ASSISTANT-SURGEON ROYAL LONDON OPHTHALMIC HOSPITAL.

HAVING frequently experienced some difficulty in seeing minute foreign bodies on the cornea, I had this instrument constructed with a view simply to focus artificial light on the cornea, and to magnify the image, at the same time leaving one's hands free for the necessary manipulations required to remove the foreign body. The difficulty, of course, only arises in private practice, where one has not a competent assistant at hand, but I have no hesitation in saying that this arrangement is even better than the aid rendered by the most expert persons.

I should not have thought so small a production worthy of being brought into public notice had I not found how very useful it is for purposes other than those for which it was originally intended. In the first place the cornea, aqueous, iris, capsule, and lens, can be examined, even by a novice, under most favourable conditions of illumination and enlargement.

One of the lenses can be brought down in front of the eye and used for producing an inverted image of the fundus for ophthalmoscopic purposes if so desired.

But, above all, it enables one to perform an iridectomy or any other operation on the interior of the eye at any hour of the day or night without an assistant. A few days ago I was asked to see a case a short distance from town, in which an immediate iridectomy was called for, the tension of the globe being + 3. Although it was dark, I was enabled to perform the operation with the utmost ease and safety, the illumination being derived from an ordinary gas-burner projecting from the wall of the patient's bedroom. Another point is this, that if lights have to be brought near to the patient's face, chloroform must be substituted for ether, whereas with this arrangement the light may be so far off as to render any precaution of the kind unnecessary.



The instrument (made by Messrs. Krohne and Sesemann) will be readily understood from the accompanying sketch. The anterior part of the fillet is made of metal, into which the arms are screwed. These arms have movement in every direction, and are so constructed as to enable one to command a view of either eye. The posterior part of the fillet is elastic, so that the instrument can be slipped on to the head of the patient instantly.

Finsbury-circus, E.C.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

WESTMINSTER HOSPITAL.

POISONING BY OXALIC ACID.

(Under the care of Dr. ALLCHIN.)

FOR the following notes we are indebted to Mr. Samuel H. Butler, late house-physician.

M. L——, aged fifty-eight years, was admitted at 5.5 P.M. on Oct. 1st, 1879. When brought to the hospital it was stated that she had taken a cupful of fluid containing oxalic acid between ten and fifteen minutes previously. She was almost unconscious, could not be made to speak, and the extremities were cold. There was no vomiting; the pupils were dilated, and acted slightly to light; the pulse was almost imperceptible; respiration hurried; there was no evidence of corrosion about the mouth. With difficulty the patient was made to swallow some chalk mixture, and was then carried into the ward, where some more chalk mixture was given. After this she was very sick, and then more mixture was given, and hot-water bottles were put to her feet. At 5.20 she had been sick two or three times since the last dose of the mixture, of which eight ounces had been taken. The patient was very drowsy, and asked to be let alone. The extremities were still cold, and the woman complained of headache; the pulse was small and hurried; the pupils acted more readily to light. Six ounces of chalk mixture were given. At 5.45 there had been no more sickness, and the extremities were warmer. She said she felt better, but complained of sore-throat, pain, and great tenderness over abdomen. Next day there had been no more sickness. She complained of sore-throat, pain, and tenderness over the abdomen, also of headache, and she felt depressed; tongue pale and flabby; the bowels had not been open. To have milk and lime-water. On the 3rd, the bowels were opened once; she was slightly sick in the morning after milk. On the 5th the sickness continued after milk; complained of pain in the lumbar region, as well as in the abdomen, and great pain when swallowing. To have nutrient enemas, and ice to suck. On the 10th the enemas were discontinued; she was not sick after milk, and had no pain in swallowing. After this the patient gradually recovered, and began to take solid food by degrees. She was discharged on the 26th, feeling quite well; no pain or tenderness in abdomen.

It was ascertained that the patient had taken half an ounce of oxalic acid mixed with water, which her husband used for cleaning leather.

LEEDS GENERAL INFIRMARY.

CASES OF NERVOUS DISEASE, PRESENTING OPHTHALMOSCOPIC PHENOMENA.

THE following notes, for which we are indebted to Dr. E. H. Jacob, late resident physician, are continued from p. 168.

CASE 3. *Cerebral Softening; Hemiplegia; Optic Neuritis.* M. E——, aged thirty-four, admitted on May 24th, 1878, under Dr. Heaton. She had been married eleven years, but had had no children. Soon after her marriage she was under treatment for sores on her thighs, and a year before admission she attended at the infirmary for pain in the head. Three years before, she was laid up for a few days after a blow on the head. In March, 1878, she lost the use of her left limbs, and her mouth was drawn to one side.

On admission she was but slightly intelligent. There was some left facial paralysis, and she could move the arm or leg

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on that side; tongue protruded straight. She constantly rambled, and was very emotional; sensation unimpaired. Passed motions involuntarily. There were some adhesions in the left pupil, and there was great difficulty in examining the eyes.

On June 10th, with some trouble, it was seen that there was considerable effusion round the right disc. On the 27th she became very quiet, and could hardly be roused. There was constant twitching of the left arm. Next day she appeared deaf, and could be roused only with difficulty. She had taken food, and spoken a few intelligent words. She lay on the right side, and had occasional twitching of limbs. She grew gradually more unconscious, and died on the 5th July.

The treatment consisted of iodide of potassium in increasing doses, to which was added on July 2nd some perchloride of mercury.

Necropsy, twenty-five hours after death.—Cerebral membranes much injected; arteries at base very hard. The posterior cerebral on left side filled with firm clot, and middle cerebral slightly obstructed near its origin. There was some superficial softening at the lower part of the left temporo-sphenoidal lobe. The right side of the brain showed some softening of the walls of the lateral ventricle. The whole brain-substance was very soft, partly red and partly of yellow tint, freely disintegrating under a stream of water (post-mortem change?) The softening, however, was much less marked on the left than the right side. Other organs healthy.

CASE 4. *Cranial Tumour; Optic Neuritis.*—W. B——, aged fifty-nine, admitted Oct. 24th, 1878, under Dr. Clifford Allbutt. Nine years before he was struck on the left ear by an iron spring, after which he was unconscious for an hour. He had been partly deaf for many years; he latterly got worse, and was treated as an out-patient for his deafness with some relief. He had then some pain in his joints, and about January, 1878, he began to have shooting pains in the head. Six months afterwards his sight began to grow dim. From the time he first noticed the pain in his head he had an obstruction in his nose, and occasionally a sanious discharge from his nostrils. There was no syphilitic history, except that he had occasionally had a sore tongue.

On admission he was rather thin, and had a somewhat dazed appearance. There was internal strabismus of the right eye, the pupil being rather smaller than in the left. There was considerable impairment of sight, and double optic neuritis existed. He was ordered ten grains of iodide and fifteen grains of bromide of potassium three times a day.

On Nov. 7th was in less pain, but had much the same appearance. The left hand measured only 15 lb. with the dynamometer, the right 40 lb. There was some dropping of the left angle of the mouth, and he complained of numbness in the left side of the face. On the 13th the right hand squeezed 30 lb., left 12 lb. There was a greater look of flaccidity about the cheeks, but less appearance of pain. On the 26th the pain had increased. He could not move the right eye, and the eyeball appeared rather more prominent than on the other side. On Dec. 17th he could not open either eye. There was no strabismus. He lay with his mouth open, could not protrude tongue or move his eyes. Could not chew his food. He could walk with assistance. He had great difficulty in swallowing. On Jan. 17th he swallowed better; could feed himself, and see objects on the other side of the ward, and was not so deaf. He lay quietly in the day on his back, with his eyes shut and mouth open, but he got restless about 9 P.M., and there was considerable difficulty in keeping him in bed at night. This improvement was but transitory. In a few days he relapsed into his former condition, and after lying for many days in a comatose condition, he died on Feb. 13th.

Necropsy, seventeen hours after death.—Body emaciated. Right eyeball sloughing. There was a tumour of hard fibrous consistence occupying the floor of the cranium in the middle line, extending into the cranial cavity, with rounded prominence, but more on the left side. It was then about the size of a walnut. There was some compression of the optic nerve on both sides, but no marked encroachment on the orbits. The bones from which the tumour sprang were much softened, and a probe could easily be passed from the interior of the cranium into both nasal fossæ. The arteries at the base of the brain were hard and atheromatous. The left temporo-sphenoidal lobe was much indented, but here was no softening and no adherence of membranes.

SUSSEX COUNTY HOSPITAL.

LARGE SARCOMA OF LEFT ILIUM; SARCOMATOUS THROMBUS OF LEFT COMMON AND EXTERNAL ILIAC VEINS; SARCOMATOUS EMBOLI IN RIGHT VENTRICLE OF HEART AND RIGHT LUNG; SECONDARY DEPOSIT IN LUNG; PNEUMONIA, ETC.; PNEUMOTHORAX; MELÆNA.

(Under the care of Dr. FUSSELL.)

J. M——, aged thirty-three, was admitted Feb. 5th, 1879. He was a married man, a gardener. He had been suffering from pain in his left hip for nine months, and had been treated during this time for sciatica. He had had three successive attacks of shivering. A week or two before admission he noticed some swelling about the left hip for the first time, and he was quite unable to bear any weight on the limb. He stated that he had never suffered from rheumatism, and had always enjoyed good health. There was no family history of cancer.

On admission, he was sallow and poorly-nourished, having, he said, lost flesh during his illness, and his expression was anxious. He complained of shooting pains from his left hip downwards to the foot, which prevented him from sleeping. The left foot, leg, and thigh were œdematous, and there was found to be great swelling, with induration, over the haunch-bone of this side, the swelling being hot, tender, and painful. There was also some fulness, with tenderness, in the corresponding iliac fossa; no glandular enlargement was discoverable; his bowels were costive, and he did not pass water very freely; tongue red, dry; pulse 96, small and soft. He was kept in bed, morphia was administered hypodermically to relieve the pain, and castor oil to act on the bowels. The swelling gradually increased, assuming very large proportions, his lower extremity became numb, and he grew more emaciated. Eventually, in about a fortnight or three weeks' time, well-marked signs of pleurisy and pneumonia were developed on the right side of his chest, followed by great prostration and distress. Finally, March 3rd, symptoms of pneumothorax occurred on the same side of the chest, and about the same time rather profuse melæna took place. From this date he quickly sank, and died on March 5th, one month after admission.

Necropsy, eighteen hours after death.—Signs of commencing decomposition were observable; rigor mortis fairly firm; slight hypostasis. There was no ascites, but the left lower extremity was œdematous from hip to toes. The body was rather emaciated. There were no scars noticeable beyond those produced by the hypodermic syringe, and very slight bed-sores. The swelling above-mentioned in connexion with the left hip was now very prominent; it occupied the dorsum ilii and the iliac fossa, and was hard and firm. On dissection it was found to spring from the whole of both surfaces of the ala of the ilium, to which it was quite limited, and which it had eroded, though not actually perforated. On cutting into it the mass was white and suety in appearance, and firm and hard throughout, except for a small extent in its interior, where it had softened down into a pulpy cavity containing a clot of blood. Distributed through its substance was a quantity of bony or calcareous material. Microscopical examination of the tumour showed it to be a specimen of sarcoma, composed of a dense matrix of fibroid tissue, with cells of various sizes and shapes, mostly rounded, but some angular, spindle-shaped, and caudate; some with large, well-marked nuclei, and others with indistinct granular contents embedded in it. In most places calcareous granules were scattered, but no true bone-cells were discovered. The nerves in the neighbourhood were pressed upon; the external and common iliac veins (left) were also compressed, and were blocked internally by a large white flattened mass, suety in appearance, hard, and irregular on the surface. Microscopically this was found to consist, in part at least, of sarcomatous tissue, presenting roundish nucleated cells of considerable size, interspersed in an indistinct or slightly fibrillated stroma. It was lying loose in the lumen of the vessel, the walls of which were not invaded. The upper part of the femoral vein contained a somewhat similar, but softer, mass, more like an ordinary coagulum (not examined microscopically). Lumbar glands not enlarged. The cervical glands were not enlarged. Ribs and costal cartilages healthy. On opening the chest, the right pleural cavity was found occupied by a pyo-pneumothorax, the lung being collapsed and compressed into a small space at the upper and inner

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part, except anteriorly opposite the first, second, and third ribs, where it was bound to the chest-wall by firm adhesions. The cavity was lined by a thick, shreddy pyogenic membrane, and, besides air, contained a pint or two of fetid pus. The left pleural cavity contained a small quantity of serous fluid, and posteriorly there were a few adhesions. The right lung was much compressed, though capable, as far as its middle and lowest lobes were concerned at least, of being inflated through the main bronchus. Its uppermost lobe was completely solidified, of a greyish colour, granular on section, and yielding when pressed a thick purulent fluid from all parts of its cut surface, some flowing from the tubes, and some oozing from the solid pneumonic tissue surrounding them; this tissue was riddled throughout with points of pus, like minute abscesses, and broke down under firm pressure into puriform pulp; it was, in fact, in a condition of grey hepatisation and purulent infiltration. It was traversed also by a considerable quantity of fibroid tissue, owing to which it was firm. It contained no air, and sank like a stone in water. The middle lobe was carnified by compression, sinking in water, but could, as before said, be inflated. Its tubes were filled with pus, though its tissue was not pneumonic like that of the preceding, and did not break down into puriform pulp. Near the posterior surface of this lobe was a small, hard, pinkish nodule, pale and granular on section, not encapsuled, but embedded in the pulmonary tissue itself, evidently a secondary deposit of sarcoma. The lowest lobe, also compressed, but also capable of inflation, presented generally fairly healthy tissue. At the upper and posterior part of its surface, however, was a small space or cavity, collapsed and empty, and formed apparently by simple breaking down of lung tissue, though from what cause did not appear evident, unless, indeed, it were due to the plugging of arteries to be presently mentioned. Possibly a process of ulceration had occurred from without inwards, as the pleura and pyogenic membrane at this spot had also given way. Certainly there was no tubercle. Anyhow this small space communicated with the pleural cavity, and here was the origin of the pneumothorax. On pressing the lung in the neighbourhood of this, a number of curious elongated, white, rusty-looking masses exuded, like maggots, from the small branches of the pulmonary artery. On examining further, a great number of similar masses were found in the vessels of every part of this lobe. They were all quite white, firm in consistence, and perfectly unattached, lying free in the lumen of the vessels, from the cut ends of which they could be squeezed out, as before said, like maggots, or rather like the sebaceous matter from a distended follicle. Some were branched, corresponding with the divisions of the arteries; and many were tubular, having a minute canal bored through their centre. One was seen to terminate by a closed end, resembling a miniature test-tube; this one was smooth on the surface, but most, if not all, of the others presented an irregular varicose or beaded appearance. At first it was thought they might be fibrinous casts, but microscopic examination proved them to be actually *emboli of sarcomatous tissue*, composed of very distinct, roundish cells embedded in a slightly fibrillated matrix—having, in fact, a structure identical, both microscopically and to the naked eye, with another mass in the right ventricle of the heart (to be presently described), with that in the left iliac vein before mentioned, and with the softer parts of the tumour connected with the haunch bone (except that in this main tumour the cells were not quite so numerous). In another part of this same lobe a nodule of secondary deposit existed, embedded in the pulmonary tissue. Some of the tubes contained a little pus.—Left lung: Upper lobe pale, emphysematous; apex somewhat congested. Lower lobe solid almost throughout; riddled with pale-yellowish granular patches of pneumonic consolidation, very readily breaking down under the finger; intensely gorged with blood at its extreme base; sinking for the most part in water. Some bronchial glands on both sides enlarged. Larynx healthy, but filled with the same kind of fluid as was found in the right pleural cavity. The mucous membrane in the neighbourhood of the aryteno-epiglottidean folds and the adjoining part of the pharynx was covered with shreds, similar to those on the right pleura, and probably carried up from that membrane through the lung and lodged there; but there were also some rough, yellowish, shreddy deposits evidently belonging to the mucous membrane of this part itself. Pericardium healthy. Heart about normal in size; tissue good. In the right ventricle was a partially decolorised clot of some size. On pressing this, a long white pedunculated or polypoid mass, about two and a half inches in length, with a somewhat rounded head and a long stalk, not unlike a barnacle, started out from the centre. This was quite firm, irregular on its surface, having a somewhat twisted or annulated appearance (due to the projection of numerous bead-like excrescences), exactly resembling, except in point of size and shape, the suety bodies found in the branches of the pulmonary artery in the right lung. It was quite unattached to the walls of the heart, and was evidently of embolic origin, derived from the mass in the iliac vein, the blood-clot having formed around it so as to completely enclose it; it was only discovered accidentally while manipulating the clot. Microscopically it was seen to be composed of cells mostly roundish, but some irregular, of various sizes, scattered through a fibrillated stroma, having a structure therefore identical with that of the bodies previously described. The expanded portion, or head, was filled with a soft glutinous pulp containing similar cells microscopically. The right auricle contained a large softish blood-clot, partially decolorised. Left cavities contained a little dark clot. All the valves were healthy. Aorta healthy, or at least with only a few minute yellow opaque spots on its interior. On opening the abdomen the intestines were found much discoloured. Almost the whole of the ileum and the large intestines were filled with blood and tarry fæces. The mucous membrane was in many places infiltrated with blood, and in others highly congested, but the source of the hæmorrhage was not evident. There was no sign of ulceration in these parts of the bowel. The jejunum was quite healthy and empty. The upper part of the duodenum was congested, its mucous membrane being very distinctly mammillated. Here was a large ulcer, or rather the depressed cicatrix of one, with thick rounded edges. There was no trace of bleeding here. Stomach healthy, peritoneum healthy. Pancreas healthy. Spleen pale on section, rather firm; not staining with iodine; structure healthy. Liver 67 ounces, pale on section; structure healthy. Kidneys very firm; pale on section; structure healthy, not yielding the amyloid reaction with iodine. Capsules readily stripped off. Bladder, prostate gland, and urethra healthy. No pus in joints. Head not examined. Spine not opened. Bones healthy (as examined superficially), not affected by the tumour.

Specimens of the growth, the thrombus, and the emboli are preserved in the Hospital Museum.

Remarks by Dr. FUSSELL.—It would seem that the tumour in its growth had compressed the iliac vein, causing blood-stasis and coagulation; that the coagulum thus formed had imbibed material through the walls of the vessel, becoming itself organised into a sarcoma; that portions of this had become washed off, giving rise to the emboli found in the right side of the heart and lung.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Osseous and Articular Lesions in Locomotor Ataxy.—Leprosy.—Fatty Tumour of Abdomen undergoing osseous and fibrous Change.—Varicella gangrenosa.—Congenital Syphilis of Larynx.

THE ordinary meeting of this Society was held on the 3rd inst., the President, J. Hutchinson, Esq., in the chair. There was a good attendance of members, and specimens of considerable interest were exhibited. The meeting was prolonged for half an hour, as the usual time of the meeting was consumed on the discussion on the osteo-arthritic changes met with in locomotor ataxy.

Dr. BUZZARD exhibited three patients suffering from Osseous and Articular Lesions in the course of Locomotor Ataxia. One of these, a man, had previously been shown at another Society, and a history of the case published (THE LANCET, January 18th, 1879.) The salient points of the case were therefore alone related. He is a typical example of tabes dorsalis, in whom the right hip-joint was completely disorganised (the head and neck of the femur having entirely disappeared) within a space, probably, of three months. He presented, besides, a curious

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bony process, nine inches long, developed in the superior tendon of the rectus femoris muscle of the same side. Of the two other patients, Case 1 was Elizabeth W——, aged fifty, widow, an in-patient of the National Hospital for the Paralysed and Epileptic, for the opportunity of observing whom Dr. Buzzard was indebted to the kindness of Dr. Lediard, of the Cleveland-street Sick Asylum, under whose care she had previously been. The patient, who has suffered for about eleven years from typical "lightning" pains in her legs and arms, has been affected for an equal time with attacks of the *crises gastriques* of Charcot, attacks in which there is pain in the stomach and chest, with continual retching and vomiting, occurring at irregular intervals, sometimes as many as four in four months, the longest period of exemption having been eight months. Other symptoms of tabes which she presents are ataxic gait, very small pupils not reacting to light, analgesia of extremities, defective muscular sense, and absence of patellar tendon reflex. In October, 1878, whilst walking quietly along the ward, her right femur fractured through its neck. In July, 1879, whilst retching in bed, the left hip-joint suddenly "bulged out." Since then she has been unable to use either leg. Mr. Adams, who examined the patient at Dr. Buzzard's request, reports the movements of both hip-joints free, but limited in some directions, with crepitation more marked in the right than the left. On the right side the top of the great trochanter is nearly level with the anterior superior spinous process, and on the left the trochanter is extremely prominent, and the bone enlarged. The conditions observed may be due, he thinks, either to spontaneous fracture of the neck of the bone on each side, or to complete disorganisation of the joint, with atrophic changes and absorption of the head and neck of the bone on the right side, and similar changes on the left, associated with enlargement of the great trochanter from throwing out of new bone. Case 2 was that of Catherine M——, aged thirty-six, married, an out-patient of the National Hospital for the Paralysed and Epileptic. For the opportunity of observing this patient Dr. Buzzard expressed his obligations to Professor Henry Smith, who had invited him to see the woman when she was a patient in King's College Hospital, and had facilitated his following up the case after her discharge. Like the other woman, she has been subject (for upwards of ten years) to attacks not only of typical "lightning" pains in her extremities, recurring at intervals of a month or two and lasting three or four days, but also of very characteristic *crises gastriques*. These occur at irregular intervals, between which she feels quite well. She has never been six months without an attack. There is distension, pain, and more or less vomiting and retching, which formerly lasted two or three days, and is now not so severe, but griping and flatulent eructations recur daily for weeks at a time. Her other symptoms have been staggering gait, diplopia, inability to stand with eyes shut, partial colour-blindness, pupils insensitive to light, analgesia of extremities. Three years ago the right leg became red and swollen, though not painful, which symptoms subsided under rest; but in June, 1878, they recurred. In September the swelling had gone down, but the knee-joint was useless. At the same time the left leg began to swell, and was larger than natural when she was admitted into King's College Hospital at the end of the year. At that time the right knee-joint was found to be disorganised. There was grating, but no pains on moving the ends of the bones. The internal condyle was enlarged, and projected inwards. The external condyle could not be felt. The patella rested on the outer surface of the lower end of the femur, the ligamentum patellæ being wasted. There was fluctuation in the joint. The left leg was swollen, and this knee-joint, which was apparently not affected on admission, became enlarged, and the leg dislocated outwards and backwards during the patient's stay of one month in the hospital. The muscles of the lower extremities were wasted. She was discharged at the end of January, with leather supports to each knee, which enable her to move about with help. There has since been swelling and crepitation of the right shoulder-joint. Mr. Broster, resident medical officer to the National Hospital in Queen-square, reports, as to the present condition, that it feels as though all ligamentous connexions had disappeared from the right knee-joint. The ends of the bones cannot be brought into apposition, and they are so loosely connected that the patient, ere she puts on the leather casing, has to splice them together with a bandage. They can be knocked together audibly, and without pain. It seems as though the condyles had been bevelled off, and the end of the femur turned into a rounded and smooth stump, whilst the upper end of the tibia is bevelled off inwards. The patella lies two inches above and to the outside of the end of the femur. Along the outer side of the inner hamstring is a firm, smooth, rounded mass, one inch by half an inch. On the left side the tibia and fibula are dislocated backwards and slightly outwards. The condyles are rounded off, the inner one being enlarged. The patella lies over the end of the femur in front. Dr. Buzzard remarked that although nearly twelve years had elapsed since Charcot first described the arthropathy which was apt to occur in tabes, the subject had hitherto engaged but little attention in England. So far as he knew, the three patients present were the first living specimens of the disease which had been exhibited at a metropolitan medical society, although the profession was indebted to the president (Mr. Hutchinson) for important contributions to the subject in his recent lectures at the College of Surgeons. Soon after Charcot's description had appeared, Clifford Allbutt published "a case of locomotor ataxy with hydrarthrosis" in the St. George's Hospital Reports for 1869, and this was the first described in England. The second was published by him (Dr. Buzzard) in THE LANCET, August 22nd, 1874. It was a typical example of tabes with enormous swelling and disorganisation of the knee-joint, which began when the patient had been affected at least five years with the disease, and proceeded with great rapidity. This made altogether four well-marked examples which had occurred in Dr. Buzzard's practice, but he had besides seen a few others of similar nature but less broadly characteristic. This scarcity of experience in England contrasted strongly with the amount of interest which the subject had attracted in France, where important contributions to it had been made by Ball, Vulpian, Richet, Dubois, Bourneville, Bouchard, Oulmont, Voisin, Michel, Bourceret, and others. Dr. Buzzard referred especially to articles by Talamon (*Revue Mensuelle*, Paris, 1878), to which he had been indebted for information. In 1873, Weir Mitchell had alluded incidentally to the frequency of fractures in tabetic patients, and about the same time Charcot brought to the Société Anatomique of Paris the case of a woman (affected with tabes dorsalis) in whom, concurrently with great disorganisation of certain joints, multiple spontaneous fractures of the neck of the left femur, and of both bones of both forearms, had occurred. At the present time Charcot is disposed to consider the alteration in the nutrition of the osseous tissue the prominent fact, the joint changes and the spontaneous fractures being each secondary manifestations of the fault of nutrition of the bone, dependent on an influence of the nervous system. According to the same authority, the extremely rapid wearing away (*usure*) of the articular extremities is the principal character which distinguishes tabetic arthropathy from arthritis deformans. It was noteworthy, in reference to the case of W——, that in cases of spontaneous fracture due to tabes, it was common to find a more than usually exuberant callus thrown out. Dr. Buzzard pointed out that in the three patients present there were, or had been, examples of all the conditions which had been described as characterising the osseous and articular lesions of locomotor ataxia. Extensive swelling, more often than not painless, and never confined to the joint itself, but extending also down the long axis of the limb, disappearance or disablement of the articular ligaments, rapid erosion or absorption of the ends of the bones, were the features which marked two of the cases. In the other, spontaneous fracture, certainly of one femur, and, as he believed, also of the other, was coupled with the formation of what was probably a voluminous callus. The evidence that the patients were examples of tabes dorsalis was not open to the least doubt. Referring to the question, Where was the seat of lesion in the nervous centres? Dr. Buzzard remarked that Charcot's original idea, that this was probably to be found in the anterior cornua of the cord, had not been supported by the results of three recent autopsies of arthropathic cases, in which the cells in the anterior horns had been found perfectly healthy. On the other side, too, he referred to the frequency with which extensive changes in the cells of the anterior horns had been found in cases of amyotrophy, which presented no such osseous lesions as those they were considering. He drew attention to the remarkable fact that the symptoms known as *crises gastriques*, which were comparatively rare in tabes (he had only met with them eight times, and in only

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four of these well pronounced, in a range of fifty-six cases of tabes in his own experience), were extraordinarily frequent in these cases of arthropathy. They were present in two out of his own four cases, they occurred in the only instance of spontaneous fracture in a tabetic patient which Vulpian had witnessed, and in a range of sixteen other cases of arthropathy, which he had collected from French sources, six were characterised by the gastric phenomena. This association was too remarkable to be attributed to accidental coincidence. As the gastric symptoms might, with some confidence, be ascribed to sclerosal invasion of the roots of the vagus, he ventured to suggest the probability that a change in some structure contiguous to these in the medulla oblongata might be found to be the lesion giving rise to the altered nutrition in the osseous system, and he thought that it was in this quarter that pathological anatomy might usefully direct its inquiries. Without claiming for this idea any position beyond that of a legitimate hypothesis suggested by the clinical association of symptoms, Dr. Buzzard reminded his hearers how much aid the discovery of a centre for nutrition of articulations in the medulla oblongata would afford towards the explanation of the remarkable association of cardiac complications with articular rheumatism, as well as the occasional high temperature witnessed in the latter disease, besides, perhaps, helping to throw light on the obscure pathology of arthritis deformans.

Dr. GOWERS showed an Elbow-joint from a patient with Locomotor Ataxy (aged forty-five) who, four years after the disease commenced, and when the symptoms were well marked in both arms and legs, fell, striking the elbow. He used the arm next day without inconvenience, but the joint rapidly swelled, and a doctor whom he consulted thought some bone had been broken. Two months later, when seen, the joint was enormously swollen, fourteen inches in circumference, abnormally mobile, and loose bone could be felt. There was not, nor had there been, any pain. The swelling slowly lessened. Six months later he died from a painless but extreme pleural effusion. The cord presented the usual lesion. In the elbow-joint the external condyle of the humerus had been split off, and the coronoid process of the ulna was also fractured. The ends of the bones had lost most of the cartilage and were eroded. The synovial membrane was covered, between the bones, by villous projections, some fine, others large. There were also two pieces of bone which could not be accounted for by fracture; one, about half an inch square, was above the coronoid process and projected into the cavity of the joint; the other was a plate of bone in the outer wall of the synovial sac about an inch square, but apparently in two pieces. The case was of interest as illustrating the course of a joint lesion in ataxy and on account of the painless character of the swelling, and the continued use of the arm in spite of the degree of damage. The painless character of the fatal pleural effusion was also worthy of remark.

The PRESIDENT showed several casts of specimens and cases sent to him by Professor Charcot from Paris. The first illustrated the changes in the bone described by Dr. Gowers, two showed a wearing away of the upper part of the femur, or possibly ununited fracture of the neck of the bone; another, extensive shortening of the femur after fracture. Another cast was from the shoulder of a patient in whom the head of the humerus, apparently unaltered in shape, was displaced under the clavicle and projected strongly under the skin; the bone was quite loose, with free and painless mobility; the opposite humerus was dislocated on to the dorsum of the scapula, and one knee was dislocated, the tibia and fibula being twisted and displaced up behind the femur, which was deformed from the loss of its outer condyle; in all these joints there was remarkable freedom of mobility and absence of pain, and the femur was greatly altered in form. He also related the case of a gentleman who suffered most severely from gastric crises, for a year being incapacitated from business by the frequently recurring attacks of pain and vomiting. These symptoms passed off, and he then consulted Mr. Hutchinson for pain and weakness in the right hip, which was diagnosed to be rheumatic arthritis. Three years later he again saw him for commencing amaurosis. Rapid blindness with white atrophy of the optic nerve ensued, and on inquiry he learnt that the patient had suffered from characteristic pains in the legs. On examining the hip at this time there was evidence of a dorsal dislocation of the femur, with absorption of the head and neck of the bone, or of ununited fracture of the neck of the femur; the man moved with great agility, and there was perfect recovery from the former pain and weakness. He exhibited the hip-joint of a man, recently dead, that had been under his observation for some fifteen years. There was first of all amaurosis which never became complete, followed by definite symptoms of ataxy. At the autopsy the limb was found much shortened, with an ununited fracture of the neck of the femur resembling other examples of that injury, the repair being very complete; the deposit of bone on the great trochanter was hollowed out into a cup-like cavity to receive the prominence of the acetabulum containing the head of the bone. Nothing was known as to how or when this fracture occurred; there was no history of any severe injury at any time, and it was an example of an almost spontaneous fracture. In this particular case it was likely that the ataxy had to do with constitutional syphilis.

Mr. DORAN stated that Charcot has presented an actual specimen of this disease to the Hunterian Museum, which also contains a collection of specimens illustrating leprosy presented by Dr. Allen, among which are some humeri showing spontaneous division of the bone, which was thinned down to a very fine stem, and at last broken across. Spontaneous amputation of the whole thickness of a limb was well known in leprosy; these specimens showed the change limited to the bones.—Mr. MACNAMARA was unable to agree with Dr. Buzzard in regarding the joint changes as the result of some central nerve lesion. In all the cases there was first of all synovitis with great distension of the joint, which must necessarily interfere with the nutrition of the joint, and the articular cartilage would early suffer. As the subjacent calcareous lamina of bone was dependent for its nutrition upon the cartilage, it would soon be destroyed when laid bare, for the continuous molecular disintegration would not be repaired in the absence of the cartilage; thus the cancellous bone would be exposed and would waste, while some of the medulla might protrude and thus give rise to the bony outgrowths met with in many instances. The articular change was identical with that of chronic rheumatic arthritis, but the nerve disease led to great wasting of the muscles and consequent looseness of the joints. Possibly there were nerves in bones, but as yet they had not been discovered. Ten years ago he was consulted by a gentleman in India for what he took to be rheumatism; within the last eighteen months he had again consulted him for increasing blindness with atrophy of the optic disc and well-marked locomotor ataxy. The head of the right humerus was now entirely destroyed, the shaft of the bone being pushed up and projecting under the skin; there was no evidence of change in the hips and knees. In this case, as in the others, degeneration of the bones was preceded by marked synovitis, and he thought that in this, and not in any central nerve lesion, lay the explanation of it.—Dr. STURGE had under his care at the present time a man with marked symptoms of locomotor ataxy, whose earliest symptoms were severe gastric crises; then there was swelling of the joints, and other symptoms developed; the joint swelling subsequently disappeared and left but slight signs of joint mischief. He had also seen two instances of spontaneous fracture in ataxy. In the one case the right tibia was broken in its upper third while the man was drawing on his boot, and subsequently the femur broke near its lower end; the other was a woman in Paris whose tibia and fibula gave way during walknig, and a few days afterwards her humerus snapped while she was pulling herself up in bed. He thought Mr. Macnamara had only removed the question a step further back, for he still had to account for the occurrence of the synovitis, and also for the cases in which the changes in the bones were out of proportion to that in the joints.—Mr. HULKE reminded the Society that several years ago the late Mr. C. de Morgan showed the hip, knee, elbow, and shoulder joints apparently affected with this disease; there was great distension of the joints with relaxation of the ligaments, curious deformities from the removal of natural eminences and the deposit of masses of new bone; the neck of one femur was broken through and showed large spines of new bone projecting down from it; there was also an absence of pain in this case, with free flail-like movements of the joints. He was uncertain, but thought the man was not suffering from dorsal tabes.—Mr. MORRANT BAKER asked in what this disease differed from osteo-arthritis. Might Dr. Buzzard's and the other cases be only coincidences of the two affections in one person? Probably, as each condition was common, they would be occasionally combined. But if not, did these cases help us to the conclusion that osteo-arthritis is a neurosis?—Dr.

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CURNOW mentioned the case of a man under his care at the Seamen's Hospital with well-marked locomotor ataxy in whom during the last five or six months a large number of fatty tumours had developed in the subcutaneous tissue. If the arthritic changes were neurotic, might not the widespread and symmetrical development of these tumours be considered neurotic also?—Mr. BUTLIN suggested that the disease consisted at first of a general arthritis like that of a chronic rheumatic arthritis, but that it was associated with atrophy of the bones instead of outgrowth from them.—Dr. BROADBENT had seen the younger of the two women brought forward by Dr. Buzzard, at an early period of the disease. The affection was attributed to a heavy fall on the back before which there had been no symptoms of anything wrong. The characteristic ataxic pains were not then prominent; the pupils were dilated, not contracted, and not quite fixed but not freely mobile. The gastric crises were also peculiar; they came on at night, and were marked by pain more than by vomiting. During the attacks the woman got out of bed and beat herself violently over the abdomen, and for the time the ataxic symptoms disappeared, her movements being quite agile. When the arthropathy first appeared there was no effusion into the joints, but a large bursa behind the knee was distended, the surrounding structures became relaxed, and the bones of the leg projected backwards. He had seen only very few cases of arthropathy, and was not prepared to agree with Dr. Buzzard in the association between it and the gastric crises; he could recall six cases of these crises, two of which were dead, and in only one of whom was there any joint affection.—Dr. BUZZARD expressed his thanks for the interesting cases narrated, and specimens shown by the various speakers. The cases related by the President and Dr. Sturge were two more instances of the association of gastric crises with arthropathy. He had never heard of a case similar to Dr. Curnow's. No doubt the joint changes were anatomically similar to those of chronic rheumatic arthritis, but the differences between the two affections were so marked that he could not look upon them as one and the same. First of all, chronic osteo-arthritis, when generalised, attacks the smaller joints in preference to the large, while in the ataxic cases the small joints had not been affected. Next, the quantity of fluid effused in the ataxic arthropathy is enormous and not limited to the joint, but extends beneath the muscles all along the limb. Further, many of these cases show a marked retrogression which was never met with in the rheumatoid affection. Was dislocation met with in osteo-arthritis? The extreme suddenness of onset and rapidity of the destructive process were also very distinguishing features of these cases; in one of Charcot's cases in three months there was entire destruction of the head of the humerus. He considered the vice of nutrition to affect directly both the synovial membrane and the bone. The disease had been met with so often now that he thought coincidence might be put aside.

The PRESIDENT exhibited a boy aged ten, who was born in Calcutta of English parents. He came to this country four years ago, when he had paralysis of both ulnar nerves; he now suffered also from marked dusky erythematous discoloration of the skin and anæsthetic patches. The feature of interest in the case was the paralysis preceding the marked skin change.

Dr. DRESCHFELD showed three Tumours removed from a lady aged forty-nine, who suffered three or four years ago from a hard swelling in the left lumbar region, which could not be recognised as connected with any abdominal or pelvic viscus. Last year she consulted Mr. Heath again on account of loss of flesh, failing appetite, and abdominal tenderness. Another tumour, firm but less hard than the first, was now found in the right lumbar region. The patient was anxious for something to be done, and accordingly, on Oct. 17th, Mr. Heath made an exploratory incision into the abdomen, and soon came on an osseous tumour, which he turned out from a distinct capsule, round which he placed a ligature; a second tumour, larger and less firm, was removed in the same manner. Death occurred on the fifth day from peritonitis and shock. At the post-mortem examination an enormous fatty tumour, weighing 12 lb., was removed from the back of the belly, and it was found by the position of the ligatures that the two smaller growths had been originally connected with this larger mass. The small tumour was purely bony, of ivory consistence, and close to its attachment to the large growth were scattered several small nodules of bone; the other tumour was partly fatty and partly fibrous. The specimens were interesting, because fatty tumours are rare in the abdominal cavity, only two being recorded in the Pathological Society's Transactions. Also, while calcification is a common change in fatty growths, true ossification is very rare, and still more unusual is it to find one part of a fatty tumour ossifying, while another part is becoming fibrous.

Dr. ABERCROMBIE showed the body of an infant which had recently died in the Hospital for Sick Children, which was admitted with several sharply cut circular ulcers about the head and trunk; it was very feeble, and died in two days. At the autopsy one small ulcer was found in the small intestine, and some of the mesenteric glands were caseous. A fortnight before the child's admission to hospital four other children in the same house suffered from undoubted varicella, and the day after its admission a fifth was attacked with the same disease; there was thus strong reason to call this case varicella gangrenosa. Dr. Dickinson had told him that in all these cases there is evidence of tuberculosis.—The PRESIDENT knew of no case in which the diagnosis of this affection was so conclusive as in this instance, and the case became, therefore, of great importance. He and others had met with several cases of children with gangrenous patches of skin, but there had been difference of opinion as to their real nature. He thought this case was conclusive evidence that they were examples of gangrenous varicella. He had seen many similar cases, and one of vaccinia gangrenosa.—Dr. BARLOW had seen seven or eight cases of this disease, and there was a good model of it in Guy's Hospital Museum, labelled Rupia escharotica. In all the fatal cases he had found more or less evidence of tuberculosis, which he had looked upon as the cause of the gangrenous action, and had not suspected that they were cases of varicella till the last but one of his cases. In all cases the first appearance is a bulla nearly always on the head or trunk, on which a thick scab forms, under which rapid and deep ulceration occurs, so that in three or four days the bone may be exposed. Only a few cases recover.

Dr. F. SÉMON exhibited the Larynges of two brothers, both affected by Congenital Syphilis. There was abundant evidence of syphilis in the parents, and both children, in addition to other syphilitic affections, suffered from laryngeal trouble from the age of one month, dyspnœa being very marked. There was ulceration about the lips, mouth, and pharynx; laryngoscopic examination was very difficult and imperfect. Treatment was conducted irregularly. On January 10th the eldest child died, after exacerbation of the dyspnœa for five days. There was great chronic thickening of the upper aperture of the larynx, with only subordinate ulceration; and it was from the aggravation of this chronic process, rather than from acute œdema, that death ensued. The younger child died within three weeks from acute œdema of the middle compartment of the larynx, which was completely occluded, the upper aperture of the larynx being almost free. Deep lesions of the larynx are very rare in congenital syphilis; and simple chronic thickening of the parts, very rare in adults, had not been observed before in children. It was remarkable that syphilis should have attacked the larynx especially, in these two brothers, and remarkable also that each should have fallen a victim to acute œdema.

The specimens shown by card were:—1. Drawings of Cancer; by Mr. Hulke. 2. Microscopic specimens of Optic Neuritis with good sight; by Mr. Nettleship. 3. Microscopic specimens of Atrophy of the Optic Nerve and Retina, and other changes in an Eye, lost by erysipelas spreading to the orbit; by Mr. Nettleship.

The Society then adjourned.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting of the Society, held at 1, Adam-street, Adelphi, on Friday, Jan. 16th—President, John Syer Bristowe, M.D.—Dr. JOHN TATHAM, Medical Officer of Health for Salford, read a paper on certain reforms which appear desirable in the statistical tables adopted in their annual reports by medical officers of health acting for large urban districts, of which the following is an abstract:—After acknowledging that the tables recommended by the Society were of value to metropolitan health officers, he pointed out that they were but sparingly adopted in the provinces;

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moreover the tables had been drawn up some five years ago, and it was now worth while considering whether these forms could not be modified so as to answer the purpose of metropolitan as well as extra-metropolitan officers of health. It is to be regretted that, though the whole of England has been parceled out into sanitary districts, the national collection of local sanitary statistics is so meagre as to be positively discreditable to the public health service—a result due to the fact that the health officers are working solely with regard to local requirements, and entirely without reference to a national statistical system. Dr. Tatham then suggested that the tables which he submitted to the Society should be referred to the same committee which five years ago compiled the statistical forms of 1874, and at the same time he stated that the tables were the work of a friend who had had great experience in vital statistics. The following is a summary of the information given in the tables which accompanied the paper:—Table A gives the density and birth and death rates. Table B gives an analysis of the mortality for a series of years. It shows the deaths of children at ages under one year, under five years, and those of persons over 60 years, and also the death-rates at those ages, and from seven zymotic diseases, the infantile mortality being measured by the number of children dying under twelve months old per 1000 births. Table C gives the births registered in a town, and in its various registration subdistricts, wards, or other statistical subdivisions, distinguishing legitimate and illegitimate births. Table D gives the estimated population, the birth and death rate, the deaths and rate of mortality per 1000 living in the various statistical subdivisions of a town. The death-rates are also given for these areas from the five principal classes of diseases; the deaths occurring in public institutions having been distributed. Table E gives the population and the annual rate of mortality occurring in a town at five groups of ages, compared with the English life-table rate at those ages for males and for females. Table F shows the principal causes of death in combination with ages at the five selected groups. Table G gives the deaths from several specified causes, without distinction of age, occurring in the various wards of the borough, and also the deaths occurring in the various public institutions. Table H gives the annual rate of mortality during the twelve months from the five classes of diseases at five groups of ages per 1000 persons estimated to be living at those ages. Table I gives the number of deaths, and proportions of deaths, certified by medical practitioners, by the coroner, and the number and proportion of uncertified deaths. Table J gives the prices paid by the poor-law authority for the principal articles of food and fuel.—In the discussion which followed, the President, Dr. Longstaff, Dr. Tripe, Mr. Humphreys, Dr. Browning, and Mr. Shirley Murphy took part.

Reviews and Notices of Books.

Cholera: its Natural Laws and Progress. Extract from Surgeon-General's (British Forces) Annual Report for 1878.

THIS paper cannot be considered as a history of cholera as it appeared among the troops in India in 1878. It is rather a summary of the conclusions arrived at by Dr. Bryden from his statistical labours of fifteen years, and an attempt to remove some of the mist in which the origin and progress of cholera epidemics are enveloped, and to deduce certain practical lessons on the subject. As the paper is what it purports to be—a succinct statement of the views put forward by Dr. Bryden for the past fifteen years—it would be impossible, in the limits at our disposal, to give anything like a full statement of these views. We shall, therefore, content ourselves with bringing to notice a few of the leading points, and of the practical conclusions drawn by Surgeon-General Ker Innes.

The first point laid down is "that while certain areas enjoy a complete or comparative immunity from cholera, others stand endemically and perennially, or epidemically and periodically, related to it;" Bengal Proper being, as it were, the permanent seat of cholera, which fluctuates in character and intensity, but is never absent, while in the North-Western Provinces, the Punjab, and Oudh, it is a periodical but never a permanent occupant. There is this further contrast between the two, that when cholera is at its maximum in the one it is at its minimum in the other; but this appears capable of explanation by the fact that the meteorological conditions in these areas are, in some respects, assimilated at the time of the maximum prevalence of the disease in each respectively. The endemic area "may be regarded as the manufactory of that cholera-cause which is periodically to overflow and occupy the other," or epidemic area.

Dr. Bryden affirms that, "during any given year, cholera manifests itself in a succession of outbreaks, interrupted by periods or seasons of dormancy; that in its epidemic or invading form it reappears through a succession of years, the period from its first invasion to its final departure ..... representing the normal life, as it were, of an epidemic, each one of which is but a repetition of its predecessors, the parallels between different epidemics being conterminous with, and as fixed and stable as is, the occurrence of the meteorological conditions in the area invaded."

But in what manner is the disease transmitted from the endemic to the epidemic area? The mode of diffusion is assumed to be atmospheric. "The cholera-cause having no locomotive power in and by itself, must depend for its movement on a vehicle and an extraneous force, the vehicle being moisture, and the force being the wind." This opinion derives some support from the statement that "the first general fall of the rains extinguishes the disease in the endemic area, but fits every other province lying within the monsoon influence for the invasion—or development if the cholera-cause has been already distributed—of the epidemic."

While upholding atmospheric diffusion to be the principal mode by which an epidemic is spread, the operation of other causes, including infection, is not denied. It is only maintained that "it is far from being the fact that any given outbreak has ever stood in the relation of the focus or centre of an epidemic in the same figurative way, as has been represented, that a stone thrown into the middle of a still lake stands to the series of widening circles caused by its disturbance of the water." In support of the opinion that infection or contagion could not satisfactorily explain the spread of the disease, it is stated that, "Looking on Hurdwar as a centre, there is no doubt that the pilgrims who attended the fair proceeded to it from every point of the compass, and if the theory of infection were true, then cholera should have followed in their tracks in an equal number of directions when these same pilgrims radiated outwards to their various homes. This, however, was not by any means the case, for while cholera appeared in a severe and fatal form in the Himalayan tracts to the north and in the Punjab, the country to the south and east has remained free from epidemic cholera."

Dr. Bryden's views are thus epitomised in the paper:—

"Cholera is ever present or endemic in Lower Bengal, and may be diffused or become epidemic every year. When it travels to the north-west the invasion is frequently confined to a natural area, limited by the line of 80° east longitude. It never appears in Northern India before April 20th in any year. Individual cases west of the line of 80°, especially in the last quarter of the year, very constantly precede the appearance of cholera in the following spring. If the Upper Provinces be affected as an area, cholera will last until the third week of September. Experience teaches that a bad cholera in spring is followed by a worse during the monsoon, usually appearing a fortnight after the beginning of the rains. Cholera, epidemic in the east of India, may be entirely diverted from the north-west into Western India. This takes place during the prevalence of the north-east monsoon, in the last quarter of the year.'

In support of these views a brief sketch is given of the progress of the epidemic of 1878 in the Bengal Presidency,

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and of that of 1879 in the Punjab, illustrated by a map, diagrams, and tables.

The influence of moisture and of the monsoon upon cholera is deduced from—1st. The constant presence of the disease in the low-lying moist districts of Lower Bengal. 2nd. The exemption of places like Mooltan, unless in exceptionally wet seasons. 3rd. The contrast in cholera and famine years in certain districts; where the crops failed from a relative absence of monsoon influences, cholera did not appear, though prevailing as an epidemic in the contiguous tracts of country. 4th. From a correspondence observed in the difference with regard to cholera and the difference in the meteorological phenomena in adjoining districts contiguous to the line of 80° east longitude.

In discussing the "water theory" of the origin and spread of cholera, evidence is adduced to show that this is not "adequate to cover the phenomena of an epidemic of cholera" as observed in India. With regard to the influence exerted by increased means of communication, it is stated that "the spread of an epidemic has been in no way altered by improved and more rapid means of communication in India; and its course, instead of being with, is against the course of the great natural drainage of the country. It has never happened that an epidemic commenced in the Upper Provinces, and gradually spread down the Ganges, the Jumna, or the Indus, or their tributaries; its advance has been exactly the opposite. And, curiously enough, a series of maps lately issued with the intention of supporting the view that cholera spreads by water as a vehicle, only serves to illustrate an old fact—not that the water was the *vehicle*, but that low-lying places, like those of rivers and water-courses, are favourite habitats of cholera when present."

The practical facts in regard to the disease may be briefly stated as the influence of position in localising it, and the importance of withdrawing troops to neighbouring stations or camps as soon as a case appears. When a number of cases occur simultaneously, the disease will probably prevail, in spite of movements, for eight or ten days. The influence of aggregation as opposed to segregation of individuals, in increasing the risk of cholera; the injurious effect of *continuous* occupation of a building, as shown by the disproportionate number of attacks in a hospital ward compared with a barrack-room, with a common atmosphere which becomes laden with moisture or organic matter; and, lastly, the effect of night duty during an epidemic of cholera, as shown in the greater mortality of the men than of the officers.

The paper does not add much to the knowledge already possessed on the subject of cholera. It certainly tends to show that the disease may be diffused in more than one way—that it cannot be attributed solely to infection or contagion, to water, filth, crowding, or any one cause or condition; but it throws no new light upon its causes. It is true there is some reference to the "cholera-cause," but no explanation of what that is, or conjecture of what it may be supposed to be, is offered. That it is believed to be an entity we may infer from its being stated to have "no locomotive power in and by itself," but of its nature and attributes no indication is given.

Guy's Hospital Reports. Edited by H. G. HOWSE, M.S., and FREDERICK TAYLOR, M.D. Third Series, Vol. XXIV. London: J. & A. Churchill.

To say that this volume maintains the high standard of excellence characteristic of the whole series of these Reports, is to say what is at once the truth and also no stinted praise. We could point to individual numbers of the series containing papers of greater fulness and more lasting value, in which new light has been thrown upon familiar affections, or fresh fields for study have been opened up. It would be difficult to select any one of the interesting memoirs in this volume that could take such a high rank; nor is it to be expected that the staff of any hospital, however gifted and with however great a field for study, will be able every year to produce work of such special merit. But the editors of this volume may certainly be congratulated on having produced a portly volume of nearly 500 pages full of valuable matter. There are two points which must strike even the most casual reader of the volume. One is that the record of the experience of the senior members of the staff is in many instances conspicuous by its absence, and the other is that such a leading hospital as Guy's should be without a fuller and more detailed register of cases under treatment during the year than is published here. Other hospitals with far less resources publish from year to year most valuable analytical statistical tables, to which it would be an insult to compare even for a moment the meagre and therefore almost valueless tables vouchsafed by Dr. Steele.

It is impossible here even to mention all the papers in this volume, and for an enumeration of them we gladly refer our readers to the volume. Reports of single cases of special interest form the subjects of essays by Drs. Taylor, Carrington, and Wright, and Messrs. Lucas and Davies-Colley; while the valuable lessons deducible from a careful study of a series of cases are brought out in memoirs by Drs. Habershon, Goodhart, Savage, and Mahomed, and Messrs. Bryant and Howse. Mr. Bryant recurs to the subject of operative interference for the relief of tension in inflammatory affections of bone, which he treated of in a paper read before the Medical Society of London last year, but he does not appear to add anything to what he adduced then. Dr. Wilks, to whose "Notes on the History of the Physiology of the Nervous System" we turned with anticipation that was not disappointed, traces most lucidly the points in which phrenologists, so often in the wrong, were in accord with the truth which later investigation has revealed. Dr. Fagge deals in a masterly manner with the subject of the "Modes of Dying," and replaces Bichat's classification by one more accordant with our present physiological and clinical knowledge. Probably the essays of the chiefest interest are those by Drs. Goodhart and Mr. Howse on Surgical Scarlatina. The careful series of cases narrated, the one occurring at Guy's, the other and more extended at the Evelina Hospital for Children, cannot fail to be of value in elucidating this subject, which presents so many obvious difficulties. Both authors are convinced that the disease is really scarlatina, modified in some of its details, but not more so than is common in cases of ordinary epidemic scarlatina. Dr. Goodhart believes that a dose of the poison, which might be inert in a healthy individual, finds a suitable nidus for development and increase in the localised inflammations so often met with in surgical cases, and is then able to affect the constitution; as, however, antisepticism minimises these local inflammations, the development of the poison is retarded, and the incubation period of the disease is by so much lengthened when Listerism is carried out. A theory propounded by Mr. Howse, to account for the confusion between scarlatina and septicæmia, must not be passed over without mention. He states that when scarlatina attacks a patient soon after an operation the rise of temperature that occurs prevents the formation of granulation tissue, and favours the rapid decomposition of discharge, and thus renders septic absorption easy. If by the use of antiseptic precautions decomposition be prevented the septic absorption is averted, and the case then develops as one of scarlatina. One obvious objection to this theory is that it supposes septicæmia invariably to result from the contact of decomposing matter with living tissue unprotected by healthy granulations—a

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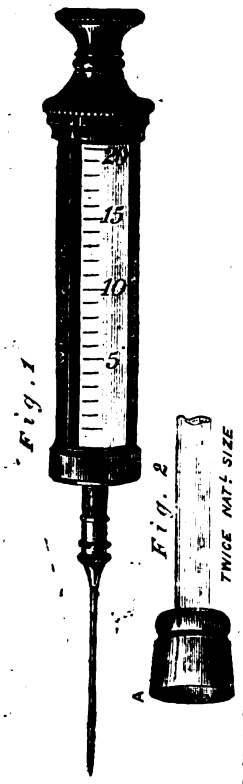
supposition contradicted by pre-antiseptic experience. This volume of Reports incidentally shows that faith in "Listerism" is certainly the faith of the future at Guy's.

New Inventions.

PISTON FOR SYRINGES AND PUMPS.



THIS is an arrangement patented by Messrs. John Weiss and Sons, which obviates the inconvenience attending the use of syringes fitted with ordinary pistons. No packing is required in the special construction adopted. The end or sucker consists of a cup-shaped or cylindrical disc of vulcanite, which resists the action of liquids, and does not become dry. There is consequently no danger of the end of the piston failing to fit tightly in the tube, and so acting imperfectly. The free edge of the vulcanite disc is very thin, and sufficiently elastic to secure a vacuum. The principle of construction is applicable to pumps of all kinds, and will be readily understood on reference to the accompanying woodcut. Fig. 1 shows an hypodermic syringe of the new pattern, Fig. 2 the piston on a large scale. The instrument submitted to us is of admirable make, and the arrangement described commends itself as likely to attain the full advantages claimed for it. The ingenuity of the contrivance will be appreciated; but the practical point gained is that there will be no danger of leakage, or of the passage of air through any interspace between the piston and the tube.

A SIMPLE OPHTHALMOSCOPE.

THE instrument figured in the accompanying sketch (to a scale of one-third) is manufactured by Messrs. R. and J. Beck, of London and Philadelphia, from designs and instructions of Mr. Charles Bader, of Guy's Hospital. The focal length of the glass mirror is seven inches, and either 1·4" or 1·5"

English (35½ mm. or 38 mm.) in diameter. The mirror is not perforated, but has a sight hole of ·15" (4 mm). The framework is of vulcanite, and carries a ledge at back to receive the lenses of the ordinary trial cases. The back of the mirror is dull black, to avoid troublesome reflection, and the object lens supplied has a focus of 2·25 inches (57 mm.)

With a little practice the nature and degree of the various forms of ametropia are almost as quickly recognised with this simple ophthalmoscope as with more complicated instruments. Its other advantages are extreme lightness, its portability, and the facility for using the lenses of the trial case for corrections, instead of the more or less bulky arrangements of many pocket ophthalmoscopes.

HEALTH OF LARGE ENGLISH TOWNS.

FOURTH WEEK OF 1880.

THE severe cold of last week caused a further marked increase of mortality. In twenty of the largest English towns, estimated to contain in the middle of this year seven millions and a half of persons, or nearly a third of the entire population of England and Wales, 5110 births and 4264 deaths were registered during last week. The births were 75 below, whereas the deaths were no less than 989 above, the average weekly numbers during 1879. The deaths showed a further increase of 523 upon the numbers returned in the two preceding weeks, and the annual death-rate, which had been 24·2 and 26·0 in the two previous weeks, further rose last week to 29·7. The lowest death-rates in the twenty towns last week were 16·5 in Wolverhampton, 21·0 in Portsmouth, 21·4 in Sheffield, and 24·1 in Bradford. The rates in the other towns ranged upwards to 31·3 in London, 31·7 in Liverpool, 32·0 in Plymouth, 32·3 in Salford, 34·9 in Manchester, and 35·2 in Liverpool.

The deaths in the twenty towns referred to the seven principal zymotic diseases, which had been 519 and 544 in the two previous weeks, further rose last week to 600; they included 273 from whooping-cough, 127 from scarlet fever, 110 from measles, and 39 from fever, principally enteric. Whooping-cough showed the largest proportional fatality in Salford, Plymouth, and London; measles in Hull, Plymouth, Nottingham and Leicester; and scarlet fever in Norwich and Sunderland. Of the 17 deaths referred to diphtheria in the twenty towns, 10 occurred in London, and 3 in Birmingham. Small-pox caused 12 more deaths in London and in its outer ring of suburban districts, but not one in any of the nineteen large provincial towns. The fatal cases of small-pox in London were more numerous than in any week since the beginning of July last. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 75 and 84 at the end of the two preceding weeks, were 80 on Saturday last; during the week 22 new cases of small-pox were admitted to these hospitals, against 8 and 21 in the two previous weeks.

Under the influence of the severe cold the fatality of lung diseases showed a further marked increase. The deaths referred to diseases of the respiratory organs in London, which had been 455, 512, and 559 in the three preceding weeks, further rose to 757 last week, and exceeded the corrected weekly average by 341, or no less than 82 per cent.; 531 resulted from bronchitis, and 149 from pneumonia. The deaths from these diseases were equal to an annual rate of 10·8 per 1000 of the population in London; in Liverpool the rate from the same diseases was equal to 11·2 per 1000.

THE USE OF MOLASSES AS AN ANTI-SCORBUTIC.

To the Editor of THE LANCET.

SIR,—The suggestion made by Mr. Cullimore in your impression of this week, that molasses or treacle should be added to the dietary of those suffering from famine in Ireland, may possibly, I think, prove useful. In my article on "Scorbutus" (Reynolds's System of Medicine, 1866) I referred in the following terms to the experience of the Confederate Army during the American War:—"Syrup from the Chinese sugar-cane (sorghum), abundantly manufactured in the last two years of the war, was issued as a ration with decided benefit. When badly made it is liable to fermentation and deranges the bowels; yet even in this condition it was of great service in scorbutic cases, as was also the extracted juice before being boiled."

I cannot, however, subscribe to Mr. Cullimore's opinion that "the antiscorbutic property of the potato is due to the large quantity of sugar it contains."

Yours faithfully,

Grosvenor-street, February, 1880. THOMAS BUZZARD.

WICKLOW GAOL.—As this prison will be closed on the 31st March, the services of the medical officer will be dispensed with and his claim to superannuation considered. The gaol will be converted into a bridewell.

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THE LANCET.

LONDON: SATURDAY, FEBRUARY 7, 1880.

WHEN we speak of Medical Reform as an urgent public question, we do not, of course, allude to those proposals for reconstructive change which have so long been pressed on the attention of Parliament in the interests of the medical profession. These have their public bearing, being necessary in order to protect the community from the misleading self-representations of pretended or pretentious practitioners. It is, however, of more general matters we speak. There is reason to fear that when the Prime Minister enunciated his famous aphorism, "Sanitas sanitatum, omnia sanitas," he uttered the sentiment in very much the same spirit as that which possessed the mind of the preacher who propounded the original epigram. It was, in truth, a melancholy reflection coming from a mind seeking rest and longing to be free of the trouble and turmoil arising, or likely to arise, from an overweening carefulness for the health of the population. It is not difficult to imagine a statesman, oppressed by the foreboding that a hydra-headed question like that of medical reform—in its broadest sense—awaited solution, regretfully exclaiming against the persistent and ubiquitous character of the threatening apparition by which he was confronted. It is easy to see how disturbing this essentially modern element of State policy may well prove to a responsible Minister, when not even may an expedition be despatched to search for the North Pole, or a small army be sent to make war on a nation of savages, without the one being burdened with the duty of carrying and consuming lime-juice, and the other, perforce, provided with a retinue of doctors and being attended by an organised staff of hospital helpers. When no department of home legislation or local administration is free from the spectre of medical reform—or reform in a medical sense—there can be little cause for wonder if the head of the Government exclaims, plaintively, or even with a measure of petulance, "Sanitas sanitatum, omnia sanitas!" We begin to think that those who have tried to construe this utterance in a different fashion, and to interpret it as an expression of policy, or at least a recognition of expediency, must have been labouring under a misconception, and accordingly almost deserve to be disappointed!

The time is not, perhaps, come for a bold and general acceptance of the doctrine that health, physical and moral, defensive and actual, is the basis of prosperity. Disease has, until recent times, been recognised as an accident of life, and the aid of medicine sought only to *cure*. We are now asking that health preservation shall be regarded as a matter of common life, and incorporated as an integral part of the policy of a Government. We are insisting that in every measure submitted for the consideration of the Legislature, and in every act of administration performed with the sanction of the Government, the interests of health shall be treated as paramount. It is impossible to conceal the fact that these demands strike at the root of Ministerial independence. In times gone by it was enough to satisfy the utmost requirements of wisdom in statescraft if, before a war was declared the odds against us were carefully counted, or if when commencing to build a city the means were secured to finish it. Now, the health of the army and the sanitary requirements of every scrap of house-property are added to the cares of the promoter of a strong foreign policy, or of improvements at home. Notwithstanding the efforts which have been made, and are in progress, to educate the community at large, and Parliament in particular, in reference to subjects of this nature, the medical profession is probably, we say, too sanguine in supposing that public opinion, as reflected in the views of the Government and the Legislature, is prepared to yield compliance with the demands we are making, or even able to perceive their cogency. We must be resigned, if not content, to see the rational and humane overtures of science flouted, and its professors treated with contumely, until a better spirit takes possession of the public mind, and the *vis inertiæ* of constituted authority, intensified by tradition, has been surmounted by the force of sturdy and remorseless facts.

Nevertheless, time is short and the need urgent. The "impossible" *will* come to pass, and statesmen will be brought to see that in a practical and true sense *sanitas est omnia*. It would be difficult to name a subject of public interest in which the health question does not crop out more or less conspicuously. In the face of this fact, how is the Government advised? To what quarter may the Legislature look for enlightenment, or, if it is unconscious or neglectful of the obligation to seek illumination, whence will light break on it? These are pertinent inquiries, and at the outset of a new session, short and meagre as it well may be, we venture to think they deserve very serious consideration. Suppose, we say, the Government or the Legislature should chance to feel its need of medical counsel, from *whom*—that is the way to put it—can trustworthy and in every way competent advice be obtained? Before we vehemently condemn a Government for not taking counsel on topics of medical reform, it is only fair to ask whether an authority above the level of a suppliant for some boon, and at the same time able to command the respect of public opinion and the profession—really exists? The Medical Council is clearly not such a body, for it is just now on its knees begging for life, and clemency for its many omissions. The Royal College of Physicians is not such a body, for it has no aptitude for scientific energy or progress; and every other medical corporation is in the same condition. Added to which, there is the not unimportant circumstance to bear in mind, that all these bodies, from the Medical Council downwards, are constituted for, and *ought* to be engrossed with, the subject and purposes of professional education, and they have no special qualification for the task of framing or giving general advice. There are, of course, the medical officers of Departments; for example, the Local Government Board, the Army, and the Navy, have their medical officers, and some of these gentlemen command the confidence of the profession and the public, and are well able to advise; but the fact that they are officers of Departments obviously cripples their independence and limits the practical value of their counsel. A standing Board or Council, to which the Government of the day and

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either House of Parliament might repair for scientific information and advice on subjects of public health, is urgently needed. If the present Ministry is not prepared to constitute such a council, some other Government will hereafter feel itself compelled to have recourse to this obvious expedient. A Department of Public Health *must* be formed, whether or not the edifice of medical reform be completed by the appointment of a Minister of Health! It should neither be costly nor difficult to provide a small council of representative members of the medical profession, selected for their special knowledge of branches of health work, and deliberating under the presidence of a political moderator, as in the case of the Council of the Secretary of State for India. We commend this suggestion to the Government and the Legislature as a ready mode of securing what is just now so greatly needed,—namely, a trusty and experienced but unprejudiced guide through the labyrinth of medical reform. The policy of the moment is, we know, to avoid the maze instead of tracking it, but, unless we are greatly mistaken, that policy cannot be much longer pursued.

DR. LYON PLAYFAIR, it will be remembered, at the last meeting of the Select Committee on the Medical Acts, asked the Registrar of the General Medical Council for a table to show how far the regulations and practice of the medical licensing bodies are in accordance with the recommendations of the General Medical Council on education and examination. Tabulated returns to this effect are now before us, and they constitute a valuable contribution towards a right understanding of the efficiency and the authority of the General Medical Council. The General Council is a representative body, not as regards the medical profession, but as regards the bodies which assume to regulate and represent the profession and the universities. It might have been supposed that a Council so constituted would recommend with a weight equal to a command. The data before us enable us to see how far this is so. Around the table of the Council the representatives of the various bodies express the greatest regard for its decisions, but when we go into detail we find ample proof of the assertions of those who declared that the most important recommendations of the Council are often unheeded. The returns show that the General Medical Council has issued about thirty-three recommendations. In some of the answers of the Irish College, contained in these returns, the College expresses its regret that certain of the recommendations were not of a mandatory character, and it set forth that the representative of the College had endeavoured in the Council to get the said recommendations put into a compulsory and mandatory form. It is curious to see both the College and its representative forgetting that the Council has no power to compel or to command. It may tell off half of its most eminent members, representing all the great corporations and universities in the land, to make inquiries, extending over months, and to formulate recommendations founded on such inquiries. Half the recommendations will not be adopted, and half of the half that is adopted by the General Medical Council will be found years after to be not acted on by the bodies. This was the allegation made in the damaging evidence against the Council before the Select Committee. It is now demonstrated to be true. The return, indeed, does not deal with the great reports and conclusions of the principal committees of the Medical Council, though it is clear that the conclusions of such committees are entitled to the utmost weight, and the case against the Council is not complete unless they are taken into consideration. But dealing only with actual recommendations of the Council, what are their practical force?

We cannot, of course, give the details of the loyalty of the bodies to the thirty-three recommendations. We can only take a general view of their treatment of them.

The chief recommendations are to the following effect:—That preliminary examinations should include certain subjects; that preliminary examinations should be left to universities and bodies engaged in general education; that the licensing bodies should report decided ignorance in subjects of general education; that the course of study for a licence should be at least four years; that the licensing bodies should not exact more than one course of lectures on any one subject; that an examination in nine specified subjects should be regarded as indispensable before obtaining a registrable qualification; that the licensing bodies should encourage students to prosecute the study of the natural sciences before they engage in studies of a strictly professional character; that they should require evidence of special teaching in vaccination; that an examination in the earlier subjects of professional study should take place before the end of the first year of study; that written questions should be put by the whole body of examiners; that higher degrees or qualifications should only be granted on evidence of higher professional attainment; that there should be a limitation and definition by schedule of the extent of examination in certain subjects of the curriculum; that observations with the microscope form part of the examinations; that evidence be adduced by candidates that they have had opportunities of practical study in hospitals, dispensaries, or elsewhere, with care of patients; that dissections and operations constitute part of examinations. These are very good recommendations as far as they go. Yet they touch only the very fringe of the subject of Medical Education and its methods. But the returns show that the individual bodies receive or disregard them according to their own pleasure. Perhaps the Royal College of Surgeons is as great a delinquent as any other body. From its answers we gather that it does not comply with about eleven out of thirty-three recommendations, some of the most important of these included. Thus the recommendation not to exact more than one course of lectures on one subject "has never been brought under the consideration of the Council of the College!" Again, the Council of the College has expressed its concurrence in the nine necessary subjects of examination, but it examines in only five. It omits all tests of knowledge of Chemistry and Physics, of Medical Anatomy and Clinical Medicine, of Materia Medica and Pharmacy, of Pathology, of Midwifery, and of Forensic Medicine! It does not conform to the recommendation of the Council in favour of an examination at the end of the first year. It does not comply with the recommendation in favour of a definition of area in subjects of examination. It considers it conforms to the recommendation in favour of requiring proof of having seen medical practice by requiring candi-

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dates to act as dressers! It does not comply with the recommendation requiring candidates to dissect or operate in the course of examinations. In short, it does not comply with the recommendations which represent the principal discussions and work of the Medical Council. So very much with the other bodies. The answers of the Scotch bodies are in many respects remarkable. This is especially the case with their answers to the recommendation that higher degrees and qualifications should only be granted on proof of higher attainments. This is a very shaky point with the Scotch corporations. The Edinburgh College of Physicians makes a very extraordinary remark. It expresses its opinion that evidence of professional and social standing is a better test for higher qualifications than additional examinations! Surely, if this be so, examinations might be dispensed with altogether, and merit determined by the public—"by professional and social standing"! Almost equally remarkable is the reply of the Edinburgh College of Surgeons, whose able representative explained to the Select Committee that his College gave fellowships on a system of payment *plus* testimonials, which are notoriously easy of production. But in the returns before us the College dismisses the delicate subject with these words: "The College attends to this recommendation." The Irish bodies show an equally independent spirit, and take as many of the recommendations as they approve and reject the rest. We see, by the way, no answers at all from the Queen's University, which, under the lead of the lamented Sir DOMINIC CORRIGAN, was especially famous for its bold independence. The returns are an unanswerable argument for giving the Council power, and insisting that it should take it and use it in the interest of the too little considered medical student.

THE universal testimony of experience approves the well-known dictum that every foreign substance that gains admission into the living body, or that is engendered within it, no matter what its origin or its nature, must become organised or absorbed, eliminated or encysted, if it is not more or less seriously to prejudice health or to destroy life. In one or other of these modes does Nature endeavour to preserve and protect living tissues from violent reaction, disorganisation, and death. Not unseldom, however, she signally fails, and has to call in the aid of Art. No better illustration of this can be adduced than that of stone in the bladder. If the peccant substance be over a certain size, Nature's unaided efforts are ineffectual to procure relief. Organisation of a vesical calculus is impossible; absorption doubtful; elimination rare and uncertain; encystation accidental, painful, and hazardous. Surgery alone may be trusted to act intelligently and safely. This truth has long been recognised. The earliest records of the surgical treatment of stone in the bladder belong to times now very remote. The operation of cutting for stone is one of the oldest in history, and reigned for at least two thousand years without a rival. Its supremacy remained unquestioned until the beginning of the present century, when the practice of crushing through the urethra was introduced. Then for fifty years crushing steadily grew into more and more esteem, and the reputation of cutting dwindled in a corresponding degree, till at length the more sanguine advocates of lithotrity confidently prophesied the final abandonment of lithotomy as uncalled for and unnecessarily severe. In the opinion of cooler minds, however, the ultimate triumph of lithotrity was not so sure. Little by little the uncompromising lithotritists had to change their position; the cutting and the crushing operations were no longer antagonistic but complementary, provided always that lithotrity was to be the rule and lithotomy the exception. With this avowal lithotrity lost much of its prestige, and was not likely again soon to recover its old status. Its good name had been called in question, and there were those who were not slow in dragging to light some of its drawbacks and disadvantages. Every year the advocates of the newer operation had to make more and greater concessions to the champions of the older; and, in spite of the oft-repeated unparalleled results of the professed lithotritists, a distinct reaction began some two or three years ago to set in towards the cutting operation. About that time, however, an unexpected event occurred which called off attention into another direction. Professor BIGELOW, of Harvard, U.S., proposed and introduced an entirely new method for the removal of stone from the bladder—namely, by complete crushing and continuous evacuation of the fragments by means of aspiration. This method he designated "litholapaxy."

We have called Professor BIGELOW'S method an entirely new one, and such we believe is its true character, notwithstanding the attempts that have been made to explain away its significance or to destroy its originality. Litholapaxy can appear as a mere modification of lithotrity only to a superficial observer. The philosophical student will not fail to discover an essential and fundamental difference of principle. Apart from the irreconcilably opposite modes of procedure, in crushing a stone after the manner of professed lithotritists, and in removing it by Professor BIGELOW'S plan, there is no real analogy whatever. Lithotrity, as ordinarily practised, is an operation of least interference; the calculus is crushed at one sitting or at many sittings into fragments small enough to be passed, *per vias naturales*, by the expulsive efforts of the bladder and abdominal muscles. In other words, a rude attempt is made to reduce a large calculus into several small ones, which may be passed spontaneously. Litholopaxy, on the other hand, is a radical operation, and aims at breaking up the whole of the calculous mass and removing it at once by powerful but systematic aspiration. In the one the calculus is broken, and then Nature is left to get rid of the irritating fragments as best she may; in the other the comminution and the removal are alike accomplished by mechanical means. It is in vain that efforts are made to establish identity between the aspirator employed for the entire removal of all the fragments of stone in the operation of litholopaxy, and the weak and inefficient suction-bottles made use of to remove the finer débris in the operation of lithotrity. One frees the bladder from all foreign matter, the other removes only the soft pulverulent particles, and allows the larger hard and angular fragments to come into closer and rougher contact with the mucous membrane lining the interior of the bladder.

In the interests alike of science and humanity it is right that these important truths should be distinctly and empha-

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tically stated. Almost every observer who has recorded his experience of Professor BIGELOW'S method has made confession of a preliminary repulsion which only success in application has modified or removed. The plan is still on its trial, though so far eminently satisfactory. Those, on the other hand, who had the largest opportunities of using the suction-bottle for the removal of the finer débris, after ordinary lithotrity, were almost unanimous in asserting that, as a rule, it was better to do without it. And probably this apparent paradox may, after all, contain a kernel of truth. It is not difficult to conceive that unless all fragments can be removed, it is better to let the pulverulent matter remain behind, as a soft pultaceous sediment to protect the tender walls of the bladder from actual contact with the large and sharp fragments that cannot pass through the small tube that is used in CRAMPTON'S or CLOVER'S bottle. This may be the true but hidden reason why the suction-bottle was not approved by the best lithotritists, and it may likewise afford a clue to the success of Professor BIGELOW'S bold and ingenious device.

THE National Board of Health of the United States has issued its first annual report—the report of its work in 1879—as a supplement to the last published of its weekly "bulletins." The report is in every respect a document of exceptional interest. It proves that in our observations on the Board when first formed we rather underrated than overrated its importance in advancing public health administration in the United States. It would be difficult to say whether, in the short period of its existence, it has proved of greatest advantage to the States as a co-ordinating, an advisory, or an active working agency, for it has been influential in each of these directions, and in each has amply justified its creation, and shown the need for it. The report describes in some detail the various works the Board has been engaged in during the year, and in so doing presents a view of the actual position and future requirements of public health organisation in the United States of much interest. And, first, it has been actively engaged in collecting information and advice from the principal sanitary organisations and sanitary labourers of the United States as to the best plan for a national health organisation, including the subject of quarantine, both maritime and inland, and the relations which should exist between State or local systems of quarantine, and a national system. So far as this work has proceeded, it tends to show that the Board has the confidence of the most influential existing public health organisations in the States, that its plan of procedure is fully approved by them, and that eventually it will be in a position to devise a comprehensive and much-needed national public health system. Next, the Board has been endeavouring to initiate what may be termed a detailed sanitary survey of the principal cities and towns in the States, and with no inconsiderable success. In addition to these more general aims the Board has instituted certain special inquiries by investigators selected for the purpose. These inquiries include a commission to investigate yellow fever in the island of Cuba (the Havana Commission so-called, to which he had occasion to refer a short time ago); researches into the best method of determining the amount and character of organic matter in the air; an inquiry as to the effect of disinfectants, distinguishing those which are the subject of patents; other inquiries include the adulteration of food and drugs, the diseases of food-producing animals, the flow of sewers in relation to their sizes and gradients, sanitary surveys of the eastern coast of New Jersey bordering on New York Harbour, and of the city of Memphis, Tenn., where yellow fever was lately so fatally prevalent; the hygiene of the mercantile marine, diphtheria, and the influence of various soils upon sanitary work in regard to drainage and the disposal of excreta. Reports on several of these inquiries have already been presented to the Board, and their publication will be looked for with quite as much interest in this country as in the United States, and this not only on account of their subjects, but also because of the distinguished names of the several reporters.

In addition to the above large array of subjects, the Board has caused to be collected and collated the sanitary laws of the United States and of the several States, including not only the statutes, but the decisions of the several courts on all questions involving the public health. This great work, it is stated, is completed, and authority is sought for its printing and publication.

But even the vast amount of work here indicated seems scarcely to make an impression upon the apparently inexhaustible energy of the Board. By far the larger portion of the report is taken up with the question of "Quarantine" in its local and international relations, and the "Yellow Fever of 1879." Both these subjects will demand separate consideration, but with respect to quarantine it may be briefly said here that the National Board of Health gives to the United States a body which is enabled to discuss the subject adequately in its international relations. It is not easy for an inhabitant of this kingdom readily to apprehend the view in which quarantine presents itself to the inhabitants of the United States, and it would seem as if the term there were being used with a most undesirable and misleading latitude. To this question, however, we shall recur. Meanwhile we would express our hearty gratification at the unquestionable success of the first year's administration of the National Board of Health of the United States, and the earnest this affords of a prosperous and brilliant future.

NOW that Parliament has met, it is impossible that the Government can much longer delay offering some explanation of their reasons for the course they recently took in filling the vacancy created by the resignation of Major GRAHAM, and stating their intentions with regard to officially recognising the eminent services of Dr. FARR.

In acknowledging copies of the resolutions recently passed at a meeting of the South London District Metropolitan Counties Branch of the British Medical Association, the Premier, through his private secretary, states that he is "highly sensible of the eminent services rendered by Dr. FARR during his past career, that he well knows how to appreciate them, and that Her Majesty's Government had excellent reasons for the course which they considered it their duty to take." The Government will need all possible ingenuity to substantiate their "excellent reasons" for passing over in silence Dr. FARR'S claims to succeed Major GRAHAM, and for appointing Sir BRYDGES HENNIKER in his place. It appears, indeed, difficult to justify the

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conduct of the Government either to Dr. FARR or the public. Many months ago, when Major GRAHAM'S resignation was officially announced, Dr. FARR became a candidate for the appointment of Registrar-General. His reasons for this were more recently explained by him in the following words, in a letter addressed to *The Times*:—"Although warned by the recent state of my health that I was in want of rest rather than of increased duties and responsibilities, I was induced by the hope of enlarged opportunities for rendering assistance in the approaching Census, and in the promotion of public health and sanitary statistics, to become a candidate for the post." The Premier, in reply to his application, promised Dr. FARR that his claims for the appointment should at the proper time receive his fullest consideration. When, however, the post really became vacant, it was bestowed upon Sir BRYDGES HENNIKER, without even a courteous expression of regret to Dr. FARR for "the course which they had considered it their duty to take." It will not be difficult for the Government to assign Dr. FARR'S declining health as their reason for withholding from him his much-deserved promotion; bearing in mind, however, the manner in which the appointment has been filled, it will not be easy to believe that Dr. FARR has been generously treated, or that the public has benefited by the way in which the Government have performed their duty. From another point of view some explanation should be forthcoming of the reasons which have induced the Government to adopt a course with regard to the Registrar-Generalship of England so different from that which governed their appointment of the last two Registrar-Generals of Ireland, who have both been medical statisticians. If Dr. FARR had been appointed Registrar-General a considerable saving of public money would have been effected, similar to that which had already resulted from a similar arrangement in Ireland. The opportunity of suitably acknowledging and rewarding the eminent services of Dr. FARR, which Lord BEACONSFIELD "well knows how to appreciate," did not, however, outweigh the personal considerations and interest to which Sir BRYDGES HENNIKER owes his appointment. The state of Dr. FARR'S health affords ample grounds for his resignation when he found his claims passed by unnoticed; it supplies, however, but a shallow pretence for the course which the Government has chosen to adopt in the matter. Such a plea might have been more easily justified on the ground of the requirements of the post, if special qualifications had marked the successor to Major GRAHAM. Under present circumstances, however, such a plea is worse than untenable. In connexion with the suggested explanation of the Premier's "excellent reasons" for appointing Sir BRYDGES HENNIKER in preference to Dr. FARR, it may be noted that Dr. FARR read a paper at the Royal Society on Thursday evening, the 29th ult., on the Fecundity of English Women at Different Ages, containing tables which form a valuable contribution to vital statistics.

SURGEON-MAJOR BELLEW, C.S.I., who has been employed as a political officer with General Roberts' army in Cabul, has been compelled by ill health to return to India, and left Sherpur with a convoy of sick and wounded under Surgeon-Major Low, for Peshawur, on the 26th December.

Annotations.

"Ne quid nimis."

A GOVERNMENT BILL ON LUNACY LAW REFORM.

IT is with great satisfaction we find in the Queen's Speech a promise that a Bill "for consolidating and amending the Lunacy Laws" shall be submitted to Parliament. This places the adoption of a measure of some scope and value on this important subject beyond question. It remains to be seen how far the anticipations of the profession, and the hope of the public for a final adjustment of this long vexed question, will be realised.

DEATH OF SIR DOMINIC CORRIGAN, BART.

WITH much regret we have to announce the fatal termination of the malady under which Sir Dominic Corrigan, Bart., has been labouring for the past five weeks. The distinguished baronet expired on Sunday morning last at his residence in Merrion-square, Dublin. A notice of the life and labours of the deceased physician will be given in our next number.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE first meeting of the new Council was held at the Mansion House on Monday last. The Lord Mayor presided, and spoke hearty words of sympathy and determination to support the fund as his predecessors had done so powerfully. The attendance was of that highly representative character which shows how strong is the hold which this movement has on the religious world. The chief business was the reappointment of committees. The committees were almost unanimously re-elected, two or three vacancies by death or resignation having to be filled up. The conspicuous vacancy was that in the Distribution Committee, caused by the lamented death of Mr. Callender. It was filled up by the appointment of Mr. Alfred Willett, who succeeds Mr. Callender in St. Bartholomew's. There can be but one opinion of Mr. Willett's fitness for this duty, but we regret that occasion was not taken to vary the representation on the Distribution Committee. St. Bartholomew's is already represented by its able treasurer, who by merit and by his early labours in originating the fund, has an influence in its councils such as does not require the support of a colleague. The Distribution Committee would be the better for a little fresh blood.

RECENT DEATHS AND THE GENERAL DEPRESSION.

IT is impossible to throw off the feeling of anxiety produced by the number of recent deaths occurring with startling suddenness in the course of diseases which scarcely seemed to assume the gravest type of development before a fatal issue was reached. There can be no doubt but that the long continuance of a low temperature, with first wet, then snow, and for some days in succession heavy fogs, has seriously depressed the vitality of all except the most vigorous constitutions, and possibly a few invalids who are so engrossed, as it were, with some special malady that they have no sensibility left for the weather. There is certainly a state in which a dominant disease holds the citadel against other aggressors. The "depression" generally experienced gives ground for alarm, and should induce everyone to practise more than common carefulness in the avoidance of gastric disturbance, exhausting labour, and cold. It is not enough in such weather as we are experiencing to live simply and wisely: it is indispensable to live *well*. The food

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taken ought to be especially nutritious, and it should be easy of digestion. Stimulants, except for temporary purposes, unless taken as a matter of habit, should not be relied upon as aids to strength. The reserves of potential energy are so low just now that it is required to economise the stock rather than to call upon it for special effort by the use of a stimulant. The horse is weak and weary; it is useless to ply the whip. Better go cautiously and strive rather to replenish the strength of the body than to excite the nervous or muscular system to additional work. The vital force must be treasured carefully, and it is clearly the duty of every brain-worker to protect himself, as much as possible, from the peril of expending the last remains of mental energy while he thinks he is only "sticking to work." The force, whatever it be, which puts the mind into action also energises the body with its complicated system of organs and apparatus. It is impossible to consume the strength in one direction without depriving other parts of the organism of their due supply of energy. Therefore, the man who will labour excessively with his brain must not be greatly surprised to find himself weak in other regions of the body. Weakness means inability to cope with the enemy ever lurking to do mischief to the mortal nature. When the strength of health is diverted from the body as a whole, by being used up recklessly in some one of its parts, the system is left unprotected and any organ with a latent weakness, perhaps, compensated in average health, is exposed to injury in the way determined by weakness of function or by disease. The danger is not difficult to understand; nor is the measure necessary for self-protection far to seek, though in the exigencies and vicissitudes of daily life it may not be always easy to carry into effect. Moderation in, yet sufficiency of, food and exertion, with the greatest prudence and cheerfulness in self-conduct, constitute the policy of health preservation, and more especially is it indispensable that such a policy should be carefully followed out. Late hours, exhausting pleasures, oppressive labour, and worry, are the enemies that make "depression" a danger and potent cause of untimely death.

ARMY MEDICAL DEPARTMENT.

THE *Standard* of the 29th January stated that "the Secretary of State for War, on the recommendation of the Director-General of the Army Medical Department, has consented to allow Surgeon-General J. H. Ker Innes, C.B., to retain his appointment of Principal Medical Officer of the Army in India beyond the period when retirement is rendered compulsory. Mr. Innes attained the age of sixty years on Tuesday last, and should, therefore, at once retire; but his exceptional ability has brought him so frequently to notice that it is considered for the good of the service that he should be retained." It is much to be regretted that our contemporary did not take the trouble to verify this statement before publication. If it were true that this step had been taken "on the recommendation of the Director-General of the Army Medical Department," we should concur with the *Army and Navy Gazette* in denouncing it as an act calculated to lower the department in the eyes of the profession, and to cast merited obloquy on Sir William Muir. But we happen to know that this statement is in some essential particulars incorrect. More than three months ago Surgeon-General Crawford was put in orders to proceed to India to relieve Mr. Innes. A strong recommendation came home from the Commander-in-Chief in India, supported by the Governor-General, that Mr. Innes should not be removed while active operations were going on in Afghanistan. To this recommendation it would have been difficult for the authorities at home to withhold their assent. With great reluctance on the part of the Director-General, Dr. Crawford was ordered to Madras instead of Bengal, but on the distinct understanding that, as soon as the exigencies of the service should permit, he was to be moved to Bengal to relieve Mr. Innes. At the time of the change of Dr. Crawford's destination, we were cognisant of the circumstances by which it was caused, but did not consider it necessary to comment on what appeared to be almost an unavoidable contingency. Now that affairs in Afghanistan are more quiet, we feel satisfied that the promise given to relieve Mr. Innes as soon as possible will be at once fulfilled, and Surgeon-General Crawford be installed as Principal Medical Officer of the British troops in India. While we are disposed to give, and have on all occasions given, Surgeon-General Innes all due credit for the manner in which he has conducted the medical service, under circumstances of considerable difficulty, we feel that his removal will not cause any detriment to the service or to the Department. Those who have known the manner in which Dr. Crawford discharged the duties of Head of the Medical Branch at Whitehall-yard, and his subsequent career as Deputy Surgeon-General in Bengal, can have no fear for the result. He is a very able administrator and a popular officer. Under him we have no doubt the duties will be carried on as efficiently and as pleasantly as it is possible for them to be done. We shall only add that for the breach of the Warrant in not placing Surgeon-General Innes on the retired list on reaching the regulation age the military authorities in India, and not the Director-General at home, are responsible.

SMALL-POX AT BATH.

IN our impression of the 17th ult. we gave some information relative to an alleged "lamentable insufficiency" of hospital accommodation in Bath, relative to recent prevalence of small-pox there, and expressed a hope that this information was erroneous or exaggerated, notwithstanding we had much confidence in our informant. Last week we printed letters from the medical officer of the Bath Workhouse (Mr. Robert Biggs) and the medical officer of health for the borough (Dr. Brabazon), the former gentleman deprecating any blame in regard to the action of the guardians during the recent outbreak, who, as he justly observes, had dealt in "a large-hearted and practical way" with a difficulty which it is obvious had been thrown upon them by the extraordinary action of the Town Council—the health authority (!) of the borough; the latter gentleman giving an unqualified denial to the statements of our informant. This week we print a copy of a report bearing upon this subject adopted by the Board of Guardians, and an extract from Dr. Brabazon's annual report for 1879, giving an account of the outbreak of small-pox in question. From these reports it appears that the Town Council abnegated its sanitary functions in regard to the poorer and pauper population of its district, indirectly compelling the guardians (who have no sanitary functions in respect to Bath) not only to make hospital provision for pauper patients, but to pauperise some of the sick by making them poor-law patients; and this policy was so successfully followed that, of 80 cases of small-pox removed to hospital, 21 only were dealt with by the Sanitary Authority, and 53 by the Poor-law Authority! Certainly the Town Council wish to take credit for having received four "urgent" cases into their hospital who could not pay them; but what credit should be given to them for practically compelling the guardians to receive within the precincts of the workhouse, occupied by 700 persons, numerous cases of small-pox? Mr. Biggs thinks our information contained a misapprehension as to the hospital provision for infectious diseases at the workhouse. But he himself confirms its accuracy. The small "cottage" we referred to is clearly the infectious disease hospital of the workhouse; and the emergency of having to obviate the shortcomings of the Sanitary Authority in the recent small-pox epidemic was met

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by giving up wards in the workhouse buildings, themselves destined for other purposes. We shall be curious to know what the Local Government Board will have to say to this revival of an objectionable feature of workhouse management. Dr. Brabazon designates our information as "untrue and groundless," and even suggests that we have been made the victims of a "mendacious hoax." Yet in his report, from which we have quoted, he tells us that no provision whatever for small-pox was made in the Sanitary Authority's hospital for infectious diseases, and that at the beginning of the outbreak of small-pox, "in consideration of being intended for other diseases, he wished to keep it (the hospital) intact as long as possible." Moreover, when he could no longer refuse to admit small-pox, it became necessary to *exclude* other infectious diseases, measles at that time being frequent and fatal in the city, and scarlet fever reported. Thanks to the action of the guardians it seems never to have been necessary to use all the hospital accommodation that in the end the Sanitary Authority provided; but it is difficult to see how this redounds to the credit of that authority. It is for the first time we learn that a good road and a beautiful view are to be regarded by patients and friends as a sufficient set-off against the inconvenient distance at which a hospital may be placed. We need not pursue this matter in further detail. Our readers have now before them the data from which they themselves can judge as to the accuracy of our information given on the 17th. We have here the extraordinary spectacle of the Sanitary Authority of the most aristocratic inland health-resort of the kingdom depending upon the Poor-law guardians for the performance of the major part of the most important of its duties as to the prevention of the spread of infectious diseases among its population; and we have the still more extraordinary spectacle of a Board of Guardians exhibiting a larger and deeper interest in the sanitary welfare of the resort than the Sanitary Authority—the Town Council—itself. Surely this perversion of law and principle will not be permitted to pass without some inquiry on the part of the Local Government Board. The sanitary administration of Bath is not a matter of mere local interest. The vast number of persons who flock there in search of health from year to year have a right to be assured that the search shall not be frustrated by neglect of the Sanitary Authority, whether of omission or of commission. Happily, visitors of health-resorts are becoming more alive to the duties of sanitary authorities, and we cannot affect regret that the shortcomings of the Town Council of Bath have not been without their effect in producing a "scare" among their visitors.

ATAXIC ARTHROPATHY.

THE osseous and articular changes occasionally occurring in the course of locomotor ataxia have for some few years past attracted the attention of our French *confrères*, by whom it has been fully discussed. But in this country it has been almost unnoticed, and Dr. Buzzard has done good service in calling attention to it so prominently as he did at the last meeting of the Pathological Society. Dr. Gowers showed a good specimen, and the President showed several excellent casts presented by Professor Charcot. We shall doubtless soon have more cases and specimens exhibited; and, as always happens in such cases, we shall get to wonder that the disease so long escaped notice. At first sight the changes in the joints bear a very close resemblance to those of chronic rheumatic arthritis, but the evidence in favour of their special nature adduced by Dr. Buzzard appears convincing. According to our present knowledge, the affection usually sets in early in the course of the ataxia, and is at first marked by great, very great, effusion into the synovial cavity of the joint, and in many cases also under the deep muscles of the limb. This is in general rapidly followed by complete destruction of the joint: the ligaments are relaxed, cartilages eroded and soon completely worn away, and the articular ends of the bones rapidly absorbed. The joints become misshapen, loose, and often dislocated. These changes take place painlessly, and the irregular, loose, flail-like movements can also be accomplished without any pain. In addition to these joint changes, the affected bones are subject to spontaneous fracture, either in their shafts or near the articular ends. There is often a very abundant callus uniting the fragments, which may envelop all the deep structures in one unyielding mass; but when occurring at the neck of the femur the fracture remains ununited. While, in the main, as Mr. Butlin pointed out, there is an absence of osteophytic growths round the joints, the specimen exhibited by the President of great osseous enlargement of the great trochanter of the femur, and the cases shown by Dr. Buzzard, in one of which one trochanter was greatly enlarged, whilst the other case presented ossification of the rectus tendon, prove that such outgrowth of bone may be present. The rapidity and painlessness of the process, and the marked atrophic changes met with, are characteristic of this affection. Dr. Buzzard suggested that the cause might be found to lie in some lesion of the medulla oblongata, and although Mr. Macnamara's observations threw some light on the probable course of the articular changes, they by no means negatived the suggestion. The probable nervous origin of the allied condition of chronic rheumatoid arthritis was insisted upon by Dr. Ord in a communication to the Clinical Society last year.

POISONING BY "NOSTRUMS."

THE subject of the abuse of veiled narcotic remedies is one of such importance as to demand continued attention until it is in some way brought to a check. The recourse to "nostrums," whose constitution is but little known even to the vendors, and not at all to lay-purchasers, is mainly responsible for this evil. Deceived in many instances by a neutral name, or one which gives no clue to the real nature of the compound, sufferers from real or imaginary diseases resort to drug-drinking who would not indulge in the fatal habit did they know what narcotics they were habitually taking. Opium, morphia, prussic acid—these and other sedatives form an integral part of many an apparently harmless "soothing syrup," "cough-elixir," and the like. Probably there would be much virtuous indignation expressed by those who indulge in those things (and, judging from the demand, there must be a very large number who do) that they are no better than opium-eaters or morphia-maniacs. That, of course, would be the bare truth, but such persons would be the last to realise it in its nakedness. There are, no doubt, great difficulties in the way of reform in this direction, and the Pharmaceutical Society has been (perhaps with reason) blamed for not being more active in employing the powers it possesses. What comes clearly out of the whole matter is the necessity for such legislation as shall get rid of the secrecy attaching to the patented medicines. To imagine that they are compounded in an unknown and mysterious manner, of materials which are equally rare and secret, is an absurdity and an anachronism in these days.

We have so recently commented on this matter that it may seem almost superfluous to advert to the equally grave cognate subject of indulgence in chloral and morphia, openly or in secret. But we feel constrained to do so, if only to draw attention to the striking verses which appeared last week in the pages of our esteemed contemporary *Punch*, who, under the guise of pleasantry, has often done good service in striking hard at social abuses. The lines we refer to must have been read by many with a painful interest.

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Opening with the praise of chloral as the great pain-destroyer, the "ode" closes with a view of the other side of the picture, and shows how great is the evil that arises from it when wrongly used. It is vain to hope that the number of intemperates in these drugs is smaller than is assumed. We know how fatal is the facility for having recourse to them, and how difficult the resolution to break off a habit once formed. The indications of bodily strain from overwork and anxiety—as told in anæmia, sleeplessness, neuralgia, and in many other ways—which can only be combated by thorough rest and wholesome recreation, are stifled by recourse to such drugs, leading not only to serious deterioration of health, but sometimes, from want of caution, to graver results still. The records of such cases have been painfully frequent of late years. Are we to remain deaf to this reiteration? Shall we not rather continue to repeat the warnings until they are listened to and acted on—acted on not only by individuals, but by the Legislature seeing that its laws are enforced in letter and spirit, so that the facilities by which these things are done may cease to exist?

HOSPITAL PROVISION FOR INFECTIOUS DISEASES IN THE METROPOLIS.

OUR contemporary, the *East London Observer*, has some important observations on the operation of the Poor-law Amendment Act of last session in respect to the power given to the Metropolitan Asylums Board to contract with the sanitary authorities of the metropolis for the reception of patients. It would appear that the Asylums Board has been in communication with the several authorities on the subject, but that the terms proposed by the Board are such as to cause no little dismay to the authorities. So much is this the case that the several sanitary authorities who had previously exercised their power of making hospital provision—Poplar, Whitechapel, and Lewisham are mentioned—may, according to our contemporary, congratulate themselves for having done so. This unexpected aspect of the question must exercise an important influence on its ultimate solution, for it would now seem that, in the interest of the ratepayers and of local economy, the sanitary authorities would have done well to become their own purveyors of hospital accommodation; and that it is probable the "expediency" policy of the Local Government Board in the matter will prove the worst policy.

VOLUNTEER AMBULANCE DEPARTMENT.

THE official inspection of Surgeon Shepherd's class of "Ambulance Volunteers" took place at the Guildhall on Wednesday, Dec. 28th. The inspecting officer was Surgeon-General Wm. Munro, C.B., who arrived punctually at 7.30 P.M., accompanied by Surgeon-Majors Don and Clarke, Captain Pringle, and Lieutenants Mackay and Warren, of the Army Hospital Corps. The Right Hon. the Lord Mayor had signified his wish to be present in state, and a few minutes after the half-hour his arrival was announced, a guard of honour of 100 rank and file of the London Rifle Brigade, under the command of Captain Ward, receiving him with a general salute. The Lord Mayor was accompanied by the Lady Mayoress, Bishop Claughton, Sheriff Bayley, and Under-Sheriffs Crawford and Wragg. The class was then put through stretcher drill by Surgeon Shepherd, of the Victoria Rifles, and soon after the manœuvres commenced the Baroness Burdett Coutts arrived, and occupied a seat on the right of the Lord Mayor. The men performed their drill expeditiously and yet steadily. A certain number lay down on rugs and were ticketed as wounded, the stretcher detachment advanced, placed the stretcher alongside, and quickly applied the necessary dressings, splints, &c., the wounded man being then carefully lifted and carried off the ground. The men showed considerable skill and knowledge in applying Esmarch's triangular bandage, and in making use of temporary splints; in one instance a rifle was applied to a fractured femur. While the dressing was in progress Lady Burdett Coutts and the Lord Mayor inspected the detachments, Surgeon-General Munro explaining the cases to the distinguished visitors, who showed much interest in the work. The class was next formed up in hollow square facing the dais, and the Surgeon-General addressed them; the Lord Mayor also expressed his pleasure at what he had seen, intimating his willingness to subscribe to the funds of the society, "to enable them to carry on even more successfully the noble and patriotic work in which they were engaged." The members of the classes of Surgeon Faris, Army Medical Department, Surgeon Daniells, Surgeon Egan, and Surgeon Norton were then called up one by one by Lieutenant A. Maclure, of the London Scottish, the honorary secretary, and Baroness Burdett Coutts presented the certificate of efficiency to each volunteer entitled by examination to receive one. They numbered nearly two hundred. At the close of the distribution Lady Burdett Coutts addressed a few stirring words to the class, "stating her pleasure at having been invited to be present on the occasion, and her keen interest in the work she had witnessed—one in which she felt every woman in the kingdom as well as herself deeply sympathised. To relieve suffering on the battle-field, and to assuage the pain and misery of those lying helpless or dying, was indeed a noble work." Surgeon-General Munro then dismissed the class, and the proceedings terminated.

DEATHS IN PRISON.

THE death of another prisoner, confined only for a short term, adds to the already long list of casualties that have occurred since the new Prison Act came into force. In the present instance it is alleged that the deceased was a strong healthy man when sent to prison, but the plank bed, starvation diet, and an underground cell caused him to lose weight at the rate of a pound a day, and before his sentence had expired he died from consumption. The case obviously calls for the most searching inquiry; and if the facts alleged are true, then we have additional evidence that the new Prison Act, indiscriminately applied, is most fatal in its results, and that its application ought to be suspended till scientific evidence can determine what modifications are necessary for its successful working. This is not an isolated case, for within a very short period we have had to notice a lamentable series of deaths in her Majesty's prisons under the working of the new Act. The Clerkenwell inquiry into the death of John Nolan, as we pointed out at the time, was conspicuously deficient in scientific and professional acumen. The case at Southampton of conveying a dying man backwards and forwards from one town to another to have his evidence taken before magistrates previous to his actual conviction of crime, and the sad case of Armagh, are still more striking instances of the weak points in our new prison administration. The report of the Prison Commissioners as to the working of the new Act speaks in enthusiastic terms of its success, but here and there we notice, when they have the boldness to publish the medical officer's opinion with regard to the new dietaries, that doubts exist as to their physiological sufficiency. It appears to us that the food-requirements of prisoners drawn from rural and urban districts are widely different. The agricultural labourer, accustomed to a diet composed chiefly of carbo-hydrates and hydrocarbons, insufficiently lodged, and habituated to hard labour, finds the plank bed, bread and water, beans and bacon, and hard labour no great evil; whilst the urban criminal, accustomed to a liberal diet and one ordinarily

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richer in nitrogen, unused to great physical exertion, with less stamina, and generally better housed than his rural brother in crime, finds prison life as at present regulated a severe strain on his vital powers, so that should there be any weak spot in his constitution, he breaks down under the pressure. Coroners' inquests tell us of the number of deaths that occur, and of late they have been sadly numerous; but we have no record of those who have been discharged from prison hopelessly injured in health, and who, unable through weakness to make an attempt to return to habits of honesty, fall back again to crime in utter recklessness. We feel no undue leniency towards any criminal class; punishment should be awarded them to the utmost extent of their endurance; but we must protest against a system that barely scathes the strong, but crushes the weak.

THE LAW OF MEDICAL REGISTRATION.

OUR readers will remember that there has been considerable difference of opinion between the Branch Councils and the General Medical Council as to the proper way of making alterations of, or additions to, the details of registration, the General Council maintaining that an alteration could be made in a registration, effected originally, say, in Ireland, by the Registrar of the General Medical Council. The Registrar of the Irish Branch Council maintained, on the other hand, that the alteration must first be made in the Branch Register in which the registration was first effected. Several opinions of counsel have been taken, all of them different. The last seems a sort of compromise, and is as follows:—

Opinion.—We are of opinion that a registered practitioner who desires to have a higher degree or additional qualification obtained by him inserted in the Register, must apply to the Registrar of one of the Branch Councils for that purpose; and that the provisions of Section 25 of the Medical Act as to registration apply to the entering in the Register of such higher degrees or additional qualifications. But we are of opinion that such application, and the consequent entry in the local Register, need not be made to, or by, the Registrar of the particular branch in the local Register of which the original qualification of the applicant was first entered, but may be made to and by any one of the local Registrars. Thus a practitioner whose name was originally entered in the Irish local Register may, in our opinion, apply to the Registrar for England for the purpose of having an additional or substituted qualification inserted in the Register, and such qualification may thereupon be entered in the local Register for England, and be thence copied into the general Register; and conversely a person whose name was originally entered in the English local Register may obtain the insertion of a subsequent qualification by application to the Irish local Registrar.

(Signed) HARDINGE GIFFARD.
F. VAUGHAN HAWKINS.

Temple, December 11th, 1879.

DEMONSTRATIONS AT THE PARKES MUSEUM.

FOOD was the subject of the demonstration on Saturday last (31st Jan.), when, in spite of the thick fog which enveloped the metropolis, there was a fair attendance of representatives from the working men's clubs, for whose benefit the present series of demonstrations has been arranged. Dr. G. V. Poore, the lecturer of the day, was introduced by Professor W. H. Corfield.

Dr. Poore began by comparing the human body to a machine, and showed that as by a proper consumption of fuel an engine could be made to give off heat and do work, so the animal body, by a proper consumption of combustible food, was enabled to maintain its proper temperature in all climates, to perform its internal and external work, and likewise (and in this it showed its superiority to the machine with which it had been compared) to maintain its tissues in a state of health and due development.

The composition of the body was next alluded to, and it was claimed for food—(1) that it must be combustible, and (2) that it must contain materials which are capable of building up the body. The classification of food-elements into water, nitrogenous elements, fats, starches, sugars, and salts was then reviewed, and the necessity for the presence of each element was insisted upon. Milk, the only single article of diet upon which the human body can be properly nourished, was then shown to contain a due admixture of food-elements.

The predominating features of various articles of diet were then touched upon, and the mode of devising and calculating dietaries was shortly explained.

In a natural state it had been shown that man might be left to his natural appetite in the selection of his diet, and many popular foods—such, for example, as bread and cheese and pork and pease-pudding—were thoroughly in accordance with scientific teaching. Some persons were so situated that an obedience to the appetite was impossible, as, for example, soldiers, prisoners, and helpless children. Scientific dietaries had improved the health of our soldiers, and had converted our prisons from pest-houses into veritable abodes of health. There was still too little science in the feeding of young children, and the ignorance of parents in this respect was truly lamentable. Dr. Poore's experience as a physician had taught him that the great majority of children's ailments were traceable to the inability of the mother to make a proper selection of food for her offspring.

THE ZULU WAR: SECCOCOENI EXPEDITION.

OUR correspondent in the Transvaal sends us some interesting notes of the medical transactions connected with the storming of Seccocoeni's stronghold on the 28th of November. We have already described the arrangements for the wounded planned by the senior medical officer of the force, consisting of field hospitals, dressing stations outside the line of fire, ambulances, and the bearer company of Surgeon-Major Hector. The stronghold possessed such a natural defensive position, and the numerous rocky caves and koppies were known to hold numbers of an enemy recklessly brave, that hard fighting, with a heavy list of killed and wounded, was anticipated. At early dawn on the 28th the ambulances, water-carts, country waggons with straw to supplement the ambulances in the event of many wounded, were moved into the positions selected. The surgery waggon was unluckily upset in crossing a stream, but its contents were removed and brought on. Surgeon-Major Johnston, with Surgeon Fraser to assist, was told off to the dressing station, Surgeon-Major Kerr, with Surgeon Martin, at the field hospital, where also Lieutenant of Orderlies Horn, was stationed with a plentiful supply of medical comforts, &c. When the action commenced, the bearer company followed the skirmishers, accompanying them up the fighting koppie, doing their duty quietly, steadily, and efficiently, often under heavy fire; and so close up with the fighting line were Dr. Hector and his men that barely a moment elapsed before a wounded man was attended to and carried off the ground. Sir Garnet Wolseley expressed himself as greatly pleased with the working of the bearer company on this occasion, the first, it may be observed, where a regularly-trained and disciplined company has been present in action with our troops. Colonel Baker Russell, who commanded the attack, was also warm in praise of the prompt and speedy manner in which the wounded were removed from the field without a single soldier from the fighting ranks being called on to leave his post to carry them to the rear.

Surgeon-Major Hector had barely a month in which to train his men, who consisted for the most part of Kaffirs with a sprinkling of Europeans, but by constant instruction and drill he had them well in hand, their steadiness under fire

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and the valuable aid they rendered on the battle field rewarding him for his exertions. Surgeon Lloyd gave willing assistance both in the preliminary training and during the engagement. Forty-nine wounded Europeans, many of them serious cases, were conveyed to the field hospital, while more than 200 Swazies and irregulars were received there, having their wounds dressed and getting every care and attention. The wounded left for Middleburgh a day or two after the fight, where a Base Hospital fully equipped, and the lady nurses from Netley, were ready to receive them. By the latest reports they were all doing well.

DIPHTHERIA IN RUSSIA.

THE ravages of diphtheria in Russia appear to be increasing rather than diminishing. The disease would seem, indeed, in certain districts, to be obtaining pestilential proportions. The medical faculty in Kharkov insist upon the necessity of severing both the sick and the healthy from infected homes, and urge the preparation of both houses of refuge and hospitals for those persons who cannot be properly isolated and cared for in their own dwellings. They advise also that before convalescents leave hospital their old clothing should be burned, and that they should be furnished with new. Further, they suggest that religious ceremonies, such as communion, extreme unction, burial, &c., should not be carried out without precautionary measures being taken against the dissemination of contagion. Professor Jacobi, discoursing on the subject before the Medical Society, laid down the following propositions: (1) diphtheria is particularly fatal to infants, and spreads not only by contact of the healthy with the sick, but also by means of the clothing of the sick; (2) diphtheria selects by preference marshy, damp localities, and ill-ventilated and overcrowded houses. He advises that when the disease shows itself in a family all the healthy children should be at once removed to a dry, well-aired house, kept apart for five days, and not allowed to mix with others until after their clothing had been well washed. When the disease shows itself in a village the medical man and priest of the locality should, among other things, warn the inhabitants of the danger run, and attach to the door of the infected house a notice written or printed on yellow paper, as a caution. The epidemic is now penetrating into Poland, and attacking there especially scholars. Numerous victims have fallen to it in the gymnasium of Chelm. The first sanitary detachment formed by the Red Cross Society for the relief of the diphtheria-stricken districts in Poltava has left St. Petersburg. It consists of thirty-one sisters and five medical men, under the charge of M. Feodosiew. Other detachments will follow. The branch of the Red Cross at Kharkov is organising three sanitary detachments for work in the zemstvo.

CONTRACTS TO ATTEND.

WE have often reported cases in which medical men have recovered obstetric fees from patients who had engaged them to attend, and yet did not send for them at the time of delivery. A medical man is hindered by an obstetric engagement, even if not sent for. We have now to report an instance in which the husband of a club patient has sued a medical man for recovery of £1 14*s*., because the surgeon failed to attend his wife, though having engaged to do so as a club patient, for 7*s*. 6*d*. The plaintiff, according to the *Grantham Journal*, had contributed to a club in view of his wife's confinement, expecting to have the defendant's services on the occasion. The surgeon had an engagement, not a professional one, which prevented him going. He offered to send a midwife. But the plaintiff engaged another medical man, and he claimed the recovery of 30*s*. he had paid into the club. Judgment was given for the plaintiff. We must admit that a contract cuts two ways and binds both sides, always supposing that the medical man is physically and professionally able to fulfil his contract. Of course, he cannot be in two places at once, and, supposing him to be engaged with another case equally urgent, he could not, we presume, be successfully proceeded against for not keeping his engagement. Accepting, however, the adverse application of the law of contract, it seems to us that here it has been somewhat harshly carried out, and that the medical man is punished in having to pay more than the sum for which he agreed to attend the case. The moral of the matter is that medical men must guard themselves in making engagements of this character.

THE EXAMINATION FOR THE PUBLIC SERVICES.

A LARGE number of candidates for commissions in the Army Medical Department and the Indian Medical Service have sent in applications to compete at the examination on Monday next, while the number of aspirants for the Royal Navy is, we believe, barely half a dozen. During the present crisis in naval medical matters we must express our regret that any gentlemen have come forward at all.

TYPHUS IN LONDON.

DR. WHITMORE in his last monthly report directs attention to the occurrence of a case of typhus in his district. The patient had only slept there one night and he was removed to the London Fever Hospital. It was found impracticable to trace out the previous history of the case, but Dr. Whitmore notes it as not insignificant when considered in connexion with the occurrence of cases in other parts of the metropolis.

YEOVIL HOSPITAL.

AT the annual general meeting of the subscribers of the Yeovil Hospital and Dispensary, the honorary medical officers, Dr. Aldridge and Mr. Garland, and the surgeon-dentist, Mr. Hunt, were presented with valuable testimonials in silver-plate in recognition of their services to the institution. Gratuitous medical work is so rarely recognised and valued by the subscribers to our hospitals and dispensaries, that we have especial pleasure in noticing this exception. In returning thanks the medical officers made the important suggestion that the out-patient department should be rendered self-supporting. There is certainly no reason why the services of the medical staff of these hospitals in country towns, where the means of patients can be so easily investigated, should be gratuitously given to all comers, as is the usual custom at present.

THE LATE SURGEON-MAJOR PORTER.

THE medical officers at Netley have decided to erect a memorial brass in the chapel of the Royal Victoria Hospital to the memory of their late comrade, Surgeon-Major Joseph Henry Porter, who died in the Sherpur Camp, Cabul, on 9th January, while acting as principal medical officer of the Cabul force. The subscription is limited to one guinea, and a committee, consisting of Surgeon-General Thomas Longmore, C.B., Surgeon-Major Boileau, and Surgeon-Major Notter, have been formed to collect subscriptions and carry out the proposal.

THE RUSSIAN TRANS-CASPIAN EXPEDITION.

A DETACHMENT of nine sisters of charity recently left Odessa to render service to the sick and wounded of the Russian Trans-Caspian Expedition. The sisters travelled to Temir-Khan-Schoura by way of Kharkov and Vladikavkaz. Three of the sisters were attached to the hospital at Temir-Khan, which contains 210 patients, and the six

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others were sent on to Petrovsk, to give assistance in an ambulance which has been established there. This ambulance, which is formed in a large two-storied building, is capable of receiving 600 patients, but at present contains only 200. The arrival of the sisters is stated to have exercised a very happy effect upon the sufferers in the different hospitals.

A DISCUSSION took place at the College of Physicians in Ireland last week, at the annual meeting of the Dublin Branch of the British Medical Association, consequent on a paper read by Dr. J. WM oore, on Compulsory Notification of Infectious Diseases. Dr. Moore believes that, although the difficulties are great in obtaining compulsory notification and registration of infectious diseases, yet they are not insurmountable. Briefly, he recommended as desirable the plan suggested of compelling the owner or occupier of a house where an inmate is suffering from an infectious malady, to forward a certificate, prepared by the medical attendant, to the sanitary authorities, and, for registration purposes, a certificate from the practitioner to the General Registration Office.

AT a meeting of the Council of the Poor-law Medical Officers' Association, held on Feb. 3rd, at their rooms, 3, Bolt-court, Fleet-street, attention was directed to the hardship of the case of Mr. J. J. Terry, of Wiltersham, Kent, who, after upwards of forty years' service as Poor-law medical officer, was refused superannuation allowance when incapacitated for further duty. It was resolved that a communication be addressed to the President of the Local Government Board on this subject, he having promised to a deputation of Poor-law medical officers on June 12th, 1876, his willingness to investigate any case of this nature which might be brought before him.

A DEATH during the inhalation of chloroform at the West Norfork and Lynn Hospital, took place on the 29th ult. We shall publish a full account next week.

THE

INFECTIVE DISEASES KNOWN AS PYÆMIA, SEPTICÆMIA, AND PURULENT INFECTION.[1]

I.

THE elaborate and exhaustive report which was presented to the Pathological Society at the close of its last session occupies a prominent place in its recently issued volume of Transactions; and as it was also drawn up under the auspices of the Local Government Board, it will appear in the forthcoming Report of the Medical Officer of the Board. It is impossible to do full justice to this report without presenting a tolerably complete analysis of its contents, and we propose to deal seriatim with each portion of it, in order that those who may not have access to the document itself may be in possession of the leading features of this important inquiry. For although the Committee do not, wisely, formulate any conclusions, it is certain that hitherto no such complete investigation has been made into a subject admittedly obscure, and the report teems with suggestive considerations, both clinical and pathological, besides containing many new facts of great importance to a clear understanding of the subject. The plan pursued by the Committee was laid down upon the following lines. In the first place, to collect statistical information from nearly all the large London hospitals from the years 1869 to 1878, with a view to ascertain definite facts of the etiology of these diseases. Secondly, by an analysis of 156 detailed reports of cases, to attempt a classification of them according to their clinical and pathological features, and to ascertain how far these correspond with diseases of like kind produced experimentally in animals. Lastly, to ascertain by microscopical examination of the blood and of the viscera, and by analysis of the urine, what are the constant pathological characters of these affections. We propose to abstract the results obtained in each of these branches of inquiry, and, dealing with the first head now, to leave the others for subsequent notice.

1. *Sex and age.*—Out of 321 cases of pyæmia and septicæmia under treatment during the ten years above-mentioned in the London, Middlesex, and St. George's Hospitals, 252 were males and 69 females. This large preponderance of the male sex is somewhat counterbalanced by the fact that the table does not include cases arising in the puerperal state nor those following ovariotomy. The greatest number of cases occurred between the ages of thirty and forty, but no period of life can be said to be exempt.

2. *Influence of season and meteorological conditions.*—On this interesting point some curious facts are detailed, although necessarily the question is one of much difficulty. It was found that the average annual mortality from these diseases in eight large London hospitals for the decennium was 92·1, but that average was greatly exceeded in two years—1874 and 1875,—reaching 125 in the former. The lowest death-rate was in 1869—viz., 64, but as that year does not comprise returns from one of the hospitals, the year 1878 was probably the lowest. An endeavour is then made to ascertain whether the years 1874 and 1875 were characterised by any special meteorological conditions sufficiently marked to differentiate them from other years of the period with which the heightened mortality might be associated. It is pointed out that in these two years there was a comparatively high mortality for all diseases throughout the kingdom, and that in 1874 cases of erysipelas treated in hospitals were unusually numerous. Inquiry into the climatic variations points to the fact that both in 1874 and 1875 the atmospheric changes were more severe than in any other of the ten years, but that, whereas 1874 was notable for a rainfall much below the average, in 1875 the rainfall was excessive. Passing from the annual rate of mortality to the monthly average, we find that in the period this latter in three hospitals (St. George's, London, and University College) was 28·5, the death-rate in February being 51, in March 40, and in May 34. To what reason can this heightened mortality in these three months be attributed? It is suggested that it may be connected with sanitary and meteorological conditions, such as the distance of the period from the annual hospital cleaning, or the necessity of having the ward windows closed for longer periods together during the prolonged wet and cold weather of February, and during the east winds prevailing many days together in March and May.

3. *Relationship of pyæmia and septicæmia to erysipelas.*—On this point the Committee have failed to establish any definite relationship. The data gathered from five hospitals show that although in 1874 there was a marked excess in both these classes of disease, yet in 1871, which follows next in high mortality from pyæmia, the cases of erysipelas were comparatively few.

4. *Duration of the disease, and frequency of occurrence after various surgical lesions.*—An analysis of 142 cases, in which the date of invasion was stated, gives an average stay in hospital from the time of admission to the onset of pyæmic symptoms of 20·2 days, and a period of 9·2 days intervening (in 153 cases) between the date of invasion and death. A table is given showing the relative frequency of occurrence after various surgical lesions. The table includes 768 cases, culled from six hospitals. Of this number 218 followed operations, 120 injuries, 208 arose in the course of surgical diseases, and the remaining 96 appeared due to a variety of conditions not admitting of analysis, and to which no distinct cause could be assigned. Of the operations, 145 followed amputation of limbs, after amputation of the breast, 8, removal of tumours 18, herniotomy 4, osteotomy 3, lithotomy 4, ligature of arteries and piles 12, trephining and fracture of the skull 11. Under injuries there were 50 cases of compound fractures and dislocation, 18 of simple fracture, 12 of lacerated wounds, and 30 of contused wounds; 66 cases are classed as "urethral." Diseases of joints (including excisions) yielded 104 cases, diseases of bone 72, abscess 50, ulcer 16, and carbuncle 12.

These comprise the main etiological data furnished by the Committee, and we have deemed it well to follow closely in

[1] *Report of the Committee appointed by the Pathological Society of London to investigate the nature and causes of those infective diseases known as Pyæmia, Septicæmia, and Purulent Infection.*

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their lines. The appendix to this portion of the report comprises numerous and valuable statistical tables, the compilation of which must have been a matter of no slight difficulty; especially in view of the fact stated in the closing paragraph of this portion of the report, which runs as follows:—"Before passing from this part of the subject we would observe that, considerable as the number of cases collected in these statistics may be, still, spread as they are over a number of years, they are insufficient to found definite conclusions upon, but may prove useful as suggesting points for future inquiry. They would have been, however, more conclusive than they are had the whole material of the London hospitals been available; but unfortunately, owing to the absence of any uniform system of keeping the registers throughout the metropolitan hospitals, information given in some reports is not mentioned in others. It would be of immense value, especially in determining the etiology of diseases in points relating to their predisposing causes, if a uniform system of registration were adopted in all metropolitan hospitals." With which opinion we thoroughly concur.

SMALL-POX AT BATH.

THE following is a copy of a report adopted at a recent meeting of the Bath Board of Guardians, Major Allen presiding:—

"Your committee informed the City Sanitary Authority of the injury they believe results to individuals and the community from the present mode of dealing with small-pox cases, and they were asked to consider whether they could arrange to care for all persons needing hospital accommodation other than those actually receiving medical or other poor-law aid. Your committee pointed out that the demand of 15*s.* per week and the cost of conveyance to the Statutory Hospital of persons who, for the public safety, cannot be nursed at their homes, forced some people for the first time to obtain relief from the guardians, and that consequently they (and in some cases their families) come on the pauper roll, and voters were disfranchised; that such unfortunate introduction to pauper relief would tend to break down the wholesome dread of parish relief. The cost of these patients would have to be paid by the ratepayers, whether at the Statutory Hospital or the workhouse, but the latter would add to the affliction of the disease, the injuries alluded to. If in cases of infectious epidemics a number of people are forced on the care of the guardians they would be compelled to build an additional hospital, and thus two institutions would have to be maintained at the public cost instead of one, the arrangements at the workhouse being sufficient under ordinary circumstances for all cases arising in actual paupers. It is also safer to remove the majority of cases to the isolated hospital at Claverton Down instead of the workhouse. The power for the removal of cases dangerous to the public, possessed by the Sanitary Committee and not by the guardians, was also advanced. A friendly discussion followed, which evidenced that both bodies had endeavoured to meet the emergency in proportion to the accommodation at their command, that though the Statutory Hospital was erected for persons who could pay, the medical officer had used a discretionary power and had admitted four urgent cases, unable to pay for their admission. The City Sanitary Committee is not prepared to increase the hospital to permit of the admission of the people who are under existing arrangements forced into the pauper ranks. It is clear that so long as a city the size of Bath is content to provide only twenty-four beds, including the wooden building, five of which beds are kept vacant for fever cases, the injurious difficulty the guardians wish to remove will continue until the epidemic wears out. The committee have reason to hope that the epidemic is on the wane. Though Bath has been exceptionally free in the past from epidemics, the present condition should convince the inhabitants that they have not the provision made for properly dealing with such possible visitations."

The following is an extract from the medical officer of health's annual report for 1879:—

"I give a brief account of the origin and progress of this outbreak of small-pox. On July 23rd the first case of small-pox was reported—a private patient in Corn-street—by the medical attendant. The patient, a girl aged nineteen, had been on a visit to a sister in London, who took small-pox and infected this patient, who on her return home developed small-pox. In this instance there were sufficient means of isolation, and compulsory removal was out of the question. However, the use of the Statutory Hospital was offered, but declined. The next case was reported on Sept. 18th in a girl in Avon-street, who was employed as a rag-sorter. It is a curious coincidence that the first case was in the daughter of a rag-collector; but minute investigation could detect no communication between the houses. This case, being attended by the parochial medical officer, was sent to the Union Hospital. During the fortnight ending Oct. 8th two cases were reported—one at the Blind School, Walcot, infection apparently being conveyed in clothing from London; the other was removed to the Union Hospital. On Nov. 18th one case was reported, and removed to the Statutory Hospital, which, in consideration of being intended for other infectious diseases, I wished to keep intact as long as possible. However, the emergency arose, and, the hospital, being empty, was used, and has since been utilised, to the exclusion of any use of other infectious disease which might arise. Measles being at this time frequent and fatal, and some two or three cases of scarlet fever having been reported, I advised the Sanitary Committee to erect an auxiliary temporary hospital to provide for any cases of such disease as might arise. This was done within as short a time as possible, and here there was afforded accommodation for twenty-one non-pauper patients, which, under the circumstances, might have been considered sufficient to meet the exigencies of the case. This temporary hospital is constructed in such a manner that it can be added to within a brief period and to any required amount. So far I may say to the present moment the accommodation has been sufficient to meet not only all the demands on its space for non-paupers, but also I have been enabled to admit cases which were practically paupers, a certain discretion being kindly given to me by the Sanitary Committee to abnegate, under certain circumstances, the strict rules under which patients are admitted to the Statutory Hospital. In the suburban village of Weston an outbreak of small-pox occurred in houses occupied by washerwomen. This is outside the borough. These cases were not removed, and doubtless the infection was spread through the agency of clothes washed in these houses. I can give two instances in which infection was conveyed to persons living in Bath by this means. Four cases occurred at the United Hospital, but were speedily removed, and there has been no recurrence of the disease in that institution. To sum up, between the occurrence of the first case of small-pox on July 23rd and Dec. 31st, being a period of five months and seven days, a total number of eighty cases were reported. The deaths amounted to eighteen, two of which had not, for special reasons, been removed. Of these deaths, twelve were unvaccinated, and four had marks which were equivalent to no vaccination; of the remaining two there was no information. The outbreak occurred and has, with the exception of some half-dozen sporadic cases, been confined within certain limits, and, I am glad to say, so far has not shown any tendency to spread beyond those limits. Nor have those sporadic cases proved the foci of infection which sanitary pessimists would expect; this I attribute to immediate isolation and disinfection. The same results might have been obtained in those streets and courts in which the disease has prevailed had the conditions been the same, but the comparatively total regardlessness of all sanitary precautions, both generally and socially, renders almost futile the effects of isolation and disinfection which have been and are being carried out in the districts affected by the disease, and inasmuch as the inhabitants of these places are of the poorest class, probably in want of proper food and sufficient fuel at this inclement season. So do we find that small-pox has, following its ordinary laws, entirely confined its attack to this class. Not one single case of small-pox among the upper classes has been reported, not one single case of the disease has been reported in the streets, and squares, and crescents, which are the residence of the upper class, and to which visitors resort. Yes, one case, a servant, who probably contracted the disease through clothes washed at Weston. I can go further, and state that no cases of small-pox have occurred in the smaller and more insignificant streets, chiefly occupied by an humbler class whose principal subsistence depends upon letting lodgings. When I say no cases, I mean nothing to constitute an epidemic; and in the face of these facts an absurd panic has been raised, sufficient and I fear successful enough to injure the prospects of the city, by driving away visitors who had come, and preventing others from coming.

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Let anyone take the map of the city and draw a perpendicular line through the centre; intersect this line at right angles, and out of the four segments thus formed the outbreak has been almost totally confined to one segment of the four. Sporadic cases have occurred in the other three or some of them, but this does not constitute a small-pox epidemic in Bath, although it is an epidemic respecting the unfortunate district affected. Of the eighty cases of small-pox reported seventy-four were removed—fifty-three to the Union and twenty-one to the Statutory Hospital. In every instance the removal of the case has been immediately followed by disinfection of rooms and all articles of bed-clothing and body-clothing."

DR. FARR.

AT a meeting of the Sheffield Medico-Chirurgical Society, held on Jan. 29th, Mr. Arthur Jackson, President, in the chair, the following resolution was unanimously adopted:—

"That the members of the Sheffield Medico-Chirurgical Society desire to express their high sense of the great services which Dr. Wm. Farr has rendered to his country in promoting sanitary progress, and to record their deep regret that his paramount claims to the Registrar-Generalship have been overlooked by the present Government, and to hope that those services will shortly be recompensed in a suitable manner by that Government."

Copies were directed to be sent to Lord Beaconsfield and Mr. Sclater-Booth.

Correspondence.

"Audi alteram partem."

VACCINE LYMPH.

To the Editor of THE LANCET.

SIR,—Dr. Cameron is anxious to avoid the charge of dogmatism; but so long as he arrogantly asserts opinions opposed to facts he cannot escape the imputation. He asserted in *The Times* of November 24th, 1879, that the lymph obtained by the inoculation of the cow with small-pox virus was the source of the dissemination of small-pox—was, in fact, inoculated small-pox. Notwithstanding (as you justly observe) "the large amount of the lymph thus obtained and used in this country, he has not produced one particle of evidence to show that in any single instance small-pox was even ever suspected to have been produced by infection from a case of so-called variola vaccine. The dilemma he now sees is insuperable, and he proceeds to urge, in effect, that this modified small-pox has lost its infective qualities, and that, if not dangerous as inoculated small-pox, it has become useless as a protection against the natural disease! He discards his first line of argument as to the mischievousness of this variola vaccine lymph in disseminating contagion, and substitutes another sort of argument which is equally against all experience." Like Goldsmith's schoolmaster, "even though vanquished, he can argue still." Had Dr. Cameron, before making such rash and reckless assertions, made inquiries at home, he would not have fallen into the dilemma in which he now finds himself. He would have discovered that my experiments in inoculating the cow with human variolous virus were not made for the purpose of obtaining a new lymph, but in the endeavour to solve a doubt long entertained of the affinity of vaccinia and variola, that after fruitless attempts to infect the cows by the method of Sonderland and Neumann, and amidst several failures to inoculate such animals with small-pox, I at length succeeded in obtaining vesicles bearing all the characteristics of those which I had repeatedly seen on the cow casually developed; that these experiments were performed in the presence of members of the veterinary and medical professions, and watched during their progress and in all their phases and effects on the human subject, corresponding with those resulting from active primary vaccine, to which none of them were strangers, and were unattended at any time by abnormal or varioloid eruptions. He would also have known that the lymph was for a long time under observation at Cheltenham, where it was extensively used; that for many months it was in use at the Small-pox and Vaccination Hospital under the observation of Dr. Gregory and Mr. Marson, and at the Cow-pox Institution in Dublin, and by numerous private practitioners in all parts of the kingdom. I also forwarded supplies of the lymph to the East and West Indies, to Africa, and many other places at home and abroad, all agreeing that it proved to be an active genuine vaccine lymph, unattended by any abnormal eruptions or any approach to variola.

The details of all the proceedings on the animals and on man, with numerous illustrations, I was permitted to place in the eighth and tenth volumes of the Provincial Medical and Surgical Association's Transactions, and they, with descriptions and illustrations of other allied subjects, have received critical and favourable notices by highly qualified critics.

But, after all, I am happy to add that I am but one among the many successful operators in the above experiments. The success of my predecessors was unknown to me till after the publication of my own. The most distinguished of my successors is Mr. John Badcock, of Brighton, who, unacquainted with my experiments, commenced with the desire to obtain a new stock of vaccine lymph, I think in the year 1840. He, having the advantage of a succession of milch cows in his dairy, has obtained repeated supplies of new lymph, during a period of many years. I have had the pleasure at various times of using his lymph, and always found it possessed of the qualities of my own. It was for several years in use by the late Mr. Marson at the Small-pox and Vaccination Hospital, and has been repeatedly transmitted to all parts of the world with the best effects. A stock generated twenty years ago is still in use at Brighton by the public vaccinators and many private practitioners, with undiminished power, and eliciting the recognition and unqualified appreciation of those most competent to judge.

It is to be hoped now that Dr. Cameron will see what he has lost by inattention to the advice of Cicero to his inquiring friends: "Meos amicos in quibus est studium, jubeo ut a fontibus potius quam rivulos consectentur."

I remain, Sir, yours truly,

Aylesbury, Jan. 28th, 1880. ROBERT CEELY.

ACUTE RHEUMATISM.

To the Editor of THE LANCET.

SIR,—Having read in THE LANCET for Jan. 17th an account of the discussion on acute rheumatism at the Clinical Society's meeting, and *à propos* of the very interesting remarks of Dr. Goodhart, I send you the particulars of a fatal case which has just occurred in my practice, and which was treated by means of the salicylate of soda.

On Dec. 31st I was called to see A. B——, aged twenty-six, of an excitable and irritable temperament, with a history of asthma, but otherwise healthy. He complained to me of stiffness of the joints, pain about the shoulders and back, shivering, vomiting, &c., and he attributed these symptoms to exposure to wet and cold. I ordered him to bed, and next day diagnosed rheumatic fever. I need not take up space with the symptoms of the case, as it appeared a typical one, and uncomplicated. Sleeplessness and restlessness were prominent symptoms. I attended him for nine days. During the first four days he was placed on the alkaline treatment, and the joints, which were all affected, were fomented with anodynes, carefully blistered, and well wrapped in cotton-wadding. The skin and kidneys acted freely, and the bowels once or twice daily. As he continued to suffer great pain, so much so that he expressed a wish to die, and to have, despite the free use of opiates and chloral, very restless, sleepless nights, with some delirium, I determined to try the salicylic acid treatment, which I had been successful with, particularly, in a case of acute rheumatism complicating convalescence from enteric fever. I placed him on fifteen grains of the salicylate of soda, in glycerine and water, every three hours. Improvement commenced very quickly, and in two days' time he delighted his friends by exhibiting how easily he could move his legs in bed, and how nimble his fingers were. He complained of a little numbness in his hands, but was entirely free from

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pain. The temperature had fallen from 102° and 103° to a little below 100°; pulse 120, of fair strength; sweating diminished; sudamina abundant; slight deafness and singing in the ears; thirst still insatiable; heart sounds unaffected. Next day, the third of the salicylate treatment, I diminished the remedy by one half, and, on the following morning, as there had been some alarming violent delirium, of short duration, during the night, I discontinued its use altogether and recommended the alkalies. Beyond the report of delirium I did not consider him any worse at the time of my visit, which was about 10 A.M. During the day, however, he became worse, and at 10 P.M. there was much pain again in the knees, ankles, and shoulders; pulse 124; temperature higher than ever, 104°. The heart-sounds had altered since the morning, and there was now heard a loud systolic murmur. He had been on the alkaline mixture all day, and, thinking that the salicylate would again give ease, or at least moderate the heart's action, which was rather tumultuous, I ordered it to be recommenced in fifteen-grain doses every three hours as before. At 4 A.M. a messenger came to my house stating that the patient seemed to be dying. On my arrival I found him moribund, unconscious, breathing stertorously; temperature 109°; pupils equal, contracted. He lived only half an hour after I was called. He had been very violent for an hour and a half, from 2 A.M. to 3.30 A.M., requiring two or three men to hold him. Had had two doses of the salicylate. No post-mortem examination.

Since the termination of the case I have repeatedly asked myself the following questions:—(1) Was my patient's sudden death the result of the hyperpyrexia, or embolism, or the use of the salicylate? (2) Ought I to have continued the salicylate instead of substituting alkalies the last day, or had I already gone too far with it and decided the case with the last two doses? Had I continued it without intermission I might have connected it with patient's death, but it is a drug the effects of which pass off quickly, and the patient had only thirty grains during the eighteen hours preceding death. Moreover, a like result is, so far as I know, comparatively rare during its use.

I remain, Sir, yours obediently,

Oldham, January 23rd, 1880. R. BRYDEN HILL, M.D.

ENCYSTED STONE.

To the Editor of THE LANCET.

SIR,—Will you kindly give me a place in your publication for a few observations on a case of "Encysted Stone," reported in THE LANCET of July 26th, 1879, under the care of Dr. Lediard? This gentleman will allow me to compliment him on the result of a rare case, and one requiring no small share of management and surgical address, under unexpected and difficult circumstances. I am particularly interested in the case, having met with five such cases, and having myself operated on two of them. I am anxious to draw the attention of the profession to "encysted stone," and I believe I am the first to elucidate its nature; and if I am correct in my view, it will establish a rule of practice in such cases; and, of course, the question is an important one in this light. My views are given in the *Medical Times and Gazette* of July 12th, 1872.

Those cases of so-called "encysted stone" are found in young subjects; they are of long-standing; there is a constant dribbling away of urine; the bladder is in an empty state, contracted on the stone, and forcing it into the neck of the bladder, where it gets impacted, and by the constant expulsive force exerted on it, the stone eventually *ulcerates* through the coats of the bladder, and so forms a *sort* of cyst for itself; the opening by which it escaped from the bladder gradually contracts, and the foreign body is shut out of the cavity of the bladder, and in this way Nature is capable of curing the disease. She very nearly effected this in my two cases. She had only accomplished a third of this in Dr. Lediard's case.

And now for the rule of practice—the most important point in such cases. They can be "diagnosed," at least the five cases I have seen were, by examination with the finger from the rectum. I am convinced that the median is the only operation suitable in such cases. I perform myself the median in all cases, and in fifty or sixty cases I have had only three deaths in all. But in those encysted cases the median should alone be performed. The cyst and its contents are in the median line; you cut on it and extract the part you find therein. If the neck be narrow, as in my cases, you of course break it (the external stone) off, and you then follow the part in the bladder, according to circumstances, either dilating with a probe-pointed or button-pointed bistoury, or cutting on the groove in the staff, and so finishing the operation, as in ordinary cases, having, however, the advantage of an opening ready made into the bladder. In Dr. Lediard's case, there would have been no necessity for his *cutting* at all into the bladder. Any surgeon will see what difficulty I must have encountered had I chosen the lateral operation in my cases. Dr. Lediard encountered and overcame some of them successfully. The cyst in these cases is not lined by a smooth membrane, nor is the surface of the stone contained in it smooth; on the contrary, the surface is most irregular, projections and anfractuosities, into which granulations like worms are inserted, attaching the stone to the cyst. In my cases it is evident that I could not have scraped away the particles remaining attached, as Dr. Lediard was enabled to do with no small difficulty. If the opening had been direct, as in the median, this would not have been necessary, as all the débris left would have come away with the subsequent discharges. Had I performed the lateral operation, after having reached the bladder and brought away the stone found therein (in No. 2 case), I should have been obliged to cut "transversely" on the cyst (supposing I had presence of mind enough to realise the exact position of affairs), and thus there must have been made *two openings* into the bladder.

It is evident, to me at least, that the median operation is the only one suitable in these so-called "encysted stones." Fortunately for those who, as a general rule, prefer the lateral, these cases can be diagnosed from the rectum by the finger.

I am, Sir, yours, &c.,

JAMES MCCRARTH, M.D., F.R.C.S.,

Smyrna, Nov. 19th, 1879. Surgeon British Seamen's Hospital.

THE EFFECT OF SALICYLATES ON THE HEART.

To the Editor of THE LANCET.

SIR,—Will you permit me to correct a serious misrepresentation which occurs in THE LANCET of January 24th. In a short article on the recent discussion at the Clinical Society on Dr. Goodhart's paper on "Sudden Death in Acute Rheumatism," you attribute to me the statement that I have *invariably* found a diminution or disappearance of the first sound of the heart when patients have been treated with the salicylates. It was far from my intention to make such an absurdly general statement as that. I regret very much if I failed to make myself understood, but I am generally reported as having "found that the first sound of the heart is *often* absent during convalescence," &c. This by no means conveys the unrestricted assertion to which you call attention. Of course, in a large proportion of the cases of acute rheumatism which come under observation, the first sound is obscured or replaced by a bruit; only those in which the heart is unaffected remain for observation. In a considerable proportion of these I have noticed the first sound very feeble or absent during convalescence, and I have felt inclined to attribute this to the salicylate; but I am quite unprepared to deny that the same condition occurs during the convalescence of rheumatism that has not been so treated. Moreover, should the drug in question enfeeble the action of the heart, as I am inclined to think, I should not regard it by any means as an unmixed evil; for the pulse in acute rheumatism, especially with pericarditis, indicates a markedly excited action, and a drug that will enfeeble this action may give the heart that physiological rest which is so highly desirable in this condition.

I am, Sir, yours, &c.,

Feb. 1880. F. A. MAHOMED.

PREGNANCY AFTER OVARIOTOMY.

To the Editor of THE LANCET.

SIR,—Many cases like that related last week by Dr. Harding, of Whittlesea, would settle a question that has exercised physiologists—whether the sex of a child is determined by the ovary from which it is generated. But then it is necessary to put on record the fact as to *which* ovary

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was left after "ovariotomy." Will Dr. Harding state this for the case of Mrs. R——, who produced a female child after extirpation of one ovary?

I am, Sir, ours faithfully,

Feb. 2nd, 1880. BETA.

EDINBURGH.

(From our own Correspondent.)

DR. KEITH had a second case of ovariotomy on the 24th January. In this case a large dermoid cyst was removed, a long narrow pedicle ligatured and returned to the abdomen. There were many adhesions to the omentum and intestine, which were carefully separated, and bleeding points secured with catgut ligatures. These adhesions were due to the position the patient had chiefly occupied—viz., lying with the face downwards. The usual antiseptic precautions were followed. The first case has made a good recovery.

At the meeting of the University court on Monday (26th January) the medical examiners were all reappointed with the exception of Dr. Dyce Duckworth, whose term of office as Examiner in Practice of Medicine has expired; Dr. A. B. Duffin, of King's College, has been elected as his successor.

NAVAL NOTES FROM MALTA.

(From a Correspondent.)

STATEMENTS all more or less incorrect regarding the outbreak of small-pox in H.M.S. *Rupert* have recently been going the round of the papers. The facts are these. When at sea on the 5th of last December, while on passage from Alexandria, and the day before reaching Malta, Sub-Lieutenant Moore "went sick." Two days after arrival decided symptoms of small-pox appeared, and the sufferer was placed in the Royal Naval Quarantine Hospital. Two days thereafter a stoker of the same ship was also sent there similarly affected. Mr. Moore's case ended fatally, the stoker is convalescent, and there has been no further spread of the disease. The ship was never put in quarantine, and otherwise the health of the crew has remained excellent. It is unknown how the contagion was caught. For ten months previously the stoker had had no communication whatever with the shore. It is also certain that the officer had not been out of the ship for many months. The senior medical officer has issued a supply of fresh vaccine lymph-tubes to the various ships for the purpose of revaccination, and other necessary precautions having been duly observed, the mischief is probably at an end.

Great regret is felt at the sudden death of Fleet Surgeon Roe, R.N., of H.M.'s Dockyard, which took place in the Naval Hospital on the evening of the 4th inst. The sympathy with his wife and family is universal.

The recent batch of promotions to the rank of Staff Surgeon did not bring joy unmixed to all included. The indiscriminate way in which seniors were reduced to juniors on the new list is very stinging. Besides, this "last straw" makes medical officers if possible more distrustful than ever of the powers that be, for the slight has been put upon more than one officer hitherto conspicuous for professional zeal and blameless conduct.

Malta, Jan. 12th, 1880.

THE WEATHER AT ALGIERS.

(From a Correspondent.)

IT is worthy of note that the severe weather which troubled nearly the whole of Europe during the month of December affected in a degree the northern coasts of Africa. A mild sorocco, or desert wind, swept over Algiers during the first few days of December, but it had not the blasting properties of the summer soroccos, when the inhabitants are compelled to keep indoors with closed windows. This was followed by a week of fine but rather chilly days, the lowest temperature in the daytime ranging between 47° and 50° Fahr. After two days of strong north-easterly and north-westerly winds, the rain came down in torrents on Dec. 14th, and continued both day and night with but little intermission till the evening of the 18th. At times the water came down almost in sheets, and on the nights of the 15th and 16th it thundered and hailed a little; at no time, however, was there any frost or snow, and the thermometer at night never fell below 42·9° in the town.

On Dec. 19th it cleared, and the weather has been beautifully warm and clear, with a very occasional shower at night, up to Jan. 15th. While London was visited by a succession of fogs, frosts, and snows, Algiers had an uninterrupted spell of such weather as we rarely see even in an English summer,—mild enough to be pleasant driving, and not too hot for walking exercise.

Is it not surprising that more of the sufferers by the English climate should not take refuge in this healthful winter resort, where great historic and artistic attractions are combined with all the comforts of modern civilisation and many of its amusements?

Obituary.

JOHN MACDONALD, M.D.,

OF BUENOS AYRES.

To the list of those of our profession who died at the close of 1879 must be added the name of John Macdonald, M.D., son of Alex. Macdonald, Esq., of Lynedale, Isle of Skye; and some mention should be made of the passing away of a valuable life, and one simply sacrificed to a sense of duty.

Educated at Glasgow and at Paris, and having taken his degree of M.D. at the former University in 1862, Dr. Macdonald studied at most of the principal hospitals in Austria and Prussia. It is, however, of his work in Buenos Ayres that we desire to lay some notice before our readers. He arrived there about fourteen years ago. Finding that no doctor could practise within the precincts of the town without a Spanish diploma, and not knowing the Spanish language, he, to acquire it, joined the Argentine army for a year as surgeon, which was then, together with the allied Brazilians, fighting against the Paraguayans, commanded by the notorious Lopez. While thus engaged, he was so successful in surgical operations as to be specially noticed by the authorities, by whom he was placed at the head of the hospital and ambulance corps of one of the divisions, and raised to the rank of surgeon-major. Returning to Buenos Ayres at the end of a year, he took his diploma, intending to remain there; but a special request from the commander-in-chief that he would not discontinue his services, accompanied by the expression of a high opinion of their value, appeared to him an appeal to his sense of honour. He remained, therefore, with the army to the close of the war, through continual privation and exposure, and experiencing many narrow escapes; suffering at one time from a severe attack of malarious fever, after having remained for three weeks in a swamp, and not taking off his boots once in that time.

In the year 1871 the memorable epidemic of yellow fever broke out at Buenos Ayres. Three medical men only remained—one only, Dr. Macdonald, remained till all was over—in a plague-stricken city of some 150,000 inhabitants. Of his devotion to his work some estimate may be formed from the fact that during this fearful epidemic he once attended as many as ninety cases in a single day. Medicine he supplied largely at his own expense; and in many instances death itself did not terminate his services, for he even advanced money to defray funeral expenses, too often never repaid. The fever lasted some months, during which time Dr. Macdonald was himself twice struck down by it. For his services he received almost nothing, abundantly as they had been acknowledged and extolled both by the Government and by the native and the English press. The medal which the Government offered he declined, *more suo*. It was not in his nature to value such things, even if they could have borne adequate witness, which, of course, they could not, to services of the highest possible order, and to the sacrifice of health gone for ever.

He remained at Buenos Ayres for a few years longer in varying conditions of health. It was hoped that a good

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constitution and a singularly "plucky" temperament might in time do much to overcome the effects of past severe suffering. But it was not to be so, and when recovery was no longer to be hoped for it was determined in the autumn that Dr. Macdonald should leave for England, in fulfilment of the only remaining hope, that of dying at home. He landed in October exceedingly ill, and Sir W. Jenner diagnosed chronic hepatic inflammation, the result of malarial poison. With great difficulty reaching the Isle of Skye, he died on Dec. 7th, surrounded by nearly all his nearest relatives.

Those who from his early years knew him intimately, whether related to him or not, cannot trust themselves to speak of his nobility of character, his unbounded generosity, his perfect sense of honour. They would rather point to the facts of his life and his death. And when one thinks of that work calmly carried on in the pestilential streets, that heavy burden borne without help, of skill, sympathy, money, and, as the event proved, life itself placed, and knowingly placed, at the disposal of those whom he attended, his figure seems to stand out not unlike that of the hero of the ancient battlefield, and certainly not less glorious—

"——— non arma manu, non frena remisit;
Qualis erat, dextros defert in Tartara currus."

CHARLES BENSON, M.D. T.C.D.

DR. BENSON, whose death we announced on the 24th ult., was a graduate in medicine of the University of Dublin, a fellow and ex-president of the Royal College of Surgeons in Ireland, and held for a considerable time the Professorship of the Practice of Medicine in the latter institution, until failing sight obliged him to resign. Dr. Benson was one of the original founders of the City of Dublin Hospital, with which he was connected for a very long period as one of the visiting physicians, and on his retirement was appointed consulting physician. Some weeks since he was presented with an address on the occasion of his portrait being placed in the board-room of the City of Dublin Hospital, which referred to his untiring zeal in the interests of that institution, and trusted that many years might yet be spared to him, a hope which a few short weeks have dispelled. His remains were last Saturday interred in Mount Jerome Cemetery, and were followed to their last resting place by a very large number of the profession.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Members of the College on Jan. 29th:—

Fowler, James Kingston, M.B. Camb., Clarges-street.
Haggard, W. Richard, M.D. Queen's Univ., Hammersmith.

On the same day the following gentlemen were admitted Licentiates of the College:—

Alvares, Nicolas Santaud, Ampthill-square.
M'Kee, Gerard Macklin Eccles, Overstone-road, W.

UNIVERSITY OF DURHAM. — At the Primary Examination for Degrees in Medicine and Surgery the following satisfied the Examiners:—

Cheetham, Walter Henry, M.R.C.S.
Giles, Bernard Faraday, M.R.C.S., L.S.A.
Lloyd, George Jordan, M.R.C.S., L.S.A.
Mantle, Alfred, M.R.C.S., L.S.A.
Pardington, George Lucas, M.R.C.S., L.R.C.P., L.S.A.
Porter, William Smith, M.R.C.S., L.R.C.P.
Roué, William Barrett.
Seager, Herbert West, M.R.C.S., L.S.A.
Wills, Joseph Pearce Budgett.
Wray, Charles.

One candidate referred in Botany, and two candidates referred in all subjects, will be permitted to re-enter for examination in April next.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Jan. 29th:—

Hebb, Richard Grainger, Brighton.
Volckman, Ronald, Norwood.

The following gentlemen on the same day passed the Primary Professional Examination:—

John Arthur Francis, St. Bartholomew's Hospital; Francis Henry Unsworth, London Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The annual course of lectures at this College will be commenced on Monday next by Professor Parker, F.R.S., who will deliver nine lectures "On the Structure and Functions of the Vertebrate Skeleton"; on the completion of which, Professor Flower, LL.D., F.R.S., will give nine lectures "On the Comparative Anatomy of Man," in continuation of his course of last year. The lectures will be delivered in the theatre of the College on each Monday, Wednesday, and Friday, at 4 o'clock P.M., until completed.

THE Woburn Guardians have increased the salary of Mr. George A. D. Mahon, Medical Officer to the Workhouse, from £35 to £45 per annum.

THE Governors of the Harrogate Bath Hospital have increased the medical staff from two to three—viz., one physician and two medical officers.

WILLIAM MACLACHLAN, M.D., Doonbank, Dalmellington, has been appointed, on the recommendation of the Lord-Lieutenant of the County, a Justice of the Peace for Ayrshire.

ZYMOTIC DISEASES IN DUBLIN.—During the December quarter of the past year the deaths in the Dublin Registration District from zymotic diseases amounted to 629, being equivalent to an annual rate of 7·4 per 1000, a number largely in excess of the average (470) for the corresponding quarter of the previous ten years. Of these the deaths from scarlatina numbered 160; measles, 94; small-pox, 77; fever, 68; diarrhœa, 46; whooping-cough, 37; and diphtheria, 20.

A NEAT COTTAGE HOSPITAL, to accommodate about twenty patients, is to be built at Milnthorpe, near Kendal, Westmoreland, in memory of the late John Kitching, M.R.C.S, Eng., L.S.A., who, after practising at 61, South Audley-street, Grosvenor-square, London, retired to Milnthorpe, his native place, where he practised for thirty years, and died May 26th, 1879, aged eighty-three years. The hospital is to be built by his daughter, Mrs. William Bindloss, and his sister, Mrs. Thompson Bindloss, as a memorial to him. The plans have been prepared by Mr. Eli Cox, architect, Kendal, and the building is intended to be carried out immediately.

BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—The first annual dinner of this Association was held on Wednesday, January 28th, when about twenty of the members and their friends were present. The President, Dr. J. Beresford Ryley, in proposing the toast of the evening, referred to the great difficulty which beset British practitioners who were desirous of obtaining a degree, and said that were some native University to open its doors to any practitioner able to pass its examination without insisting on residence, it would supply a want felt throughout the whole of the profession, and would obviate the necessity of men seeking abroad what they were prevented from obtaining at home. Dr. F. E. Pocock, the hon. secretary, in responding to this toast, with which his name had been coupled, gave a short sketch of the origin of the Association, and congratulated the members present upon the success of this the first annual dinner.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.—The annual meeting of this Association was held on Wednesday, January the 28th, when the treasurer's report was received and adopted, showing the Society to be in a highly prosperous and flourishing condition. The following officers and Council for 1880 were duly elected:—President: Mr. W. A. N. Catlin. Vice-Presidents: Messrs. J. A. Baker, S. Cartwright, Coleman, Salter, F.R.S., and Dr. Smith, F.R.S. Edin. Treasurer: Mr. Edgelow. Hon. Secretary: Mr. Craigie. Council: Messrs. E. Bartlett, S. H. Cartwright, Fairbank, F. Fox, C. Gaine (Bath), Napier, W. Ranger, and A. Winterbottom. The first dinner of the Association took place in the evening at the Langham Hotel, S. Cartwright, Esq., in the chair, when over fifty Fellows and their friends were present, amongst whom were the President of the Royal College of Physicians and Surgeons, Sir William Gull, Mr. Young, M.P., Dr. Quain, the President of the Medical Society of London, Mr. Ransford, Professor Lister, Mr. Edwin Saunders, Dr. Andrew Clark, &c. &c.

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MANCHESTER MEDICO-ETHICAL ASSOCIATION.—At the annual meeting held on January 29th, 1880, the following office-bearers were elected:—President: H. Simpson, M.D. Vice-Presidents: R. W. Ledward, M.D.; J. Roberts, M.D.; P. Royle, M.D.; J. Thorburn, M.D. Hon. Treasurer: J. Stone, M.D. Hon. Secretaries: A. Wahltuch, M.D., and J. Broadbent, Esq. Committee: E. Bishop, Esq.; A. C. Clark, M.D.; C. J. Cullingworth, Esq.; A. M. Edge, M.D.; J. S. Fletcher, M.D.; R. D. Fox, Esq.; A. Emrys Jones, M.D.; T. Jones, Esq.; W. H. Maccal, M.D.; F. M. Pierce, M.D.; J. Tatham, M.D.; and J. Watson, M.D. Parliamentary Sub-committee: D. Leach, M.D.; F. M. Pierce, M.D.; P. Royle, M.D.; J. Tatham, M.D.; and J. Watson, M.D.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Denbighshire Infirmary and General Dispensary has received a second £500 under the will of Mr. Hugh Davies Griffiths, of Caerhun. The West Kent General Hospital, Maidstone, has received £218 5*s.*, under the will of Mr. John Crowhurst. Mr. Henry Edwards, M.P., has given £200, Sir Frederic Johnstone, Bart., M.P., £52 10*s.*, and Mr. G. E. Eliot, the Mayor, £35 to the Weymouth Royal Hospital and Dispensary. The Hospital for Women has received £200 under the will of Mrs. Harriet Kirkpatrick, and £100 from Mr. Baring Young. Mr. Hugh M'Kay has given £100 to the Hospital for Epilepsy and Paralysis, Regent's-park. The Ledbury Cottage Hospital has become entitled to £500 under the will of Mr. William Ireland, of Eastnor. The Southampton Dispensary has received £180 under the will of Mr. George Foster. The Earl of Sheffield has given £1000 to the Sussex County Hospital, Brighton.

Medical Appointments.

BATES, H. L., L.R.C.P.L., M.R.C.S.E., has been appointed Second House-Physician to Guy's Hospital, for February.

BERRY, F. H., M.R.C.S.E., has been appointed Senior House-Physician to Guy's Hospital, for February.

BURD, G. V., M.R.C.S.E., L.R.C.P.Ed., has been appointed House-Surgeon to the Royal Portsmouth, Portsea, and Gosport Hospital, vice Robinson, resigned.

CLEGHORN, Dr. H., has been appointed the Additional Examiner in Botany at the University of Edinburgh, vice Balfour, resigned.

CLOWES, F., D.Sc.L., has been appointed Public Analyst for the Borough of Newcastle-under-Lyme, at £10 10*s.* per annum, and 10*s.* 6*d.* per analysis.

CROOK, Mr. W. G., has been reappointed Public Analyst for the City of Norwich, to be paid by fees.

DEAN, T., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Burnley Urban Sanitary District, Lancashire, at £60 per annum.

DUFFIN, A. B., M.D., F.R.C.P.L., has been appointed the Additional Examiner in the Practice of Physic at the University of Edinburgh, vice Duckworth, whose term of office has expired.

DUKE, E., M.R.C.S., L.S.A.L., has been appointed a Medical Officer to the Clapham General Dispensary.

GULLIVER, G., M.B., has been appointed Resident Assistant-Physician to St. Thomas's Hospital, vice Sharkey, appointed an Assistant-Physician.

HOLMES, H., M.B., C.M., has been appointed Certifying Factory Surgeon for the District of Dunamanagh, co. Tyrone.

HOOLE, H., M.R.C.S., L.S.A.L., has been appointed Medical Officer for the North London Provident Dispensary, vice Caffyn, resigned.

HOPCROFT, T., L.R.C.P.Ed. & L.M., M.R.C.S.E., has been appointed Certifying Factory Surgeon for the District of Dorking.

KENNY, J. E., L.R.C.P.Ed., L.R.C.S.Ed., L.A.H.D., has been appointed Medical Officer to the North Dublin Union Workhouse, at £150 per annum, vice Kirkpatrick, resigned.

LAKIN, C., L.R.C.P., L.M., L.F.P.S.G., L.S.A.L., L.A.H.D., has been appointed Medical Referee to the Liverpool Victoria Legal Friendly Society at Leicester.

LITTLE, R., L.R.C.S.I. & L.M., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Raphoe, co. Donegal.

MCBRIDE, J., C.M., has been appointed Certifying Factory Surgeon for the District of Forkhill, co. Armagh.

MCINTOSH, W. C., M.D., has been reappointed the Additional Examiner in Natural History at the University of Edinburgh.

MANSELL, E. R., M.R.C.S.E., L.S.A.L., has been appointed Second House-Surgeon to Guy's Hospital, for February.

MASTERS, J. A., L.R.C.P.L., M.R.C.S.E., has been appointed Certifying Factory Surgeon for the District of Hednesford, Staffordshire.

MAYLARD, A. E., M.B., B.Sc., has been appointed Junior House-Surgeon to Guy's Hospital, for February.

MORTON, J., M.D., has been appointed Medical Officer to the Western Friendly Society, Glasgow, for the ensuing year.

MULLINS, E. A., L.K.Q.C.P.I., L.R.C.S.I., has been reappointed Medical Officer, Public Vaccinator, &c., for the Bangor Dispensary District of the Belmullet Union, co. Mayo, at £100 per annum and fees, and £10 per annum as Medical Officer of Health.

NOBLE, C. J., L.D.S., R.C.S.E., has been appointed Dental Surgeon to the Hospital for Consumption and Diseases of the Chest, Brompton, vice Bartlett, resigned.

PEDEN, W. K., M.B., C.M., has been appointed Medical Missionary of the Blantyre Mission of the Church of Scotland, East Africa, vice Macklin, on leave.

POLAND, J., M.R.C.S.E., L.R.C.P.L., has been appointed Senior House-Surgeon to Guy's Hospital, for February.

PRATT, A., M.D., has been appointed Medical Officer to the Workhouse, and Medical Officer and Public Vaccinator, Western District, Godstone Union, vice Bailey, resigned.

ROBINSON, T., L.F.P.S.G. & L.M., has been appointed Certifying Factory Surgeon for the District of Beragh, co. Tyrone.

RUSSELL, G. H., M.B., M.R.C.S.E., has been appointed Junior House-Physician to Guy's Hospital, for February.

SAVORY, W. S., F.R.C.S.E., M.B., has been appointed Consulting Surgeon to the Charter House, vice Callender, deceased.

SCOTT, A., M.R.C.S.E., has been appointed Junior Obstetric Assistant to Guy's Hospital, for February.

SEWELL, J. J., M.R.C.S., L.R.C.P.Ed., has been appointed third Attending Medical Officer to the Provident Medical Institution, Pimlico-road, vice Evans, retired.

SLADE-KING, E., M.D., Ext. L.R.C.P.L., M.R.C.S.E., L.S.S.Ed., Medical Officer of Health to the Ilfracombe Urban and Dulverton Rural Sanitary Authorities, has been appointed to a similar office by the Great Torrington Rural Sanitary Authority, vice Blyth, resigned.

SOUTHAM, F. A., M.B., F.R.C.S.E., has been appointed Resident Medical and Surgical Registrar to the Manchester Royal Infirmary.

SWEENIE, W. F., M.B., L.R.C.S.Ed., has been appointed Certifying Factory Surgeon for the District of Newtown-Cunningham, co. Donegal.

WAINWRIGHT, R. S., M.R.C.S.E., L.S.A.L., has been appointed Senior Obstetric Assistant to Guy's Hospital, for February.

WHITE, W. H., M.A., M.D., M.Ch., has been appointed Honorary Physician to St. Marylebone General Dispensary, vice Gabbett, resigned.

WILSON, R. J., F.R.C.P.Ed., has been appointed Physician to the Hastings and St. Leonard's Convalescent Home for Children, for the ensuing year.

WRIGHT, G. A., M.B., F.R.C.S.E., has been appointed Resident Surgical Registrar to the Manchester Royal Infirmary, vice Southam.

YATES, W., M.R.C.S.E. & L.M., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Richmond, Surrey.

Births, Marriages, and Deaths.

BIRTHS.

BATE.—On the 27th ult., at Northumberland Houses, Hackney, the wife of George Paddock Bate, M.D., of a son.

CONRY.—On the 23rd ult., at Alladale, Woolston, the wife of Staff-Surgeon Conry, R.N., of a daughter.

GWATKIN.—On the 23rd ult., at Higher Broughton, Manchester, the wife of Owen Gwatkin, M.R.C.S., of a daughter.

JAMES.—On the 29th ult., at Elgin-crescent, Notting-hill, the wife of Richard James, L.R.C.P.Ed., of a daughter.

MAUNSELL.—On the 9th ult., at Halifax, Nova Scotia, the wife of Surgeon-Major T. Maunsell, of a daughter.

ROBATHAN.—On the 25th ult., at York Villas, Prestonville, Brighton, the wife of George Beckett Robathan, M.R.C.S.E., of a son.

SMITH.—On the 15th October, at Kyneton, Victoria, Australia, the wife of Samuel Smith, M.R.C.S.E., of a son.

MARRIAGES.

NICHOLLS—FAULCONER.—On the 27th ult., at St. Matthew's, Oakley-square, Howard Hill John Nicholls, M.R.C.S.E., to Harriett, daughter of T. Faulconer, Esq.

O'BRIEN—BANISTER.—On the 14th ult., at St. Gregory's, Cheltenham, Henry O'Brien, Surgeon-Major, Army Medical Department, to Ethel Bessie, daughter of Henry Banister, Esq.

DEATHS.

CORRIGAN.—On the 1st inst., at Merrion-square, Dublin, Sir Dominic John Corrigan, Bart., M.D., aged 77.

DYER.—On the 28th ult., at Alexander-square, Henry Sumner Dyer, M.D., aged 71.

EVANS.—On the 27th ult., at Bath, Evan Evans, M.R.C.S.E.

GODSON.—Found dead, on the 19th ult., Henry Godson, M.R.C.S.E., of Coldhurst, Oldham, Lancashire.

HAY.—On the 2nd inst., at Porlock, Somersetshire, Richard Francis Hay, M.R.C.S.E., eldest son of W. H. Hay, M.D., of Bridport, aged 33.

HENN.—On the 30th ult., at Winton-avenue, Rathgar, Edmund Poole Howell Henn, L.K.Q.C.P.I., aged 23.

KENNY.—On the 4th ult., at Priest's-road, Tramore, Dr. James Kenny.

LEADER.—On the 28th ult., at Keale House, Mill-street, co. Cork, John Leader, M.D., aged 72.

MCCARTHY.—On the 8th ult., at the Royal Naval Hospital, Jamaica, Dr. William McCarthy, Army Medical Department.

OWEN.—On the 28th ult., at Oxford, Edward R. Owen, F.R.C.S.E., aged 70.

SKELTON.—On the 31st ult., at Plymouth, John Skelton, L.R.C.P.Ed.

WEST.—On the 24th December, at Tavistock, Richard Eliot West, M.R.C.S.E.

YATE.—On the 8th December, at Shanghai (accidentally shot), Henry Wright Yate, M.R.C.S.E., aged 23.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Feb. 5th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jan. 30	30·17	S.E.	37	37	..	50	22	..	Foggy
,, 31	30·34	S.E.	35	35	..	50	28	..	Foggy
Feb. 1	30·37	S.E.	36	35	..	48	28	..	Foggy
,, 2	30·33	S.E.	32	32	..	47	29	..	Foggy
,, 3	30·45	S.	42	41	..	47	30	..	Overcast
,, 4	30·43	S.W.	37	36	..	46	33	..	Foggy
,, 5	30·15	S.W.	30	..	..	40	27	..	Foggy

Notes, Short Comments, and Answers to Correspondents.

BLINDED AND IN BONDS.

THE vagaries of feminine taste in the matter of dress are traditionally and essentially fearful and inexplicable; but that is no reason why they should be allowed to play wanton havoc with health. At the present moment women go about hobbled after the fashion adopted by our forefathers to prevent the straying of their horses and asses when turned out to grass. Bonds encircle the legs and knees, and, besides preventing a decent gait, expose the wearers of such ridiculous gear to the risk of falling, particularly when hurrying across a crowded thoroughfare or even stepping upon a curb-stone. This is sufficiently monstrous; but even worse, because persistent, mischief is done by the practice of binding a veil tightly round the face in such a way that not only is the sight obscured, but the eyes are mechanically irritated by the fabric clouding them. Cases of something worse than mental annoyance and "nervousness," distinctly traceable to this cause, are falling under the observation of practitioners, and when the practice is denounced, "fashion" is pleaded as its excuse. We are not disposed to waste words in remonstrance; but it is simple duty to point out that if women please, in defiance of common sense, to resort to these practices they must take the consequences. The veils worn by our mothers and sisters of the last generation hung freely at a reasonable distance from the eyes, and could be thrown back. Those of to-day are semi-transparent eye-bandages, and must tend to disturb the vision, as well as to set up irritation in the eyelids. If the women who dabble in medicine would devote any information they may happen to have acquired to the correction of the follies of their sex, they might do some service.

A. E. B.—Budd; Liebermeister in "Ziemssen's Cyclopædia"; Harley in "Reynolds's System."

Mr. C. Lewin.—We cannot advise. Consult a practitioner.

SUDDEN DEATH FROM TORN INTESTINE.

To the Editor of THE LANCET.

SIR,—The following case appears to me worthy of record.

On the evening of the 15th instant I was called in to a case of sudden death, and found the body quite cold, disposed in a kneeling position across a box, half-dressed, with one leg in the trousers. The corpse was that of a man, aged sixty-three, the subject of double rupture, for which a truss had been worn, and was then on and effectually securing the hernia. By order of the coroner I made a post-mortem on the following evening, and found externally a slight injury to the left little finger, from which a few drops of blood had exuded, and a linear bruise across the abdomen, corresponding to the edge of the box. The small intestines were injected, and their surface was greasy, but not adherent. On carefully tracing out the intestine, a transverse rupture, nine lines in length, was found about the middle of the small intestine at its junction with the mesentery, from which a small quantity of intestinal contents had oozed. Other abdominal organs were healthy. An extreme thinning of the coats of the small intestines was observed throughout, especially at the seat of rupture. There was no sign of ulceration or any thickened edge at the seat of the injury, and no enlargement of Peyer's patches. The pericardium was universally adherent, and the heart muscle showed traces of fatty degeneration microscopically. The left side of the heart was filled with dark fluid blood. The early stage of peritonitis showed that the lesion had occurred during life. The subject of it was in the act of dressing, and the effort of placing the second leg in the trousers was probably the immediate cause. The sudden pain of the rupture probably caused the fall, and the syncope became fatal at once owing to the state of the heart muscle.

I find no such case recorded as a cause of peritonitis in Ziemssen, and a search through ten years of THE LANCET fails to find one similar.

I am, Sir, yours faithfully,

JOHN H. GALTON, M.D. Lond.

Woodside, Anerley-road, S.E., Jan. 19th, 1880.

MIDDLE-CLASS HOSPITALS.

THE following letter has just been issued. It gives the views of the Committee of the Home Hospitals Association for Paying Patients on the recent decision of the Master of the Rolls:—

"We beg to commend to your careful consideration the enclosed papers relating to a public meeting of great importance for establishing hospitals for paying patients. You will observe that one-half of the preliminary capital fund has already been subscribed. The Managing Committee, having experienced insurmountable difficulties in converting the house they had secured in the centre of the 'W.' district into a 'Pay Hospital,' are now fitting up an eligible freehold house which they have purchased in Fitzroy-square. A recent decision of the Master of the Rolls proves that none but freehold premises can be utilised without the consent of the ground landlord. This decision forces the Committee to make a strenuous effort to obtain the second half of the preliminary capital fund, and it has been decided to confer on those who assist them in this task the privileges of governors or members. It is hoped that the many who are interested in the progress of this most successful and beneficent movement will show their practical sympathy by assisting to raise the additional sum required, £10,000, without delay. Such a sum will enable the Committee to proceed vigorously with the scheme they have so carefully elaborated.

"The Pay Hospital will be the means of rendering inestimable service to many who are unable, when ill, to obtain the skilled nursing and hygienic surroundings without which recovery is scarcely possible. The Committee rely upon the sympathy of the public in the difficulties they have had to overcome, and they look forward with confidence to its continued approval and support to enable them to carry their undertaking to a successful issue.

(Signed) "NORTHUMBERLAND, President.
"FREDERICK COX, Treasurer.
"HENRY C. BURDETT, Hon. Sec.

"Home Hospitals Association, 246, Regent-street, W."

A Successful Competitor.—Many members of the Council, Court and Board of Examiners of the College have carried off collegial prizes, as Messrs. Swan (four times), S. Cooper, Lawrence, Hodgson, Earle, Stanley, Stafford, Phillips, Curling, Calloway, Birkett, H. Lee, Hulke, Wood, and Heath.

Mr. Cunliffe will find the information desired in the Medical Register or Medical Directory.

Mr. W. J. Tyson.—The cases are marked for early insertion.

THE FUNCTIONS OF RELIEF SOCIETIES.

To the Editor of THE LANCET.

SIR,—The Secretary of a branch Society called on me the other day concerning a person who had applied to them for relief, and whom I, as resident medical officer of a public institution, had been attending. He wanted full information as to diagnosis, prognosis, and what kind of relief would benefit the patient most, and all this information to be written. I replied that I could give him no information concerning any patient under my care without the patient's consent, and, further, that I could not do so in writing without the usual fee. Will you kindly favour me with your opinion on the point?

I am, Sir, yours faithfully,

Jan. 27th, 1880. A SUBSCRIBER.

*** The request for a written statement of the several details mentioned was preposterous, and our correspondent was justified in refusing to give particulars of diagnosis and prognosis without the patient's consent, and, even with that consent, in writing without a fee. The Secretary might properly have consulted our correspondent on the sort of relief which would best benefit his patient, and no doubt, had he done so, he would have received willing assistance in furthering the object of the Society. Is the Society proposing to institute an inquisition of diagnosis and prognosis in cases under medical care which may be fitting objects for its aid?—ED. L.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Mr. Heath requests us to mention that Mr. Butcher's ligature of the carotid for subclavian aneurism was not said by him to have been "by mistake," the case being one where ligature of the subclavian was found to be impossible (*vide* Butcher's Operative Surgery, p. 855).

Dr. Maurice G. Evans.—We cannot touch a matter which is wholly personal.

COMPULSORY MEDICAL ATTENDANCE.

To the Editor of THE LANCET.

SIR,—Will you kindly inform me, if a medical man is called to anyone professionally, if there is any Act of Parliament to compel him to attend, and oblige, Yours obediently,

Whitechapel, Jan. 30th, 1880. W. J. PENFOLD.

*** No; but he must exercise judgment in refusing to attend. For juries at inquests are somewhat apt, in cases of fatal accident and in fatal cases of other sorts, where a medical man may have been summoned and refused to attend, to pass verdicts as if a practitioner were really bound to attend when sent for, irrespective of his personal feelings in the matter.—ED. L.

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SOUTH DUBLIN UNION: DUTIES OF THE MEDICAL OFFICERS OF THE WORKHOUSE.

At a meeting of the Board of Guardians of the South Dublin Union last week, a communication was received from the medical officers of the workhouse, objecting, in consequence of want of time, to keep the book prescribed by the Local Government Board, setting forth the names, diseases, &c., of the sick inmates under their charge, and trusting that the Board would not enforce the order. After some discussion, a resolution was adopted, to the effect that the medical officers should not be relieved from any of the duties which the law had imposed on them.

Dr. Thudichum's letter, we regret to say, arrived too late for full consideration this week, but shall be dealt with in our next number.

Mr. S. O. Moses should refer to the Medical Directory for the current year.

TOBACCO-SMOKING.

To the Editor of THE LANCET.

SIR,—Having lately seen the letter of Professor Parkes which you have given to the world, I desire to bring under your notice and that of the medical profession the opinion of the late George Norman, Esq., an eminent surgeon of this city, on the above subject.

Many years ago I had occasion to take to Mr. Norman a man who had made a proposal to insure his life. Mr. Norman, having eyed him over, said, "I think, Sir, you have not got the best-formed chest that I have met with, and I should like to examine you." He thereupon went up to the man, unbottoned his waistcoat, and tapped his chest, and, drawing himself back with a look of surprise, said, "Pray, Sir, do you smoke?" "Yes, Sir, I do." "Pray, what do you smoke?" "I smoke cigars." "How many do you smoke a day?" "Three or four, four or five; I think I can conscientiously say I never exceed six." "Well, Sir, as a medical man, I must tell you that I disapprove of smoking altogether; but if you must smoke, by all means smoke a pipe." Mr. Norman then wrote: "I have seen and examined Mr. So-and-so, and think his life eligible for insurance.—George Norman." The papers were forwarded to the office, and a policy was granted for £500. It continued in force for about six or seven years, when the man died, and those who represented the policy received £500, for which about £100 had been paid. Thus ended that part of the transaction.

Several years after I met Mr. Norman at a friend's house, and was placed next to him at the dinner-table. In the course of conversation over our wine, I adverted to the foregoing circumstance, and said I had often thought upon what he said about smoking a pipe in preference to a cigar; but I had never been able to understand his theory. "Oh," he said, "I am precisely of the same opinion now as I was then. I take as my groundwork that all tobacco is poisonous. If you have any doubt about it, you have only to cut up one cigar, steep it in a wineglass of water, and drink it. It will poison you to all intents and purposes. Therefore I say if a man must smoke let him smoke a pipe, because he only inhales the smoke; but if he smokes a cigar he has got the poison within his lips, and, notwithstanding he may expectorate, I am of opinion that a certain portion of the poison finds its way into the stomach, and that when it gets there it never gets out again, for the stomach is so composed that, although it will take up everything in the shape of nutriment, it will turn away from everything deleterious, just as a worm will turn away from a grain of salt. For what do we frequently find? A man goes on smoking and smoking, and all of a sudden he finds himself deprived by paralysis of the use of one arm or one leg or one side. Why, Sir, the man has been gradually poisoning himself."

Now, it so happens that at this very time I have three male friends all suffering from paralysis, one somewhat under sixty, the others from sixty to sixty-five. The two youngest have been great smokers, one principally smoking a German pipe, but not wholly so; the other a great smoker of cigars; whereas the third, whom I have known nearly twenty years, has been entirely a non-smoker. Then I know another gentleman, who is upwards of eighty years of age, who told me not long since that for the last forty years of his life he had regularly smoked two cigars and drank a glass of whisky-and-water every night before going to bed. This gentleman is hale and hearty, and to be seen out most days whenever the weather is favourable.

Now, what I would beg to suggest is that some half-a-dozen gentlemen in good professional practice should be asked to institute an inquiry among their paralytic patients, so as to ascertain whether smoking had anything to do with inducing paralysis, and for that purpose to inquire whether the parties had been smokers of pipes or cigars, and to what extent; and if smokers of pipes, what sort of pipe. Likewise to inquire whether paralysis was more frequent among men than women, or more severe in the one than the other.

As there is considerable doubt upon the above subject, not only in the minds of medical men, but in the public at large, it is desirable that the point should be decided; and if it be ascertained that cigar-smoking is the more injurious of the two, let it be made known, and the public be recommended, as Mr. Norman said, "If you must smoke, by all means smoke a pipe."

I can remember seventy years back, and for many years after, when it was rare to see a cigar smoked, the ordinary common clay-pipe being generally used; but cigars have taken their place, particularly among the rising generation, who should be dissuaded from going on to poison themselves unconsciously.

I enclose my card, and am, Sir, yours &c.,

Bath, Jan. 26th, 1880. C.

"A NUISANCE AFLOAT AT RAMSGATE."

A CORRESPONDENT sends us the following account of the nuisance still, it appears, afloat at Ramsgate:—

"What good has resulted from the proceedings of the Committee? On Jan. 1st we have the *Vittorio* in the harbour, her deck covered with bones at least two feet deep; the hulk *Eids-vold* is then placed alongside her, and the bones transmitted, the process lasting over a week, and with a terrible nuisance resulting. The hulk is then brought into the basin, and moored as near the habitations as possible (a most unnecessary proceeding), in reckless disregard for the comfort and health of the townspeople. The vessel named *John Hannah* is next placed alongside the *Vittorio*, is loaded, and proceeds to sea. The *Elizabeth Morton* then takes her place to receive cargo. All this time we have the hulk, with the gases visibly escaping from her. On Jan. 22nd this was going on to a great extent, and a south-west wind wafting the gases directly over the town. Late on Saturday (Jan. 24th), or early on Sunday morning (Jan. 25th) last the hulk was taken out to the *Elizabeth Morton* to turn over the bones to her, and it may take as long to unload the hulk as it did to load her, which was over a week. The *Vittorio* is about to be placed on the repairing slip, called the gridiron, in close contact with the town, for examination and repair if worth it. Thus we may have the pleasure of her company for weeks to come. The harbour is under the control of the Board of Trade, and some persons are making money out of the bones. A boatman replied to me, on my saying, I see the bone ships are still here, 'All right, more days more dollars, you see.'"

Mrs. Meredyth will obtain assistance in her search from any well-established instrument-maker.

Mr. J. Neil.—We have no recollection of seeing the paper.

THE POSTAL MICROSCOPICAL SOCIETY.

To the Editor of THE LANCET.

SIR,—Thanks to your insertion of letters on the subject, the effort made by the Postal Microscopical Society to establish a separate histopathological section has been most successful, and a number of boxes have been placed in circulation. Most of the slides have been of a very high order; some sent by a professional mounter, and others the work of amateurs (medical men), are triumphs of section-cutting, injecting, staining, &c., and, being accompanied by accounts of the cases from which they were taken, are thus made exceedingly instructive. It is a great pity that slides, illustrating rare forms of disease, or original investigations into the causes of morbid action, should be seen by the comparatively small number of medical men who attend the meetings of Societies, and it will be a great boon to the profession generally if those who have such slides to exhibit would place them at the disposal of this Society, that they may be seen by any of us who are interested in microscopy. The boxes have been gradually improved, so that it is almost impossible for properly-mounted slides to be injured in transit. The annual subscription is very small—namely, 5*s.*

Any information about the Society will be gladly given by the Hon. Sec., Mr. Alfred Allen, Cambridge-place, Bath, or by,

Yours truly,

Castle Cary, Jan. 30th, 1880. C. P. COOMBS, M.D. Lond.

NERVE-STRETCHING.

To the Editor of THE LANCET.

SIR,—With reference to the letter of Dr. A. W. Johnstone in your issue of Dec. 13th, 1879, regarding nerve-stretching in tetanus, I should like to inquire whether the substitute which I proposed for such in THE LANCET of July 3rd, 1870—viz., freezing or partial freezing—has ever been tried in this disease. That the temporary interruption of the nerve-current by freezing often produces an effect which lasts for days, is a certainty, and I would suggest this simple procedure to be tried in a case of tetanus.

Dr. Johnstone's treatment does not appear to have been favourably received in England, the cause being probably the serious nature of the operation that has to be performed in isolating the nerves before stretching; and, in lieu of it, I would suggest small incisions over the nerves to be acted on, and the application of the ether spray so as to freeze or partially freeze the nerves. With superficial nerves, or in very thin people, the incisions would not be required.—Yours &c.,

RICHARD WOLSELEY, M.D.,

Halifax, N.S., Jan. 7th, 1880. Surgeon-Major, A.M.D.,

ELASTIC EXTENSION IN JOINT DISEASE.

To the Editor of THE LANCET.

SIR,—The principle of "persistent elastic extension" effected by Mr. Bryant's splint occurred quite independently to my mind some three years ago, and has been practised by me in the few cases which have come under my care. My object in writing, however, is simply to say that I have in one case of incipient hip-joint disease combined elastic extension with immobility by means of a common stillion (instead of india-rubber) applied to a modified Thomas's splint, and enabled my patient to get about and enjoy fresh air and some exercise, with the joint in the best possible condition for obtaining a cure without shortening of the limb. By the stillion one is able to register exactly the force exerted.

Yours obediently,

Darnley-road, Hackney, Feb. 1880. W. J. V. HARLE.

ERRATUM.—The article on "Trichinosis" referred to in our last number p. 181, appeared in the *Veterinary Journal*, not in the *Veterinarian*.

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COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Buzzard, London; Dr. Dobell, London; Dr. Mahomed; Mr. Wharton Jones; Mr. R. C. Lucas, London; Dr. Thudichum, London; Mr. G. Fleming, London; Mr. L. Tait, Birmingham; Mr. Hoole, Hornsey; Dr. Bower, Bedford; Mr. Grinling, Burton-on-Trent; Mr. Marsh, London; Dr. Maclachlan, Patna; Dr. Ermengen, Brussels; Mr. Maclagan, Edinburgh; Messrs. Lindsay and Co.; Mr. Cunliffe, Mytholmroyd; Messrs. Southall and Co., Birmingham; Mr. Graham; Mr. Murray, Newcastle; Mr. Venman, London; Mr. Lakin, Leicester; Mr. Waters, Okehampton; Mr. Franklin, Melbourne; Mr. King, Leeds; Messrs. Berrall and Co., London; Mrs. Catlin, Stoke Newington; Mr. Craven, Southport; Messrs. Clarke and Co.; Mr. Bryan, Wakefield; Mr. Scott, Manchester; Mr. Harrison, Liverpool; Mr. Scott, Orkney; Mr. Biggs, Bath; Dr. Armstrong, Newcastle-on-Tyne; Dr. Coombs, Castle Cary; Dr. Lawton, Poole; Mr. Crerer, Maryport; Mr. M. Morris, London; Dr. Evans, Cardiff; Mr. Craigie, London; Dr. Wahltuch, Manchester; Mr. Broadbent, Manchester; Mr. Snell, Sheffield; Dr. Duffin, London; Dr. England, Dover; Mr. Dawson, Newcastle-on-Tyne; Mr. Neil, Macclesfield; Mr. J. N. Beach, London; Mr. Penfold, London; Dr. Pocock, London; Dr. Griffith, Harrow-road; Mr. Chilcot, Bristol; Messrs. Shirley and Murphy, London; Messrs. Young and Postans, London; Mr. Cox, Kendal; Mr. E. Duke, Clapham; Mr. Cottle, London; Mr. Harle, Hackney; Dr. Blomfield, Lynn; Mr. Page, Sydenham; Mr. Luxton, Tavistock; Mr. Smith, Netherton; Dr. Tatham, Salford; Mr. Tallack, London; Messrs. Voncier and Co., London; Dr. Slade-King, Ilfracombe; Mr. Seymour, Tewkesbury; Mr. James, Notting-hill; Mr. Dowman, Pondoland, South Africa; Dr. H. White, Brompton; Dr. Ridge, Enfield; Messrs. Harvey and Reynolds, Leeds; Mr. Pring, Pwllheli; Mr. Brett, Leicester; Dr. Smith, Cheltenham; Mr. Barnard, Edinburgh; Mr. J. W. Barnes, London; Mr. Budd, Edinburgh; Miss Newdegate, Dublin; Messrs. Savory and Moore, London; M.R.C.S.; A Medical Officer; A General Practitioner; T. P.; Omicron, London; G. C. G., Dalhousie; Scratch; A Subscriber; A. E. B.; S. E. O.; Secretary, Grantham; F.R.C.S., Birmingham; Emigrans; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Wilson, Stamford Hill; Mr. Jones, West Bromwich; Mrs. Rahn, Ipswich; Mr. Godfrey, Northampton; Messrs. Baildon and Son, Edinburgh; Dr. Waters, Liverpool; Mr. Roben, Jersey; Dr. Lister, Ashton; Mr. Maclehose, Glasgow; Dr. Buchanan, Glasgow; Mr. Rogers, Cowes; Mr. Hough, Oakham; Mrs. Bedingfield, London; Mr. King, Leeds; Mr. Palmer, Nayland; Dr. Tibbits, Warwick; Mr. Cornish, Manchester; Mr. Coward, Huddersfield; Dr. Seguin, New York; Mr. Lewis, Edinburgh; Dr. Johnston, Leicester; Mr. Owen, Fishgard; Dr. Rutherford, Sedgefield; Mr. Spiers, Leeds; Mr. White, London; Dr. March, Bradford; Mr. Cameron, Cambuslang; Mr. Lanwarne, Hereford; Mr. Jones, Burry Port; Mr. Cairns, Wakefield; Dr. Hay, Bridport; Mr. Appleton, Beverley; Mr. Berry, Upwell; Mr. Lee, Cannamore; Dr. Wigg, Derby; Mr. Atkin, Higher Broughton; X. Z., Felling-on-Tyne; Alpha; Rector, Lewes; B., Sheffield; M.D.; Surgeon, Manchester; M.R.C.S.; Phaeton; G. P. B., Bury; B. D. F.; Alpha, Burbage; A. B.; A. K., Horncastle; Horace; Delta; Omega, Stoke-on-Trent; N. R., Trengothel; W. S.; B.A., F.R.C.S.; M. B. W.; Query; M. or N.; Locum Tenens; Medicus, Ditton Priors; Surgeon, Newcross; D. V., Harrow; A. B. C.; V. C., London; Doctor, London; T. T. B., Alfreton, &c.

Mining World, Journal of the Society of Arts, Bombay Gazette, Sunderland County Herald, Old Jonathan, Dover and County Chronicle, Lincoln Gazette, Land and Water, Social Notes, West Cumberland Guardian, Western Daily Mercury, Exeter and Plymouth Gazette, Richmond Times, &c., have been received.

NOTICE.

THE LANCET is now Enlarged to EIGHTY PAGES, giving additional space for the Scientific Papers of our Contributors. A first issue will be made each week at Seven o'clock on Friday morning, *for the Wholesale Houses only*, to facilitate the delivery in country districts soon after the arrival of the early trains. The Journal is also CUT AT THE EDGES. Another new feature is an INDEX to ADVERTISEMENTS, and their classification as far as possible, with NAMES of ADVERTISERS. (*See p. 2 of Advertisements.*)

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Medical Diary for the ensuing Week.

Monday, Feb. 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Structure and Functions of the Vertebrate Skeleton."
MEDICAL SOCIETY OF LONDON. — 8½ P.M. Mr. A. Pearce Gould, "On a Case of Melanotic Sarcoma of the Penis." — Dr. Woakes, "On Ear-sneezing and Ear-giddiness." — Dr. Farquharson, "On some Therapeutic Superstitions."

Tuesday, Feb. 10.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Schäfer, "On the Physiology of Muscle."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8 P.M. Ballot.—8½ P.M. Mr. Lawson Tait: "The Antiseptic Theory tested by the Statistics of 100 Cases of successful Ovariotomy." — Dr. V. Carter: "Contributions to the Experimental Pathology of Spirillum Fever."

Wednesday, Feb. 11.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Structure and Functions of the Vertebrate Skeleton."
HUNTERIAN SOCIETY.—7½ P.M. Annual General Meeting for the Election of Officers."—8 P.M. Hunterian Oration, by Dr. Pye-Smith.

Thursday, Feb. 12.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Dewar, "On recent Chemical Progress."

Friday, Feb. 13.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Structure and Functions of the Vertebrate Skeleton."
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Conversation and Exhibition of Objects.
HUNTERIAN SOCIETY.—Annual Dinner at the Albion, Aldersgate-street.
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Henry Morris: "Traumatic Salivary Fistula treated by passing a fine Catgut Bougie from the Mouth along Stenson's Duct." — Mr. Hulke, "On a Case of Sutural Union of the Median Nerve in the lower part of the Forearm five weeks after division by a broken glass bottle, followed by return of function."—Dr. Sangster: "Disturbed Nutrition, with Suppuration and Exfoliation of the Nails, probably of Strumous origin."—Mr. Heath, "On two Cases of Popliteal Aneurism Cured by the Application of Esmarch's Bandage."
ROYAL INSTITUTION. — 8 P.M. Evening Meeting.—9 P.M. Mr. William Preece, "On Wheatstone's Telegraphic Achievements."

Saturday, Feb. 14.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Pauer, "On Sebastian Bach." (With Musical Illustrations.)

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Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

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Clinical Lectures ON LOCOMOTOR ATAXIA.

Delivered at the National Hospital for the Paralysed and Epileptic,

BY THOMAS BUZZARD, M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL.

LECTURE II.

AMONGST the subjective symptoms of tabes, the first place must be given to the pains. It is customary to speak of these as constituting, along with ocular troubles, the first stage of locomotor ataxia. In my own experience it is a very rare exception for pains not to be present at some time or other in the course of tabes, and much more often than not to precede the other symptoms. It is only right, however, to say that more than one observer has mentioned to me that he did not meet with the symptom with anything like this amount of frequency. A highly-qualified friend writes me from the country, "As to the pains, if inquired for they may be remembered as slight and occasional, or may never have occurred. I only remember one or two cases in which they were well-marked." Another, with a large special experience, told me not long since that he thought it open to question whether pains occurred in the majority of cases. The symptom, it may be remarked, is so often attributed to rheumatism at first that the difficulty of obtaining exact information about it is great; and this may to some extent account for the difference of opinion. The patient B——[1] tells us he has suffered "for years" from what he calls "rheumatic" pains in the legs and arms. He will have them in paroxysms which may keep him awake all night. The pain, he says, is excruciating, and before now he has cried with it. He describes it as being exceedingly sudden and lasting perhaps two or three seconds or so. I must dwell a little here upon this point.

Our hope of dealing successfully with a disease is greatly dependent, there can be little doubt, upon early recognition of it. It appears, therefore, to be of great consequence that we should recognise the early pains of tabes, and not confound them with other conditions, as I have good reason for thinking is very often done. Descriptions given of them by patients themselves, who at the time of coming under observation were undoubtedly marked examples of locomotor ataxy, are valuable, and I will quote some illustrations of the kind from my notes.

In one case the first onset was marked by "an electric-shock-like pain in the right heel." This patient described his pains as being "of a horrible description, generally confined to the lower extremities, but occasionally occurring also in the middle and little fingers of one hand. At times there was great hyperæsthesia at the seat of pain, and then a slight touch on the spot would start a paroxysm." A patient, A—— (whom I show to you, and to whose case I shall again have occasion to refer), describes them as "burning pains—as if he had been scalded—in the left arm, and sharp cutting pains at the knee." W—— says that "shooting pains catch him under the sole of the foot towards the toes, and dart up the leg to the knee. Occasionally they go up the thigh. They are like a sharp pinch, which is off directly." At another time he spoke of "gnawing pain in the left thigh, especially in the inner part. The pains," he says, "occur daily, and have done so for six weeks; sometimes they will go on for the whole day and night." He gets two or three times in rapid succession, a "drawing" pain, and then none perhaps for half an hour. He sometimes gets a pain "like the stab of a knife" in the right side of his chest. C—— is liable to have shooting pains, chiefly in the calves, once in six or seven days. The attacks formerly lasted three to four hours, and then gradually extended from ten to twelve hours. "A dart of pain would come perhaps three times in five minutes, and be gone instantaneously like a flash of lightning—a stroke and a quiver." H——, for years past has had "the most dreadful pains shooting in the thighs and heels." S—— may go two to three weeks without pain, and then it may only last a few hours, in the shins and ankles. On some occasions he has very severe pains of a shooting character in the inner ankle for twenty-four hours. Next day the pain will gradually "work up" the thigh and the left flank. He describes flying pains lasting a few seconds, and like something being "pushed into" the front or the lower part of the tibia, as if into the bone, recurring at intervals of perhaps five seconds. Another man's description was "rats gnawing his shin-bones." Another speaks of "pins and needles in his legs, occasionally darting pains like something sharp pushed into his back." The term used by another patient is "spasmodic shooting pains, principally at night, in the heel, calf, or knee." By another, "electric pains in the arms." An educated patient now under my care says that "excruciating paroxysms of pain will occur, especially in the right foot and different parts of the right lower extremity. The pains will come perhaps five or six times in the minute, like "a corkscrew of red-hot iron going into the flesh." "Bouts of pain like this may return for several days together, or their recurrence may be delayed for a week or more." T—— had darting, extremely sudden pains in the ankles, colon, backs of thighs, and knees. At the time of the pains the slightest touch on the skin would be agony, but strong pressure could be borne, and was rather comfortable. Damp or draught would be sure to cause the pains. After a time the legs would feel as if they had been beaten, and the pains were accompanied by involuntary movements. F—— described a "knife-like spasm" as attacking one or other of his lower extremities in the thigh, knee, leg, or ankle, at intervals of a few minutes. He showed a point two or three inches above the left knee, where, over a space not bigger than a crown-piece, it was as though some one were giving him repeated digs with a knife. M—— spoke of "quivering shocks" in either leg. A female patient said her illness began with pains in the knees, which seized her when she walked quickly. K—— describes "a gripe of pain of momentary duration, followed in a minute or two by another."

Such are a few illustrations which I could easily amplify of the character of the pains. As regards the frequency of occurrence of this symptom I can give some idea of this from a recently published paper of Erb,[2] and also from my own records. Erb mentions that ont of fifty-six cases of tabes which he brings together for comparison the lancinating pains were altogether absent only in five, and in three they were so slightly pronounced as to be not specially characteristic. I have lately analysed a collection of fifty-four cases of tabes in my own experience, of which I possess notes. In only one case was there a complete absence of pains. In one other instance pains had occurred, which were attributed to "rheumatism," and they certainly did not appear to possess those features of suddenness, short duration, and sharpness which ordinarily characterise the pains of tabes. The pain was described as being more or less continuous. The other symptoms of tabes were, however, very well marked, and it is therefore quite possible that the apparent continuousness may really have been owing to an extremely rapid recurrence of momentary pains. I am sure that this occurs in reference to pain, and one is reminded by it of the tetanic contraction of muscular tissue, which, unbroken as it appears to be, is known to consist of vibrations succeeding each other very quickly. It is well to bear this in mind, as a description of continuousness of pain would otherwise be liable to divert the attention from the idea of tabes in a case which was so characterised. But leaving out this case, and adding together the statistics of Erb and myself, we get but seven instances in which pain was absent out of a total of 100 cases, so that, as far as the present figures are a guide, this symptom occurs in tabes dorsalis in the proportion of nearly 94 per cent. of the cases.

Now doubtless, as Charcot has pointed out, pains of the lightning- or electric-shock-like character, may be met with in other conditions. We have seen them occur in a recent case of Pott's disease. They were marked also in a case of almost universal paralysis, which recovered under specific treatment—a case the pathology of which is obscure. They occur, too, in spinal pachymeningitis, and in leptomeningitis, sometimes also in disseminated sclerosis and in acute

[1] Vide Lecture I., THE LANCET, Jan. 10th, 1880.

[2] Zur Pathologie der Tabes dorsalis. Deutsches Archiv für klinische Medicin. 1879.

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myelitis. What appears to me to be characteristic of the pains of tabes, at least in the earlier stage of the disease, is this—that you may have a person going about his usual occupation with activity, and often presenting no outward sign of ill-health, but who is liable to have from time to time paroxysms of pains *not usually limited to the district of one nerve, as in neuralgia*, but commonly attacking more than one locality, if not on the same, yet on other occasions—pains which are often horribly severe, and give him sleepless nights, but leave him again, and remain absent for periods of days, weeks, or sometimes months, during which he tells you he has nothing to complain of. Now, of course, this does not always happen in tabes dorsalis; the pains may be more continuous or disabling, and other symptoms may be so rapidly developed as to allow no time for the condition described to be noticeable; but it is really a very common story, and sufferers in this way, when their ailment is not ascribed to rheumatism, call it gout or neuralgia, and they tell you perhaps that a glass of hot whisky-and-water, some alkaline remedy, a dose of colchicum, or an alterative aperient, never fails to disperse these pains. The fact, however, is that it is in the natural history of such pains that they should occur in paroxysms, with intervals of immunity, and, whether treated medically or not, they usually tend to cease after a few hours.

The three patients whom I show you present characteristic pains as part of their symptoms. Of B—— I have already spoken. Charles V—— says that he became liable to have "pains of a momentary character, like electric shocks, chiefly in the lower limbs, but occasionally also in the shoulders. They would make him jump. The pains would be repeated many times in an hour, and he would have bouts of them lasting for several hours daily for perhaps a week, and then disappearing for a month or so, to recur in a similar manner." For the last year he has been able to carry on his regular employment of a sweep. Charles A—— complains of burning pains in the left arm, as if it had been scalded, and sharp cutting pains in both knees.

These patients also present another symptom of great importance, of which I have already spoken some time since.[3] In neither of them, as you see, does a blow upon the patellar tendon cause any contraction of the quadriceps extensor muscle. The fact that in tabes there is absence of the usual response to a blow on the ligamentum patellæ was first pointed out by Westphal, and I think that clinical medicine owes very much to him for the observation. There are certain misconceptions, I find, in regard to the symptom which it may be as well to guard against by a few hints.

1. If you do not obtain the jerk of the foot upwards on a rough examination you should always lay the leg bare and examine with great care, using a percussion hammer, before concluding that the reflex is absent.

2. Take care that the leg hangs easily, and that the patient is not voluntarily or unintentionally restraining its movement, or, on the other hand, as I have known to happen, imitating the reflex jerk. The patient may sit on a chair, and cross one leg over the other, or let his leg dangle from a table; or, if he is in bed, you may support the lower part of his thigh with your hand.

3. Remember that absence of the patellar tendon reflex does not at all *necessarily* point to tabes. Any destructive lesion of the cord at the part from which comes the nerve-supply to the quadriceps extensor will prevent the occurrence of the reflex. It is absent, for example, in many cases of acute myelitis, infantile paralysis, and anterior polio-myelitis. Moreover, any coarse affection of the anterior or posterior roots of the lumbar plexus will stop it—anything, indeed, which interferes at any point with the integrity of the nervous arc, which extends from the patellar tendon to the grey matter of the cord, and thence to the muscle. It may, therefore, be absent in spinal meningitis, in peri-neuritis, and diphtheritic paralysis, and also where there is change or degeneration of muscular structure, as in myosclerosis.

4. What you require for this symptom to be characteristic of tabes is this: that along with the absence of reflex there is what may be considered a practically normal condition of the quadriceps muscle. In each of these patients you see that the knee can be voluntarily lifted with a fair amount of force, and that when I strike the vastus internus muscle with the hammer a very evident wave of contraction occurs in the muscular tissue. (A slight upward movement of the foot is caused by this experiment. On a previous occasion[4] I have called attention to the state of integrity of the muscle in tabes, and cautioned against mistaking an idio-muscular contraction for a reflex.) You will observe that there is no evident muscular atrophy, and I may tell you that induced currents of electricity will provoke the normal response in the muscle.

Now, let me contrast with these conditions that which you will observe in the child I bring before you. This little one, of some two years old, who occupies a cot in the hospital, is affected with infantile paralysis limited to the left lower extremity. When I strike the right patellar tendon you observe an immediate jerk of the foot; on the left, however, I may tap repeatedly and there is no response. You will notice, however, that the left limb is much wasted, that a blow on the vastus internus of that thigh causes no wave, and it is a fact, which I have carefully tested, that the strongest induced currents have no effect in causing contraction of the muscle.

5. The symptom may occur without any peculiarity of gait being present. The case of the patient A—— is a very important one in reference to this subject, and I will therefore briefly quote the history from Mr. Broster's notes. Charles A——, aged forty-five, came to the hospital in April 1879, suffering from paralysis of the right external rectus muscle, and he told us that he had been affected with drooping of the left eyelid two or three months previously, but this had disappeared. There was anæsthesia of the left side of the face, cheek, tongue, and pharynx (left side), with burning pains in his arms (as previously described), occasional giving way of the leg, and sharp cutting pains of paroxysmal character in both knees. There was no difficulty in standing or walking with the eyes shut; no ataxia. His pupils did not react to light, but acted readily during accommodation. His first symptom was diplopia, which occurred in October, 1878. Before that time he had scarcely experienced a day's illness in his life, and certainly (he says) had not had any cutting pains. Now in April, 1879, I found the patellar tendon reflex quite absent on the left side, and but slightly marked on the right. On August 13th the tendon reflex was discovered to be absent on both sides.

Passing over a number of other interesting points, let me draw your attention to the important fact that in this patient the patellar tendon reflex was absent in one leg and but slightly present in the other only six months after the first symptoms of tabes, and that a few months later the phenomenon was not to be observed in either leg. (I shall have occasion later on to speak of another case in which this early disappearance of the reflex was noted, but it will be more convenient to defer it.) The gradual mode in which the disappearance took place is also very interesting. It does away with the possibility of congenital absence causing a fallacious inference. It is peculiarly important, too, as occurring in a person in whom the disease is almost, to all appearance, limited to the upper part of the body. The only sign of the lower extremities being involved is found in the man's own description, given in August last: "When I get out of bed in the night I am very unsteady." You have seen him walk and noted that he shows no difficulty of gait whatever. You would never guess, to look at him, that he was affected with tabes dorsalis.

The symptom (absence of patellar tendon reflex) is of such comparatively recent observation that I do not feel able to say from my own experience whether it is ordinarily to be met with so early as this, but Erb, who began to investigate the matter before I did, has been led to consider it as one of the earliest symptoms. It is certainly one of the most constant. Erb has lately shown that the symptom was found by him in forty-eight out of forty-nine cases of tabes dorsalis in which he sought for it. Out of thirty cases of tabes in my own practice in which I applied the test, I found the tendon reflex absent in twenty-eight. The two patients in whom it was still retained (for one of whom I am indebted to my colleague Dr. Jackson) presented no ataxia of gait, but I have no doubt that they were cases of tabes. They both suffered from atrophy of the optic nerves, and characteristic lightning pains. One had some tottering on closing the eyes, some bladder and sexual weakness with anæsthesia of the extremities. The other had some symptoms resembling the *crises gastriques* of Charcot. I do not include here other cases than those which have occurred in my own practice, but it is within my

[3] THE LANCET, July 27th, 1878.

[4] THE LANCET, August 10th, 1878.

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knowledge that the kind of frequency I have described is met with by others. Now if we add together Erb's cases and my own, we find the absence of patellar tendon reflex noted in seventy-six out of seventy-nine cases of tabes dorsalis—i.e., in about ninety-six per cent. In two out of the three exceptions there was no ataxia.

There can be little doubt, I think, that this symptom holds the same rank as an *objective* sign of tabes as is occupied by the characteristic pains amongst the *subjective* symptoms of the disease. Let me illustrate its utility.

Five or six years ago I attended a gentleman who had hemiplegia and aphasia. He recovered, went to India, and actively engaged in military duties. A few weeks back he came home and called upon me, not for advice, but to tell me how well he had got on. The day after my last lecture he came again and said he feared he had suffered a relapse the day before, as there had been a peculiar feeling in his right leg, and there had been a "contortion" of it, his head also being drawn to one side. In the course of examination I tested his patellar reflex of the right leg, expecting to find it in some excess, as is more often than not the case in the sequel of hemiplegia. To my surprise it was absent in both legs. Finding this I enquired about pains, and learned that for several years past he has been liable to "rheumatic" or "neuralgic" pains, sudden in character, of very short duration, and coming in almost any part of him. A year or two ago he had such a bad attack of pains of this kind in his foot that, to use his own expression, "it almost made him delirious." The pains would be very sharp indeed, and recur at perhaps minute intervals. He has been kept awake all night by them. He feels lost in the dark, and cannot stand for a moment with his eyes shut. His gait is ataxic. He sometimes gives way at the knee. There is some want of electrocutaneous sensibility in the legs; the muscles of the thighs respond perfectly to induced currents. The pupils contract, though but sluggishly, to light, and much better during accommodation. His pulse is about 100.

I have said enough to show that this is a case of tabes. For its recognition, I am indebted in the first instance to the observation that percussion of the ligamentum patellæ produced no upward jerk of the foot. Until this fact was observed the idea that a patient who had previously suffered, to my knowledge, from a sudden attack of right hemiplegia and aphasia, had now come to be an example of tabes dorsalis had not entered my mind. It is of much importance to remember that the two symptoms—on the subjective side pains of the character described, and on the objective side the absence of patellar tendon reflex (with a fairly normal condition of the quadriceps extensor muscle) are the most constant, as they are probably the earliest of all. My belief is that if we meet with a patient who exhibits them both we do not need the presence of any other in order to form a diagnosis of tabes dorsalis.

Annual Address
AT THE
OBSTETRICAL SOCIETY OF LONDON.

Delivered on February 4th, 1880,

BY W. S. PLAYFAIR, M.D., F.R.C.P.,
PRESIDENT OF THE SOCIETY.

GENTLEMEN,—The task allotted to your President of annually addressing you on the work and prospects of the Society is now fortunately always a pleasing and an easy one, since he has, year by year, to tell the same tale of continuous and increasing prosperity. Since our last meeting we have elected fifty-nine new Fellows, while we have lost thirty-one by death and resignation, the Society now numbering in all 774 Fellows. The reports you have heard read give satisfactory proof of our financial prosperity, and of the working of the library, which for some years has formed an important part of our organisation, and which promises, ere very long, to be one of the most valuable centres for obstetric reference in the country. I claim the right to a special interest in its well-being, since I had the honour of holding the office of honorary librarian when it first received a local habitation, and had much to do with its arrangement.

We have to-night, for the first time since its formation eight years ago, received a report from the Board for the Examination of Midwives. The Council of the Society has always felt that an improvement in the training of women acting as midwives was a question of really national importance, and most of you must have had opportunities of becoming personally acquainted with the injury to the public arising from the crass ignorance of the women who attend on the poor during their time of trial. It always seemed to it a great and a crying scandal that in a country such as ours every ignorant old woman who chooses to assume the name of "midwife" might practise at her own free will without let or hindrance. In founding an examination the Society had no intention of assuming to itself legislative functions, but it hoped that its action might direct public attention to this question, and that the Legislature might eventually take the matter in hand. There is good ground for believing that a Bill on this subject will ere long be submitted to Parliament, and in that case our scheme of examination will be useful as indicating the lines on which such a measure should be based. Early in the year I had the honour of heading a deputation to the Lord President of the Council urging the necessity of this on the Government, which was courteously and favourably received. The Government had already taken this matter into consideration in their Medical Bill, in which there was provision for the formation of a Register of Midwives, which was, however, simply permissive, and would have been practically useless. When the question is settled, our Board of Examiners will, I am sure, gladly perform the operation of the "happy despatch," and cease their functions. In the meantime I should like to point out that something may be done by our principal lying-in institutions, which have been, doubtless unwittingly, great offenders. As matters at present stand in many of these, any ignorant and superannuated old woman, who thinks the practice of midwifery would be a comfortable provision for her old age, goes to a hospital, pays a moderate sum, sees a few labours, and comes away with a certificate a yard long stating that she is a duly qualified midwife or nurse. In the General Lying-in Hospital, where I am consulting physician, the Committee has, on my motion, passed a resolution that for the future the only certificate given shall be one of tuition, and that only after six months' training, and that no woman shall be admitted after thirty-five years of age. For a certificate of proficiency, pending the action of the Government, the pupils are recommended to take the diploma of our Society. In another institution with which I am also connected—the St. John's House Maternity Home—the rule is adopted of sending all their nurses to our board for examination before they are sent out to patients, no less than three of them having been so qualified at the last meeting. If such a course were adopted by other similar institutions, I venture to think that much good might be done.

The meetings during the past year have been well attended, and the many interesting papers submitted to us, and the valuable discussions they gave rise to, show that in this respect the Society is in no danger of losing its well-earned reputation. I cannot presume to trespass on your kindness by any lengthy abstract of what has been done, but there are one or two subjects which have been brought before us which specially merit a brief notice on this occasion.

We have had several communications illustrative of the *quæstio vexata* of the proper treatment of extra-uterine fœtation of the tubal variety. Supposing this to be satisfactorily diagnosed, and it is not so rare in these days as formerly that the diagnosis should be made out, no question can be more momentous than the decision as to the proper course to pursue. Dr. Priestley brought forward a case showing the advantages of an expectant treatment. The extra-uterine pregnancy was made out, nothing was done, and twelve years afterwards the fœtal bones were expelled after much constitutional disturbance, through an aperture in the roof of the vagina. I must frankly confess that this practice does not commend itself to my judgment; for, given a tubal fœtation, the chances are immeasurably greater that the sac should rupture, than that it should remain quiescent for so many years, and the hope that it will do so is a slender reed indeed to rest upon. Moreover, the constitutional irritation attendant on efforts at spontaneous elimination would

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probably expose the patient to risks quite as great as those accompanying some more active form of interference as soon as the complication was detected. Dr. Routh contributed a paper on a somewhat similar case, in which aspiration was frequently resorted to, with the view of arresting the growth of the fœtus, which, however, it did not succeed in effecting, since the sac subsequently ruptured. This procedure has frequently been tried, and aspiration is so simple and harmless that there can be no objection to it *per se*, but Dr. Routh's case suffices to prove that it is not reliable, and, moreover, it has the disadvantage, even when the fœtus is destroyed, of leaving it *in situ* with the risk of subsequent spontaneous elimination, as in Dr. Priestley's case. There remain the alternatives of removing the fœtus from the sac, either by abdominal section, or by section through the vagina with the galvano-caustic knife, leaving the placenta attached, an operation which has more than once been successfully performed in America. If there were a fair chance of being able to remove the whole mass, cyst included, the former, with strict antiseptic precautions, would probably be preferable, and would be no more dangerous than, and not so difficult as, ovariotomy. Unfortunately the cyst is generally so firmly united by adhesions to the surrounding parts that its removal cannot reasonably be expected, and the drainage of the emptied cyst through the abdominal opening would be more difficult than through the vagina, where the aperture is made through its most dependent part. For this reason I am inclined to think that Thomas's operation by galvano-caustic is the procedure which, in the present state of our knowledge, offers the best hope of a successful result. The chief risk is hæmorrhage; but this is less when the tissues are burned through than if they were divided by the knife, as in abdominal section. It is the procedure I had determined to adopt in a case which I narrated to the Society, which both Dr. Braxton Hicks and myself believed to be probably one of extra-uterine fœtation, but which the use of the sound demonstrated to be a retroflexion of the gravid uterus. It well illustrates, I think, both the difficulty of diagnosis, and the value of that instrument in settling the nature of the suspected swelling. The same doubt is mentioned in both Dr. Priestley's and Dr. Routh's cases, and clearly no steps should ever be taken until the state of the uterus is positively determined in this manner. I have ventured to comment upon these communications since the subject is of great importance and comparatively new, so that we are still much in want of positive rules for our guidance when such anxious cases come under our care.

No less than three evenings were spent, and I am sure they could not have been more profitably employed, in the discussion on the use of the forceps, which was so ably introduced by Dr. Barnes. The crowded room, and the fact that many eminent obstetricians travelled long distances, from Dublin, Edinburgh, and Aberdeen, to join in the discussion and give us the benefit of their experience, indicate in the strongest way the interest which the profession takes in this great practical question, and fully justify the action of the Council in selecting it as a topic of debate. Nothing can possibly be of greater use than this free interchange of opinion amongst so many leaders in obstetric science from different schools, and, to my mind, this, and the analogous discussion on puerperal fever which preceded it, constitute some of the most useful work which this Society has accomplished during its existence. I shall not trespass on your patience by a detailed analysis of the debate, since you will very shortly have the opportunity of refreshing your memories with regard to it in the forthcoming volume of the "Transactions," where you will find it printed *in extenso*. To myself it was of special interest, since, having paid a good deal of attention to the subject for many years, and having spoken and written of it oftener than was perhaps judicious, I am aware that some of my friends credit me with being an uncompromising champion of frequent forceps delivery. I was interested, therefore, to find, and it marks, I think, a distinct advance in professional opinion, that the speakers took almost for granted the advisability of operating soon rather than late in the only class of cases in which I have ever recommended a more frequent use of the forceps than has been customary—viz., those in which the head was arrested low down in the pelvis, or on the perineum, simply from a deficient *vis a tergo*. The unanimity with which this was assumed as a proper course of procedure might almost have made some of our respected predecessors, who would have regarded such practice with horror, turn in their graves. With the exception of Dr. Daly, however, no speaker alluded to what has always been, to my mind, a strong justification of early interference in the hands of a competent operator, and to no other can our remarks refer, and that is the relief of the horrible sufferings of labour. It is the clear duty of the accoucheur to diminish the pains, as well as the perils, of childbirth, and I have never been able to understand how we are justified in allowing our patients to drag on many weary hours in useless suffering, when they might be speedily and safely delivered. The only reasonable objection to this teaching, and it is one the force of which I willingly concede, is that a semi-educated and stupid practitioner may fail to recognise the distinction between this most simple and safe procedure, and the much more formidable cases in which the head is high in the pelvis. The answer to this is that we must lay down a rule of practice for the intelligent and well-taught, not one which renders ignorance and incapacity safe. If it were necessary for surgical or obstetrical science that no practice should be advocated which could do harm in the hands of the incapable, all hope of progress would be at an end. Rather let it teach the lesson that more time and care should be devoted to the instruction of the student in a department of practice in which so much of his future work is to be spent—a lesson which those who regulate our examinations require to lay to heart far more than our teachers of midwifery. To the other great point in the debate—I allude to the application of the forceps with the head high in the pelvis, and the os undilated—I venture to think far too great prominence was given. From the way in which it was discussed one would almost fancy it was considered by some to be an every-day practice, and the inexperienced might thus readily be misled, to the serious detriment of their patients. While I do not deny, nay while I readily admit, that in certain well-selected cases, in the hands of those who are expert in the use of the instrument, the operation is fully justifiable and may lead to the best results, yet I know of few procedures requiring more judgment, skill, and caution; and I believe that such a use of the forceps cannot be fenced round with too great care. Nor, indeed, are the cases in which it is even to be thought of, unless the experience of others be very different from my own, of any but the rarest occurrence. I am satisfied, however, that a superficial perusal of the debate would scarcely lead to that conclusion, and I think that the eminent surgeon who remarked to me that he was horrified to find that accoucheurs were so frequently in the habit of applying the forceps within the uterine cavity, was not altogether unreasonable in the deduction he drew from reading our discussion. Dr. Roper's observations on the results of this practice in the Rotunda Hospital struck me forcibly. Based as they were on statistics, which so readily adapt themselves to proving whatever we desire, they may possibly be susceptible of refutation; but the answer to them, if an answer is to be made, has not yet appeared.

An important event in the history of the year is the report on Transfusion, which was presented at our December meeting by Mr. Schäfer. The Society will remember that some years ago a committee was appointed to investigate the subject, under the presidency of Dr. John Hall Davis. After holding several meetings the committee found that the practical difficulties in coming to any satisfactory conclusion were so great that little could be done without physiological experiments, which naturally could not be performed by them. They, therefore, arrived at the resolution that it was better to entrust the investigation of the subject to an experienced physiologist, and Mr. Schäfer was selected for the purpose, a grant of £70 from the funds of the Society being allotted to him to cover the expenses of the necessary experimental inquiries. The wisdom of this course is amply proved by the deeply interesting and instructive Report which was read to the Society. I may say, without fear of contradiction, that this is by far the most valuable contribution to the study of the operation with which medical science, in this country at least, has been yet enriched. Hitherto all that has been done in reference to the subject has been merely empirical or theoretical, and the want of accurate observations has done much to prevent this valuable operation being as frequently performed as it might have been. Now, for the first time, the profession has some reliable data to act upon, and it may be well to point out how triumphantly such a Report disposes of the short-sighted and ignorant action of those who would put a stop to experiments of all kinds on living animals, without which such increased

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knowledge as we now possess of the best means of performing this operation could not possibly have been acquired; and, as the direct result of which, many invaluable lives may, in the future, be rescued from the very gates of death. The first important result of this investigation is that it disposes, once and for all, on indisputable grounds, of the use of milk, beef-tea, and other fluids instead of blood. Within the last year or two Dr. Thomas of New York, and others in America, have published cases in which transfusion has been performed with such agents, of which the most that can be said is that some of the patients survived in spite of the operation. Mr. Schäfer's researches into the action of such fluids on the blood-corpuscles will, I cannot but think, insure our not hearing more of such experiments. The operation is one in which I have myself always taken great interest, and, after a careful study of all that had been written on the subject, I had come to the conclusion that the use of defibrinated blood, with a simple syringe, best fulfilled the indications which seemed to me essential for success—viz., simplicity of apparatus and ease of performance; and this was the method I had adopted in several cases in which I had performed it after severe post-partum hæmorrhage. Dr. Aveling's method of immediate transfusion I had not tried, theoretically good as it was, because the manipulations required seemed to me too complex for general use. Curiously enough, the use of defibrinated blood, so strongly recommended by many, is the one method which Mr. Schäfer seems not to have adequately discussed in his report. Whatever his reason for this, I think we must admit that he has so simplified the method of immediate transfusion from vein to vein, that every one who resorts to the operation for the future will prefer to try it. The apparatus costs next to nothing, it may always be carried in a corner of the obstetric bag ready for use on any unforeseen emergency arising, a point of no little importance, and the necessary operative procedures are so simple, that no one need shrink from resorting to them. The same can hardly be said of the proposed method of transfusing from artery to artery, in which I confess I see much practical difficulty. I think you will agree with me that the Society has good cause to congratulate itself on its action in directing investigation to this important topic.

Mr. Lawson Tait submitted to us a new operation of a very ingenious character for repair of the female perineum. It did not, when read, seem to meet with the approval which, I think, a more careful perusal will show that it merits, since its details are, at first, not easy to understand. I am satisfied, however, that as regards one most troublesome class of cases—viz., those in which the recto-vaginal septum is lacerated, which I, in common with all who have had to deal with such cases, have found very difficult to manage—it promises very well. I mention it because I think many who heard the paper probably did not quite understand the method proposed, which, however, is easily enough mastered when carefully studied.

If I do not allude to other interesting communications which have been brought before us, it is only because they speak for themselves, and require no comment from me. I regret, however, as others who have occupied this chair before me have done, that we have had no paper on the diseases of children. I know few subjects more requiring elucidation, and offering a more promising field for investigation. It is, moreover, peculiarly within the province of the Society, and I am not without hopes that some of our Fellows, who hold appointments in connexion with the numerous metropolitan hospitals for sick children, and there are many such on our list, will yet favour us with the results of their investigations in this important branch of medicine.

Unhappily no year passes in which your President has not the painful duty to perform of directing your attention to the losses the Society has to deplore by death, and to-night I have to mention to you rather more than the average number of those whose earthly work is over. Of some of these I have not been able to gather any information which I need record. Doubtless they led useful, hard-working, and honourable lives, endearing themselves to their friends and patients, although it was not their good or evil fortune to occupy positions of prominence. Amongst these of whom I can find no obituary notice are George W. Nicholls of Rotherhithe, George Edward Horton of Dudley, Charles Fryer of Sherburne (Yorkshire), Edward Morgan of Llanelly, George Henry Waters of Thatcham (near Newbury). Others, whose names are familiar to us from their public position, require more than a mere nominal mention.

[Appreciative remarks on the lives and work of each of the members of the Society who had died during the past year—namely, Dr. Hermann Beigel, Dr. Laurence Martin of Melbourne, Dr. Charles J. Campbell of Paris, Dr. Tilbury Fox, Mr. Pye H. Chavasse, and Mr. Crosby Leonard—concluded the address.]

THE ADVANCES IN SURGERY DURING THE PAST TWENTY YEARS.

The Presidential Address of the Border Counties Branch of the British Medical Association, delivered July 25th, 1879,

BY RODERICK MACLAREN, M.D.,
SURGEON TO THE CUMBERLAND INFIRMARY.

(Concluded from p. 201.)

THE treatment of diseases of the bladder and urethr differs much from what it used to be twenty years ago. Gonorrhœa is treated much more by direct medication: astringent lotions are injected into the urethra; and the use of what were supposed to be specifics is comparatively infrequent. The forcible rupture and internal division of stricture are largely used by many surgeons. For my own part, I do not think that anything surpasses gradual dilatation, for certainty and safety, in the great majority of cases; but still the above have added to our resources, and are applicable where bougies fail. Cystitis and also enlarged prostate have had their treatment much simplified by the introduction of the soft rubber catheter; this is so easily introduced and so unirritating that it is a great gain both to surgeon and patient. It will go into a bladder, however much the course of the urethra is altered, so long as its calibre is undiminished. Its introduction requires very little art, and most patients can easily use it for themselves; thus medication of the bladder can be carried on more regularly than with other instruments, and retention from enlarged prostate immediately relieved. When one considers the number of individual cases to which its use is applicable, it is perhaps the greatest improvement in the means of treating this class of diseases which the century has seen.

In the treatment of stone, lithotrity has occupied an ever advancing position. The lithotrite has been improved, and it has to a great extent replaced lithotomy, being specially applicable to small soft calculi, where the bladder is healthy. The cutting operation, being regarded as the more serious procedure, is reserved for large or very hard stones, and for cases in which the bladder is much inflamed or there exists a stricture or a big prostate.

Twenty years ago ovariotomy was just struggling into existence: it was not by any means the established operation it now is, and not beyond the reach of controversy. Its success has changed, and is still changing, the surgery of the abdomen. It has brought prominently before surgeons the possibility of safely opening the peritoneal cavity, and that it is even justifiable sometimes so to do for the purpose of making or confirming a diagnosis. Fibroid tumours of the uterus and other abdominal growths have been removed by external excision; and as the conditions of success became more clearly known, operative surgery has extended its domain in this direction. For example, in certain cases of acute obstruction of the bowels the lesion has been sought for, found, and removed, with a successful result; and no doubt there is still room for extension of abdominal section.

The treatment of ulcers has been the object of two great improvements. First, skin-grafting, by which small pieces of living skin are made to take root on a granulating surface and become the foci of new skin-growth. The elements of success are a healthy ulcer, growing skin quickly transplanted, and in very small fragments. The resulting new skin approaches more nearly to normal integument than ordinary cicatricial tissue does. The second alteration applies only to one special class of ulcers, those of the legs. It consists in wrapping the limb in a smooth rubber bandage. It is so recently introduced that it merely requires mention.

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Lupus has always been a disease the treatment of which was unsatisfactory; most surgeons had come to the conclusion that the less local treatment the better was the result. But a recent innovation has altered this dictum, for the complete removal of all diseased tissue by scraping results in healthy action, followed by cicatrisation, in a gratifying proportion of cases.

Spina bifida was a malformation which, in the great majority of cases, meant death to the infant within a very short time of its birth. In most instances the spinal cord or cauda equina, in passing through the sac is spread out on its inner surface, and any attempt at removal meant its obliteration. In the few cases in which it remained in the canal, excision or ligature occasionally succeeded. But a procedure of beautiful simplicity has resulted in the cure of a large proportion of those subjected to it. I refer to the injection into the sac of a solution of iodine in glycerine. In one case I had the most convincing proof of its efficacy. Over the lumbar region of a newly born infant an ulcer measuring one inch by one inch and a half was noticed. It was slightly elevated above the surface, and when touched it could be felt that there was fluid underneath the ulcerated integument, and on pressing deeply an open spinal canal was reached. On the following day the fluid had accumulated so as to raise a tumour which measured two inches across by two inches and a half long. The integument was so thin that in places the white undeveloped laminæ of the vertebræ could be seen shining through. In the evening the injection was done. Four days afterwards the tumour was evidently less tense, and the ulcer beginning to heal. In a fortnight the ulcer was about half its original size, and much of the integument had attached itself to the tissues. In a little while longer the ulcer was entirely healed, and no fluid could be detected; the thickened skin closed the spinal canal. So far as the bifid spine went, nothing could have progressed more satisfactorily or steadily to recovery; but the child was a miserable little object from birth, it never moved its right leg, and the left only very imperfectly, and while the spinal canal was closed hydrocephalus developed, of which it died. Fortunately this malformation is not always associated with grave defects, as in this case, and accordingly a good local result is not marred by profound constitutional impairment.

Cleft of the hard palate is another malformation which now admits of successful treatment. Either by separating the mucous membrane and periosteum from each side, and bringing them together in the centre, or by cutting with a chisel on each side of the gap, and parallel to it, so as to detach two bridges of bone, which can be brought together after their edges have been pared, a new roof can be made to the mouth, bringing with it natural speech and perfect deglutition. One other malformation I have to speak about—a very rare one, but a very miserable one—congenital absence of the front wall of the bladder, or extroversion of the bladder. The condition has been much ameliorated by dissecting flaps of skin, and so arranging these that the gap in the bladder is filled by a reversed skin.

No account of the recent progress of surgery can justly omit the application of the principle of absolute rest to disease of the vertebræ. It is done by enclosing the body in a plaster-of-Paris jacket; though only introduced into this country about two years ago, it has established itself as an incontrovertible success.

Nerve-stretching for neuralgia has been found a successful expedient where less formidable remedies have failed. The affected nerve is cut down upon, and well pulled with a pair of forceps; a partial paralysis of sensation is stated to ensue, and is probably the *modus operandi* of the cure. Nerve-suture has been performed in cases of divided nerves, and has resulted in a return of function where there had been entire absence of motion and sensation.

Some operations and procedures, though employed in surgery twenty years ago, are now used in a different manner, and with another object. Thus tracheotomy was used in croup to avert immediate death from suffocation, and was usually in this country delayed until a late stage of the disease; it is now done early, with the object of giving rest to the diseased part and of preventing those lung changes which continued semi-suffocation cause. The actual cautery is now far more used to prevent or check hæmorrhage than as a counter-irritant—tmainly because the diseases for which it was used are now treated in a more gentle, but at least as efficacious a manner, and the thermo and galvanic cauteries allow it to be more conveniently applied as a hæmostatic.

Of the improvements in the knowledge and treatment of diseases of the eye, of the ear, and (with the above exception) of the throat, I shall say nothing; to do them justice would carry this address far beyond the bounds of reasonable length.

In nothing is the progressive spirit of our time more manifest than in the improved hygiene of our hospitals. Our patients are no longer lodged in overcrowded, low-roofed, ill-ventilated wards. Plenty of air-space, frequently changed air, extreme cleanliness, sunlight, and perfect sewage arrangements are looked upon as the essential conditions by which the sick should be surrounded. Nursing is regarded as an honourable occupation for the most intelligent women who can be procured for it. I think nothing can more strikingly put before you the sum total of much of what I have said than a contrast which I submit to you. About twenty years ago it is on record, that of amputations generally, 25 per cent. were fatal, and that pyæmia was the cause of death in 42 per cent. of the fatal cases. In the Cumberland Infirmary during the years 1877 and 1878 there have been seventy-six amputations of all kinds, including fingers and toes, among the in-patients, with four deaths, three in primaries, within twenty-four hours of admission, from shock and hæmorrhage, the remaining one from tetanus. We have had a total of close upon two hundred operations without a death from pyæmia.[1]

It must have struck you, gentlemen, that in the past remarks the advances I have had to speak of have been mainly under the head of treatment. Little has been added to our knowledge of surgical disease. Perhaps we understand the processes of inflammation better than was done in my student days; perhaps the microscopic structure of morbid growths has received a little elucidation, but the advance in these directions is of a very trifling kind. We have had no new diseases added to our nosology, nor have our means of investigating the nature of surgical ailments had any startling additions. I think, however, we have a truer idea of the essential nature of diseases. We look upon them as processes, not cataclysms; and our aim now is to study these processes, observe their natural history, specially the tendencies which so many of them have to get well, and to aid these. We even endeavour to do more—we try to prevent those conditions which in times past produced the great surgical mortalities. I think I may say that pyæmia no longer occurs as an epidemic, and though sporadic cases still turn up, it is in a lessening ratio. I think we study our patients more as a whole, and not only the little bit of them which is supposed to have a surgical disease. *Felix qui potuit rerum cognoscere causas*—for in the essential cause lies the whole mystery of disease, of its progress and of its results. A deeper insight into causes has often been the first step in the direction of cure. The knowledge of the effects of organisms in producing putrefaction, and of putrefaction in producing infective disease, is the foundation of the antiseptic treatment. The recognition of the evil effects of retained pus produces the drainage-tube, and the knowledge of muscular tonicity being a displacing cause in fractures gives occasion to the employment of the antagonistic tension. The belief in the reign of law in disease is rescuing our practice from being the clever tricks of a skilful handicraft, giving it the dignity of a science, and enabling us to act as those who have been allowed a faint insight into some of the rules which guide and govern this world of ours. It teaches us that success can only be hoped for or attained through knowledge; that the more intimate our acquaintance with natural processes, the better can we guide them aright. Blind haphazard groping about may accomplish the object we wish to attain, but how much, how infinitely much less likely to do so than the steadfast purpose which proceeds from assured apprehension of all that is before us. It appeals to our higher

[1] Since the above was written the statistics of operations in the Cumberland Infirmary during 1879 have been completed. There were twenty-six amputations, with two deaths; one from tetanus, the other from exhaustion consequent on sloughing and bedsores, following amputation of both feet for frost-bite. Out of a total of 124 operations, we have had two deaths from pyæmia. One of these followed the extraction of a fragment of calculus impacted in the urethra, and admitted of easy explanation. The other was consecutive to removal of the left breast, and of cancerous glands in the axilla, some of them deep in close to the clavicle. The wound was kept aseptic, so far as could be ascertained by the unaided senses. For a month all went well; the patient so far recovered that she was up for five days. She then shivered, became feverish, developed the usual symptoms of pyæmia, and in a fortnight died. Pus was found in the left elbow, hip, and knee, the other joints and organs being healthy. It is more easy to form ingenious theories than to satisfy one's mind as to the true origin of the affection in such a case as this.

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nature, it gives an interest to our work beyond the earning of daily bread, and the more we know the more must we reverence the wisdom, and therefore adore and worship the great Author of all. In concluding, I may express the hope, and also the conviction, that the next twenty years will see at least an equal advance. Much lies at our hand. What do we know about tumours? What is their cause? What determines their locality? How can they be prevented? We cut them out even as our fathers did. Is there no better means of disposing of them? Then take the whole class of malignant diseases. Does one ray of light penetrate the obscurity which surrounds them? Again, is the present treatment of carious, otherwise ulcerated, bone the best that can be contrived? Why should we have so often to remove the diseased bone, or even the limb? We do not so act with ulceration of other tissues. Let us hope that we may see the solution of these and some other difficulties ere our race is run.

CLINICAL REMARKS ON THE TREATMENT OF CHRONIC DYSENTERY.

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CHRONIC DYSENTERY has always been considered one of the most formidable and intractable of diseases. Dr. William Fergusson, writing at the commencement of the present century, remarks that "the sufferer exhibits a spectacle of distress of as pitiable a kind as can be found in the history of human misery." Sir Ranald Martin says: "Let the young naval and military surgeon ponder on the spectacle before him, and determine so to master the subject and manage the treatment of acute dysentery that he may have the least possible amount of the chronic to deal with; he will thus by one act cure the acute and prevent the chronic disease." Trousseau speaks of the intractable diarrhœa following acute dysentery, "against which all therapeutic measures are unavailable." And Dr. Austin Flint, in his work on Practical Medicine, sums up the experience of the disease in America by stating that, with regard to the treatment of this disease, "unhappily, in the great majority of cases, there is very little probability that a cure will be effected; and all that can be hoped for from judicious treatment are palliation of the symptoms and prolongation of life." The experience of the Seamen's Hospital, where annually a considerable number of cases of chronic dysentery are under treatment, up to recent years, might be recorded in equally hopeless terms. For instance, my late colleague and friend, Dr.

TABLE I.—DETAILS OF FOURTEEN CASES TREATED WITH CASTOR OIL ALONE.

Case.	Age.	Duration of disease.	Stay in hospital.	Result.	Remarks.
1	23	15 months	8 days	Relieved	Admitted April 7th; passing six and five stools on first two days, with slime, no blood. Two drachms of castor oil on alternate nights. Improved steadily; stools reduced to two after first week, but still loose. Discharged April 22nd, at own request.
2	40	7 months	66 days	Relieved	Admitted Aug. 21st; passing one, two, and four light-coloured stools on first two days; lumps, slime, no blood. Half an ounce of castor oil on alternate nights. Stools never numerous.—Sept. 15th. Stools became dark-coloured, with no lumps or slime, but continued loose till his discharge on Oct. 25th.
3	51	5 months	17 days	Relieved	Admitted Sept. 13th; passing twenty and eight stools on first two days; blood and slime; no lumps. Two drachms of castor oil on alternate nights. Number of stools rapidly diminished.—Sept. 27th. Three motions, dark, loose, no blood or slime. Discharged Sept. 30th, at own request.
4	35	3½ months	13 days	Relieved	Admitted Jan. 26th; passing four and five stools in the 24 hours. Two drachms of castor oil on alternate nights. Stools fell to one, two, and three daily in first week. Discharged Feb. 8th, at own request.
5	26	3½ months	10 days	No improvement	Admitted Feb. 24th, passing eight and three stools on first two days. Two drachms of castor oil on alternate nights. Did not improve. Discharged March 6th, at own request.
6	49	—	41 days	Relieved	Admitted Dec. 24th; passing six stools in the 24 hours; slime, blood, lumps. Two drachms of castor oil on alternate nights.—March 4th. No lumps or slime. Discharged at own request.
7	26	—	59 days	Cured	Admitted Jan. 24th; passing twelve stools in the 24 hours; great pain in rectum; lumps, blood, and slime. Two drachms of castor oil on alternate nights. Made slow but steady improvement throughout.
8	—	An acute attack supervening on old chronic dysentery	14 days	Relieved	Admitted Nov. 1st; passing seven yellowish stools in the 24 hours, with blood, slime, and lumps on first two days. Ordered castor oil on alternate nights.—Nov. 6th. Stools contained no blood; only three passed.—Dec. 12th. Stools contained neither lumps, slime, nor blood.—Dec. 15th. Only two stools a day have been passed since the 12th. Discharged considerably improved.
9	34	10 months	69 days	Relieved	Admitted March 10th; passing nine liquid, yellow, frothy stools in the 24 hours, containing much slime, but no lumps or blood. Ordered castor oil on alternate nights, and quinine mixture. Had several relapses.—On April 15th was ordered fifteen grains of ipecacuanha powder, which was repeated on the 21st and 28th, and also on the 1st May, in addition to the castor oil, which he continued to take. From the 1st of April he also took twenty-drop doses of pernitrate of iron.—On the 3rd of May a decided improvement set in; the stools lost their dysenteric appearance, and became firmer. Discharged, very much improved, May 18th.
10	9	12 months	15 days	Relieved	Admitted Aug. 9th; passing twelve frothy, yellowish, slimy stools in the 24 hours; no lumps, no blood. Castor oil on alternate nights. Stools fell to two and one a day, Aug. 19th, and continued at that rate till discharge, Aug. 24th. Character of motion much improved.
11	27	years	36 days	Cured	Admitted Sept. 1st. Contracted dysentery four years ago; never free from it since; stools now seven or eight a day, containing slime and blood. Hæmorrhoids, prolapsus ani, œdema pedum, marked evidences of syphilis. Expectant mixture for first seven days, during which time stools averaged twelve a day.—Sept. 8th. Ordered half an ounce of castor oil twice a week. Stools fell during next week to four a day, and in succeeding week to three a day.—From Sept. 16th till Oct. 6th, the stools barely averaged four a day. He was under treatment one month longer for cardiac disease, during which time the dysentery did not return.
12	38	8 months	147 days	Slightly improved	Admitted Sept. 23rd; passing fifteen, twenty, and eleven stools on the first three days respectively. Ordered half an ounce of castor oil twice a week. Stools gradually fell to four a day.—Oct. 30th. Severe relapse. Ordered twelve grains of ipecacuanha powder daily; oil continued.—Nov. 9th. Improvement began, and from this date to Dec. 3rd the stools averaged two a day; then another relapse, then an improvement, then a slight relapse, and so on till discharged, Feb. 19th.
13	43	20 years	33 days	Relieved	Admitted July 11th; passing six and seven stools in the 24 hours; no pain, no straining, no slime; jungle fever in India twelve years ago, also sunstroke in the same year; syphilitic; heavy drinker; aguish attacks off and on during the last ten years. Half an ounce of castor oil twice a week, and five grains of quinine mixture three times a day. Stools rapidly fell; relapse on July 18th and again on July 31st. Ordered iodide of potassium mixture and cod-liver oil.—July 22nd. Improvement from July 31st. Discharged much improved, both as regards dysentery and general condition, Aug. 9th.
14	40	2 months	18 days	Cured	Admitted Aug. 31st; passing eight stools daily, with blood and slime.—On Sept. 2nd ordered half an ounce of castor oil.—On Sept. 4th passed three stools, on the 5th and 6th none, on the 7th three, on the 8th two, from the 8th to the 13th only one. Discharged cured Sept. 17th.

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Harry Leach, in a contribution to the *Practitioner*, December, 1870, observes: "The resources of the Pharmacopœia have, I believe, been fully and fairly tried in the Seamen's Hospital: diaphoretics, astringents (animal and vegetable), calomel, castor oil, ipecacuanha (simple and compound), and a host of other so-called remedies, have been prescribed, as well as opiates, blisters, suppositories and enemas; and it has been agreed by Dr. Ward, the senior physician, and all others who have had medical experience in this institution, that failure has been the rule rather than the exception. Four years ago, having watched upwards of 200 cases of dysentery, I ventured to record that those who having lingered the longest, or at length do well, are those with whom therapeutics have little or nothing to do." In this opinion Dr. Ward concurs, but adds, though,[1] "special remedial agents, if but of little use to control or cure the disease, render important service in the relief of distressing symptoms. An occasional dose of castor oil guarded by laudanum, or an injection of gruel with oil, will bring away scybalous fæcal matter that may have caused annoyance for some time."

Since active and special treatment has been abandoned, and more reliance placed on the good effects of rest and diet, the experience of the disease as met with at the Seamen's Hospital has certainly become more hopeful. In my treatment of the disease at the hospital I have benefited by the experience previously gained by my colleagues, Dr. Ward and Dr. Harry Leach, and have abstained from active and special treatment, except to meet occasional and urgent symptoms. Instead, however, of administering an occasional dose of castor oil, I have *systematised* its administration by giving it on stated days at least twice in the week, with the view not merely of removing retained scybalous fæcal matter and irritating discharges, but to prevent their accumulation by sweeping out the bowels at regular and stated intervals.

Of the thirty-eight cases, details of which are appended to this paper, all throughout their stay in hospital were treated with castor oil from their admission till a day or so before their discharge. Some had no other treatment. Others had bismuth mixture or extract of hæmatoxylin in addition. Ipecacuanha (twelve to twenty grains) in single doses, repeated if necessary on the second or third day, was given whenever a relapse or return to the acute form of the disease was threatened. The thirty-eight cases were all uncomplicated by any secondary visceral disease, and no case is included in which death from exhaustion occurred within a fortnight from admission. In twenty-one cases the average duration of the disease before admission to the hospital was 21·7 months, no case being of less duration than five months. In eleven cases the duration was under four months, and in six cases the duration of the disease is not stated.

Of the thirty-eight cases, sixteen were discharged cured. Of these in nine the duration of the disease prior to admission had averaged eighteen months, and none less than five months. In five cases the disease had existed less than four months, and in two cases no account of the duration is noted. Twenty cases were relieved, and in one there was no improvement.

Castor oil only was administered in fourteen cases. Of these, three were discharged cured, ten relieved, and one made no improvement. The average duration of treatment under castor oil simply, was—In cases cured, 37·6 days; in cases relieved, 42·4 days; and the case that made no improvement was discharged at own request at the end of ten days. (See Table I.)

Bismuth mixture was prescribed at some period during treatment in addition to the castor oil in nine cases. Five of these were discharged cured, and four relieved. The average duration of treatment in the cases cured was 38·8 days, and in the cases relieved 20·7 days. (See Table II.)

(To be concluded.)

TABLE II.—CASES TREATED WITH CASTOR OIL AND BISMUTH MIXTURE.

Case.	Age.	Duration of disease.	Stay in hospital.	Result.	Remarks.
15	61	—	85 days	Relieved	Admitted March 31st; passing three and seven stools on first two days, with slime and blood. Two drachms of castor oil on alternate nights, one ounce of bismuth mixture three times a day. Improved considerably; number of stools last three days in hospital two, none, and one, loose, but no slime or blood. Discharged May 5th, at own request.
16	37	3 months	7 days	Relieved	Admitted May 24th; passing eleven and seven stools on first two days; loose, slimy, lumps, blood. Two drachms of castor oil on alternate nights, one ounce of bismuth mixture three times a day. Improved rapidly.—May 30th. Passed four stools, more solid, no lumps or blood.—May 31st. Two stools. Discharged June 1st, at own request.
17	38	6 months	35 days	Cured	Admitted March 16th; passing seven and six stools on first two days; lumpy, with blood. Two drachms of castor oil on alternate nights, one ounce of bismuth mixture three times a day. Made steady improvement.—April 8th. Two stools, solid, slight blood.—April 10th. Two stools, solid, no blood. Discharged at own request.
18	36	2 months	13 days	Relieved	Admitted Sept. 25th; passing four loose stools in the 24 hours. Two drachms of castor oil on alternate nights, one ounce of bismuth mixture three times a day. Stools fell at once to one and two daily, improved in character. Discharged at own request.
19	24	2 months	22 days	Cured	Admitted May 24th; passing six and five stools on first two days; slight blood, no lumps or slime. Two drachms of castor oil on alternate nights, fifteen grains of ipecacuanha powder immediately, one ounce of bismuth mixture three times a day. Improved steadily. Discharged cured.
20	18	16 months	44 days	Cured	Admitted Oct 12th; passing three and five stools on first two days, containing blood and slime, but no lumps. Ordered half an ounce of castor oil twice a week, one ounce of bismuth mixture three times a day. Made a good recovery. Discharged cured on Nov. 25th.
21	43	5 weeks	46 days	Relieved	Admitted June 25th; passing nineteen stools in the 24 hours. Ordered expectant mixture.—On June 27th the number of stools was fifteen. Ordered castor oil on alternate nights. From this time made steady improvement. During the last three weeks bismuth mixture was given in addition to the oil. A very favourable case, as the duration of illness from acute attack was so short. Had the man remained under treatment, permanent relief would have been afforded. Discharged, considerably improved, Aug. 10th.
22	30	—	56 days	Cured	Admitted Dec. 4th; passing ten stools daily, with blood, slime, and lumps. Half an ounce of castor oil on alternate nights, one ounce of bismuth mixture three times a day.—Dec. 8th. Seven stools; patient feels weaker and more depressed; blood at end of defæcation; examined per rectum, no piles or ulceration of lower bowel detected. Ordered bismuth enemata, administered twice (Dec. 9th and 10th); castor oil discontinued.—Dec. 11th and 12th. Stools increased to eleven and twelve in the 24 hours; much pain.—Dec. 12th. To discontinue enemata and return to the castor oil, also to have twenty grains of ipecacuanha powder the same night. Stools gradually fell from this date, first to five, then to four, then to two, and latterly to one daily, up to Dec. 28th, the motions on the last five days being firmer.—Dec. 28th. One stool of tolerable consistence; complains, however, of sharp pain in left lumbar region, very tender on palpation. Twenty grains of ipecacuanha powder immediately (partly vomited).—Jan. 1st and 3rd. Quite free from pain; one firm motion daily. Discharged cured Jan. 30th.
23	22	9 months	53 days	Cured	Admitted Jan. 11th; passing fourteen, eleven, and fifteen stools on the first three days; blood and slime, but no lumps. Two drachms of castor oil on alternate nights. Slow progress till Jan. 23rd, when there was great pain in transverse colon, and sixteen stools with much blood; cramps in calves of legs. After this continued to improve, with slight relapses, till Feb. 11th (bismuth mixture ordered Feb. 5th). Steady improvement till discharged cured, March 4th.

[1] On Affections of the Liver and Intestinal Canal, &c. By Stephen Ward, M.D., F.R.C.P. Lond., Consulting Physician Seamen's Hospital. Churchill. 1872.

TECHNICAL EDUCATION.—The Drapers' Company recently voted to the Parkes Museum of Hygiene a donation of fifty guineas, and it is now announced that the Cloth-workers' Company have voted a similar sum to the same institution. This is the second donation from the Cloth-workers' Company.

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A CASE OF PROSTATIC ABSCESS.

BY RICKMAN J. GODLEE, M.S., F.R.C.S.,
ASSISTANT-SURGEON TO UNIVERSITY COLLEGE HOSPITAL.

THE clinical features of prostatic abscess are often so obscure and apparently anomalous that a short account of the following case may, perhaps with advantage, be placed on record.

A. B——, aged forty-eight, but quite grey, and looking rather older than his real age, was admitted into University College Hospital on Sept. 25th, 1879. His first symptoms occurred in August, 1879, and consisted simply of an indefinite pain in the penis and some discomfort between his legs and at the lower part of the back. Cold compresses were applied and the pains disappeared, but returned at the end of eight or ten days more severely, accompanied by increased frequency of micturition, especially at night. These symptoms increased in severity, and about this time a small stone was passed, which the patient described as of the size of the end of a wooden match. After the passage of the stone he was relieved, but a slight purulent discharge occurred from the urethra. The relief, however, was only temporary, and early in the month of August he consulted Dr. Pomian, of Stoke Newington. Some cystitis then existed, but not to any great extent. A catheter and a sound were introduced on more than one occasion, and once a little blood followed the withdrawal of the instrument.

The dysuria increased about this time very much, so that when I saw him he had an irrepressible desire to micturate sometimes as often as every twenty minutes, night and day. These attempts were accompanied by most agonising pain, and, moreover, were very ineffectual, so that it was absolutely necessary to pass a catheter three or four times a day. On passing the sound an obstruction was met with close to the neck of the bladder; the instrument was also turned over slightly to the right side as it entered the bladder. Sounding caused the patient intense pain; no stone was felt, but a little blood and pus appeared on the end of the instrument. An examination of the rectum showed that the prostate was slightly enlarged and hard, the enlargement being somewhat greater upon the left side. The urine was measured during one period of twenty-four hours; it amounted to 76 ounces, sp. gr. 1010, light in colour, somewhat turbid, throwing down a white deposit of phosphates, a little pus, and a very little mucus; reaction acid; a trace of albumen; no casts. His temperature on admission was normal.

I may now describe together the symptoms up till October 16th.—Probably as a result of the sounding the patient had an attack of orchitis, which sent his temperature up to 102° and 103°, and gradually subsided. The painful and spasmodic micturition varied a little from time to time, but continued a most distressing symptom, and necessitated the daily use of the catheter; the introduction of which required increasing care from the fact of the existence of an obviously increasing obstruction to the left side of the neck of the bladder. The character of the urine remained unchanged. The patient had three well-marked rigors, one on the 3rd, one on the 4th, and one on the 9th. During these rigors the temperature rose to about 104°, at other times it was nearly normal. During this period, but especially after the rigors, his tongue became furred and dry, his pulse quick, he had an anxious worn appearance, and emaciated rapidly. The prostate was frequently examined, and there was an unmistakable increase in its size, especially in that of the left lobe, which extended, moreover, in the direction of the anus, and on introducing a sound on Oct. 11th I was struck with the thickness of tissue to be felt beneath the instrument by the finger introduced into the rectum. A little tenderness appeared on deep pressure in the perineum in front and to the left of the anus, but no swelling at any time. At last, on Oct. 16th, I felt sure that a sort of fluctuation existed at one point. The patient was accordingly chloroformed, and after placing him in the lithotomy position, a perforated needle was plunged into the soft spot through the rectum. This showed the existence of pus, and a guarded knife introduced in the same way gave exit to about an ounce of matter. From that moment all the symptoms disappeared. He had, I believe, slight pain in the penis on two occasions a few days afterwards, but this very soon passed off, and when I saw him last, on Jan. 12th, 1880, the prostate had nearly if not quite regained its normal dimensions, and the patient declared himself absolutely free from symptoms, and better than he had been for ten years previously.

It should be added that the medical treatment of the case consisted in giving purgative medicines, which were constantly required, and in the administration of bicarbonate of soda, tincture of hyoscyamus, and extract of belladonna. Hot fomentations were applied to the lower part of the abdomen and the perineum.

The etiology of the case probably is as follows: the stone which was passed was most likely prostatic; its presence or its dislodgment set up the prostatitis and consequent slight cystitis, and this resulted in the abscess. It must be remembered, however, that the abscess may have resulted from a wound of the inflamed prostate in the course of instrumentation. Whether or not I followed the right practice in opening it through the rectum is, I am aware, open to doubt. The possibility of such an abscess opening secondarily into the bladder, and setting up that most intractable of conditions—a recto-vesical fistula—cannot be put out of view. The alternative, of course, is to introduce a long thin knife through the perineum, and endeavour to hit the pus in this way. This might be preceded by exploration with a fine trocar. It is also very questionable whether with such symptoms as I have described it would not be advisable to make an earlier exploration with a knife or trocar. The pus, no doubt, had existed some time before it was evacuated, though, from the nature of the case, its detection was difficult. It seems likely that the larger the abscess is allowed to become the greater will be the chance of the formation of a recto-vesical fistula. I am sorry I did not administer opium pretty freely.

CONSTIPATION VIEWED AS A DISEASE 'PER SE' AND AS AN EXCITING CAUSE OF DISEASE.

BY ROBERT BELL, M.D.,
PHYSICIAN TO THE GLASGOW INSTITUTION FOR DISEASES OF WOMEN AND CHILDREN.

IT is my intention in this communication to bring under the notice of the profession a *casus morbi* which I venture to say, although it is hardly ever overlooked, does not as a rule receive the attention it deserves; and, consequently, it might very often as well be ignored altogether as have bestowed upon it the passing notice so frequently accorded it. My observations extend over a period of six years, and the cases quoted are selected from a list of over two hundred. It does seem strange to meet with individuals almost daily who have been under treatment for weeks and months, and in many instances for years, and all this without any relief being experienced, when a little judicious treatment at the commencement of the symptoms of prostration might have prevented much of the suffering that has ensued, and have afforded speedy relief.

If we remember the power that the colon possesses of absorbing fluids (which numerous experiments place beyond a doubt), we do not require to ask an explanation as to the disappearance of the watery constituent of the stools in subjects suffering from constipation. I have heard it stated by a lecturer on the practice of medicine that "it was quite compatible with health to go a week, or even longer, without having an evacuation of the bowels"—that, in fact, it was all a matter of habit. Now, my observations go entirely to disprove such statements; moreover, such remarks are most apt to lead a student to look upon constipation as quite a trivial matter. If he does so, he will doubtless find that he has a great deal to unlearn, as he will soon discover that quite a host of complaints in every period of life may directly or indirectly take their origin in this abnormal condition of the bowels, and in very many instances the

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symptoms as a whole can be shown to be dependent upon this morbid condition. How is it that a smart purge, and a thorough clearing of the *primæ viæ*, have such a beneficial effect when one is feeling out of sorts? One rarely begins the treatment of any disease without being first satisfied as to the state of the bowels and endeavouring to rectify them. A purgative will probably be given if there is constipation, and yet in numberless instances purgatives may be given over and over again without having the effect of clearing away scybalous masses from the lower bowel. When constipation has continued for a lengthened period, the colon becomes distended, and the sacculæ attain a greater capacity. The gut loses its tonicity, and consequently its power of contracting upon and expelling the fæces is reduced very materially. Thus we find that patients, when asked if they have a motion of the bowels every day, though they may insist that they are quite regular in that respect, yet, on close questioning, are led to confess that they never experience that sense of complete relief which they would wish to feel after a stool, but, on the contrary, that there is a desire to sit on the W.C. and endeavour to void more fæces. It will also be found that such individuals always complain of the fæces being lumpy and difficult to pass. Others again will inform you that, so far from their bowels being constipated, they have frequent attacks of diarrhœa, but it will not be difficult to discover that such attacks are invariably preceded and followed by constipation; moreover, that the diarrhœal evacuation contains hard pieces of feculent matter often described as pellets. How are these little attacks of diarrhœa to be accounted for? That it is not diarrhœa in the ordinary sense of the word is not difficult to show, as the stools are small in quantity, and do not come away with the rush that is generally a symptom of diarrhœa in its true type. This form of diarrhœa occurs most frequently early in the morning, often necessitating the patient rising out of bed and going to stool; indeed, there is no choice, as the desire is so urgent. There may be two or three such stools before breakfast, and the probability is there will be no more during the remainder of that day. Another characteristic of these stools is that they possess an extraordinarily offensive odour. It is quite evident that what we have to deal with at present is a "looseness" of only a limited portion of the intestine, and is due to the irritation produced by the presence of hard masses of scybala in the colon, which act as an irritant on that portion of the bowel and produces a catarrh in their immediate vicinity; the mucus which is excreted from the mucous membrane then acts as a partial solvent to a portion of the scybalous matter, at the same time a partial disintegration of it takes place; and so we find that the stools in this intermittent kind of diarrhœa always contain innumerable small pieces of hard fæces. In such attacks it must, of course, be worse than useless to employ the ordinary treatment of diarrhœa by opiates or astringents. The removal of the cause must be aimed at, and hence the importance of a correct diagnosis. It will be generally admitted that when the fæces descend into the colon they are of a soft consistence; that they are *not* hard and dry. What has become then of their watery constituents when they are converted into hard scybalous masses? Sometimes so difficult to pass are they, that an evacuation of the bowels in such circumstances may actually produce more suffering than the pains of labour, and, as I saw only a few days ago, may really bring on premature parturition. I would repeat, what becomes of the watery portion of the fæces, and what is the effect on the general system, especially the nervous apparatus, of the hardened matter lodging in the bowel? We have not to look far for an answer to the first part of the question when we are cognisant of the power of absorbing liquids which the large intestine possesses. The fluid most certainly finds its way into the blood, and thus of necessity produces a form of blood-poisoning. We may note the following effects produced by the absorption of such fetid matter,—the red corpuscles become diseased, they are altered in colour, diminished in numbers, have their carrying power lessened. Thus a sallow complexion results, dark rings appear below the eyes where the skin is thin and more transparent, the limbs and extremities are cold in consequence of oxygen being supplied in less quantity. There is a feeling of lethargy due to the blood being vitiated and the corpuscles being in this enfeebled state. Consequently the system is not nourished, and there is a falling off in flesh. Then there is a diseased blood supply circulating through the nervous system, and as a consequence nervous depression coexists. The pulse becomes slow and easily compressed. There is a feeling of numbness in the extremities, the organs of digestion and assimilation are lowered in tone. There is loss of memory, and a want of power of concentrating the thoughts, a heavy drowsiness supervenes, which never seems to be removed by what appears to be really sound sleep, and all the functions of the body are carried on in an unsatisfactory way. We will find, too, that the patient is tired on very little exertion of any kind. Then there are numerous local symptoms produced by the presence of scybala in the colon, which very often are attributed to other causes. Among these may be noted most acute pain on pressure over the situation of the hardened matter, and so severe may this be that it may simulate peritonitis. If it occurs in women we often observe, as a consequence, ovarian neuralgia, this being excited by the irritation conveyed to the ovary by the presence of scybala in its immediate neighbourhood, while a predisposing cause exists in the lowered nervous tone consequent upon blood-poisoning. Frequently there is acute pain complained of over the ileo-cæcal valve, and in many, if not the very great majority of instances, typhlitis is a direct consequence of the irritation produced by scybala lodging in the cul-de-sac. Irritability of the bladder is another local symptom frequently resulting from a similar condition of things in the immediate neighbourhood of the organ. Displacements of the uterus may be and are caused by large accumulations in the rectum, and in every case are very much aggravated by such a state of matters. I have seen cases where an accumulation of this kind has been mistaken for pregnancy, and at other times where it has been looked upon as an ovarian tumour. A very constant effect of this condition is the prevention of refreshing sleep at night. The patient always complains of dreaming, and nightmare is a frequent symptom of this torpid state of the bowels. It will invariably be ascertained that there is no refreshment from sleep, in fact the remark is generally made that he or she is more tired in the morning than they were on going to bed. In many cases I have found the temperature of the body rising at evening and falling again towards morning, so much so that typhoid fever has been suspected to be present. If children are the sufferers, a whole train of ailments may result, an idea of which will best be formed by a perusal of the report of cases given below.

In a most careful perusal of the most recent works on the practice of medicine, I cannot find in one of them the subject of constipation gone into *per se*, and even where it is mentioned as a concomitant of other diseases, it is, barely glanced at. This is all the more strange when it is beyond doubt, not only a disease having a most enormous train of painful symptoms, but is a predisposing cause of quite a host of other ailments.

(To be concluded.)

THE ALKALINE, SALICIN, AND SALICYLATE OF SODA TREATMENT OF ACUTE RHEUMATISM.

BY ROBERT SINCLAIR, M.D.,

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(Continued from page 205).

SALICYLIC ACID AND ITS SALTS.

IN THE LANCET of Jan. 8th, 1876, there appeared a short paragraph containing a sketch of the results obtained by Dr. Reiss, of the Berlin Metropolitan Hospital, in the treatment of 400 cases of febrile disease by means of the salicylate of soda. Briefly stated, the effects were—rapid reduction of temperature; hastened convalescence; frequently profuse perspiration; occasionally tinnitus aurium, dimness of vision and vomiting; no effect on the pulse; antipyretic effects in inverse ratio to the fatality of the diseases.

About the same time Professor Traube and Staff-Surgeon Stricker were making trials of the drug in febrile diseases, and especially in acute rheumatism. The results exceeded their expectations. Dr. Stricker very early came to the same conclusion in regard to salicylic acid, that Dr. Maclagan formed regarding salicin—namely, that the more acute the attack the better the result. His plan has usually been to administer the drug in fifteen- to thirty-grain doses,

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every hour for six hours. By the end of this time the patient is usually ready to fall asleep, and may be left undisturbed for some time. The same, or a similar quantity, is given daily till recovery is ensured. "All the patients thus treated," says Dr. Stricker, "were not only relieved of their fever, but also of their local symptoms—i.e., the swelling, redness, and especially the painfulness of their joints within forty-eight hours, most of them even within a much shorter period."[1] This statement is based on the observation of fourteen cases. Dr. Hermann Senator, of Berlin, and others in Germany have come to similar conclusions, which for the most part have been stated with great moderation. The acid and the salts appear to be used indifferently by many physicians; but the salicylate of soda is now the favourite form, in this country at least. The tendency to cardiac complications is believed to be diminished only in proportion to the reduction of fever; and their presence is little if at all influenced by the drug. Chemically pure preparations must, it need hardly be said, only be used. The toxical effects observed in several cases—namely, deafness, giddiness, vomiting, sighing respiration, delirium, and depression of the cardiac action, as well as the hæmorrhagic erosions of the mucous membrane of the stomach and intestines, discovered by Drs. Wolffberg and Reiss, are probably due in a measure to adulteration with carbolic acid; but they have not been wanting in some cases treated with perfectly pure preparations.

The eighth volume of the St. George's Hospital Reports (1874–76) contains two excellent papers on the treatment of rheumatism by salicin and salicylate of soda. One is by Drs. Whipham and Collyns, the other by Dr. Cavafy.

The cases of Drs. Whipham and Collyns are of little or no value for statistical purposes, for the following reasons:—The number of cases is too limited; some of them were evidently acute, some subacute, some chronic; five only were subjected to salicylate of potash alone, one to salicin alone, two to both drugs at different times, one to salicin, iodide of potassium, and iron, and one to salicin, iodide of potassium, iron, and a blister. But the cases are nevertheless instructive in other ways. In one (case 8) pericarditis was developed three days after the commencement of treatment by salicylate of potash. In another (case 9) some cardiac affection, the nature and termination of which are not at all clear from the report, was developed under treatment by salicin. One thing is clear enough, however, that salicin was not given in sufficient doses. Of seventeen cases of rheumatism and other diseases treated by salicylate of soda or potash, nine suffered from toxic symptoms.

Dr. Cavafy's paper is of quite another kind. He records twenty-one cases treated by one drug—namely, salicylate of soda, and the salient points of each case are stated with great distinctness. Moreover, his results are, in the main, a fair illustration of what the drug can do, and of what it has done, in the experience of the profession during the last three years and a half. I have therefore tabulated, with the utmost care, the more important results of those twenty-one cases.

No.	Character of attack.	Duration before admission.	Duration under treatment of rheumatic symptoms—pain, swelling, and abnormal temperature.	Residence in hospital.	Toxic symptoms noted.
1	Relapsing	2 weeks	37 days	46 days	No
2	Continued (?)	2½ months	5 ,,	14 ,,	No
3	,,	10 days	6 ,,	18 ,,	No
4	,,	1 week	2 ,,	16 ,,	No
5	,,	18 days	4 ,,	16 ,,	Yes
6	Gonorrhœal(?)	3 weeks	16 ,,	26 ,,	Yes
7	Continued	1 week	3 ,,	14 ,,	No
8	Relapsing	4 days	44 ,,	61 ,,	Yes
9	,,	4 ,,	37 ,,	47 ,,	Yes
10	Continued	2 ,,	5 ,,	12 ,,	Yes
*11	Relapsing	14 ,,	35 ,,	66 ,,	Yes
12	Continued	3 weeks	2 ,,	11 ,,	No
13	,,	10 days	3 ,,	11 ,,	Yes
14	,,	4 ,,	2 ,,	10 ,,	No
15	,,	3 ,,	2 ,,	6 ,,	No
16	,,	4 ,,	7 ,,	28 ,,	Yes
17	,,	4 ,,	1 ,,	9 ,,	Yes
18	,,	8 ,,	5 ,,	17 ,,	Yes
19	,,	5 ,,	5 ,,	21 ,,	Yes
20	Relapsing	11 ,,	17 ,,	75 at least	Yes
21	Continued	1 month	3 ,,	8 days	Yes

* This case was treated partly in hospital and partly at the Wimbledon Home for Convalescents. The whole period is included, as the case was discharged from St. George's before the disease was quite subdued.

1 Berlin. Klin. Woch., Jan. 3rd, 1876.

The first thing that strikes one on examining Dr. Cavafy's careful reports and charts is the apparently rapid effect of the drug in relieving pain and reducing temperature; and if this were all that is wanted, we might well congratulate ourselves that "we at last possess a most efficacious remedy for acute rheumatism."[2] But here I, for one, am prepared to join issue with Dr. Cavafy. We want something more. We want a remedy that will speedily free our patients from the stiffness, the anæmia, and the weakness incidental to the disease, and a remedy, moreover, that will enable them to resume their ordinary occupations and pleasures at the earliest possible moment. Let us see how far the salicylate of soda fulfils these objects. The average duration of the rheumatic symptoms—namely, pain, swelling, and elevation of temperature—was 11·4 days; and the average residence of the patients in hospital was 25·3 days. Dr. Fuller, on the other hand, found the average residence of his patients in hospital, under the alkaline treatment, to be 20·1 days; and if we include twenty-eight patients who had pericarditis on admission, it was still only 22·2 days. I am quite aware that Dr. Cavafy may object to the total duration both of the attacks and intermissions of his relapsing cases being included under the column headed "Duration under Treatment." But my reply to this objection is, that I have taken all his cases into calculation, some of them evidently exceedingly trifling attacks; and I repeat that the drug must be tested by its power of *preventing* relapses and producing speedy convalescence. It has been already shown by Dr. Southey, to whose paper reference will shortly be made, that the *attacks* in relapsing rheumatism tend to terminate without treatment. The prevention of the *occurrence of relapses* has not been assisted in the slightest degree by the salicylate of soda, either in Dr. Cavafy's cases or mine. It would no doubt be much more satisfactory to separate the continued from the relapsing cases in our calculations and comparisons; and I hope this will be done in all future publications. But whenever we compare our results nowadays with those of the less recent systems, we must, in the interests of truth and fairness, take continued and relapsing cases together, for the simple reason that in former statistical returns the separation has not been made. There are only two other points in these twenty-one cases to which I would draw attention. Although, in a very small minority, cardiac murmurs were developed under treatment, it does not appear that any grave cardiac complication occurred in a single case. On this result Dr. Cavafy is to be congratulated. The other point is, that toxic symptoms, some of them very serious, occurred in thirteen of his twenty-one cases. Without pretending to explain the cause of the protracted convalescence which many of us have observed in certain cases of rheumatism treated by the salicylate of soda, I should like to throw out the hint that the depressing effects of this drug may have had some share in the unhappy result.

One of the most valuable contributions ever made to our knowledge of the natural history of acute rheumatism is to be found in the St. Bartholomew's Hospital Reports, from the pen of Dr. Southey, who advises his brethren in attempting to form an estimate of the effects of any remedy, new or old, to distinguish carefully between two forms of the disease, the continued and the relapsing. The former, he believes, usually remits about the eighth or ninth day, and about the twenty-first day the patient is able to be out of bed. The latter remits about the seventh day, whatever treatment be adopted. But, while in the former variety convalescence usually proceeds satisfactorily, in the latter the patient, after being apparently well, and perhaps out of bed, is again seized with rheumatic inflammation of his joints, which once more remits quite suddenly on or about the fourteenth day from the first seizure. This remission may be permanent, and usually is a longer remission than the first, but it may be succeeded by a second, a third, or even a fourth relapse.[3] Dr. Southey does not appear to be so enthusiastic about the latest additions to the *materia medica* of rheumatism as some of our brethren, for he states that though salicylate of soda has done some good, it has never, in his experience, prevented relapses. This periodicity he recommends us to attack with large doses of quinine.

Dr. Julius Pollock, of the Charing-cross Hospital, assures us that he has used salicin without much success; but, he adds, "the evidence in favour of salicylate of soda in the treatment of articular rheumatism is becoming so overwhelming that its great value must shortly be thoroughly

2 St. George's Hospital Reports, vol. viii., p. 200.

3 St. Bartholomew's Hospital Reports, vol. xiv., p. 19.

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established."[4] Dr. Pollock is convinced of the efficacy of the drug, it should be said, in *all* forms of articular rheumatism. He usually gives it in combination with "two or three grains of carbonate of ammonia in an ounce of camphor water, or with tincture or syrup of orange, in orange flower water,"[5] and he always gives it freely. In the appendix to the monograph quoted above, Dr. Pollock records his notes of sixteen cases, fourteen being acute, and two subacute rheumatism. The results show, for the most part, that salicylate of soda has considerable influence in reducing fever, abolishing pain, and in many cases bringing about a speedy convalescence. But they show something else that should be carefully remembered by the salicylic zealots. They show three fatal cases in a total of sixteen, and they prove incontestably that the drug does not invariably prevent pericarditis, endocarditis, pleurisy, and hyperpyrexia.

In a survey of the chaotic literature of salicylic acid, we cannot omit reference to one of the earliest papers on the subject, by so well-known a writer as Dr. Broadbent, of St. Mary's Hospital. Whatever may have been the extent of Dr. Broadbent's experience at the time he penned the article of April 8th, 1876, his published cases amounted to four, the rapid and satisfactory terminations of which, under salicylic acid, are undeniable. Such results were no doubt a sufficient excuse for a little comfortable comment. But they by no means palliate the injudicious haste with which Dr. Broadbent rushed to the conclusion that, "according to present experience, rheumatic fever, when treated by this drug is an affair of two or three days;"[6] a remark that was shortly afterwards echoed by a similar one in regard to salicin, by Dr. Maclagan—"Seeing a patient suffering from acute rheumatism I have no hesitation in assuring him that within forty-eight hours, possibly in twenty-four, he will be free from pain."[7]

Dogma like this cannot be sufficiently deplored. It hinders the progress of therapeutics, imperils human life, and in the long run injures the cause it is intended to help. Unfortunately, the student of the history of medicine is no stranger to confident assertions; some with good foundation, some with marvellously little, and some with none. Dr. Broadbent is surely aware of the good results of the alkaline treatment in the hands of Fuller, Garrod, Furnivall, and Dickinson, and he cannot forget that Dr. Hope, after six years' experience, in 200 cases, preferred a line of treatment that included moderate bleeding, calomel, opium, colchicum, and salines, for the excellent reason that, thus treated, his patients were usually well within a week, and able to resume their occupations in ten days after the cessation of pain. These facts are not mentioned with the view of depreciating the undoubted valne, in certain cases, of salicin and the salts of salicylic acid, but merely for the sake of keeping in view the important truth, that the rapid cure of acute rheumatism is not altogether new.

(To be concluded.)

HUMAN AND ANIMAL VARIOLÆ: A STUDY IN COMPARATIVE PATHOLOGY.

BY GEORGE FLEMING, F.R.C.V.S.,
ARMY VETERINARY INSPECTOR.

(Continued from p. 166.)

IT has been stated that cow-pox is now a very rare disease, and that the probable cause for its being more frequent in the days of Jenner was the much greater prevalence of small-pox; thus leading to the inference that the one disease was dependent on the presence of the other. But this statement will not bear close examination. We have no definite evidence to prove that cow-pox was a common disease before vaccination became general, nor yet that it is a very rare malady now; still less that its frequency had any relation to the occurrence of small-pox. We have only the testimony of Jenner, and two or three other observers of the early part of this century, and they may have witnessed merely local outbreaks, such as occur now and again in different countries. It appears to have been known from time immemorial, and was certainly so in India, Persia, South America, and the Continent of Europe, long before the time of Jenner. But it had not been studied until Jenner's discovery, and its presence may have often been overlooked, or it may have been confounded with other bovine disorders. Soon after the announcement of its prophylactic influence on man, it was sought for and found at Castres, Nancy, Metz, Strasbourg, and Rambouillet, in France, as well as in various parts of Italy, Prussia, Spain, Wurtemburg, Holstein, Denmark, and elsewhere in Europe. That cow-pox did appear, and that it was perhaps somewhat common in that part of Gloucestershire in which Jenner resided, and indeed in many places in England, is not at all denied. But that its prevalence was owing to small-pox being rife, is opposed to all clinical and experimental evidence. Small-pox is transmitted with difficulty to the cow, and does not produce cow-pox, as I have already asserted. If cow-pox was more common a century ago than now, this may be due to the greater care bestowed upon cattle in their dwellings and general management now than formerly. Dairies are kept cleaner and more wholesome, and people who milk and go among cows are more proper in their own persons, than they probably were years ago; consequently, if a case of cow-pox does appear, it has not the same facilities for transmission to other cows. This transmission appears to be mainly effected by the milker; the vesicles, being chiefly localised on the udder or teats, are ruptured in the act of milking, and the virus on the dairymaid's hands is transplanted into the lacteal apparatus of the cows she next milks. Sores are frequent on the teats, and the presence of these renders vaccination all the more certain. It is very unlikely that people affected with small-pox would work in dairies, and still more unlikely, if they did so, that they would infect the cows. If cow-pox could be produced through the medium of diseased dairymaids, it ought to be more common now than before vaccination was introduced, seeing the great difficulty with which small-pox is transferred to the cow (when it does not produce vaccinia), and the readiness with which this animal is vaccinated.

If small-pox could accidentally give rise to cow-pox, surely evidence of this would be forthcoming at the present day, when we have frequent, severe, and extensive outbreaks. There are certainly instances recorded of this so-called accidental transmission observed many years ago, as well as coincident outbreaks of cow-pox in localities where variola was prevalent; but these instances are so very few, and depend, seemingly, upon such a mere chance, that they cannot be accepted as affording reliable proof of the actual possibility of such transmission; while the fact that small-pox prevails intensely over wide districts at times, without variola being observed in the bovine or other animal species, as well as the other fact that cow-pox is observed here and there—individually, sporadically, enzootically, and even epizootically—without, however, small-pox being observed, goes far to negative the likelihood of accidental transmission.

That cow-pox may be a less frequent disease in this country than formerly is quite possible, and, for the above reasons, very probable; though in this respect England would not be an exception, for the veterinary professor, Spinola, mentions that it was a somewhat common malady towards the end of last century all over the German littoral of the Baltic, but to-day it is rare. Like all other diseases of this kind, however, it would appear to have its periods of subsidence and recrudescence. Neumann states that in Holland, in certain years, it was seldom seen, while in others—as in 1805, 1811, and 1824—it was rather frequent. Ritter says that in Schleswig-Holstein it is always present to some extent, but that in some years it assumes an epizootic form, and is propagated from herd to herd—as in 1824, 1826, 1829, 1830, and 1832.

Now and again, too, we read of isolated outbreaks in different countries, which attract attention because of the large number of animals affected. The most recent of these is that recorded by Professors Oreste and Sabbatini in 1876 (*Gazetta Medico-Veterinaria*), as occurring among a herd of buffalos, more than two hundred of these animals, young and old, being attacked. The eruption in the cows was chiefly confined to the udder and teats, but the sucking-calves had it on the nose and lips. The pigs which consorted on the same pastures were not infected. The eruption was typical. According to the *Deutsche Zeitschrift für Thiermedicin* (December, 1879), cow-pox appeared as an epizooty in the summer of 1876, in the vicinity of Reykjavik,

[4] Notes on Rheumatism, by Julius Pollock, M.D., Second Edition, p. 47. [5] Ibid., p. 45.
[6] THE LANCET, April 8th, 1876, p. 532.
[7] Brit. Med. Jour., May 20th, 1876, p. 627.

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Iceland. It had never been seen there before, and caused very great alarm; all the milch cows became progressively affected, and in several instances milkers got inoculated in the hands. Neither in this, nor any other of the outbreaks mentioned above, is any allusion made to small-pox being prevalent in mankind.

In this country we have no means of arriving at any conclusion with regard to the extent to which it may prevail, as no reports are called for by Government, and veterinary surgeons are seldom, if ever, required to attend cases of cow-pox, these being usually so trifling. Indeed, it is not at all improbable that many pass unperceived, and those observed are not mentioned by dairy-keepers or milkers, or they may look upon the eruption as analogous to that which is sometimes seen on the teats or udder after parturition. The pustules are broken, too, almost before they are developed, in the act of milking, and the sores which result are considered to be only simple abrasions or fissures, so common in this region. Therefore it is that there are very few veterinary surgeons, even of those practising in the most populous cattle districts in this country, who have ever seen a case of cow-pox. But we see no reason for thinking that the malady is much less common here than elsewhere—say in Wuftemburg, where the Government reports, drawn up by district veterinary surgeons, are very full and complete, and where rewards are offered for every case of cow-pox from which children can be vaccinated. According to Hering *(Repertorium der Thierheilkunde)*, in Wurtemberg, during the ten years from 1827–37, there were 69 cases out of 84 which furnished an excellent vaccine lymph, and 152 out of 208 cases in which the lymph did not yield such satisfactory results; making in all about 30 reported cases every year. In 1873, there were 39 cases, from which 52 children were successfully vaccinated; the cases were most numerous in April (18), May (13), and and June (8), and one instance of accidental infection was reported—a farmer's wife, who had milked a cow in which the pustules had arrived at maturity, had a vaccine vesicle on the thumb. In 1874, 24 cows and 4 heifers were reported, but complaints are made that the information with regard to these came too late to make many of them available for vaccination—the pocks being either in the last stage, or ruptured and only sores remaining. Nevertheless, lymph was procured from twelve, and with this twenty-five to thirty children were successfully vaccinated. Some interesting details are given with regard to these cases of cow-pox, one of which was an example of *variola succineæ*. Surgeon Löffler, of Rottenburg, received on April 20th one of the heifers—a two-year-old animal, twenty-five to thirty weeks pregnant, and very healthy. On the two posterior teats of the right side were three fine pustules, and on the last teat of the left side was another. On opening these a yellowish glutinous fluid escaped. On the 23rd new pustules appeared. The udder and teat were hot, and on the latter were several small and large oval pustules, each with a red areola. When opened there flowed a yellow thick lymph from them; there was a very small quantity of clear lymph at the end. Two children were inoculated by puncture, and an additional quantity of lymph, mixed with tepid water, was poured into the wounds. In one child there were developed four perfect and fine *(Vollkommen schöne)* silver-hued pustules, and in the other child one pustule. From these two children five others were successfully vaccinated. Another similar case is related by Dr. Kieser, of Gmünd, in which the cow was three years and a half old, and yielded lymph with which three children were vaccinated, and from these a large number. The details of these cases are full of interest, but I cannot dwell upon them here. I may mention, however, that among the cows were two cases of *V. vacc. nigr.* In 1875 twenty-three cases of genuine, and seventeen of spurious cow-pox were reported. Nine of the former yielded satisfactory inoculations in children, and the owners of the animals were consequently rewarded. One cow was reported to have shown a succession of genuine pocks for two years; it was seven years old, and was pregnant with the fifth calf. On the udder, on April 94th, were a number of pustules from the size of a pea to that of a kreuzer, surrounded by a red border, and containing a partly watery-looking and partly milky-looking lymph. In the course of the next day the pustules became desiccated. On April 24th four new pustules were seen, these soon became encrusted, and were succeeded by others which were merely abortive pustules, and the case continued under observation for some time, not as one of vaccinia, but as one of chronic pemphigus. In 1876, it is again complained that cows were only reported as affected with pock when they became visibly unwell, the secretion of milk diminished, and the teats so swollen and sore that milking was impossible. There were forty-six cases reported, twenty-one of which were genuine, and twenty-five spurious. Successful vaccinations were notified in a number of children, as well as some instances of accidental infection. One of the latter was a girl who daily milked a cow which had calved fourteen days previously; three teats of the animal had sores and pustules on them, and the girl inoculated her nose through scratching it while she was milking. In 1878 thirty-six cows and two calves were reported, but in consequence of reaching them at an unfavourable period, lymph was collected by the district veterinarians from only five cases; this was successfully utilised. The Minister of the Interior had offered a reward of twenty-four marks to owners of cattle for every animal they timeously reported as suffering from cow-pox.

None of the other German States include this disease in their reports. Belgium has issued recently a Health Report of Animals ("Etat Sanitaire des Animaux Domestiques"), published in the Bulletin of the Conseil Supérieur d'Agriculture. In that for 1877, I find that at Châtelet there was an outbreak of vaccinia among dairy cows; but when the veterinary surgeon saw them the attack was subsiding, and on the cows still affected the pustules were either broken or dried up. Before the eruption appeared the cows gave an abundance of milk, and were grazing in the fields. At Wommen a large number of cattle were affected with vaccinia, and the same reporter mentions pigs as being affected with variola in the same district.

Cow-pox appears in the Danish Health of Animals Returns; and I observe that in 1878 there were reported 581 cases in sixty-nine localities, forty-five of these being in Northern Seeland; they occurred, as in other countries, all the year round, but were most numerous towards September.

I have taken the liberty of bringing forward this evidence to prove that cow-pox is not an extinct disease; that the chance cases reported in such small countries as Wurtemburg, Belgium, and Denmark amount to a considerable number in the course of the year; that there is ample clinical and experimental proof that the malady is really vaccinia, and has no relation whatever to human variola; that the presence of the disease in isolated cases, or in a sporadic condition, gives it the power of assuming an epizootic form when circumstances permit; and that, although it is more or less denied that cow-pox exists in this country, there is every probability that it is at least quite as common as in Wurtemburg, though perhaps less so than in the days of Jenner.

With regard to the localisation of the disease in the cow, it is quite true that the mammæ and teats are the special seat of the eruption, just as the mouth, lips, and limbs are the ordinary situation of the horse-pox. Nevertheless, cases now and again occur in which, as also in the horse, the eruption is not limited to the usual parts, but appears on the muffle, nostrils, and other regions where the skin is thin and the hair scanty. Pilger, D'Arboval, and other veterinarians testify to this, as well as the Wurtemberg reports. But the eruption is very far from being general over the body, even in these instances.

The female sex of the animal has been brought forward as an argument in favour of cow-pox being communicated by the hands of persons affected with small-pox. But it is quite forgotten that there are more cows than bulls or bullocks; that they are generally completely under observation in cowsheds; that while in milk their teats are constantly handled, and therefore the eruption can be felt and seen, while inoculation from cow to cow is made all the more easy, and the disease much more diffused than it would otherwise be. With the bull or the bullock, on the contrary, there are none of these opportunities for observation or extending the contagion. The bull is seldom indeed with the cows, and then only for a brief period; while the parts which might be the seat of eruption are rarely handled, and perhaps never examined. The bullock is still less, perhaps, exposed to contagion or submitted to examination. But I entertain no doubt whatever that both the bull and the bullock do suffer from vaccinia, and it is quite ridiculous to imagine they do not. Male bovines have been largely employed in vaccination experiments on the Continent, and the vaccine lymph has acted as promptly and effectively on them as on the cow. At Bâle, the veterinarian, Sigismund, for a long

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time furnished the vaccinators with lymph cultivated on bulls which were intended for slaughter; he inoculated them on the scrotum. Chauveau has also successfully vaccinated bulls, and so have other experimenters. Roloff, of the Berlin Veterinary School, has demonstrated how easily the bull could be infected. He slightly abraded the skin of the scrotum, and gently rubbed the vaccine lymph upon it; the characteristic eruption took place in due course. If bulls or bullocks stood in cattle-sheds with an equal number of cows, and were treated and exposed to contagion in the same way as these, there is every probability that we should have bull- or bullock-pox frequently enough. Where this association is allowed to take place on the Continent, bulls and bullocks are infected. An interesting case of this kind is recorded in the *Repertorium für Thierheilkunde* for 1879. A bull, two and a half years old, is there described as affected with vaccinia, the pustules and crusts being situated on the scrotum, a hind and fore foot, and lips. The animal suffered a good deal. The lymph from the pustules was employed with success in the vaccination of children. So that it is simple nonsense to assert that the male bovine is exempt from vaccinia; and it betrays ignorance of what has been observed by competent men, as well as lack of knowledge of pathology in general and this disease in particular.

(To be continued.)

WOOD'S OPERATION FOR RADICAL CURE OF SCROTAL HERNIA; COMPLETE CURE.

By F. C. BARKER.

A HEALTHY-LOOKING Hindu vagrant lad of twenty was admitted in October, 1879, into the Surat Civil Hospital for the relief of hernia. He had been in hospital previously for the removal of preputial chancres by circumcision, and for fever. The hernia was a year old, readily reducible, and as easily caused to descend by position and coughing. It was said to have been acquired during a straining effort from dysentery, followed by faintness, and a fall in which the right leg was extended into a neighbouring hole. The inner and outer inguinal rings were about three-quarters of an inch apart.

The operation was performed on Oct. 11th with chloroform, an assistant keeping up the intestine. The wires (copper, plated with silver) were crossed over the pad, according to the directions of surgical manuals, but the lower one was brought through a special slit made for its exit higher up than the scrotal incision, as the latter, from its direction, would have been kept agape from a wire drawing up one of its sides.

The wires were drawn out by an assistant on the tenth day after operation, some sloughing having meanwhile taken place of the cellular tissue of scrotum and groin, and of a patch of scrotal skin[1] below the incision with a pretty sharp febrile movement for the first day after operation, a fetid black discharge with gaseous gurgling following on the second. After this a gradual cleansing, aided by carbolic lotion injections, took place. On subsidence of the sloughing action a long sinus was left, uniting all three wounds; this was completely laid open with a bistoury on the twenty-first day and its floor discovered to be composed of the invaginated tissues properly adherent in their new situation and undisturbed by violent coughing, which also did not interfere with the *tucked-up* position of the testicle. This wound quickly contracted under cleansing and disinfecting treatment and carbolic oil dressing, and finally cicatrised under a thick scab formed by applications of caustic on the 2nd and 3rd December.

He was discharged on the 15th December with the wound quite healed, testis still tucked-up and of *natural size*, and no descent of hernia on standing and coughing.

[1] This proved favourable to a good after result, from the reduction caused in the size of the scrotum.

VACCINATION GRANT.—Mr. Philip E. Hill, Crickhowell Union, has for the second time received a grant from the Local Government Board of £12 17s. for successful vaccination in his district.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quampluriumas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et later se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

POPLITEAL ANEURISM; FAILURE OF PRESSURE; LIGATURE OF FEMORAL ARTERY; RAPID RECOVERY; REMARKS.

(Under the care of Mr. BELLAMY.)

FOR the following notes we are indebted to Mr. Harris, dresser at the hospital.

John K—— was admitted on Oct. 30th, 1879, with popliteal aneurism. He was a strong, healthy-looking man, and had been in the army for five and a half years, and left it August 10th, 1876. From that time he had been a gentleman's servant. He had been a moderate drinker, but had had no previous illness until three years before, when he contracted syphilis, followed in a few months by secondary symptoms. On leaving the military hospital he caught a severe cold, which brought on an attack of rheumatic fever, which lasted five months. On New-year's eve, 1878, he was decorating a room with evergreens when he fell from a pair of steps—a height of about six feet—on to his feet. His legs bent under him, and he sprained his wrist against a wall. From that time he felt no pain until Oct. 21st, 1879, when he found that his knee hurt him, and the pain was referred to the popliteal region, where a swelling appeared. He had been walking rather more than usual, but could not remember that he had given himself any particular strain.

On admission there was a regularly circumscribed tumour in the popliteal region, about the size of a large pigeon's egg, which pulsated excentrically. When the common femoral artery was compressed, the pulsation ceased, and the tumour could be emptied. On removing the compression the blood rushed into the tumour with a coarse-blowing sound, and on listening with the stethoscope the bruit was found to be synchronous with the ventricular systole. The man complained of pain, which was diffused around the knee-joint, and was steadily increasing in severity, and extending downwards into the leg.

The sac of the aneurism being very thin and rapidly getting larger, the application of Esmarch's elastic bandage was tried on November 4th, for four days for about thirty minutes every four hours.

There was no appearance of the formation of a clot, and the tumour became larger, the pulsation greater, the sac much thinner. Mr. Bellamy, therefore, determined to ligature; and on the 6th, after allowing the patient some rest from the previous treatment, he tied the superficial femoral artery antiseptically, using a strip of a bullock's aorta, as recommended by Mr. Barwell.

The patient slept fairly well, and did not complain of pain next morning. There was no return of pulsation in the tumour, nor could any be felt in either of the tibial arteries. On the 8th there was absence of pulsation in the sac, and consolidation was taking place. On the 13th there was still absence of pulsation. The sutures were removed, and the edges of the wound brought together by strapping. On the 19th the ligature seemed to have become absorbed. There was, for the first time, slight pulsation in the anterior tibial artery, but only a "flicker;" the leg was warm. On the 24th, antiseptic dressing was discontinued, the wound was healed and the sac devoid of pulsation. The patient was allowed to get up; and on the 27th, he left the hospital at his own request.

Remarks.—In a subsequent clinical lecture Mr. Bellamy remarked on the rapid development of the aneurism, and its evidently rapid increase during the time the elastic bandage had been applied. The object in using the bandage in this case was rather to develop the collateral circulation than to induce consolidation in the sac, and the result showed that this was speedily accomplished, the temperature of both limbs being the same throughout the treatment, and the continuation of the pressure would probably have burst it:

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In referring to the frequency of aneurism of the popliteal artery, Mr. Bellamy said that there were mechanical reasons, apart from pathological ones, which appeared to affect this vessel in particular. At either extremity of the vessel is a musculo-tendinous arch, which confines it and exerts pressure upon it; moreover, it is pushed backwards slightly by the contraction of the popliteus muscle during early flexion, and which makes the posterior aspect of the knee somewhat convex. As a result of these pressures at either extremity of the vessel, added to the fact that it is attached to the musculo-tendinous rings, there might be a kind of "kinking" of the artery, which, owing to the force of blood-stream, would be exposed to greater pressure than elsewhere. Associated with this "kinking" is a contraction of the lumen of the vessel, which exposes its lateral aspects over the contracted portion to a still greater pressure. It is noticeable that all vessels which lie in flexures, and which are surrounded by fat and cellular tissue, are more prone to an aneurismal condition than those which are subjected to the pressure of enveloping muscles. The internal aspect of the popliteal artery has some transverse striæ; whether this is a provision against rupture from pressure or stretching, or a result of continuous flexion, is not quite clear. Some have even observed transverse folds of its inner coat.

CENTRAL LONDON SICK ASYLUM.

DISLOCATION OF THE HEAD OF THE FEMUR INTO THE FORAMEN OVALE; REDUCTION BY MANIPULATION AFTER FOUR DAYS.

(Under the care of Dr. LEDIARD.)

JEMIMA C——, aged fifty, a charwoman, admitted late on the evening of Nov. 5th, 1878. She stated that at 10 P.M. on the night of Nov. 2nd she was in the street, and was, she thought, pushed by some one. She fell on the left knee, and on coming to herself she found she could not stand. There was great pain in the left groin, and the left thigh seemed drawn up. She sought no advice until the 4th, though she was in the meantime unable to stand, and suffering pain in the left groin, hip, and knee.

On examination, the leg was half drawn up, and thrown outwards from the hip; the foot was directed forwards. There was discoloration over the inner and upper part of the left thigh, which was also swelled and deformed. The back was arched at the loins, and the left knee could not be straightened. There was flattening over the normal situation of the trochanter on the left side, and there was great width at the junction of the thigh with the trunk. No crepitus could be felt, and all movements of the thigh were very much limited. The left thigh could not be brought into a straight line with the trunk, and there was shortening of the limb to perhaps two inches, but it is difficult to measure this since the limbs could not be put in the same position. When the woman lay on her face the left thigh was still thrown outwards from the middle line, and the fold of the buttock was absent on the left side. In the groin no rounded tumour could be felt, and the artery was not raised, but there were unusual hardness and fulness on the inner aspect and upper part of the thigh, which was not felt on the right side, and on rotation of the thigh it was evident that this hardness was the head of the thigh resting upon the foramen ovale.

The patient was put under chloroform at 2 P.M. on the 7th, during the administration of which the right leg was thrown about violently, but the motions of the left were very much limited, and the abduction and other signs of dislocation intensified. As soon as the muscles relaxed the limb was seized, the thigh flexed to about a right angle and turned outwards with a gentle sweep of half a circle, and immediately the bone slipped into the acetabulum with an audible snap; all deformity at once disappeared. The patient was confined to bed for one month with a splint, and on the 11th of December she was discharged, being able to walk very well.

Remarks by Dr. LEDIARD.—There is no doubt that this patient was intoxicated when she fell, and it is somewhat unusual for a fall of this nature to cause a dislocation of the hip, a joint generally requiring some violence to displace it. I have met with one other case similar in this respect, that it occurred from a fall in the street. A boy of about fourteen was running quickly and fell and produced a dorsal dislocation of the left hip, which was readily reduced by manipulation under chloroform. This woman, however, was heavy from being rather fat, and no doubt fell with some force. The early reduction was more probably due to an extensive laceration of the capsule of the joint than to any other cause; and the mode of reduction was exactly the reverse of that recommended by Professor Bigelow, who in cases of dislocation into the foramen ovale prefers to flex the thigh and sweep it inwards and downwards.

ST. GEORGE'S (HANOVER-SQUARE) DISPENSARY.

CASE OF REMENSTRUATION AFTER EIGHT YEARS' CESSATION OF THE CATAMENIA.

(Under the care of Dr. SUTHERLAND.)

ELIZA G——, aged fifty-nine, began to menstruate when twelve years old. This then produced such a debilitating effect that at each period she was unable to walk. She married at twenty-seven, had seven children born alive, and one miscarriage. She was regular up to the age of fifty-one; then the catamenia ceased until she was fifty-eight, when they began again. She was unable to account for this in any way.

At the time of attendance at the dispensary she had been "unwell" every three, four, or five weeks for a year; the discharge being somewhat paler than usual, although at the commencement of this remenstruation, it was of a normal red colour. She applied for relief of abdominal tension, probably due to flatulence.

It may be added that one daughter commenced menstruating at eleven, and two others not till sixteen.

Note by Dr. SUTHERLAND.—In this case the reappearance of the catamenia could be traced to no distinct cause. Moral shocks occasionally produce a similar effect, as in a case I recorded, in which a woman commenced menstruating three years after cessation, from the shock of seeing her husband killed by a fall from a ladder. Dr. Crichton Browne has recorded another case where the catamenia reappeared in an old woman from the efforts made to expel a supposed child, under the delusion that she was pregnant.

ROYAL INFIRMARY, EDINBURGH.

STRETCHING OF SCIATIC, DIGITAL, AND INFRA-ORBITAL NERVES.

(Under the care of Professor SPENCE.)

FOR the following notes we are indebted to Mr. R. Purdie, M.B., C.M.

CASE 1. *Stretching of the Sciatic Nerve.*—M. F——, a miner, was admitted in the month of August of last year. He had suffered for several months from sciatica. In consequence of want of rest and exhaustion, caused by the intense paroxysms of pain, the man had become emaciated and debilitated and quite unfit for his occupation.

Before nerve-stretching was used other methods were tried as well as tonic treatment; local means, such as acupuncture of the great sciatic along different parts of its course, the use of galvanism, and lastly the use of galvano-puncture of the sciatic nerve; but none of these remedies produced more than temporary relief.

On the 3rd of September, the patient having been brought under the influence of chloroform, an incision one inch and three-quarters in length was made, from the margin of the gluteus maximus along the outer margin of the biceps; the fascia was opened and the nerve was readily exposed and hooked over the finger. It was then forcibly stretched, while the foot was held somewhat fixed by an assistant. The stretching was continued until the nerve was loosened and a sense of yielding obtained. The wound was then lightly dressed, and healed by the first intention.

Since leaving the hospital (now more than a year since) occasional slight twitchings have been felt in damp weather, but nothing compared to the intense pain suffered before the operation.

CASE 2. *Stretching of the Digital Nerves.*—The patient, D. H——, suffered from whitlow on the dorsal surface of terminal phalanx of the forefinger seven years ago, after the pus had been evacuated stiffness of the joint at the phalanx

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gradually set in, accompanied by a severe pain of a paroxysmal character, occurring most frequently at night and lasting from about a quarter to one hour. This pain began at the tip of the finger and shot upwards as far as the proximal phalanx. All feasible remedies were tried with no satisfactory result. On the 30th June, the patient having been put under chloroform and an elastic band tied tightly round the finger, Mr. Spence, by longitudinal incisions, exposed the digital nerves. He then introduced a blunt hook under each nerve and stretched these forcibly. The patient was able to walk home on the same day.

The wounds soon healed, and there has been complete freedom from pain since.

CASE 3. *Stretching of the Infra-orbital Nerve for Epileptiform Neuralgia.*—The patient, C. D——, was admitted into the infirmary on the 3rd of April last, suffering from severe neuralgic attacks on the left side of the nose, left cheek, and eyebrow, and shooting up over the forehead. His first attack was in December, 1876, continuing more or less for a month. After a period of four months he was again attacked. On that occasion some relief was obtained by the extraction of some of the teeth of the upper jaw. Ultimately the pain became almost incessant, being liable to be set up by the slightest touch or movement, as in swallowing &c., or by draughts of cold air. The attacks were most severe about midnight, and were usually preceded by a cold shiver running down the spine.

On May 22nd, the patient being put under chloroform, Mr. Spence exposed the infra-orbital nerve by a transverse incision. He then introduced a blunt hook under the nerve, and, fixing the upper lip with the left hand, stretched the nerve with considerable force.

On the fifth day after the operation a slight return of the pain took place, and, as the incision had not united, Mr. Spence again stretched the nerve.

The wounds healed kindly, and there has been no return of the pain since.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

The Antiseptic Theory tested by the Statistics of Ovariotomy.

THE ordinary meeting of this Society was held on the 10th inst., J. E. Erichsen, F.R.S., Esq., President, in the chair. The evening was occupied by the reading and discussion of a paper contributed by Mr. Lawson Tait, in which he aimed at proving that in his own practice the adoption of antiseptic precautions had not apparently influenced the results obtained in ovariotomy. For whilst admitting the truth of the germ theory of putrefaction, he maintained that the practice of antiseptic precautions delayed the healing of wounds, and was accompanied by more constitutional disturbance than careful methods followed without the details of Listerism. It will be seen that none of the speakers—Mr. Spencer Wells, Dr. Matthews Duncan, Mr. Thornton, Mr. MacCormac, and Mr. T. Smith—endorsed these views, their own experience leading them to diametrically opposite conclusions. Mr. Tait, in his reply, reviewed the objections raised, but maintained the ground he had taken up, averring his belief that the intra-peritoneal ligature of the pedicle was the main element in the successful issue of this operation.

The following is an abstract of Mr. LAWSON TAIT'S paper, which was entitled "The Antiseptic Theory tested by the Statistics of 100 Cases of successful Ovariotomy." In commencing his paper, the author referred to the purely empirical character of the basis of medical opinion generally, and the difficulty even in surgery of obtaining a physical basis of reasoning. He ventured to indicate a more definite line of research, which he should apply to the antiseptic system, as being a theory practically now considered as one of the laws of biology. As far as we know no phenomena of putrefaction occur without the admission of these so-called germs to the substance putrefying, and their origin in the putrefying fluid cannot yet be proved as an actual occurrence, for spontaneous generation can hardly be considered a part of the present process. He therefore assumed that the germ theory was substantiated, and that no process of putrefaction occurs except by the admission of resting or swarm spores of living organisms associated with putrefactive changes. Another point was that the materials on which experiments had been made have been dead, and no corresponding putrefactive changes have resulted from the admission of germs to living matter, for, as Dr. Roberts has stated, the hypodermic morphia syringe will inoculate a sterilised solution of dead organic matter, but there are no putrefactive changes from it in the healthy body, and there is no evidence that the changes which occur in blood poisonings, even when of local origin, have any analogy with a putrefying dead infusion. For instance, in rotting and decaying fruit, the minute forms of life are confined to the decaying parts; how then can the advocates of the germ theory assume that their invasion is the cause of the decadence of vital phenomena, while it appears that such decadence due to some unknown cause is that which gives the germs their potential ascendancy, and enables them to do what during full vital action they could not effect? If the views of the germ theorists were correct, no surgical operation could be successful without rigid antiseptic precautions; a cut should be followed by septic poisoning, and surgery must long since have become an extinct art. The three factors on which the operating surgeon finds his success to depend are the condition of the patient, the condition of his surroundings, and the nature and extent of the operation. In the author's special operation of ovariotomy, apparent perfect health was not a certain indication of power to resist septic poisoning, the surroundings of the patient contained elements of far greater certainty as shown statistically in the danger from density of population and in the third factor, the fatality of major operations as compared to minor—e.g., an amputation of the thigh as compared with that of a finger seemed opposed to the legitimacy of the germ theory, and its powers as a cause in surgical mortality must be much exceeded by the power of vital resistance in the tissues, and the extent of the operation. The author illustrated the point by a case of trivial operation never known to result fatally in which he had seen a hundred minutes occupied in antiseptic precautions for what could itself be performed in three, and his conclusion was that in minor operations germs have no influence, and in major that the condition of the patient to resist their influence was of the most importance. The author admitted the difficulties connected with what constitutes a major operation, and with the different rates of mortality in such operations, and the necessity therefore for conducting the examination by the careful grouping of similar accidents together. Statistics by themselves could not prove anything, but they could be made to show the direction in which individual analysis should be made. One of the dangers of antiseptic surgery appeared to be that it was thought that many operations hitherto considered impossible might be undertaken safely under its influence, and that as a road to surgical success it placed the skilled and the inexperienced on a common level; but he feared there have been better lessons learned, showing that an antiseptic spray would not compensate for the want of manipulative dexterity. He thought also there was great risk of the condition of the patient and his surroundings being overlooked in an inattention to general hygiene. The advance of surgery, as shown in the case of ovariotomy before antisepticism was applied, must have some credit given to it in the matter, and in the careful analysis required no rough aggregate of operative results could be of use; but in a particular operation, such as ovariotomy, these results pointed in the direction of important and profitable research. In ovariotomy a large group of a hundred cases must present more features similar to another hundred, from the same attention to minute details, and the same state of the surroundings common to both groups, than probably in any other surgical operation; and the growth of personal experience and skill in the operator will show a gradual decrease

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of mortality, as notably illustrated in the practice of Dr. Keith, where it fell successively from 11 to 8·6 per cent. before he used antiseptics, and also in the experience of Mr. Wells and the author (from 19 in the first to 3 in the second fifty). Mortality results indicate only the increase of skill, for a recovery after ovariotomy is the sum of a number of efficient details, but a death may be the failure of one detail only, not perhaps under the control of the surgeon. In the three deaths of the author's second fifty cases, two were due to details beyond his control and had no relation to the antiseptic system, and the third, with full antiseptic details, was due to the irritating effects of thymol. In twenty-nine cases treated antiseptically there were two, and in twenty-one cases without antiseptic precautions only one death. Mr. Spencer Wells's statement relating to the marked improvement in his results since he had used antiseptics must be qualified by the fact that he had concurrently adopted the intra-peritoneal method of dealing with the pedicle, a method which had been very successful in the hands of Dr. Keith and of the author, and the statistics of which go to prove that little can be attributed to antiseptic precautions, though the author is not prepared to say that they were entirely without result. Reference was made to the fact (alluded to in a previous paper) that some of the details of the antiseptic method prevented the healing of wounds, which was the uniform experience of the author, as opposed to the success attending Mr. Wells's dressing of dry lint. The author then referred to an untried method for indicating the value of an individual detail such as the antiseptic system, from an examination of the method of recovery of the patients, the basis of the antiseptic claim being that it prevents septic poisoning or fever, and the deaths in ovariotomy usually occurring from the incidence of fever. The antiseptic system, therefore, must uniformly facilitate recoveries, as in non-antiseptic cases the germ will enter the peritoneum, and theoretically produce fever in every case, and only, therefore, where the septic poison is counteracted will recovery be obtained. If, therefore, we find a marked difference between the curves of cases treated antiseptically, and those not so, in favour of a less febrile course of recovery in the former, it will go towards establishing Mr. Lister's views; if there be no difference, the question is just where it was, but if a difference in favour of the other side, then he thought the germ theory would probably fade away from professional acceptance, as other fair visions had done before. The author then gave details of the system of temperature and pulse, which he always had taken by trained nurses for ten days succeeding, on ovariotomy, convalescence not being fully established till the eighth day, and not complete till the tenth. He attached more value to the pulse curves than to those of temperature, as he found that a rise in them more gradually and more certainly indicated something wrong in the patient. The temperature also rises uniformly at night during recovery, whilst the pulse does not so after the fourth night, the critical night of an ovariotomy, and in a case ending badly, while the temperature does not rise to any remarkable height, the pulse rises continuously till it disappears. Comparisons were given of the curves in the figures as they related to cases treated by the clamp, or the intra-peritoneal method, with or without antiseptic precautions, the non-antiseptic cases having a better pulse curve than the antiseptic, and their time of recovery being one day shorter, and, judging from both temperature and pulse curves, the non-antiseptic and short ligature method gives a better and shorter recovery than any other, the nocturnal acceleration of temperature in the antiseptic cases being caused by the suppuration of the wounds due to the irritating effects of the gauze dressings. The author stated that he had found more satisfactory results from dry lint dressings, and had given up antiseptic dressings (when used) after the seventh day, and used oxide of zinc ointment to facilitate the healing of the wounds. His experience had been confirmed by Professor Hegar, who, in oophorectomy, had given up antiseptic precautions. In figures which he had constructed with regard purely to the Listerian method, regardless of methods dealing with the pedicle, it was shown that it had no permanent influence, the high temperature in the sixth and seventh evenings visible in both figures being clearly derived from the use of the clamp, and the curve of temperature being decidedly higher for the antiseptic cases; and in the pulse curve the recovery of the non-antiseptic cases was more even and shorter. In conclusion, the author said that he did not attribute the delayed recovery to the use of Mr. Lister's processes, but he wished to show that the recovery of his patients was not facilitated by them. He had followed closely the published details of those who advocate the antiseptic system, and was at first strongly impressed by its influence, but after a large experience he began to suspect that he was attributing to it effects due to other causes, and his suspicions were confirmed by the facts given in the paper, which would cause him to modify his conduct in the dressings, &c., though he should continue to employ the antiseptic precautions during operation, unless a wider experience decided that they also might be given up.

The PRESIDENT, in inviting discussion upon the paper, said that it opened up a wide field, challenging most unquestionably the applicability of the germ theory to many surgical procedures, and the value of the antiseptic treatment to one particular class of operations.—Mr. SPENCER WELLS, after hearing the objections raised in the course of the paper, was considerably consoled by Mr. Tait's final conclusion to still adopt antiseptic precautions in ovariotomy. He had noted several points in which the facts observed by Mr. Tait would have led him (Mr. Wells) to opposite conclusions. The author had adduced *against* antisepticism the fact that it enabled operations to be performed which, without these precautions, would be thought unjustifiable or rash. Surely that was one of the strongest arguments in favour of the method. Then Mr. Tait said that under cover of antiseptics skill and inexperience were placed on an equality. Surely this was not tenable, for whether antisepticism were followed or not, the relative position of skilled and inexperienced operators would remain unchanged. He disputed also the fact that the pursuit of antiseptics diverted attention from other precautions of a hygienic kind, for he would say that the surgeon who adopted antiseptic treatment would take as much or even more care as to these measures than others. As to the matter being one of detail, of course it was so; it was an additional precaution in the treatment of wounds. The subject of the relative merits of the intra- and extra-peritoneal treatment of the pedicle was a wide one; and his experience in this differed from that of Mr. Tait, who had deduced a fallacious argument from his own (Mr. Wells's) practice. For two years ago, at the College of Surgeons, he had shown that in his own practice the relative percentage mortality of the extra-peritoneal and intra-peritoneal method was as 20 : 38, giving a mortality on the latter of nearly twice as high as on the former plan. It was true, that since he had adopted antiseptic measures he had discarded the clamp, for the simple reason that it could not be used in such conditions; and it was a great argument in favour of antiseptics that they enabled one to carry out the intra-peritoneal method with safety. He had always believed in the potency of a dry dressing, and he used a thymol dressing, and not carbolic acid on this account. But he was surprised that Mr. Tait required any further dressing for his wounds after the seventh day. So far as he could recollect he could not remember during the past two years to have seen a single drop of pus in the wounds. He could not agree either as to the pulse curve being of more importance than the temperature curve; for it was notorious that the pulse rate was influenced by transient causes, mental emotion, excitement, &c., to a far greater degree than the temperature. And his general impression of the result of antiseptics in subduing pyrexia was opposed to Mr. Tait's experience. Before his adoption of antiseptics the temperature used to keep up day after day, and recourse was had to the ice-cap and other measures to subdue it; but since then these measures were never called for, the temperature seldom rising over 94° or 100°, and nothing like continued pyrexia being set up. Under antiseptics the surgeon's mind is rendered easy; he has less occasion to visit his patient, he feels certain that recovery will take place with less danger to the patient, and he is freed from the anxiety which he used to feel. On all these matters, then, he had arrived at conclusions entirely opposed to those of Mr. Tait.—Dr. MATTHEWS DUNCAN, although not an ovariotomist, would like to say a few words. He would not enter on the question of the antiseptic theory, for he differed from Mr. Tait upon the whole course of his argument, which seemed to him to be full of inconsistencies —e.g., that septicæmia did not arise from a wound after seven days.—Mr. TAIT observed that he spoke only of his own experience.—Dr. DUNCAN, continuing, said that the septic and antiseptic theories had now been thoroughly and clearly established, not only in surgery and medicine but in

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comparative pathology. The matter had been physically demonstrated. What he rose to say was this. It is useless to speak of any one nowadays not using antiseptics. Every surgeon employs them. What modern surgeon, he would ask, would now resort to the old-fashioned method of passing from bed to bed using the same sponge for every wound? What modern surgeon would follow the old-fashioned methods of wound dressing? Every surgeon is using antiseptics, and if he does not adopt Listerism he comes within a hair's-breadth of it. Mr. Callender's results had often been adduced as opposed to antiseptics; but he believed that the only detail of Listerism he did not follow was the use of the spray; and he would like to know how Mr. Callender achieved his great results, if not by antiseptic measures? If the question were one of Listerian and non-Listerian methods, they had a strong argument in favour of the former in ovariotomy itself—argument far stronger and more cogent than any upon which most of our therapeutics are founded. Mr. Spencer Wells has published the fact that his very high success in this operation was made still higher by the adoption of the antiseptic spray. In St. Bartholomew's Hospital Mr. T. Smith had had several cases of ovariotomy. Before he used the spray he was not very successful, but since its adoption Mr. Smith's success in that large hospital had been as high as anywhere else, for out of twelve operations there had only been one death and that due to injury to the liver from dragging on adhesions. Take also the evidence of Dr. Keith, whose success before he used the spray had been so great. Well, since he had used it, he had had a series of some seventy cases without a single death. Dr. Keith attributes this to the adoption of this measure, and surely he is the best judge.—Mr. KNOWSLEY THORNTON would not venture to analyse Mr. Tait's paper, which contained so much that required careful study, but would only refer to one or two points of practical importance in which his experience differed from that of Mr. Tait. First, as to the temperature curve. As a rule there is no fever at all after antiseptic ovariotomy, and the greater the care taken in the minutiæ of the procedure, the more careful the nursing, the more chance is there for recovery of these cases without any practical rise in temperature. As Mr. Wells had said, the ice-cap was now never required. So convinced was he of this that whenever he found a rise in temperature and pulse, he was always profoundly suspicious that sufficient care or some detail had not been carried out. This seemed to be the experience of all surgeons who practised antiseptics. Mr. Tait's own figures showed a remarkable difference in mortality in his first fifty cases to his second fifty, viz., from nineteen to three. Was not this due to his adoption of antiseptics? [Mr. Tait expressed dissent.] He agreed with Mr. Tait as to the use of the "protective" retarding healing, for it kept the wound moist, and he now simply used carbolic gauze next to the wound. Generally the first dressing was not changed until the eighth or ninth day, and he concurred with Mr. Wells in saying that he had not seen a drop of pus in his last seventy or eighty cases. The second dressing was often not required at all, its application was merely a matter of form, a sort of extra precaution. The wound was invariably united on the removal of the dressing on the ninth or tenth day, when the stitches were taken out.—Mr. MACCORMAC was surprised at the author's temperature curves, which differed so totally from those of other surgeons who adopted antiseptics. With very few exceptions, antiseptic operations were followed by a very slight (if any) rise in temperature, and then attributable to other causes. Nor had he seen want of union and suppuration which Mr. Tait had in his cases, the uniform result being to see such wounds united at the end of a week without a drop of suppuration. When drainage-tubes had to be inserted, this union, by first intention, of course, did not take place. He would not go into the antiseptic theory, and, in a sense, Mr. Tait had disarmed criticism by saying that he believed in the theory, and would continue to follow the practice. As to ovariotomy, he found everywhere uniform testimony (with the exception of Mr. Tait) in favour of the good results following antiseptics. In Germany a mortality of 50 per cent. in this operation had been reduced to 10 per cent. by their adoption. He was not aware that Hegar had abandoned antiseptics, for in the last paper published by that surgeon, with which he (Mr. MacCormac) was acquainted—a lecture in Volkmann's series—there is an elaborate table proving this very point of the value of antiseptics in ovariotomy.—Mr. T. SMITH observed that in his able paper Mr. Tait seemed to prove that antiseptic surgery was not so good as other methods of treatment, that it was attended by more pyrexia, that convalescence was prolonged, and the impression was conveyed that Listerism should be abandoned in ovariotomy. But he was pleased to find at the close of the paper that Mr. Tait had not followed up these conclusions in practice. He would ask under what conditions these operations were done? Were they hospital or private cases, or both? Also, whether Mr. Tait did not recognise the fact that the pulse rate might be increased five or ten beats or more by the mere visit of the surgeon and such small influences, which had no effect in the temperature record.—Mr. LAWSON TAIT, in reply, said that, although he appeared to be in a minority of one, yet he did not feel his position shaken by anything said that night. He desired to speak with great respect in answer to Mr. Wells, who, in this department, held a position comparable to that of a bishop of a diocese, to question whose statements was heresy. Mr. Smith had misunderstood him. He said that he should still use the spray, because he did not see that it did any harm, and it might possibly be of good. But he had given up the Listerian dressing, and since he had returned to the old form of dressing he had had freedom from suppuration (except in one case). He attributed the presence of pus under the gauze dressing to the dressing itself. His cases were both hospital and private. He had seen Mr. Thornton's practice, and he could not tell what difference there was between the practice they each adopted; for Mr. Thornton had modified his mode of dressing the wounds. His impression used to be that the temperature curve was of more importance than the pulse curve, and he of course recognised the fact of slight influences on the pulse. But his observations were based on records of pulse and temperature taken periodically by trained nurses and he was surprised at the result shown, viz:—that the variations in temperature were more marked and sudden than those of the pulse; and that without any apparent cause. The remarks of Dr. Duncan and Mr. MacCormac reminded him of the position taken by those who believe in the doctrine of "election," for they seemed to argue that faith in the theory was necessarily followed by faith in the practice. But the results of the treatment must be tested apart from the theory. He commenced the treatment impressed with its results, but had been getting less and less sure of their efficacy. Dr. Keith's success has been increasing *pro ratâ*, both before and since he adopted antiseptics; his mortality had fallen from 11 per cent. to 4 per cent., and the continued decline would lead to 1·5 per cent., which would be quite in accordance with his results since adopting antiseptic measures. In reply to Mr. Wells, he said that antiseptics *might* lead to rash surgery; and his point was that the inexperienced, under cover of antiseptics, might be tempted to do that which the experienced would hesitate to do. Of this he knew instances. Mr. Wells, in his lectures, had mentioned the case of a surgeon who said that he had gone from the dissecting-room to a case of ovariotomy after the simple precaution of washing his hands in a solution of carbolic acid!—Mr. WELLS: That was many years ago.—Mr. TAIT: The fear is that, having this panacea, many may be led to disregard other hygienic measures. As to the intra- and extra-peritoneal methods of treating the pedicle, Mr. Wells had said somewhere that he resorted to the ligature in those cases where the clamp was inapplicable; and it seemed unintelligible that there should have been such high mortality in cases where the clamp could have been used, but where the ligature was chosen by preference. There were cases where the pedicle was very thick—e.g., where omentum is involved—which could be best dealt with by the short ligature. It seemed as if ovariotomists had been blinded by the magnificent results obtained by Mr. Wells with the clamp rather than by Dr. Keith's results with the intra-peritoneal ligature. His own impression as to Dr. Keith's opinion of the spray differed from that which had been stated. As a rule, when he (Mr. Tait) used the gauze dressing, the wound was generally gaping on removal of ligature, and it took three weeks to get well. Why did such cases escape septicæmia? He believed the adoption of the intra-peritoneal method had as much to do with the lessened pyrexia as antiseptics had, and his own experience went to show that cases treated antiseptically did no better than those treated not antiseptically, but with intra-peritoneal ligature only. Mr. MacCormac had referred to the temperature of cases treated antiseptically in St. Thomas's Hospital. Why were not those cases published?

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MEDICAL SOCIETY OF LONDON.

Ear-sneezing and Ear-giddiness.

AT the meeting of this Society, on the 9th inst., Dr. Cockle, President, in the chair, a paper was read by Dr. ED. WOAKES on Ear-sneezing and Ear-giddiness. The first part of this paper consisted of an examination of the phenomena of ear-sneezing, occurring in a case detailed recently by Dr. James Russell of Birmingham. After rejecting other sources of irritation, the symptom was traced to a plug of cerumen, subsequently found in one ear. This produced irritation of the auricular branch of the vagus, distributed to the external auditory canal, whence the impression was propagated to the lungs, through the pulmonary branches of this nerve. The series of reflex events consequent thereon exhibited first *yawning*, through implication of the third division of the fifth, shown in the muscular action required to depress the lower jaw, and simultaneously implication of the heart, the yawning being described as "coming from the heart." This was a point of crucial import, showing the channel by which the irritation was conveyed to the lungs to be the vagus; this precordial distress arising from impressions conveyed to the heart along the cardiac branches of the vagus. Then sneezing following from reflex implication of the spinal nerves of respiration; the lungs being filled with air by the act of yawning, and egress through the mouth being cut off by the approximation of the arches of the palate upon the tongue. That through the nose being open, sneezing was necessitated by the spasmodic act of expiration, following the act of gaping. Under the head of *ear-giddiness*, a new symptom—superficial congestion of the hands and forearms—was described as associated with it in severe cases. This was explained to be due to impressions passing from the labyrinth along the vaso-motor nerve of the vertebral artery to the inferior cervical ganglion, thence passing as waves of vessel-dilatation to the brachial artery, supplied by nerves from the same ganglion. Two factors were indicated as requisite to produce giddiness: direct pressure upon the labyrinth from disease of the middle ear; and vessel-dilating waves, usually proceeding from the ganglion, along the vertebral artery. These two factors, being variable in their action, were considered as capable of explaining the uncertain and irregular occurrence of giddiness in the subjects of it.—Dr. LAUDER BRUNTON said that Czermak's experiments of pressure on the vagus definitely established the fact that the thoracic oppression was connected with that nerve. Irritation of the vagus produced slowing of the pulse, and a feeling well described by the German word "Beklemmung." More importance should be attached to the occurrence of inflammation of the tympanum in the case recorded, and it was possible that the sneezing was produced through the usual nervous channel—i.e., by irritation of the nasal branches of the fifth, either directly by extension of inflammation down the Eustachian tube to nose or by nervous reflex from the ear. He agreed with Dr. Woakes that in cases of vertigo connected with indigestion, the giddiness was not due to the stomach alone. It was sometimes due to irritation of the stomach, combined with visual disturbance, as he had observed that in persons who had not previously suffered from giddiness during bilious attacks, the giddiness came on during the attacks after their sight began to fail.

The report of the committee appointed last session to inquire into Arsenical Poisoning from Wall-Papers, Fabrics, &c., was then read by Mr. Malcolm Morris, the secretary to the committee. It was understood that the report would be duly circulated. After the President had given the thanks of the Society to the committee, and especially to Mr. Morris, for their labours, a brief discussion arose.—Mr. JABEZ HOGG mentioned that the Society of Arts were willing to co-operate with the Medical Society in pursuing inquiry on this subject, and he looked to Parliament being ultimately asked to place restrictions on the sale of fabrics and wall-papers coloured with poisonous dyes.—Dr. LAUDER BRUNTON drew attention to a statement which had been made before the Society to the effect that "no fumes are given off from arsenical wall-papers and other fabrics." He agreed that such fumes might not be given off under certain conditions, but under other conditions he was sure that they were evolved.

After some further observations from Mr. Carr (Society of Arts), Dr. de H. Hall, and Mr. Morris (who said that the next issue of circulars would be to general practitioners), the subject dropped.

Reviews and Notices of Books.

Biological Atlas. A Guide to the Practical Study of Plants and Animals, with accompanying text. By D. MCALPINE, F.C.S., Lecturer on Botany and Biology, Edinburgh; and A. N. MCALPINE, Lecturer on Botany, School of Medicine, Edinburgh. Edinburgh and London: W. and A. K. Johnston. 1880.

THIS work is intended as a companion to the chief modern text-books of zoology and botany, which it will materially aid the student to understand. It is not intended to supply the place of actual dissection and examination of specimens. In the preface we are informed that "the explanatory text arranges the information obtained from the drawing in a convenient form, explains briefly the nature of the object seen, states equivalent terms when the same thing is differently named by standard authors, gives the derivation of names when that throws light on their meaning, and accents them when there is any danger of false pronunciation, and finally sums up the distinctive characters in the form of a classification." These objects are very fairly and fully carried out. As an example, which will enable our readers to judge for themselves, we shall select the fern. This is illustrated by seventeen coloured figures. The first, showing a rudimentary leaf, a young leaf, a cut leaf, and an old leaf, attached to an underground stem or rhizome, with its growing points and roots. The succeeding figures show—2. The lateral lines of rhizome. 3. The parts of a leaf or frond, named Rachis; Pinna and Pinnule, and two pinnules viewed from below showing the indusium covering spore cases; and Sorus, a cluster of spore cases. 4. The forked venation and indusium. 5. The spore case, or sporangium with stalk, case, annulus, and spores. 6. The spore, with exosporium, endosporium, protoplasm, with oil-globules, nucleus. 7. The development of spore, showing endosporium protruded, endosporium divided, to form a young prothallus with root hairs, and an old prothallus with root hairs, male organs, or antheridia, and female organs or archegonia. 8. Prothallus, under high power, showing cells, with cell-wall, protoplasm, chlorophyll, granules, and large vacuoles filled with cell-sap. 9. The antheridium and antherozoids of the Royal Fern (Osmunda regalis) under surface of prothallus (green). 10. The archegonium, with its central cell, or germ-cell. 11. The division of the central cell into four in the bracken. 12. Connexion of young bracken fern with its prothallus by means of the foot. 13, 14, and 15. Transverse and longitudinal sections of the rhizome, showing the various parts of which it is composed. 16. Portion of fibro-vascular bundle, with its constituent parts, phloem and xylum. 17. Part of an oblique section of a leaf stalk. The classification of fern is then given.

The drawings illustrating these several parts are clear and distinct, and quite sufficient for the purpose of self-instruction. Eight plates are devoted to plants, nine to invertebrate animals, and seven to the frog. The plants illustrated are yeast and bacteria, brown mould and green mould, protococcus and chara, the fern and various flowering plants. The invertebrate animals are the proteus and bell animalcule, the fresh-water polypus and earthworm, the lobster and crayfish, the fresh-water mussel and snail; the vertebrate selected is the frog. Of course many of the drawings are essentially diagrammatic, such as those of the segmental organs of the earthworm; and a better illustration of some of the tissues, as of muscle and nerve, might have been

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given; but altogether the work is a very satisfactory production, and reflects credit on the joint authors.

Pathologie Clinique du Grand Sympathique: Etude basée sur l'Anatomie et la Physiologie. Par le Dr. A. TRUMET DE FONTARCE, ancien Interne des Hôpitaux de Paris. Pp. 373, avec planches intercalées dans le texte. Paris: J. B. Baillière et Fils. 1880.

IN this work Dr. Trumet de Fontarce first gives a brief account of the anatomy and physiology of the sympathetic system, with a section on its pathological anatomy; and then proceeds to describe its affections under the following heads: diseases of the peripheric ganglionic system; diseases of the cerebral sympathetic, and then in succession of the cervical, thoracic, and abdominal sympathetic systems; diseases of the general sympathetic; and, finally, the relations of the sympathetic system to fever.

On the whole, considering the great extent and importance of the sympathetic system, its close relations to all the organs of vegetative life, and the well-known action it exerts on the circulatory system, and consequently on all trophic change, it is singular that more attention has not been paid to it than appears from a reference to any of the works of eminence and position in the profession. Take, for example, Dr. Bristowe's "Theory and Practice of Medicine," and we find that, although the author admits the importance of this system in the production of disease, he yet dismisses the subject in the compass of a page, apparently satisfied with stating that its function chiefly affects the conditions of congestion or diminished blood-supply to each part, which does not necessarily involve disease. The pathology of this system of nerves has received very little attention in this country, and we venture to say that out of the large number of autopsies that are yearly made in the great London hospitals, the lesions of the sympathetic system are those least frequently noted and described; and even if we look to foreign literature, the works devoted to the affections of this part of the nervous system might almost be counted on the fingers.

It appears to be tolerably well established that the great sympathetic cord, as well as some of the ganglia of this system, are liable to inflammation. Lobstein noticed it in a girl of six years, who died from persistent vomiting, accompanied by violent cough. In this case the left half of the solar plexus was inflamed, whilst the right was healthy. Dr. Duncan again observed the great sympathetic to be swollen to twice its normal size in a case of diabetes. Lubimoff, who examined the condition of the sympathetic system in 250 bodies, noticed both congestion and anæmia of the gangliated cord. Amongst other conditions which he describes are fatty degeneration, tuberculosis, and hyperplasiæ of the connective-tissue elements of the ganglia. Changes due to syphilis have also been described. M. Trumet de Fontarce gives a good description of "migraine" or hemicrania, which he regards as the type of sympathetic neurosis. He shows that the primary cause of this affection is some defect in the action of the sympathetic system distributed to the digestive system. Some lively emotion, as Bichat, with his usual penetration, observed, constitutes the starting point of the disease, by perverting the functions of the sympathetic system, which is followed by mental depression, disturbance of the digestive system, and neuralgiæ of very various seat and form. M. de Fontarce has unfortunately little to give to us in the way of treatment, though occasionally electricity appears to have been successful.

The chapter on Progressive Muscular Atrophy is interesting, and some very strong pathological evidence is brought to bear on the view that it is primarily due, not, as Charcot maintains, to disease of the spinal cord, but to fatty degeneration of the great sympathetic. Many more observations, however, will have to be made before this can be regarded as established, but good service will have been done if the attention of pathologists in this country is directed to the changes in the sympathetic system of nerves in this and many other diseases.

HEALTH OF LARGE ENGLISH TOWNS.

FIFTH WEEK OF 1880.

UNDER the influence of continued cold, and of suffocating fogs in London, the recorded mortality in our large towns showed a marked further increase last week. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly a third of the entire population of England and Wales, 5290 births and 5312 deaths were registered during last week. The births were 105, and the deaths no less than 2037, above the average weekly numbers during 1879. The deaths showed a further increase of 1048 upon the numbers returned in recent weeks; and the annual death-rate, which had been equal to 24·2, 26·0, and 29·7 per 1000 in the three preceding weeks, further rose last week to 37·0. The lowest death-rates in these twenty towns were 16·5 in Wolverhampton, 21·2 in Birmingham, 21·3 in Newcastle-upon-Tyne, 22·1 in Sheffield, and 22·2 in Oldham. The rates in the other towns ranged upwards to 29·8 in Bristol and Norwich, 31·6 in Manchester, 32·1 in Nottingham, 32·4 in Hull, and 48·1 in London. The marked excess of the death-rate in London appears to have been due more to the effect of the dense fogs than of the cold, for in the nineteen large provincial towns the average death-rate last week did not exceed 26·3 per 1000, whereas it was equal to 48·1 in the metropolis.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 519, 544, and 600 in the three previous weeks, further rose last week to 647; they included 317 from whooping-cough, 120 from scarlet fever, and 102 from measles. Whooping-cough caused the largest proportional fatality in London, Brighton, and Sunderland; measles in Hull, Nottingham, Leicester, and Plymouth; and scarlet fever in Sunderland. Small-pox caused fourteen more deaths in London and in its outer ring of suburban districts, but not one in any of the nineteen large provincial towns. The fatality from small-pox in London was greater than it has been in any week since the beginning of July last. The number of small-pox patients in the metropolitan asylum hospitals, which had been 84 and 80 at the end of the two preceding weeks, rose to 91 on Saturday last; and 36 new cases of small-pox were admitted to these hospitals during the week, against 8, 21, and 22 in the three previous weeks.

The increase of registered deaths in the twenty towns last week was confined to London, for those recorded in the nineteen provincial towns were less by 128 than the number in the previous week. This seems to prove that the remarkable mortality in London was due rather to the fog than to the cold, for the cold was more severe in several of the provincial towns than in London. The excess in London was mainly due to the fatality of lung diseases. The deaths referred to diseases of the respiratory organs in the metropolis, which had been 559 and 759 in the two previous weeks, rose last week to 1557, and exceeded the corrected weekly average by no less than 1125. The annual death-rate from these diseases in London last week was equal to no less than 22·2 per 1000. In Liverpool the rate from the same diseases did not exceed 8·9 per 1000. The fatal cases of bronchitis last week in London were no less than 1223, against 531 in the previous week.

THE AMBULANCE.—The Duke of Westminster has become a patron of the Liverpool Centre of the St. John Ambulance Association. A meeting was held at Birmingham last week; Lord Leigh presided, and Sir E. A. H. Lechmere, M.P., and Mr. John Furley attended as a deputation from the Order of St. John. The police at Birmingham have been attending lectures for some time past, and steps will now be taken to extend the instruction to all classes. The head-quarters of the Volunteer Ambulance Department, we are asked to state, are at the Army Medical Department, 6, Whitehall-yard, S.W.

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THE LANCET.

LONDON: SATURDAY, FEBRUARY 14, 1880.

THE answer of the Duke of RICHMOND to the Marquis of RIPON on the subject of the intentions of the Government in regard to medical legislation is satisfactory, and justifies a hope that, whatever may have been the barrenness of this Parliament in domestic legislation, it may yet have the credit of passing a good Medical Bill that shall make our medical institutions more efficient, and bring them into greater congruity with the wants and views of the present day. It will be strange indeed if an institution like the Royal College of Surgeons of England, which passes into the profession a larger number of entrants than any other body, and whose diploma entitles to registration, should be permitted to go on holding examinations from which half the subjects that a general practitioner should be examined in are omitted. The Duke of RICHMOND says it is the intention of the Government to bring in its Bill of last year, and to revive the Select Committee to which the whole subject was referred. Lord GEORGE HAMILTON has taken corresponding action in the House of Commons. The promoters of private Bills, Dr. LUSH and others, have adopted a similar course. Mr. PLUNKETT'S motion, that it is inexpedient to attempt to deal legislatively with the question of medical examination and teaching until the Committee of last session shall, if reappointed, have completed its inquiry, is quite reasonable, though we must hope it covers no disposition to shirk legislation for another session, and a new Parliament which will have more congenial subjects to deal with. As the Medical Bills have had an early start, it is to be expected that the Select Committee will set to work in good earnest, and bring its labours, now very well begun, to a conclusion. The responsibility of failure will then rest, not with the Committee, but with the Government. But we will not anticipate such a result. There has been no such opportunity as the present for a settlement of the main questions of medical reform—the creation of a better Council of Medical Education and Registration, and of a more satisfactory system of Licensing Boards. Hitherto the subject has engaged only the attention of the Lord President of the Council and the Vice-President, who have been in direct communication with the Medical Council, which is intensely satisfied with its own achievements. But now the whole subject is thrown open. If all things are to continue as they are, and every individual body is to be granted a further lease of its emoluments and functions, it will be as remarkable as if a Select Committee sitting on facilities of locomotion should recommend sedan chairs and stage coaches.

It will be interesting to notice what course the Select Committee will take in the coming weeks. Almost every kind of institution interested in the existing system of medical education and examination has been represented already. But there are several institutions that have not, especially certain institutions which, in the opinion of reformers, have served their generation, and might now be relieved of public duties. It is essential on every principle of fair play that these bodies should have a hearing, and it will be extremely interesting to see how they will substantiate their claim to be perpetuated by a high system of fees that shall indemnify them all for loss in the examinational system of the future. It will certainly puzzle statesmen to give a reason why bodies which might have been very useful half a century ago, but which are perfectly superfluous now, should be maintained in perpetuity by the profession.

All the interests being duly heard, it is to be hoped that the Committee will not close its inquiry before asking the opinion of a few important independent witnesses, who can view professional questions apart from the bias which is too often shown by long official connexion with the medical corporations. It is certain that there are such witnesses. Two can be named without any invidiousness — Sir WILLIAM JENNER and Dr. ANDREW CLARK. It may confidently be assumed that these physicians have found time in their busy lives to ponder over the great questions which have so agitated the medical profession, and it would be a misfortune if their opinions were not ascertained. They see more of the profession than most men of their time, and are well able, therefore, to represent their opinions, and to indicate any defects in the processes of education or the methods of examination.

There are yet others to be heard before the evidence can be said to be complete. We cannot doubt that some witnesses from Scotland may be found who will be able to contemplate the establishment of a good uniform minimum examination in London, Edinburgh, and Dublin, without dread of the downfall of the Universities of Scotland, or even their pecuniary injury; who will even see that Scotland is more deeply interested in the creation of such boards than any other division of the kingdom.

Finally, there are those whose experience of the defects of the penal clauses of the existing Acts entitles them to a hearing—notably Mr. W. H. CARPENTER, Mr. GEORGE BROWN, and Mr. NELSON HARDY. For ourselves, we hold no extreme views on this part of the subject. But it will be hard indeed if, while the admission to the profession is to be made more difficult in the interest of the public, no additional protection is granted to its members and to the public from imposture and fraud.

AT a moment when the Government is supposed to be reconstituting — or, as some would say, *developing* — the office and system of public registration in relation to death and disease, it will be opportune to ask serious attention for the subject of "assigned causes" generally, and especially those which are collected, with the view of afterwards treating them as the data for practical inferences in respect of prevention and cure. It may be laid down as a broad principle that, while for legal and statistical—or, more accurately, simply numerical—purposes there may be advantages accruing to the grouping of eventualities under convenient heads, whether these be precise or arbitrary, true or questionable, so far as the interests of science and progress are concerned, it would be better to have no "assigned causes" of death and disease, than to make guesses, or mere formal and colourable returns, the bases of what affects to

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be solid reasoning. The two subjects "causes of death" and "causes of disease" ought obviously to be kept wholly apart, or both placed under a strictly *medical* censorship. If the Government of the day had been well advised, it would have seized the opportunity placed at its disposal by the resignation of the Registrar-General to fill that office with a medical man, thus making the supreme function scientific, instead of, as it is at present, purely clerical. The chance has been lost, and it now only remains to show how the patent evils resulting from a system which has been confirmed instead of being amended may be minimised.

We have repeatedly contended, and must again insist, that "the cause of death" returned to the Registrar-General is not, and, in spite of the Acts in force, never will or can be, a scientific datum. There are three faults in the return which must vitiate it and practically destroy its value. (1) It is made for legal purposes, and can therefore be only in a subordinate sense scientific. (2) It is made in such a way as to render perfect accuracy generally improbable, and in a large proportion of instances impracticable. (3) It is a return exacted from the medical practitioner ungraciously, and in a manner which not merely taxes his forbearance, but conveys the impression that what he is asked to do is not in itself of high importance. It is easy to waive objections like these, and to assert, or imply, that they are of small moment, but we are prepared to affirm that together they constitute a fatal blight, which renders the data in the office of the Registrar-General, so far as scientific uses are concerned, little better than valueless. Let us glance for an instant at each of the exceptions we have taken, which have been, again and again, discussed in these columns; but the crisis at the General Register Office renders it necessary to restate them.

First. Until the return of the "cause of death" is made to a medical authority, it is absurd and futile to expect that it will be medical. No Act of Parliament can efface the difference between a professional diagnosis and the rough-and-ready opinion which would suffice to distinguish between deaths from natural causes, and those resulting from causes of which the judicial authority may need to take cognisance. A purely clerical department can never elicit from a scientific profession a complete series of *technical* returns. The discrimination of diseases—even between typhoid fever and pneumonia—is not as plain a business as the classification of sheep and oxen, and the various descriptions of crops; yet, agricultural statistics are dealt with in a specially skilled department, and the statistics of disease, as causes of death, must be treated in the same fashion before they can possess any real value as furnishing the data for inference as to the national health. Nothing would so greatly tend to improve the returns made by practitioners signing certificates of causes of death as a reform which should make those documents returnable to a medical authority. This is a matter which demands and deserves the calm and practical consideration of the Legislature whenever the subject of registration as a whole is responsibly discussed. Again, the primary reason for seeking a certificate from the medical attendant of a deceased person was simply to obtain some guarantee that the death was due to natural causes. The attempt to make these certificates useful as returns of specific disease, wholly changing their use, has been insidious and supplemental. Instead of coming boldly to the profession, and asking its aid to create a Department of Health Statistics, Government has striven by Act of Parliament to get more out of the medical practitioners than they were at first asked to give, in order that the returns might be used for a new purpose. It is not surprising that the attempt has failed.

Second. The return should be made directly to a public department, as the notice of successful vaccination is rendered, and not through the friends of the deceased. The reason for this requirement is obvious. It very commonly happens that new light as to the nature of an affection is discovered shortly before a fatal termination. Is it right to ask that the correction made in a judgment formed at the outset of a case, and communicated under the pressure of anxiety, shall be submitted to the criticism of friends who may think that if the full type of the malady had been recognised earlier, more might have been accomplished by treatment? This is no fanciful conjecture. The experience occurs every day. Mere statisticians, however able, cannot appreciate this difficulty, and grave source of error. To these gentlemen figures are facts, whereas to the practitioner in medicine the figures based on first opinions—or such opinions as are not corrected by experience carried to the *end* of a case and amended by reflection afterwards—are often no better than fallacies. Nor does the error introduced relate to matters of detail, but the very name and class of the disease. If returns were made direct to a central medical authority, and the local registration restricted to its original and legitimate purpose—namely, a certification of death from "natural causes,' the accumulation of trustworthy data, for the registration of causes of death or disease, would be inaugurated.

Third. It is inconceivable that, if the returns it is now sought to wheedle out of the profession are really worth having, they are not worth paying for. The solicitor who is licensed to administer oaths claims his modest fee; even the registrar who only enters the "cause of death" in his book from the practitioner's certificate is remunerated for his trouble; while the medical man is expected to give what, if it is worth anything, must be a carefully formed and expert judgment—based on special knowledge often outside the mere treatment of disease—for nothing! Here, again, the inadequate estimate formed by the statistician conveys a wrong impression of the service the medical man is asked to perform for the State. It is no mere citizen's duty. It is a matter of business as formal as the act performed by the medical man who examines a life for an insurance company, if not equally consequential. To ask a practitioner to give a certificate of the cause of death of his patient is *not* simply to request him to tell what he already knows, but to pronounce a critical judgment on his own work, and this he is expected to do without the smallest reserve at the bidding of a Registrar-General who is a clerk and nothing more, for the convenience of a department which, being solely clerical and statistical, uses the returns made as data of a class from which their intrinsic nature, as well as the conditions under which they are obtained, should exclude them.

THIRTY years or more have elapsed since the publication of WAGNER'S *Handwörterbuch der Physiologie*, a work that exerted a great influence on the development of

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physiology, owing to the fact that each subject was placed in the hands of a man who had already been known as a worker in it. Old theories were discarded, new facts were advanced, and generally the importance of experiment in testing the soundness of theory and as forming the basis of all true science, was insisted upon. To this day many of these articles are well worthy of perusal, but others have grown old, and Professor HERMANN is now editing a new *Handwörterbuch* on the same basis, of which several volumes have already appeared, and of which it may fairly be said that it will at least rival, if not eclipse, its predecessor. We venture to give a brief extract from a part of one of these articles. Speaking of the cause of muscular contraction, Professor HERMANN remarks that it is one of the most difficult problems in physiology. The apparent simplicity of the phenomenon and the ease with which it can be observed, the numerous points of attack which the darling object of exact physiology, muscle, affords in its mechanical, thermic, electrical, and chemical properties, and the fine field these properties offer for the development and proof of theoretical views, lead every inquirer to believe that the next step in scientific inquiry will effect the solution of the difficulty which has as yet derided every effort. The old theories, such as that muscular contraction results from the entrance of air from the nerves, or that it is due to the injection of blood into the substance of the organ, may be summarily dismissed. WEBER'S and SCHWANN'S attempts to explain contraction as a result of the action of elastic forces are inadmissible. That of PRÉVOST and DUMAS, to the effect that it was attributable to electrical attraction and repulsion, though to some extent supported by DUBOIS' observations, falls to the ground at one stroke as soon as it is shown that there is no electrical discontinuity between the molecules of muscle.

The chief data for a theory of the nature of muscular contraction HERMANN considers to be the phenomena of rigor mortis, in which he considers that there is an active shortening and thickening of the muscle. The form assumed by muscle in contraction and in rigor mortis being identical, certain conditions must undoubtedly be common to both. In both there is some condensation or diminution in the volume of the muscle; in both a determinable amount of force is exerted; in both heat is generated in addition to the mechanical power; and in both the electrical relations are the same as compared with quiescent muscle. It may further be added that in both the process of contraction, once begun, proceeds—with great differences of rapidity no doubt—through the whole length of the fibre, and has no tendency to extend laterally or to pass to adjoining fibres. The chemical relations of contracted muscle and of muscle in the condition of rigor mortis also present many analogies. Lastly, under certain conditions, as exhaustion, physical lesion, abnormal temperature, and the toxic influence of certain poisons, the phenomena of contraction undergo modification in the direction of rigor mortis, the tracing of the curve becoming prolonged, and idiomuscular contractions occurring with partial stimulation, these last being propagated feebly and with comparative slowness along the fibres. From all this it would appear that the act of contraction and the condition of rigor mortis are closely connected with each other, and that intermediate stages or links exist between them. The essential difference between them lies in the transitoriness of the one and the permanency of the other. Contraction can only be maintained through the continual action of a stimulus and the continuous play of chemical forces, whilst the shortening of rigor mortis requires no stimulus.

Another theory—that, namely, of ENGELMANN, which may be termed the imbibition theory—is founded in part on observation of the microscopical phenomena occurring during contraction. According to this inquirer, contraction is due to the swelling up of the anisotropous substance at the cost of the isotropous. The former substance he considers to be composed of rod-like molecules, which, however, are not identical either with BOWMAN'S sarcous elements or with BRUECKE'S disdiaclasts. They are supposed to have the power of rapidly imbibing fluid from the isotropous substance; and as bodies that possess remarkable powers of imbibition have a tendency to assume a spherical form, he considers that the rods he assumes to be present become thicker and shorter. But this theory fails to account for the singular suddenness of the swelling, and still more for the sudden and rapid loss of the material supposed to be absorbed, which must accompany relaxation of muscle.

The theory of RADCLIFFE and others, that the natural state of muscle is the contracted, and that the active state is one of elongation, HERMANN thinks is only supported by the phenomena of rigor mortis; the other facts relied upon as supporting it, such as the diastolic expansion of the heart and certain phenomena in the iris, being explicable on other views.

HERMANN notes the fact that fibres of fibrin heated to 65° C. become thicker, and contract in length, which is inexplicable except on the theory that the molecular arrangement of the fibres follows certain directions or lines of force. He has observed, moreover, that the fibrin fibres are doubly refracting, and that, like muscular fibres, they are positively uniaxial, the axis corresponding to the direction of the fibres. Light, therefore, is propagated through the fibre most rapidly in the longitudinal direction, from which it may be concluded that the particles are less closely aggregated in this direction. But on heating to 65° C. fibrin fibres undergo various changes; they are no longer soluble in certain saline solutions; they no longer exert a catalytic action on peroxide of hydrogen; their double refraction disappears, and they have consequently made a step towards an amorphous arrangement of their molecules.

The contraction of muscle he in like manner reduces to a change of form of certain elements, which are crystal-like in the mode of their arrangement, under the influence of a chemical change in their substance. These elements possess a looser molecular structure in the direction of the axis of the fibre than in a direction perpendicular to the axis. At the moment of contraction the substance of the muscle so changes its chemical constitution that the new substance possesses a smaller difference in density in the two chief directions, and therefore the particles in the direction of the long axis are closer together, and in the transverse direction are more distant from each other than before; and, just as in coagulation from heat, anisotropy is wholly abolished. Hence it naturally suggests itself that the chemical change referred to is a process of coagulation, or is very nearly

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allied to it. The circumstance that all contractile substances are anisotropal lends this view still greater probability.

A DEPUTATION from the British Medical Association, introduced by Dr. CAMERON, M.P., had an interview with the President of the Local Government Board, Mr. SCLATER-BOOTH, M.P., on the 9th inst., on the subjects of animal vaccination and the registration of infectious diseases. Mr. SALT, M.P., the Parliamentary Secretary of the Board, Sir JOHN LAMBERT, K.C.B., the Permanent Secretary, and Dr. BUCHANAN, the Medical Officer, were with Mr. SCLATER-BOOTH during the interview. The views of the British Medical Association as to animal vaccination were stated by he Chairman of the Parliamentary Bills Committee, and were to the effect that the Government should themselves introduce a Bill during the present session for promoting the practice of animal vaccination in this country. It was held that by pursuing such a course, among other advantages, the principal ground of objection on the part of the anti-vaccinationists would be removed; such fears as the public entertained as to the in-vaccination of other diseases than vaccinia in the process of arm-to-arm vaccination would be dispersed; and a means of lymph-supply would be secured practically inexhaustible, and of unquestionable efficacy and purity. On each of the points urged Mr. SCLATER-BOOTH had something to say, and although the position he took is substantially that with which Dr. BALLARD, on the authority of the Board, has made us familiar, it derives special importance as coming from the responsible Minister.

Mr. SCLATER-BOOTH, after a graceful reference to the illness and death of Dr. SEATON, frankly stated that the proceedings of the Board on the subject at issue had been greatly embarrassed by this untimely loss. Nevertheless, a great deal of attention had been given to the subject, and he impressed upon the deputation that the Board had no objection *à priori* to the substitution of a better for a worse lymph, provided they were satisfied that the substitution would be a public advantage. On the contrary, they were desirous to secure the best article possible, subject to the maintenance of public vaccination in its present state of efficiency. And here he took issue with some of the arguments of the deputation, certain of which he characterised as "suicidal and contradictory." They averred that they were not wishful to interfere with the arm-to-arm system now in vogue; indeed, it was expressly stated that the arm-to-arm system must be maintained if the population was to be properly vaccinated. Nevertheless, they would concede to parents and guardians the option of choosing whether their children should be vaccinated with animal lymph or from arm-to-arm. He held that such a concession would at once destroy all certainty in the working of the present arrangements as to public vaccination, and would probably lead to a collapse of the whole system. The responsibility of introducing such a change was of too grave a nature to be undertaken without a clearer knowledge of the subject in debate, and even of the presumed advantages to be derived from the change, than was at present available. It had been averred that the course of action proposed would act as a check to the anti-vaccination movement. The not inconsiderable experience of the department did not support this view, as it showed that the anti-vaccinationists were opposed to vaccination in any form. Then it was urged that the public had lost confidence in the lymph now issued by the National Vaccine Establishment, yet with strange inconsistency it was asked that that establishment should provide a new lymph for the whole kingdom. He could not reconcile the lack of confidence in regard to the former supply, and its existence in regard to a novel and yet untried supply. Moreover, the experience derived from public vaccination gave no support to the argument of the deputation that there was a demand for animal lymph. What demand there might be for this lymph in private vaccination he could not say, but seeing that somewhere about a quarter of million children were vaccinated by private practitioners yearly, why should Government be called upon to purvey an article which could be obtained, or might be provided, in the market? He deprecated the hands of the Government being forced in this matter. In regard to private vaccinations, there was clearly no grievance, as private vaccinators and their clients had the remedy in their own hands. With regard to public vaccinations, there were considerations involved of a very different character. It was a difficult matter to devise a mode of substitution of animal vaccination for arm-to-arm vaccination, or even of supplementing the one by the other, without endangering the whole system of public vaccination in the country—a risk which even the deputation would seek to avoid. The Government were fully alive to the importance of the questions at issue, and were prepared to continue the investigations they had entered upon with a view of determining whether and in what fashion animal vaccination could be introduced into England. We had to get our own experience on this subject, the experience of other countries not applying to the compulsory vaccination of this country. The views expressed by the deputation from the British Medical Association could not but strengthen the hands of the Government in the course they had entered upon, if they were permitted to pursue it unfettered.

Such is a free rendering of Mr. SCLATER-BOOTH'S observations, and we shall leave them for the present without comment.

We reserve our observations on the second subject introduced by the deputation — the registration of infectious diseases.

Annotations.

"Ne quid nimis."

THE GOVERNMENT AND DR. FARR.

IT is now nearly two months since Dr. Farr, on the announcement that Sir Brydges Henniker had been appointed Registrar-General in succession to Major Graham, asked to be allowed to retire from the public service after an official career of more than forty years of exceptional merit and usefulness. He had previously asked the Government for promotion to the Registrar-Generalship, as a crowning reward for services which the Premier asserts "he well knows how to appreciate." Now that Her Majesty's Government have irrevocably taken the "course which they considered it their duty to take," it is at least time that some measures were also taken to prove that the Government appreciation of Dr. Farr's services is more than a convenient

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and empty phrase. The public, as well as the profession, have the strongest interest in the just, not to say liberal, treatment of such a public servant as Dr. Farr. The effect upon the public service of the scant courtesy with which Dr. Farr has been treated by the Government, apart from the policy which prompted them to ignore his request for promotion, is to be deplored. Nearly two months have passed and no measures have been taken to fix his superannuation allowance, or to mark the Government's appreciation of his services. This is a delay at once unaccountable and ungracious. Now that he desires to retire, and especially under the circumstances connected with his retirement, the profession is fully entitled to demand for him some liberal acknowledgment of his work. It is neither fair to the public which has evinced so keen an appreciation of Dr. Farr's services, nor to Dr. Farr himself, that there should be any more delay in the announcement of some tangible mark of that appreciation of the Government referred to by the Premier. Mr. Sclater-Booth's answer to Mr. Anderson's question in the House the other evening shows how little satisfaction can be expected from the Government with regard to the course they have chosen to adopt, but there can be no sufficient reason for further delay in doing what is now possible to remove the impression of discourteous treatment to Dr. Farr which they appear, quite unnecessarily, to have created.

THE CHAIRMANSHIP OF THE SELECT COMMITTEE.

WE hear with regret that there is some doubt about Mr. Forster taking the office of Chairman of the Select Committee this year, should the committee be reappointed. We trust that he will agree to complete the work which he has so well begun. There ought to be a continuity in the chairmanship of a Committee on a subject so technical, and it will be simply a misfortune if a change has to be made.

ADMINISTRATION OF DRUGS BY UNSKILLED PERSONS.

OKEHAMPTON, in Devonshire, has been visited by a severe epidemic of measles, which has caused the death of many children. In the case of a child, five years of age, the affection, although complicated with laryngitis, was apparently proceeding favourably when suddenly symptoms of salivation occurred, and advanced rapidly until the child's death, which took place in a few days. Under these circumstances Dr. Waters, the medical attendant, most properly refused a certificate of death; consequently a coroner's inquest was rendered imperative. The evidence adduced most fully warranted Dr. Waters in so doing, for it appeared that a nurse, on her own responsibility, and without the knowledge of the medical attendant, had administered powders containing mercury to the patient. Indeed, she had not only been rash enough to give them to one child, but had brought a packet into the house to administer to another who was suffering from the same affection. The condition of the poor patient is thus described by Mr. Northey, who was called in consultation, and who made a post-mortem examination: "Both cheeks were swollen and inflamed, the gums had become absorbed, some of the front teeth had fallen out, and the under jaw was in a state of incipient necrosis." Clearer proofs of mercurial poisoning could scarcely be advanced, and, moreover, a powder which was examined was conclusively shown to contain mercury. The child, however, had congestion of the lungs and bronchitis, and so the jury, looking at the bare possibility that she might have died from the disease independently of the mercurial poisoning, gave the nurse the benefit of the doubt, but strongly cautioned her against administering drugs in future. To this the coroner added a grave censure on the parents of the child. The administration of drugs of whose contents and effects they have no knowledge is far too common with so-called nurses and other unskilled persons in our country towns and villages, and we hope that the serious consequences which took place in this case will act as a warning in the future. We fear that Dr. Waters will have to meet some local opprobrium and animosity for acting so properly in refusing a certificate of death under the circumstances, but every particle of evidence shows how fully he was justified in so doing, and thereby compelling a disclosure of the dangers which may be induced by the administration of medicines to a patient by an ignorant person without the medical attendant being made cognisant of the fact.

THE HEALTH OF THE QUEEN OF ITALY.

PROFESSORS BACCELLI, DE MARTINO, and ROSSI meet in consultation on Queen Margaret so often as fairly to discredit the non-official announcements that their august patient is doing very well. From the fact that of the three consultants Professor De Martino, the distinguished obstetrician, assumes the main responsibility, our readers may infer the source of the malady, which seems to have taken its present form after the shock conveyed to the nervous system by the regicidal attempt of Passanante. That agitating experience was shortly succeeded by syncopal attacks, the severest of which overtook her Majesty on the day of the return to Rome. Queen Margaret's strength was equal to the triumphal progress from the railway terminus to the Quirinal, but when the applauding crowd insisted on their Majesties appearing on the balcony, the King, with his prime minister, Benedetto Cairoli, alone responded. Her Majesty had retired, and it was some time before her anxious attendants found her in the chapel of the Palace, lying in a fainting fit on the floor. From the fall and the interval of unconsciousness on the cold marble, the Queen was aroused to emotional reaction, in which panic predominated over depression, until latterly a restlessness has supervened, which seems occasionally to simulate *mania errabunda*. A few days ago Her Majesty drove out beyond the Porta Pia, and having caused the carriage to stop, alighted and suddenly started off on foot to the Quirinal, scattering money right and left among the importunate mendicants on the highway, and walking at such a pace as forced her attendants to use the carriage to keep up with her. Recurring fits of malopportune activity form, in fact, the chief concern of Queen Margaret's physicians, who, we are glad to learn, entertain good hopes of eradicating the cause of the symptoms.

THE LATE SIR DOMINIC CORRIGAN, BART.

AT a meeting of the Dublin Obstetrical Society, held on the 7th instant, the following resolution was adopted:—

"That this Society desire to place on record their sense of the great loss the whole medical profession has sustained in the death of Sir Dominic J. Corrigan, Bart.; and to convey to Lady Corrigan and her family their heartfelt sympathy with them in their great bereavement."

The Fellows of the College of Physicians in Ireland, of which Sir Dominic was an ex-president, last week recorded their deep sense of the loss sustained by the College, by the profession of medicine, and the country at large, through Sir Dominic's death, who filled so distinguished a place in the history of the College; and the members of the Royal Irish Academy have also adopted a resolution of the loss the Academy has sustained by his decease.

The professional topic of greatest interest just now in Dublin is the question, who is to be the successor of the late Sir Dominic Corrigan in the appointment of Physician in Ordinary to the Queen in Ireland? The probable men are

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said to be, Dr. Alfred Hudson, physician to the Queen, Regius Professor of Physic in Dublin University, and Crown representative on the General Medical Council; Dr. J. Banks, a Senator of the Queen's University, and ex-President of the College of Physicians; Dr. Head, the existing President of the same College; Dr. Samuel Gordon, its President of last year; and Dr. B. G. McDowel, Physician to the Richmond Hospital. Either of these gentlemen might well be selected for the vacant post; but of course the selection rests with the Crown, and is in a special sense also personal to the Sovereign.

DEATHS OF THREE REPUTED CENTENARIANS IN LONDON.

THE moist, cold, and foggy weather was unprecedentedly fatal to elderly persons in London. The deaths of persons aged upwards of sixty years in the metropolis, which had been 453 and 533 in the two preceding weeks, rose to 1017 in the week ending last Saturday, of which no less than 162 were of persons aged upwards of eighty years. The deaths of three reputed centenarians were registered during the week; two of these were of female inmates of the Westminster and St. Pancras Workhouses, whose ages were respectively stated to be 101 and 102 years. The third case was of the widow of a builder who died in the Wandsworth-road, Lambeth, on the 4th instant, from bronchitis; the informant in this case was a daughter-in-law, who stated the age of the deceased woman to be 113 years. The woman is said to have been born near Bristol, and her surviving relations seem to entertain no doubt as to the accuracy of the statement as to age. The husband, who stated that his wife was eighteen years older than himself, died two years ago, and his age was inserted in the death register as ninety-three, the accuracy of which statement appears to be supported by the ages of his surviving children. The statement, however, that the woman was eighteen years older than her husband seems to require confirmation. It seems hardly probable that the remarkable statement as to the age of this widow would stand rigid investigation.

THE PRESS AND THE ITALIAN QUARTER.

SINCE the publication of our special report on the sanitary condition of the Italian quarter several newspapers, notably the *Standard*, the *Daily News*, the *Daily Telegraph*, and the *Saturday Review*, have published lengthy articles on itinerant musicians, and on the social and sanitary condition of their homes. We are pleased to have been the means of thus awaking public attention to some of the important questions involved by the presence of so many Italians in our midst, and it is of comparatively little importance if our contemporaries, while treading in our footsteps, have sometimes forgotten to mention whence they derived their first inspiration. In reading over these articles, we cannot say that any new light has been thrown on the subject; while, on the other hand, a number of minor errors have been committed. There is also a regrettable tendency to attack and blame these foreigners because they are foreigners, because their ways are not our ways, failing to notice that, by the side of grave shortcomings, these Italians possess many virtues which the English poor would do well to imitate; notably their frugality, sobriety, their skill and comparative refinement in all matters of economic cooking. If the death-rate is not high in spite of the filth, the overcrowding, the bad drains, and ventilation of the Italian organ grinders' homes, this is in some measure due to the regular and abundant meals they are able to prepare at so small a cost. While the English poor live irregularly and starve themselves half the week because they cannot afford a joint or a steak every day, the Italian never dreams of purchasing anything so expensive, but, on the other hand, has every day a most ample meal of maccaroni polenta, with cabbage, bacon fat, and occasionally a few cheap scraps of meat, commonly known as "block ornaments." Their clothes, also, are ample and well suited to resist the climate, and their prudence does not allow them to encumber themselves with a wife and numerous family they would not have the means to support. Thus, what with the absence of children, with plenty of food, and daily, continuous out-door exercise, disease is not as prevalent as the want of proper house accommodation might lead one to anticipate. Further, they are gay, light-hearted, communicative, faithful to one another, and ever ready with a polite answer and a bright smile in response to any kindly word. In all this there is a great deal to be learnt, and if these Italians could only be taught English ideas of cleanliness, could be made to live in English common lodging-houses where sanitary regulations are carried out by means of continual police inspection, we are not at all sure but that the English poor might benefit considerably from the example set by these abstemious and economical foreigners.

PATHOLOGY OF CONGENITAL OPACITY OF CORNEA.

MR. E. NETTLESHIP, ophthalmic surgeon to St. Thomas's Hospital, reports to us an examination of an Eyeball with Congenital Opacity of Cornea, in which there was Arrested Growth, with Myopic and Glaucomatous changes. Ernest E——, aged ten, undergrown, brought in October, 1878, for total slightly staphylomatous opacity of right cornea; no perception of light. Tension rather +. Opacity was seen by the nurse on the evening of his birth, and by his mother the next day. No history of ophthalmia. In January, 1880, the condition was unchanged. Tension still slightly +; eye painful lately, and other eye irritable; right excised. Corneal region rather enlarged, but the rest of the eye very notably smaller than natural (no measurements made). In shape, however, it resembled a highly myopic eye, for the sclerotic, instead of being spherical, was egg-shaped, the yellow spot region corresponding to the small end of an egg. Disc deeply cupped, and bordered by a well-marked myopic crescent towards the yellow spot. Lens very small and rather flat; a large circumscribed opacity near its posterior pole, otherwise clear. Iris formed a thin layer of pigmented tissue adherent to opaque cornea. Vitreous rather fluid. Other parts normal.

In this rare specimen probably a large perforating ulcer of cornea occurred *in utero*, with total anterior synechia, and arrest of growth of the eyeball and crystalline lens. After birth chronic glaucoma resulted, as is usual, from the total anterior synechia, and this led not only to cupping of the disc, but to stretching of the posterior part of the sclerotic, and consequent myopic conformation of the dwarfed eyeball.

"INFANT LIFE PROTECTION."

IT is impossible to fail in sympathy for the victims of the baby-farming system, but we are not disposed to attach sensational importance to particular instances of wrong-doing while the system remains in force. The remedy already proposed in our columns—namely, to make the only legal mode of payment one passing through the local post-office, so that there should be a practical, though indirect, registration and an available list of baby-farms, is, so far as we can see, the only sufficient method of dealing with the difficulty. The proposal was stated in detail in a leading article which appeared on the 25th of October last. Lamentable cases of neglect and mismanagement will occur, and the public sense of humanity will be scandalised, until the whole subject is brought under control. It must be assumed that there must, to the end of the chapter, be a need of baby-farms,

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institutions which practically, if not nominally, fall under that description. The utmost society can do is to secure for the trade in nursing and training that publicity which constitutes the only real safeguard of most of our liberties. It is the publicity given to the administration of asylums for lunatics, imbeciles, and idiots which prevents abuses, and gives the motive-inspiration to progress. The policy with regard to baby-farms is precisely the same. Let means be taken—such as we suggest would be effectual—to create a means of knowing when, by whom, and consequently, at pleasure, how the children put out to nurse are cared for. A system of supervision by the occasional and unexpected visits of a proper official, who may be the inspector of the district, will complete the arrangements necessary to afford all that can be reasonably demanded or would be required.

THE MEDICAL SERVICES IN INDIA.

WE republish an order in the *Gazette* abolishing from 31st March the extravagant and useless system of dual administration of the Military Medical Service in India, which has for many years obtained in that country, and which we have from time to time condemned as complicated, cumbersome, and uselessly extravagant. We are glad to find that the Secretary of State for India has at last dealt boldly with the question, and has not allowed vested interests or other obstruction to stand in his way. The duties will in future be conducted in Bengal by a Surgeon-General, A.M.D., six Deputy Surgeons-General, A.M.D., and five I.M.D.; in Madras, by a Surgeon-General, A.M.D., two Deputy Surgeons-General, A.M.D., and four I.M.D.; and in Bombay by a Surgeon-General, I.M.D., two Deputy Surgeons-General, A.M.D., and two I.M.D. The abolition of three Surgeon-General's appointments and eleven Deputy Surgeon-General's, will, of course, give rise to considerable dissatisfaction among the medical officers, but we cannot but feel that in the interests alike of economy and efficiency some such change was much needed. There will be an additional saving by the duties of Secretary to Surgeons-General being discharged by one officer instead of two, except in Bengal, and by the Army Statistical work being transferred to the Statistical Officer attached to the "Sanitary Commissioner with the Government of India." The arrangements for the civil medical administration have not yet been promulgated. Under the new system orders have been issued for the withdrawal from India of two Deputy Surgeons-General, three Superintending Surgeons-Major, two Secretaries to Surgeons-General, and one Statistical Officer, the last three being also Surgeons-Major. The Surgeons-General and Deputy Surgeons-General of the Indian Medical Department, who will be removed from their posts by this order, are to be permitted to retire on the extra pension of their grade, and with a step of honorary rank, without being required to fulfil the regulated conditions as regards qualifying service.

EFFECTS OF POISONING BY CANTHARIDIN.

M. V. CORNIL has recently made a series of investigations on the lesions of the kidney and bladder in rapid poisoning by cantharidin. He finds that cantharidin, the action of which is simultaneously manifested on other organs of the body, causes in the first instance in the kidney almost immediately after its introduction beneath the skin the diapedesis, or escape of both white and red corpuscles from the vessels constituting the glomeruli; and in addition, there appears an impregnation and swelling up of the cells lining the capsules of Malpighii, and of the *tubuli contorti*, by a liquid containing hematic granules. After a short space of time inflammation of the *tubuli recti* and collecting tubes is observed characterised by a modification of the form of their cells, which instead of presenting their usual definite form, become variable or irregularly polyhedric, and this state is very general in the cells of other organs of the body. The bladder, after the first act of micturition, in which a large quantity of urine is discharged, and which occurs about fifteen or twenty minutes after the animal has been poisoned, remains contracted. Its surface is red, it contains a few drops of turbid urine with leucocytes, and very large cells, which may either be spherical or elongated and flat. An hour after the injection of the poison these large cells, which contain from two to eight or ten round nuclei, are either floating freely in the urine, or are adherent to the surface of the mucous membrane, and about to detach themselves from it. The elongated cells are irregular at their borders, and present rounded processes. Their protoplasm is granular, solid, homogeneous, stains yellow with picrocarmin, whilst the nuclei become red. Nuclei may also be seen about to divide, or several smaller nuclei may be seen near a larger one.

THE LATE MR. SERJEANT PARRY AND MRS. PARRY.

A CORRESPONDENT of the *Builder* (January 31st) describes the arrangements of a water-closet in the apartments occupied by Mr. Serjeant Parry and Mrs. Parry, where, it is surmised, the learned gentleman and his wife contracted their fatal illness. The closet leads out of the bedroom and dressing-room; the metal soil-pipe, seemingly of four inches diameter, was within the building, and into the head, beyond the trap of the water-closet, had been fixed a 2-inch pipe, elbow-shaped, which passed through the wall, and opened on the outer side. The soldered joint of this pipe had become defective and allowed the sewer air to escape under the floor. A 3-inch so-called ventilating pipe is to be substituted for the 2-inch pipe at the head of the soil-pipe, and the outer end attached to a zinc pipe running up the side of the house. And this, apparently, is the sole remedy proposed to be carried out for so mischievous an arrangement of the water-closet!

POLICE DIAGNOSIS.

IT cannot be surprising to anyone practically acquainted with the subject of "apparent drunkenness" and familiar with the difficulties of discriminating between the effects of intoxication and those of brain-disturbance otherwise induced, that the police do not always succeed in performing the medical duty of diagnosis officially confided to them. On the whole we think they do very well. It is true that deplorable instances of mistake occur with tolerable frequency, that a considerable proportion of the persons locked up in solitude and left to sleep off the supposed effects of drink prove to be passing quietly into a state of unconsciousness caused by injury or disease. We do not, however, see any reason why these results of the system pursued should be treated as wonderful in their nature, or as reflecting discreditably on the police. If the officers of the Inland Revenue were entrusted with the duty of examining crews of incoming ships for the indications of communicable disease, or collectors of the Queen's taxes were charged with the execution of the Compulsory Vaccination Acts, there would probably be a fair sprinkling of "mistakes"—in fact, about as many per cent. of errors as the fortuitous course of circumstances allowed. The police surely do not make more than this proportion of blunders in their discharge of the medical duties imposed upon them. Then why complain? If ever society should grow weary of an arrangement which places the population in perpetual peril of being locked up as drunk and "brought round" by the cold douche, it will doubtless please the Legislature to pass a short Act compelling the police to seek or call in a

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medical practitioner in every case of unconsciousness. Until either a bishop or some exemplary peer is "locked up" and carefully "soused" for drunkenness—and fate proves that he is labouring under disease,—there will be no change for the better, and none ought to be expected, however much it may be desired.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

MR. KARKEEK, in his report for 1879, as medical officer of health for Torquay, shows that the local authority of that famous health-resort is by no means disposed to rest contented with its climatological advantages. He tells of excellent work done in the course of the year in the ventilation of sewers, the supervision of the erection of new buildings, arrangements for a continuous water-supply, detailed inspection of the town, and completion of the preliminary measures for the erection of an infectious disease hospital. Advantages of climate are too frequently counteracted by local sanitary neglects, and we note with great satisfaction the endeavours of the Torquay local authority to remove any sanitary reproach from their district.

Mr. Linnington Ash sends us a copy of his sixth annual report as medical officer of health to the Holsworthy Rural Sanitary Authority, North Devon. It is an elaborate document, and ought to be in a form which would admit of its being distributed broadcast within the district to which it refers. This should be obvious to the Sanitary Authority. The work done by Mr. Linnington Ash during the year appears to have been of the most thorough description, and such as to keep his Authority most fully informed of the requirements of their district. Nevertheless, he has to complain that even in this the sixth year of his office the Authority has not seen fit to have a house-to-house survey of the district made. Without such survey it is impracticable to keep as defined an account of progress as is wanted. The report abounds with interesting particulars, and yields abundant evidence of the valuable work Mr. Ash is doing in his district.

TRAINED NURSING.

AT the annual meeting of the Glasgow Training Home for Nursing, last week, gratifying progress during the past year was reported. On 31st December last there were thirty-one nurses attached to the Home, of whom twenty-three were efficient and eight under training. During the year twenty-seven were admitted as probationers, nineteen were dismissed as unsuitable, and four left on account of bad health. Patients to the number of 132 were treated at the Home, of whom ninety-two underwent operations of more or less severity. After longer or shorter periods of treatment eighty-eight of the patients left cured of their ailments; twenty-seven were relieved, and four died; thirteen remaining in the Home on 31st December. During the past year trained nurses were sent out to wait upon 210 cases of sickness in private families. The total expenditure of the institution in 1879 amounted to £1796 5*s.* 1*d.*, and as the receipts from in-door patients and nurses only yielded £1386 11*s.* 8*d.*, it is not yet self-supporting, although the directors are sanguine that ere long it will be so; and it is satisfactory to find that while the deficiency of income from in-door patients and nurses' fees over the expenditure of the Home averaged £700 9*s.* 2*d.* during the four years ending 31st December, 1878, the deficiency for the year ending 31st December, 1879, was only £409 13*s.* 5*d.*, and that this sum was more than met by the subscriptions and donations received during the year. The new premises have meantime been so arranged as to provide suitable accommodation for the ladies in charge, and for twenty nurses. There can be no doubt that institutions such as this are a great boon to the community and deserve success.

EXCHANGES IN THE ARMY MEDICAL SERVICE.

THE following order by H.R.H. the Commander-in-Chief has just been promulgated:—

1. Exchanges between officers of the Army Medical Department at home and foreign stations will be permitted to the same extent as in the case of combatant officers, under the qualifying conditions as to promotions specified in Articles 15, 18, and 21 of the Royal Warrant of the 27th November, 1879 (Clause 1, Army Circulars, 1880).

2. Except under special circumstances, exchanges between medical officers serving in the United Kingdom will not be permitted, unless the officers have been at least two years at their respective stations.

The publication of this order should give considerable satisfaction to our military brethren, who have for a long time had a just cause of complaint that they were not permitted to exchange. The second clause is also a wise one, as it will prevent, except in special cases, medical officers constantly moving about or exchanging without substantial reasons. Officers and their families will not be liable to have a fresh medical officer every few months—a complaint we have often heard made under the new system, and which this general order will tend to remedy.

ACTION OF SALTS ON THE KIDNEYS.

MM. RICHET and Moutard-Martin have continued their researches on the effects of injecting various substances into the veins, and have communicated their results to the Académie des Sciences. They find that distilled water injected into the veins, far from being, as might have been anticipated, diuretic, arrests the ordinary secretion, even when the quantity thrown in amounts to ten grammes for each kilogramme of the total weight of the animal (1544 grains to each 2·2 lb. av.) In smaller quantities, as five grammes to each kilogramme, it checks without arresting it. In larger quantities it permanently arrests the secretion, and the function of the kidney cannot be re-established. All substances which are either normally or accidentally discharged by the urine are diuretics, if they occur in the urine in larger quantities than natural; in fact their elimination induces the discharge of a certain quantity of water. The beginning of the diuresis coincides exactly with the commencement of the elimination. The condition of concentration of the fluid injected appears to matter little in the effects produced on the renal secretion, for the polyuria seems to be due exclusively to the elimination of the salts injected. In a therapeutical point of view it is obvious that diuretic remedies should be looked for amongst the substances that are normally found in the urine, as urea, the chlorides and phosphates, or amongst those that readily escape by the kidneys, as sugar.

PRIVATE ASYLUMS LICENSED FOR SPECIAL CASES.

OUR contemporary the *Globe* must be held to have scored first in the coming controversy about "Lunacy Law Reform." It is suggested that while "the primary question as to who shall be the guardians of the insane is still debatable—whether, namely, it shall be the 'State,' which has deprived them of their liberty, and is only interested in their cure, or the private owners of asylums, with the serious temptation of large personal profits." "Private asylums should be licensed separately for special classes of cases." This is a good idea. To some extent, of course, it is carried out, but it is nevertheless true that, as one of the strongest arguments in support of private asylums has been that the public have a right to place their suffering friends under the special care of a favourite physician—for mental disease as for any other affection—the specialty of success in treating of a par-

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ticular variety of mind disease or disturbance might be recognised in the licence. In short, it would be better on many grounds that private houses should be licensed for specified classes of cases than for insanity generally; and such an arrangement would to some extent protect the insane from indiscriminate associations. Our contemporary and those who adopt the same view must not, however, forget that it is not possible to make an arbitrary and perfectly rigid classification of patients without sacrificing some of the *good* effects of association. It is, or ought to be, a canon of lunacy practice that treatment must be personal, but it is also important to utilize the educational effect of example, which association with mild cases sometimes beneficially exerts on patients who are affected with diseases of a lower and more debasing type. Nevertheless, we are inclined to think sufficient difference of degree may be found in the varieties of disease of the same generic type, and, recognising the value of the suggestion made by the *Globe*, we hope it will be further enforced, and receive the consideration it undoubtedly deserves both at Whitehall and St. Stephen's.

THE LATE DR. BENSON.

AT a meeting of the Committee of Council, held at the Royal College of Surgeons in Ireland, on Tuesday, the 27th of January, 1880, Dr. Speedy, Chairman of Council, in the chair, the following resolution, proposed by Dr. J. W. Moore, and seconded by Dr. Jacob, was unanimously adopted:—

"That the Council of the Irish Medical Association have heard with deep regret of the death of Dr. Charles Benson, who for many years was the earnest friend and zealous supporter of the Association as member, councillor, and President. The Council desire to record their sense of the loss sustained by the Association in the removal of so valued a colleague, and, at the same time, to express their sympathy with Dr. Benson's family in their present bereavement."

TYPHOID AT SOUTHEND.

SOME alarming statements have been recently published as to the prevalence of typhoid fever at Southend. There would appear to be some misapprehension as to this matter. Southend is situated in the registration district of Prittlewell, and more or less "fever" has seemingly been prevalent in parts of this district since November last. As many as ninety cases, it is reported, have happened, some of them in Southend, and nine have terminated fatally. The Registrar-General's report for the December quarter of last year, just issued, shows only three deaths from "fever" in the Prittlewell subdistrict, all described as typhoid. We may reasonably assume, therefore, that popular rumour has exaggerated the prevalence and fatality of the fever which has recently prevailed. We learn from other sources that Southend is free from the disease.

THE EXAMINATION FOR THE PUBLIC SERVICES.

THE competitive examination for commissions in the Medical Service of the Army, Navy, and Indian Service commenced on Monday last at Burlington House, when forty-two candidates presented themselves for the Army, five only for the Navy, and fifty-two for the Indian Medical Department. A large number of natives of India, who have been trained in the Calcutta, Madras, and Bombay medical colleges, are amongst the candidates for the Indian Service.

MR. E. R. BICKERSTETH, F.R.C.S., has, it is stated, been asked to allow himself to be put in nomination as a candidate for the representation in Parliament of the Universities of Edinburgh and St. Andrews.

AT the Liverpool Assizes, in the case of Bellis *v.* Little, the plaintiff brought an action to recover £67 7*s.*, alleged to be due upon a guarantee contained in a deed of partnership, dated September, 1874, and entered into for five years between plaintiff, and defendant, and Dr. Wood. Permission had been given verbally for Dr. Bellis to seek a practice elsewhere, and the question was whether his interests in the profits ceased when he obtained another practice, or continued till the expiration of the five years. The judge remarked that it was a pity the plaintiff and defendant had not referred their quarrels to Dr. Wood. He expressed himself unable to understand professional disputes. The question was which gentleman the jury believed was accurate in giving his evidence. The jury returned a verdict for the plaintiff, and judgment for him was given for £50. There is an increasing disposition among judges to refer questions of this sort to arbitration, and we hope to see a growing determination on the part of partners to take this course without going into courts. By this means money and dignity alike would be saved.

A LETTER from the medical officer of health for Shoreditch to the vestry clerk calls attention to very serious defects in the water-supply of the east of London, a matter which has more than once been forced on public notice. A great grievance in many of the houses is the want of proper means of storing water in the upper floors, so that a large amount of unnecessary labour is inflicted on members of poor families in having to carry it up several flights of stairs. This is a question which has a direct bearing upon the health as well as the comfort of the inhabitants of tenement-let dwellings.

THE Maryport Literary and Scientific Society, according to our contemporary the *West Cumberland Guardian*, had under discussion, on the 4th inst., the subject of "Compulsory Vaccination." The President, Dr. Crerar, occupied the chair, and gallantly and most successfully took the field against all opponents. The discussion appears to have been prolonged, but it ended in a vote upholding vaccination, there being, we learn, but one dissentient.

MR. CROSS, in writing to a gentleman in reference to the proposed acquisition of the London Water Companies, states that the mistake made in the matter of the telegraphs would not be repeated in the case of the intended acquisition of the Water Companies, which the Government intend purchasing at their known value, as it stood anterior to the proposition for their purchase.

THE profession will share the regret felt by his brother officers in learning, from a letter just received by a friend, that the second wound received by Lieutenant Ferguosn is likely to lead to the loss of his right eye. Mr. Fergusson is the second son of the late Sir William Fergusson, Bart. His comrade in arms, Surgeon Duncan, is progressing favourably, notwithstanding the severe nature of his wounds.

WE regret to report the death from pneumonia on the 12th January, in the Sherpur Cantonment, Cabul, of Surgeon Alexander C. Keith, M.B., Army Medical Department. Mr. Keith obtained his commission in February, 1877, and is the second medical officer who has fallen a victim to exposure and climate since the occupation of Cabul.

ON the 5th inst. an election took place for two physicians to Steevens' Hospital, Dublin, which had become vacant in consequence of the death of Dr. Bookey and the resignation of Dr. Grimshaw. There were three candidates, Drs. Tweedy and Hayes being successful. At the same meeting Dr. Grimshaw was appointed consulting physician.

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CLASS 4 of the Civil Service Estimates, including grants for public education, science and art, universities, &c., shows an advance of £114,303; and Clause 6, made up of superannuation and retired allowances, the maintenance of lunatics, and other items, discloses an increase of £26,049.

A MEETING of the Fellows of the Royal College of Surgeons in Ireland, in compliance with a requisition, has been convened by the President for Saturday, the 14th instant, to consult about the election of a representative of the College in the General Medical Council.

THE Medical Officer of Health for Salford, Dr. Tatham, notes, in his report for the week ending 31st January, an excessive death-rate in his district from affections of the lungs and air-passages, and an unusual mortality from whooping-cough.

SURGEON-GEN. C. A. GORDON, M.D., C.B., who has just returned from service in India, has been for the second time appointed principal medical officer of the Southern Military District.

A PETITION from inhabitants of Chesham is to be presented to the Local Government Board, praying that the proposed drainage and water-supply scheme for the town may be deferred.

DEPUTY SURGEON-GENERAL EDWARD GILBORNE has been promoted to the rank of Surgeon-General, *vice* T. Best, and appointed Principal Medical Officer in Ireland.

IT is stated that the Duke of Abercorn has been appointed Chancellor of the Royal University of Ireland.

THE death is announced of Mr. Robert Baker, C.B., for many years chief inspector of factories.

AMALGAMATION OF THE ADMINISTRATIVE STAFF OF THE ROYAL AND INDIAN MEDICAL SERVICES.

THE *Gazette of India* received by the last mail publishes the following Order of the Governor-General in Council.

"From the 31st March, 1880, the British Army Medical Department and the Indian Medical Department will form one Department for the medical administration of the army in the three Presidencies. The establishment for Bengal will consist of—

One Surgeon-General, A.M.D. One Secretary to Surgeon-General, A.M.D. One Secretary to Surgeon-General, I.M.D.	At Head-quarters.

The statistical duties for the army, British and native, will be performed by the statistical officer attached to the Sanitary Commissioner with the Government of India.

The eleven Circles of medical superintendence will be distributed as follows, each being held by a Deputy Surgeon-General:—

	Army Medical Department.		Indian Medical Department.
1. Allahabad	1	.....	—
2. Lahore	—	.....	1
3. Meerut	1	.....	—
4. Oudh and Rohilcund ...	1	.....	—
5. Rawul Pindee	1	.....	—
6. Sirhind	1	.....	—
7. Eastern Frontier District ...	—	.....	1
8. Presidency District	—	.....	1
9. Gwalior and Saugor	—	.....	1
10. Peshawur District	1	.....	—
11. Punjab Frontier Force ...	—	.....	1
	6	.....	5

For the Madras Army:

One Surgeon-General, A.M.D. ... ... One Secretary to Surgeon-General, I.M.D.	At Head-quarters.

Six Circles, each held by a Deputy Surgeon-General:

	Army Medical Department.		Indian Medical Department.
1. Centre and Northern Districts	1	.....	—
2. Southern District—Malabar and Canara	—	.....	1
3. Mysore and Central Districts	—	.....	1
4. Hyderabad	—	.....	1
5. Nagpore and Central India ...	—	.....	1
6. British Burmah	—	.....	1
	2	.....	4

For the Bombay Army:

One Surgeon-General, A.M.D. ... ... One Secretary to Surgeon-General, I.M.D.	At Head-quarters.

Four Circles, each held by a Deputy Surgeon-General:

	Army Medical Department.		Indian Medical Department.
1. Presidency District—Belgaum and Aden	—	.....	1
2. Poonah	1	.....	—
3. Northern Division and Mhow	1	.....	—
4. Sind District	—	.....	1
	2		2

After making provision for the civil medical administration of the remaining provinces of British India, the establishment of which will be duly announced in the proper department, there will remain below the rank of Surgeon-General, in excess of the establishment to be maintained for all duties,

Army Medical Department:
Two Deputy Surgeon-Generals.
Three Superintending Surgeon-Majors.
Two Secretaries to Surgeon-Generals.
One Statistical Officer.

Indian Medical Service:
Six Deputy Surgeon-Generals.

Orders have been already issued by Her Majesty's Government for the withdrawal of the surplus administrative officers of the Army Medical Department.

With a view to provide for the retirement on favourable terms of the surplus officers of the Indian Medical Service, the Right Hon. the Governor-General in Council is pleased to offer to the Surgeon-Generals and the Deputy Surgeon-Generals of the three armies their retirement on the extra pension of their grade, with an honorary step of rank, notwithstanding that they may not have completed the qualifying service for these pensions. The option of retirement will be given in order of seniority; but application to retire, which must be made to the military department of the government to which the officer belongs, cannot be accepted after the 1st March, 1880.

DR. FARR.

AT the meeting of the managers of the Associated Life Assurance Offices of Scotland, held at Edinburgh, on Tuesday, Jan. 13th, 1880, William Smith, LL.D., in the chair, on the motion of Mr. Thomson, it was unanimously resolved, "That the Association record in their minutes their regret at the retirement of Dr. William Farr, F.R.S., from the office of Superintendent of the Statistical Department of the General Register Office in London, the duties of which he had so zealously and efficiently discharged for the last forty-two years, and they take this opportunity of expressing their sense of the great value of his researches in sanitary science and vital statistics, and of the results which have followed from them; not only to the official Department in which he was engaged, but also to the whole country, and more especially to those interested in the theory or practice of life assurance."

The meeting further resolved that an excerpt from the minutes of the meeting should be forwarded by the secretary to Dr. Farr.

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THE MURCHISON MEMORIAL.

THE Committee are desirous of completing the arrangements connected with the above. A large number of subscriptions have been promised, some of which still remain unpaid. Since the last appeal was issued the Committee have enlarged the scope of this memorial, so that all students of the London and Edinburgh schools may now compete for the Scholarship in Clinical Medicine which it is proposed to institute. This scholarship should be of the value of at least £50 per annum, and to provide this further contributions amounting to £600 are desired. It is thought that no difficulty should be experienced in securing this sum to found a memorial worthy of so eminent and venerated a labourer in medical science.

Subscriptions will be received by the Hon. Treasurer, Dr. Potter, 20, George-street, Hanover-square, W.; or the Hon. Secretaries, Dr. Dyce Duckworth, 11, Grafton-street, Piccadilly; Dr. W. S. Greenfield, 15, Palace-road, St. Thomas's Hospital; and Dr. Byrom Bramwell, 4, Drumsheugh-gardens West, Edinburgh.

Additional Subscriptions.

	£	s.	d.
Earl of Derby	10	10	0
Sir W. Jenner	5	5	0
Septimus Sibley	5	0	0
W. Bowman, F.R.S. (addl.)	8	8	0
Dr. G. H. Orton	1	1	0
Dr. Felix Semon	1	1	0
Dr. Gavin Milroy	1	1	0
Mrs. E. G. Anderson, M.D.	1	1	0
W. McCormac (additional)	2	2	0
J. M. Burton (Lee)	2	2	0
Dr. Slight	3	3	0
Dr. J. Harley (additional)	2	2	0
Dr. Joseph Walker	2	2	0
Dr. Jackson (Frant)	2	2	0
Dr. Albert J. Bernays	3	3	0
Dr. Wardell (Tunbr. Wells)	1	1	0
Lennox Browne	1	1	0
Dr. Clifford Allbutt	1	1	0
Rev. H. Arnott, F.R.C.S.	2	2	0
Sir James Paget	2	2	0
Dr. Boyd	2	2	0
Dr. T. J. Maclagan	1	1	0
Dr. Workman (Teignmouth)	1	1	0
J. Dixon, F.R.C.S.	2	2	0
Dr. Bastian	2	2	0
Dr. Frederic Weber	2	2	0
Spencer Watson	1	1	0
Dr. P. M. Braidwood	2	2	0
Edgcombe Venning	1	1	0
Dr. Broadbent	3	3	0
P. H. McKellar	1	1	0
Dr. Guy	1	1	0
J. Stitt-Heslop	2	2	0
Dr. George Johnson	2	2	0
Dr. Wane	2	2	0
Dr. Hall (Brighton)	2	2	0
Dr. Adey (St. Leonards)	2	2	0
George Critchett	2	2	0
Dr. W. O. Markham	1	1	0
Dr. G. A. F. Wilks (Torquay)	1	1	0
An Old Patient, per Dr. Ralfe	5	5	0
Dr. F. T. Roberts	2	2	0
Dr. J. B. Siddall (Clifton)	1	1	0
Erasmus Wilson	2	2	0
Dr. Robert Elliot	1	1	0
Dr. Wilberforce Smith	1	1	0
Dr. C. Holman (Reigate)	1	1	0
Dr. Pearson	1	1	0
Dr. Granville Bantock	2	2	0
W. Scott	2	2	0
Dr. R. B. Owen (Beaumaris)	1	1	0
Dr. Withers Moore (Brightn.)	2	2	0
Dr. Hardman (Blackpool)	2	2	0
Dr. W. V. Lush (Weymth.)	1	1	0
J. Prestwich (Oxford)	12	12	0
Prof. Fraser (Edinburgh)	2	2	0
Jas. Moncrieff Arnott	5	5	0
Chas. Falconer, F.G.S.	25	0	0
Dr. Noel Gueneau de Mussy	3	3	0
Dr. Arding (Wallingford)	1	1	0
Dr. C. J. B. Williams	3	3	0
Dr. Allfrey (St. Mary Cray)	1	1	0
A. Campbell Swinton (Kimmerghame)	3	3	0
Dr. Douglas Powell	1	1	0
Prof. Acland	2	2	0
Dr. W. C. Coles (Bourton-on-the-Water)	1	1	0
The Dean of Lichfield	1	1	0
Rev. Dr. Nolan	1	1	0
Berkeley Hill, F.R.C.S	3	3	0
J. W. Hulke, F.R.C.S.	5	5	0
Dr. Risdon Bennett	3	3	0
Surg.-Maj. W. Stewart, M.D.	1	1	0
Dr. Fyfe	1	1	0
Dr. F. J. Mouat	1	1	0
Dr. H. Gueneau de Mussy	10	10	0
Alexander Shaw	10	10	0
G. C. Child Chaplin (Arbroath)	1	1	0
Messrs. Harper & Jackson (Barnstaple)	1	1	0
Dr. John Rae	1	1	0
Rev. J. Wale Hicks (Camb.)	1	1	0
Surg.-Maj. Alex. Grant	1	1	0
Dr. J. Clegg (Epping)	1	1	0
Miss L. Milne	5	0	0
Dr. Vereker Bindon	1	1	0
Prof. Charcot (Paris)	3	0	0
Dr. Branfort (Madras)	1	1	0
Prof. Aitken (Netley)	1	1	0
Prof. Frerichs (Berlin)	3	0	0
Prof. De Chaumont (Netley)	1	1	0
S. Wales & Mon. Branch of Brit. Medical Assoc., per Dr. Sheen	2	2	0
Dr. W. S. Playfair	2	2	0
Andrew Murray (Aberdeen)	3	3	0
Dr. Ford Anderson	1	1	0
J. Spicer (Alton), per Dr. Glover	2	2	0
Dr. Wilbraham Falconer (Bath)	2	2	0
Surg.-Maj. Geo. Perry	1	1	0
Dr. J. F. Payne	5	5	0
Professors, Calcutta Med. College, per Dr. D. B. Smith, Principal	33	9	1
Medical Officers at Allahabad, Bombay, per Shirley Deakin, F.R.C.S.	3	5	3
Medical Men practising in Ceylon, per W. R. Kynsey (Colombo)	15	16	4
T. M. Miller	1	1	0
T. W. Giles	1	1	0
W. G. Lightfoot	1	1	0
T. W. Elliott	1	10	6
W. G. Ranger	1	10	6
G. T. Rossiter	2	2	0
H. F. Banham	3	3	0
G. A. Crick	1	1	0
T. C. Charles, M.D.	2	2	0
A. Foxwell	1	1	0
T. W. Clarkson	1	1	0
T. F. Powell	1	1	0
C. K. Morris	1	1	0
F. Walters	1	1	0
O. Roberts	1	1	0
F. Heygate	1	1	0
C. Gripper	1	1	0
T. H. Battye	1	1	0
W. Wilson, M.D.	1	1	0
W. W. Groome	1	1	0
A. G. Bowen	0	10	6
R. Liebreich	3	3	0
R. W. Reid, M.D.	2	2	0
D. S. Davies	1	1	0
A. B. Carpenter	1	1	0
W. Fell	1	1	0
A. Odling	1	1	0
A. Luyard	2	2	0
Dr. Moorhead	5	5	0
Dr. Smith Shand	1	1	0
Dr. Stewart Leckie	2	2	0
Prof. Gairdner	5	5	0
Dr. Struthers	2	2	0
Dr. Cleghorn	1	1	0
Dr. Krieckenbeck	1	1	0
Dr. John Brown	1	1	0
Dr. R. Moir	5	5	0
Dr. Angus Macdonald	5	5	0
Dr. Haldane	2	2	0
Dr. C. Muirhead	5	5	0
Dr. G. H. Balfour	2	2	0
Amount before advertised	546	3	6

Correspondence.

"Audi alteram partem."

TREATMENT OF RHEUMATISM BY IODIDE OF POTASSIUM AND OPIUM.

To the Editor of THE LANCET.

SIR,—On perusing the interesting communication in your issue of Feb. 7th from Dr. Sinclair on the treatment of acute rheumatism, I was much struck by the absence of any allusion to the iodide of potash treatment for acute rheumatism, and have often wondered why it has been laid aside in England, and salicylic acid introduced, which has in several recent instances proved fatal.

I have been in the habit of using both at home and abroad iodide of potassium in large doses—five to twenty grains every three hours, with ten grains of Dover's powder at night. I have pursued this practice for at least thirty years—i.e., since the remedy was first introduced, and have treated many hundred cases on this system without disappointment or failure, and generally the treatment only lasts a week or ten days, even in acute articular rheumatism. I have a case now just recovered of articular rheumatism in the shoulders, elbows, knees, ankles, &c., which under this treatment was convalescent in a week. Mustard plasters, if applied the first day the pain is felt, will stop rheumatism at once without medicine; where mustard fails, blisters may be used. In a late case of very severe rheumatism in the joints, I found cold water was the only thing which gave relief, locally applied.

In rheumatic inflammation there is a deposit of lymph into the joints and tissues, which, if not removed speedily, becomes hard and organised, causing severe pain by its pressure. Iodide of potassium has the power of removing this deposit by absorption, and is, to my mind, the most scientific and appropriate remedy that can be used. It has the great advantage of not exposing the person taking it to cold, which the old calomel and opium treatment did by opening the pores of the skin.

Another remedy which seems much neglected nowadays is opium, which possesses very great power in subduing inflammation.

If iodide of potassium in large doses can cure rheumatism in a week, why resort to doubtful and dangerous remedies, merely because they are new?

Another advantage of this treatment is that heart complications seldom follow. In fact, I have seldom seen it occur when this remedy has been freely used in the beginning of the disease.

The old and well-tried system of counter-irritation by mustard and blister seems laid aside in the search after new remedies, which are no sooner heard of than they as quickly die out and are forgotten. Opium and bark are two of the oldest remedies under the sun, and still hold their ground; while morphine is less generally useful than opium in its crude state. Quinine, on the other hand, is superior to chinchona bark as a nerve-tonic in tropical fevers and other affections of the nervous system.

I am, Sir, yours, &c.,

Fulbeck, Feb. 9th, 1880. G. K. BARTON, M.D.

To the Editor of THE LANCET.

SIR,—Will you allow me, as having treated about two hundred cases of acute rheumatism with salicin and its allied drug, to make some remarks on the papers of Drs. Sinclair and Hill in your issue of the 7th inst.

However satisfactory the cases of the late Dr. Fuller may have been, there is no doubt but that subsequent observers in other localities have failed to secure by alkalies a like success. On the other hand, as regards reduction of temperature and alleviation of pain, the use of salicin is immensely superior to all former methods of treatment, rendering the use of opium quite unnecessary.

As regards cardiac complications, the percentage of cardiac affection after treatment was in my cases 5·6; in two hundred cases reported from Boston, 4·7, and in one hundred cases recently reported from Germany, but 2 per cent. were affected.

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The "horrible sweetness" and nausea caused by sodium salicylate, of which Dr. Sinclair complains, can be effectually concealed and prevented by the use of the drug dry, in capsules of wafer paper.

Lastly, Dr. Hill may be assured that no harm can be done by sodium salicylate in fifteen-grain doses, nor from double that amount if reasonable care be taken. I have, however, seen five cases die in a manner similar to that he describes, with delirium and hyperpyrexia. In these cases it is waste of time to use drugs, and the cold bath is the only method by which we may hope to save life.

I am, Sir, yours, &c.,

Leeds, Feb. 9th, 1880. ERNEST H. JACOB, M.B.

REMOVAL OF STONE FROM THE BLADDER.

To the Editor of THE LANCET.

SIR,—With your permission I wish to make a remark or two on the leading article in your last issue concerning Dr. Bigelow and Lithotrity. The writer, with a natural desire to be just to the American surgeon, is perhaps scarcely fair to his countrymen, the English lithotritists, and particularly to Mr. Clover.

Clover's india-rubber aspirator cannot be classed with Crampton's glass receiver, which was exhausted by an air-pump every time it was applied. Clover was the first to render aspiration of the bladder easy, simple, and practicable. All recent aspirators are identical in principle with Clover's, his instrument having been in them only modified by augmenting its power and increasing the size of the evacuating catheter. It is incorrect to say that the original aspirator only removed "pulverulent matter," since it has been employed for years to withdraw fragments and calculi as large as peas; as may at any time be verified by an examination of Sir Henry Thompson's collection of crushed stones, hundreds of which have been removed by its use.

Long before Dr. Bigelow turned his attention to lithotrity stones of small size were often removed in this country at one operation by means of the lithotrite and Clover's apparatus. During the last six years I have seen more than most men of modern lithotrity, and I have never seen a sitting not followed by the effective use of Clover's instrument.

Dr. Bigelow's method appears to be successful; and if the result of experience proves it to be so, it must be considered an important improvement in lithotrity, but not an "entirely new" operation. It is, in fact, the latest development of the original operation of Civiale, at first so rude; and it is very possible that future improvements will render lithotrity more perfect than it is at present. In regard to the question of improvement, however, an important point remains. It undoubtedly has still to be proved that evacuating catheters of the size Bigelow recommends can be invariably used with safety, or that unfortunate results have not already been produced by their use.

I am, Sir, yours, &c.,

Wimpole Street. G. BUCKSTON BROWNE.

THE "ANNALS OF CHEMICAL MEDICINE."

To the Editor of THE LANCET.

SIR,—Your issue of January 31st contains a notice of the "Annals of Chemical Medicine," &c., edited by me, in which it is stated that the materials of which the volume was composed had already appeared in various repertories of original information. This statement is entirely unfounded. No less than nineteen articles out of the twenty-three making up the volume have never been published by me before. Only four articles contain matter previously published by me, and of these one is an abbreviated summary from three different publications, while another is a consolidated extract of at least half a dozen different papers dispersed in chemical and physiological journals. It is next stated in this notice that I had excluded the productions or contributions of fellow-workers. This statement, too, is entirely unfounded. I have announced in the preface (p. vii.) that I hope to merit the countenance of the profession mainly by presenting the researches and observations of others, and that only from time to time would I venture to direct attention to work more particularly my own, and this, as the context shows, mainly on public grounds. My own researches in the volume thus play a very modest part, as compared to the researches of more than one hundred and eighty authors quoted in the text and enumerated alphabetically at the end of the volume. So far from wishing to exclude authors or fellow workers, I, on the contrary, invite them to aid me, and that in the clear statement—"All contributions of original information, whether these be the result of observation or experiment, will be as welcome as deductive or inductive meditation, provided only they are based upon the data and principles of actual science."

I can hardly believe that the author of the notice in question has read the list of contents of the new volume. The perusal of the whole of the preface would have saved him from the grave errors of his statements; the perusal in a cursory way of even some of the articles would have shown him that the title of "Annals of Chemical Medicine, &c.," is by no means "misleading," but, on the contrary, expresses correctly, and in accordance with many precedents in other branches of science, what the volume contains, and what future volumes are intended to offer. In only one point is the writer of the notice correct—namely, in the confidence that I shall endeavour to bring the contents of the "Annals" up to the highest attainable scientific standard, "by the observation of the law of the most accurate methods, and the avoidance of ephemeral sensational productions."

I trust, therefore, that you will do me the justice to reconsider this matter, withdraw the erroneous statements which I have pointed out, and give to the profession a correct account of the contents of the volume, either by publishing this letter in your next issue, or by giving a second amended notice in accordance with actual fact, or by reprinting the enclosed prospectus and list of contents, or both. Some such reparation is demanded, not only by my sense of honour, but also, I doubt not, by your own.

I remain, Sir, your obedient servant,

J. L. W. THUDICHUM, M.D.

Pembroke-gardens, Kensington, W., Feb. 3rd, 1880.

*** With reference to the absence of original communications in Dr. Thudichum's periodical, we failed to discover by either external or internal evidence that any of the twenty-three articles were contributed by other pens than his own. Dr. Thudichum may be quite correct in stating that no less than nineteen articles out of the twenty-three have never been published before by him, but we were strongly impressed with the belief that the materials in some form or other had appeared in "various repertories of original information." We did not, however, nor do we, censure Dr. Thudichum for this; what we do object to is that Dr. Thudichum, as editor of a periodical intended, and *likely*, to be useful in the general advancement of a particular branch of science, and for which he solicits "the kind attention and generous support of the medical profession," should preface its pages with a serious statement with regard to leading physiologists and chemists in this country and abroad, men whom he admits to be of "externally high position," charging them with "absence of knowledge," and with writing papers full of "pretended convictions," "haphazard opinions," and "mere claptrap." The passage which we *quoted*, from Dr. Thudichum's preface, gave us reason to fear that a work in which we are much interested might not fully represent the general progress in the branch of science it is designed to benefit.—ED. L.

THE BEARER CORPS IN SOUTH AFRICA.

To the Editor of THE LANCET.

SIR,—Having read in your paper of the 7th inst. a very interesting article on the working of Surgeon-Major Hector's Bearer Company at the storming of Seccocoeni's stronghold, without wishing to detract from the merits of Dr. Hector, permit me to point out that your correspondent is in error when he states that this Bearer Company was the "first regularly trained and disciplined one present in action with our troops."

At the request of Surgeon-General Woolfryes, C.B., the principal medical officer in South Africa, I organised a Bearer Company at Durban in March last, specially for the

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Zulu campaign. One half of this company was attached to the First, the other half to the Second, or General Newdigate's Division.

For the valuable assistance rendered to the wounded by Surgeon-Major Stafford's "Half Bearer Company," under a galling cross fire inside the square at the battle of Ulundi, and of which I was an eye-witness, I would beg to refer you to General Newdigate's Ulundi despatches.

I am, Sir, yours faithfully,

F. B. SCOTT,

Surgeon-Major (late) Head-quarter Staff.

Army and Navy Club, Feb. 10th, 1880.

HYDROPHOBIA OR RABIES.

To the Editor of THE LANCET.

SIR,—The case of hydrophobia or rabies communicated to you by Mr. Moore is most interesting, and will, I trust, call forth the latent experience of the profession on the subject of this fearful malady. Mr. Moore has evidently mastered the literature of the subject, but it may interest him to hear of what I conceive to be a genuine case of *Hydrophobie imaginare*. I much regret the details of the case are so excessively meagre, and that it did not come under my personal observation, as it occurred some miles from me.

In August, 1877, about the time when rabies was very prevalent, an excitable young man, the son of a well-to-do farmer, was suddenly seized with violent pains in the head, and his manner was "very strange." He gradually became worse. In short, symptoms of hydrophobia became developed. His usual medical attendant saw him and considered it a case of hydrophobia. He called in another practitioner of large experience, who coincided in the opinion. A London physician was obtained who quite agreed with the diagnosis. I believe the patient was treated by hot-air baths. He recovered, and is now perfectly well.

It appears two years before his seizure he was bitten by a surly spaniel, but forgot the circumstance until the papers were daily recording cases of rabies. There he read with a morbid avidity and no doubt gave way to a morbid, dread, of the disease which eventually resulted in the development of "hydrophobic imaginaire." I may add that the dog was alive and well at the time of his seizure, which was two years subsequent to the bite.

With regard to my own experience of rabies, I have a short and simple case to put on record which was undoubtedly genuine, as the dog three days after biting the boy evinced, all the usual signs of the disease, and was destroyed. This I heard when the boy was taken ill.

On May 10th, 1877, a boy aged twelve was brought to me who had just been bitten by a dog. He was playing hockey with a companion in a narrow lane, and while he was flourishing his stick the dog came by and flew at him, inflicting a rather severe lacerated wound of the left temple. I freely cauterized it and brought the edges together by wire sutures; the wound healed favourably, and, as far as I was concerned, the circumstance was forgotten.

On August the 9th I was called to see the boy who was bitten. His mother said he had been "queer for some days, and for some time his appetite had been very voracious but no fear of fluid." When I saw him he was flushed, quite sensible but with a look of extreme anxiety and horror, and complained of difficulty of breathing. The poor lad was very tractable, and with great resolution he drank a little milk. He said he knew he should die and go to heaven. The sight of a dog which happened to come in caused extreme terror. I injected half a grain of morphia, but owing to his restlessness I do not think he had the full benefit of it. I called again in two hours, and heard that he had run about on his hands and knees and barked like a dog. He was when I saw him comparatively quiet, and I persuaded him to take a small draught containing half a grain of morphia. He lay down and soon fell into a profound sleep, which lasted about three hours. He then awoke with well marked risus and opisthotonos and his struggles were violent. He was very much relieved by whiffs of chloroform, which lessened his sufferings considerably; but being a delicate boy the constantly recurring paroxysms soon exhausted him, and he died about twelve hours from the time I first saw him. Of course, the treatment in this case was purely palliative; but I was glad to have it in my power so much to mitigate his suffering by simple means.

I am, Sir, yours truly,

Wooburn, Jan., 1880. A. WARREN, L.R.C.P. Edin., &c.

ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—That "Verax" is trying to cover a weak position by a cloud of words is the impression I derive from a perusal of his last letter. This I will try to prove, if you can permit further discussion of the subject in your pages.

After admitting generally the liberality of the new scale of pay and retirement, I made an important exception, in the case of "Surgeons-Major of twenty years' service and upwards," and stated that they receive, under the Warrant, "only one shilling a day of additional pay," which amounts to the paltry sum of £18, and not of £45, a year. Does "Verax," with the Warrant before him, wish to dispute this?

My statement that an increase of pay was "unasked for" by the Department generally, to which the remark manifestly applied, I need not defend before the readers of THE LANCET.

Though exceptional demands may have been made on their behalf, and may now be dragged into argument, it seems a waste of time to repeat that pay was not one of the "causes of the unpopularity of the service."

I stated that the medical officers referred to, "after a quarter of a century's service," get an increase of pension of only "two shillings and sixpence a day." Before this Warrant was framed officers of twenty-five years' service, on retirement, got £1 a day, and now, unless "selected," they get only £1 2*s.* 6*d.*, with a new and serious condition added.

Does "Verax" wish to dispute this? What may be a *summum bonum* to men looking forward to retirement at twenty years is evidently nothing of the kind to those who have completed that period, and who may look to retirement at twenty-five years. "Assertion" is scarcely the term to apply to a remark of mine about "residence" and "commutation," which was carefully qualified by the reservation "so far as we know." But is it an unreasonable idea that the authorities may have retained such a power of restriction as I suggested, and may at any time bring it into use, "Verax's" opinion to the contrary notwithstanding, which is not "official"?

The "loyalty and patriotism" of medical officers are so far beyond all doubt that it was clearly unnecessary to bind them down to serve on "national emergency." Why then the retention of their names on the active list of the army?

Half-a-crown a day is a poor retaining fee, considering that the "rank and file" referred to by "Verax" get a fifth of the amount after only six years' service.

On the subject of "sick leave" "Verax" is not clear. He says: "Before Nov. 27th medical boards could not recommend more than six months' leave for medical officers," implying, one would suppose, that they can do so now; but Clause 44, which he quotes, shows that the second period of six months will be recommended by the Director-General. Now, why not a board in the second instance? It "goes without saying" that boards "recommend" and that the Commander-in-Chief "grants" leave.

About exchanges. An editorial in the last *Army and Navy Gazette* may be read by "Verax" with profit.

During the present trooping season, as formerly, exchanges were made before the appearance of the Warrant. Clause 33 is as vague as clause could be, and "exceptional circumstances" may yet be found a useful official expression, when it may be wished to "apply pressure."

Again, to be told "officially" what everybody knew before, and some to their cost, did not add to the stock of the world's knowledge. "Verax," I suppose, does not wish to deny that he was aware of the three years' Indian service rule. Then why all this "war of words?"

He asks four questions about "soldier servants," in rapid succession, three of them apparently taken from the children's game "How do you like it, &c. &c.?" In answer, I refer him to G. O. xliv. "Soldier Servants," 18th May, 1878, and trust he will forgive my expressing surprise that

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so zealous a champion of officialism should be ignorant of regulations vitally affecting a question he chooses to discuss.

I have not yet heard of any medical officer availing himself of the valuable concession.

Having disposed of the charges and shown "Verax" that he has not a monopoly of veracity, I apologise for the length of my letter.

Refuting such a list of imaginary "errata" is irksome, and I trust that "Verax's" next collection will be smaller, and more carefully selected.

I am, Sir, yours, &c.

January 26th, 1880. Y.

DEATH FROM CHLOROFORM.

To the Editor of THE LANCET.

SIR,—I beg to forward brief notes of a case of death from chloroform, which occurred in the West Norfolk and Lynn Hospital on the 29th January.

Rosannah H——, aged forty-five, was admitted into the Lynn Hospital on January 24th, 1880, with a large uterine polypus. Her previous history up to two years ago was good; no history of rheumatism. Two years ago the catamenia, which up to that time had been regular, ceased; from this period there is a history of uterine hæmorrhage coming on suddenly, and at intervals of a fortnight to six weeks. There is no doubt, from the anæmic appearance of the woman, that in this period she has lost a considerable amount of blood. She has lost flesh since Christmas. At an adjourned consultation of the medical staff on January 29th it was decided that chloroform should be given, in order that a thorough examination of the uterus, with a view to operative measures, should be made. Accordingly, Dr. Dale gave at first ether, then ether with chloroform, and lastly, chloroform alone. The total quantity of chloroform used did nor exceed two drachms. All went well for the first eight or ten minutes, when *suddenly* the breathing became loudly stertorous, the face cyanotic, and the pulse at the wrist ceased, the pupils being slightly dilated. The tongue was at once drawn well out of the mouth, flipping the face and body with cold water tried, and artificial respiration at once begun. She apparently rallied a little, but for a very brief period; the heart's sounds, however, could not be detected. The right external jugular vein was very prominent, and was opened, blood flowing in a jet at once. Galvanism to the heart, an enema of brandy, turning the body on the side (Silvester's method), and raising the trunk with the head low, were all tried.

Artificial respiration was persistently kept up by Mr. Sweeting, Mr. Wilson, Mr. Plowright, and myself for fully one hour. Dr. Dale noticed a somewhat accentuated second sound at the base (but there was no bruit) before giving chloroform.

At a post-mortem examination made twenty-three hours after death, rigor mortis was very slightly marked. On opening the chest a good deal of fat existed in the anterior mediastinum. The pericardium was normal; the muscular fibres of the right ventricle were greatly hidden by a deposit of fat. The left ventricle was empty; the right contained no clots; the blood was quite liquid. The mitral valve had a small circular patch of induration; four to six little bead-like bodies of lymph existed on the central aortic valve; slight digital pressure was sufficient to loosen some of these beads. The heart weighed fourteen ounces, and was therefore above the average weight; the fibres did not break down under the fingers; the heart's substance was firm and did not feel greasy. Microscopic examination, though it showed a partial fatty infiltration of the muscular fibres, gave no evidence of fatty degeneration of the fibres themselves. The lungs were somewhat small but healthy. Liver large and anæmic; kidneys and spleen normal. Examination of the uterus proved the existence of a large polypus the size of a child's head attached by a circular and slender pedicle, close to the fundus of the uterus. The right ovary had several cysts in it. The polypus could easily have been removed (had the patient lived) by Barnes's wire écraseur.

I am, Sir, your obedient servant,

ARTHUR GEO. BLOMFIELD, M.B.,
House Surgeon, Lynn Hospital.

PREGNANCY AFTER OVARIOTOMY.

To the Editor of THE LANCET.

SIR,—Having seen "Beta's" letter in your issue of Feb. 7th, 1880, it may be interesting to him to learn that, having published an article in the *Practitioner* of December, 1878, partly relative to the matter, I received a letter from Dr. Atlee, U.S., the celebrated ovariotomist, who kindly informed me that a case of his had borne several children after the removal by him of one ovary, and that some of the children were males and some females. That, therefore, settled the question, and I immediately gave up investigating the subject. The result of my inquiries into the matter I have published in the *Medical Press and Circular* (March 13th, 1878). That there is something more than a mere coincidence between the sex of the child and the position of the child I am assured of. That the removal of one ovary precludes the possibility of the woman bearing either sex must now be considered as an exploded theory.

I am, Sir, yours, &c.,

T. P. TUCKEY, M.B. Dublin.

Tywardreath, Feb. 9th, 1880.

To the Editor of THE LANCET.

SIR,—I think the following will set at rest the question of "Beta," contained in your publication of last week,—whether the sex of a child is determined by the ovary from which it is generated.

An unmarried lady had the left ovary removed by Mr. Spencer Wells, with a successful termination (*vide* vol. i., p. 51, of his able work on Diseases of the Ovaries). She subsequently married, and has had five children—three males and two females.

I am, Sir, yours faithfully,

Addison-road, Kensington, Feb. 10th, 1880. R. KING PEIRCE.

To the Editor of THE LANCET.

SIR,—If your correspondent "Beta" will refer to my case, published in your columns in 1870, which I believe was the first one put on record of a confinement after the above operation, he will find my patient underwent the operation of extirpation of the left ovary by myself in 1868, and was delivered of a male child in 1870.

Yours, &c.,

Hanley, Staffs, Feb. 1880. JOHN SWIFT WALKER, M.D.

Obituary.

SIR DOMINIC J. CORRIGAN, BART., M.D. EDIN., DUBLIN.

BY the death of Sir Dominic Corrigan the medical profession loses one of its most conspicuous members, the University of Edinburgh one of its most illustrious graduates, and the Irish race one of its finest specimens. Though a perfect Irishman, Sir Dominic was as much at home in London as in Dublin, and though a Catholic in religion, he had too much humour and too much humanity in his constitution to be a bigot. It were well for Ireland if all her public men displayed so much moderation, sense, and good humour as Sir Dominic habitually displayed in dealing with difficult and delicate questions.

We will briefly record the chief historical facts of a very interesting and useful life. Dominic John Corrigan was the son of a Dublin merchant, and was born in Thomas-street, in 1802. He was educated at the Lay College of St. Patrick's, Maynooth, and after his school days was apprenticed to a practitioner of repute in Maynooth, the late Dr. O'Kelly. Dr. O'Kelly has the further claim to be remembered that he early detected the ability and promise of young Corrigan and advised his father accordingly. He suggested that Dominic should be sent to study in Edinburgh and predicted for him the highest eminence. In 1825 both Corrigan and Stokes graduated in Edinburgh. The subject of Corrigan's thesis was "Scrofula." His anatomical studies were pursued under difficulties, and to procure subjects he had to have recourse,

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like his contemporaries, to measures which were not altogether decorous. But his humanity showed itself even on such occasions. It is recorded that on one such expedition he encountered a widow weeping over the grave of her recently-buried husband, who had died on his return, as a harvester, from England. Corrigan not only relented, but originated a subscription for the widow. He studied also in Dublin, and attended the clinical lectures of Dr. Toomey, delivered in Latin, at Sir Patrick Dun's Hospital. So early as 1832 he gave proof of that discrimination in the study of disease which has so creditably distinguished him, by publishing an article on "Permanent Patency of the Aortic Valves." This work brought him great and lasting distinction; and so high an authority as Trousseau, whose appreciation of Irish merit was acute, gave to the disease the name of "Maladie de Corrigan." His pursuits as yet and for a long time were pathological and physiological rather than clinical—not such as to bring immediate popularity as a physician. But a careful study of a little book entitled "Lives of Eminent Physicians from Linacre to Gooch," and his own honest reflections, satisfied him as to the true basis of reputation, and he worked and waited. He first became connected with the Meath Dispensary, then with the Cork-street Fever Hospital, then with the Jervis-street Hospital. As his reputation began the College of Physicians on the proposal to make him a fellow blackballed him. But the college soon relented, and, in after time, made ample amends by electing him President for five successive years, and by getting Foley to chisel his statue in marble. In 1833 he began to lecture on the Practice of Medicine in connexion with the Carmichael School. In 1840 he was appointed physician to the House of Industry Hospitals, an appointment he held till 1866. Here he delivered his important and valuable Lectures on Fever, which he published in 1853. In 1841 public recognition of his merits began. Practice had been coming for some years prior to this. In 1841, on the foundation of the Queen's University, he was nominated a member of the Senate. Thirty years later he was made Vice-Chancellor of the University. In 1849 the University of Dublin honoured him and itself by conferring its degree of M.D. upon him. In 1866 he was made a Baronet during the ministry of Lord Russell in consideration of his public services to education—he was one of the Commissioners of National Education—and of his high professional position. Amongst his many honours we must not omit to say that he was Physician-in-Ordinary to the Queen in Ireland. His professional position was now at its height, and few or no physicians of his time enjoyed a more remunerative reputation. He could not see all the patients that wished to see him, and it is said that he used to see as many as he could, and then escape from his house as he best could. He had such a reputation that after his election to Parliament for Dublin in 1870 he had only to return to Dublin to find himself as much in demand as ever.

In London, of late years, Sir Dominic has been a most grateful and familiar figure in Parliament, in the Reform Club, and in the Medical Council, in which he has represented the Queen's University since the formation of the Council in 1858. We do not like to think of the blank in the Council, and of the loss to the liveliness of its debates, which his death will occasion. The general practitioners of the country, too, lose in him one of their best friends. He had none of the "airs" of a consultant in his constitution; he looked on all medical men as his brethren, and often eloquently denounced the injustice of their exclusion from the Medical Council. He did this very recently before the Select Committee of the House of Commons, and we may well be thankful that his evidence was taken so early. Sir Dominic's influence in the Medical Council was always used in favour of holding high the standards of preliminary and professional education. Though occasionally his fine racial and constitutional pugnacity brought him into slight collisions with his colleagues in the council, we are sure there will be but one deep sentiment of regret that they will see his face and hear his Irish eloquence no more.

We cannot close this sketch of a true leader in the profession without reverting to the thoroughly sound basis on which Sir Dominic's reputation was based. Those who have only seen him of late years in London, with too many and too evident indications of the ravages of gout on his fine physique, are apt to forget his work as a pathologist and a physician, though his work in both capacities remains standard to this day. In this multifarious work we should be disposed to specify, as of chief merit, three pieces: his article on Permanent Patency of the Aortic Valves, his description of Cirrhosis of the Lung, and his lectures on Fever. We have already spoken of his article on Patency of the Aortic Valves. In the light of recent pathology his speculations on cirrhosis of the lung are more meritorious than ever, and continue to be regarded as in the main sound. They anticipated by forty years much of the present pathology. As regards Fever, his lectures abound not only in practical and sensible suggestions for treatment, but he had the merit which two or three at least of his illustrious compatriots escaped, of seeing the difference between typhus and enteric fever. We can scarcely praise too highly a man who could show such discernment, and who could add to such scientific and professional labours work as a public-spirited citizen and statesman which make his death to be lamented as a national loss.

It had been a cause of great pain to all Sir Dominic's friends to observe, for the last two years, and notably for the last few months, that his bodily health was failing. Five weeks ago he had a severe stroke of paralysis of the left side, from which he partially recovered, but during the last ten days of his life his strength failed and all hope vanished. From the commencement of his illness to its end he was closely attended by his intimate friends Drs. Banks and Cruise, and he died on Sunday morning, Feb. 1st, most peacefully, conscious almost to the very last, and surrounded by all the immediate members of his sorrowing family. His funeral took place on Feb. 5th, and was very largely attended by representative persons.

There are few lives more full of usefulness and honour than the one whose outline is sketched above, and for many particulars of which we are not a little indebted to an admirable article in the *Freeman's Journal* of Feb. 2.

PARLIAMENTARY PROCEEDINGS.

HOUSE OF LORDS.

Friday, Feb. 6th.

MEDICAL EDUCATION.

THE Marquis of RIPON asked the Lord President of the Council whether he could state what were the intentions with reference to medical education.

The Duke of RICHMOND and GORDON replied that the Bill on the subject which passed through their lordships' House last session was sent down to the other House, where it was referred to a select committee. The same Bill would be introduced in the House of Commons and referred to the same committee, in the hope of legislation this session.

HOUSE OF COMMONS.

Friday, February 6th.

THE REGISTRAR-GENERAL.

Mr. ANDERSON asked the President of the Local Government Board why, in filling the office of Chief Registrar, the forty-two years' services of Dr. Farr were ignored, and the public deprived of his aid in the new census?

Mr. SCLATER-BOOTH.—I understand from the Prime Minister, whose duty it was to advise the Crown in regard to this office—the office, that is, of Registrar-General, not "Chief Registrar," as stated in the question—that he was satisfied that the state of Dr. Farr's health was alone sufficient to render it inexpedient to appoint him to any arduous and laborious post. ("Hear, hear," and murmurs.)

Mr. ANDERSON gave notice that in consequence of the unsatisfactory answer which he had received he should take an early opportunity of calling attention to the office of Registrar-General. ("Hear, hear.")

Monday, Feb. 9th.

INTEMPERANCE.

The CHANCELLOR of the EXCHEQUER, in answer to Sir W. Lawson, said he did not think it was at all probable that it would be in the power of Her Majesty's Government in the present session to take any steps for carrying out any of the recommendations made by the Lords' Select Committee on Intemperance.

Wednesday, Feb. 11th.

The Medical Act (1858) Amendment Bill was read a second time.

THE Mile-end workhouse infirmary is to be enlarged to the extent of 200 additional beds.

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Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Feb. 5th:—

Pook, William John, Devonshire-street, E.
Quicke, William Henry, Brinton Lodge, Brixton-road.
Redmond, Leonard, Grange Loughgall, Armagh, Ireland.

The following gentlemen on the same day passed the Primary Professional Examination:—

Sidney Ernest Craddock and Frederic Harvey Norvill, King's College; Alfred Edward Odling, St. Thomas's Hospital; Chas. Robt. Tyrrell, Middlesex Hospital.

TYPHUS is reported to be very prevalent in Odessa. The city hospital, which is arranged to receive 960 patients, contained at the time of the latest news no less than 1300.

ON Sunday last collections were made in most of the churches and chapels of Manchester on behalf of the medical charities of the town.

THE Customs authorities have, within the past few days, seized and ordered to be destroyed, many thousand pounds of vile rubbish dignified by the name of tea.

THE ASYLUM FOR IDIOTS.—The Earl of Rosebery will, it is announced, preside at the anniversary festival of this charity on Thursday, April 22nd.

THE Town Council of Winchester have applied for sanction to contract a loan of £4500, required to complete the sewerage scheme of the borough, on which £32,000 has already been expended.

AT Willenhall, Staffordshire, on the 9th instant, the full penalty (£20) prescribed for neglect to provide adequate ventilation in coal mines, was imposed on Michael Harle, certificated manager for the Pelsall Coal and Iron Company.

CHARING-CROSS HOSPITAL. — The Fifty-ninth Annual General Court of the Governors of this hospital was held in the board-room of the institution on the 11th inst., H. A. Bosanquet, Esq., one of the treasurers, in the chair. The report stated that 1648 in-patients and 16,197 out-patients were treated during last year, and that of the total number 5277 were cases of accident, &c. The past year, though more satisfactory than 1878, had not been a very prosperous one. Lord Overstone had, on account of advanced age, resigned the office of President, and His Royal Highness the Duke of Edinburgh, K.G., had graciously consented to accept the office, and also to preside at a festival dinner in aid of its funds to be held in the spring of the present year.

HEALTH OF DUBLIN.—During the quarter ending 3rd January the deaths registered in the Dublin Registration District amounted to 2394, equal to 28·3 per 1000; and the deaths to 3010, or 35·6 per 1000. The deaths exceeded the births by 616, and show an excess of 785 over the average for the last quarter of the past ten years. The principal causes of death were as follows: Bronchitis, 547 deaths; convulsions, 270; phthisis, 235; scarlatina, 160; heart disease, 131; pneumonia, 99; measles, 94; small-pox, 77; fever, 68; mesenteric disease, 59; cancer, 49; diarrhœa, 49; paralysis, 48; apoplexy, 44; liver disease, 44; hydrocephalus, 40; kidney disease, 38; whooping-cough, 37; cephalitis, 33; diphtheria, 20; whilst 66 deaths were accidental, 3 homicidal, and 1 suicidal.

VENTNOR CONSUMPTION HOSPITAL.—The annual meeting of the Governors and subscribers to this charity was held on the 6th inst. at the offices, 12, Pall-mall; Viscount Eversley, the president, in the chair. The yearly statement showed that the receipts for 1879 had amounted to £8374, and the expenditure to £6935. A donation of £1000 (included in the above) was acknowledged from a friend, "E. P. P. J.," and also legacies amounting to £1000. The medical report stated that 570 in-patients had been treated during the past year, and 368 had left much improved. The mortality was only 15, or at the rate of 2·63 per cent. These favourable results were chiefly owing to the special advantages conferred by the separate system on which this hospital is built, and owing to the cases being restricted to those in the early stage or arrested if in the latter stages of the disease.

PHYSICAL SOCIETY OF LONDON.—A soirée was given at King's College on the 7th instant by Professor W. G. Adams, F.R.S., and the Council of this Society. The guests numbered 600, and included representatives of the chief learned societies of London. The visitors were received in the Museum of King George III., and in the adjoining rooms, the Wheatstone Laboratory and the College Libraries. The various objects of interest exhibited included much of the apparatus invented by the late Sir C. Wheatstone.

OBSTETRICAL SOCIETY OF LONDON.—The following is a list of officers for 1880:—Honorary President: Dr. Arthur Farre. President: Dr. S. Playfair. Vice-Presidents: Drs. John Bassett (Birmingham), A. W. Edis, J. B. Potter, G. Reper, John Williams, and Mr. Robert James Wilson (St. Leonards). Treasurer: Dr. Gervis. Honorary Secretaries: Drs. C. Godson, and A. L. Galabin. Honorary Librarian: Mr. G. E. Herman. Other Members of Council: Messrs. John Wright Baker (Derby), George Eastes, H. W. Kiallmark, Frederick W. Salzmann (Brighton), Frederick Wallace; Drs. Fancourt Barnes, Percy Boulton, C. H. Carter, F. H. Champneys, Richard Cross (Scarborough), Robert Cory, Matthews Duncan, W. T. Greene, C. D. Kingsford, D. Lloyd Roberts (Manchester), Thomas Savage (Birmingham), C. Brodie Sewell, T. J. Walker, (Peterborough).

THE will of William Chamberlain Hood, M.D., formerly of South Lambeth, Surrey, afterwards of Dublin, but late of the Berners Hotel, Berners-street, Oxford-street, was proved on the 7th inst., the personal estate being sworn under £45,000. The testator bequeathes £1000 each to the Middlesex Hospital and the Medical Benevolent College at Epsom, in memory of his late wife; in each case the bequest is to be denominated "Ann Hood's Legacy;" to his executor, Mr. Tomkins, £200; to his executor, Mr. Procter, £100; £21,500 Reduced Stock is to be divided among the children of his late son, Sir William Charles Hood; £10,000 of the same stock upon trust for his daughter, Mrs. Maria Louise Procter, and her children; and the residue of his property in equal moieties between the children of his said son and his said daughter and her children.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mr. Thomas Wrigley, of Timberhurst, Bury, bequeathed £10,000 each to the General Hospital and Dispensary for Sick Children at Pendlebury, Manchester, the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, at Lancaster, and the Bury General Dispensary. Miss H. Fiske bequeathed the "residue" of her estate, which, it is expected, will be about £2000, to the Bath Eye Infirmary. The Earl of Sheffield has given £1000 to the Sussex County Hospital. Lady Georgina Molyneux has given £200 towards providing a heating apparatus for the wards of the Tunbridge Wells Infirmary. The Mercers' Company have given fifty guineas to the Great Northern Hospital.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

BOWER, A. E., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Portland Urban Sanitary District, Dorsetshire, at £15 15s. per annum, vice Parsons, resigned.

CRITCHETT, G. A., M.R.C.S.E., has been appointed Assistant to the Ophthalmic Surgeon, Middlesex Hospital.

DEAN, T., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Briercliffe Urban Sanitary District, at £7 10s. per annum.

JONES, W. L., L.R.C.P.Ed., & L.M., L.F.P.S.G., has been reappointed Medical Officer of Health for the Llandilofawr Rural Sanitary District, Carmarthenshire, at £30 per annum.

LIVETT, H. W., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Wells Sub-district of the Wells Rural Sanitary District, at £40 for one year.

LLOYD, W. H., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Llandilo Urban Sanitary District, Carmarthenshire, at £30 per annum.

MCNEILL, J. P., M.D., B.A., L.R.C.S.I., &c., has been appointed Medical Officer of Health for the Borough of Tiverton; also Medical Officer to the Eastern and Western Districts of Tiverton Parish.

NORTHEY, W. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Tavistock District and the Workhouse of the Tavistock Union, at £35 and £55 per annum; and Medical Officer of Health for the Tavistock Sub-district of the Tavistock Rural Sanitary District, at £8 5s. per annum, vice West, deceased.

POORE, G. V., M.D., F.R.C.P.L., has been appointed Professor of Medical Jurisprudence at University College, London, vice Maudsley.

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POWELL, B. C., M.B., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, &c., for the Roscrea No. 1 Dispensary District, and Medical Officer to the Workhouse, of the Roscrea Union, co. Tipperary, and Consulting Medical Officer of Health, vice J. A. Powell, L.K.Q.C.P.I., M.R.C.S.E., deceased.

PURNELL, T., M.D., L.R.C.P.Ed., has been appointed Medical Officer of Health for the Glastonbury Sub-district of the Wells Rural Sanitary District, at £40 for one year.

RISDON, G. O., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the No. 2 District of the Wells Union, Somersetshire.

RYLEY, Dr., has been appointed Medical Officer to the Williton Union, Somerset.

SHIELS, R., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Micheldever District of the New Winchester Union, vice Willis, resigned.

SIMPSON, G. A. M., M.D., has been appointed Local Medical Officer to the Convalescent Branch (Highgate) of the Hospital for Sick Children, Great Ormond-street.

SNELL, S., M.R.C.S., L.R.C.P.L., has been appointed Ophthalmic Surgeon to the Institution for the Blind, Sheffield.

SPOFFORTH, J., L.R.C.P.Ed. & L.M., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Wolverley District of the Kidderminster Union, and Medical Officer of Health for the Wolverley Sub-district of the Kidderminster Rural Sanitary District, vice Hillman, deceased.

STEPHENSON, W. H., M.D., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Blackburn Urban Sanitary District, at £120 per annum, and Surgeon to the Borough Police and Fire Brigade, vice Martland, resigned.

STOCKER, C. J., L.R.C.P.L., has been appointed Medical Officer of Health for Little Ilford, Essex.

SUTCLIFFE, J., L.R.C.P.E., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer to the Loyal Union Lodge of Odd Fellows, South London Unity, vice J. Sutcliffe, M.R.C.S.E., L.S.A.L., resigned.

WARTENBERG, V. A., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the St. Anne's-on-the-Sea Urban Sanitary District, Lancashire, at £30 per annum.

WIGLESWORTH, H., M.B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Ashford Urban Sanitary District, Kent, at £20 per annum.

WRIGHT, G. A., M.B., F.R.C.S., has been appointed Resident Surgical Officer to the Manchester Royal Infirmary, vice Southam, appointed Registrar.

WRIGHT, H. C., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the West London Hospital, vice Cummings, resigned.

WRIGHT, J., M.D., of Wynberg, Cape Town, has been appointed Visiting-Physician to the Government Hospital, Cape Town, vice Herman.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On the 31st ult., at Brooke House, Upper Clapton, the wife of J. O. Adams, F.R.C.S., of a daughter.

ANDERSON.—On the 2nd inst., at Rosewell, Edinburgh, the wife of Thos. Anderson, M.B., F.R.C.P.Ed., of a son.

DAVEY.—On the 3rd ult., at Beaufort West, Cape of Good Hope, the wife of Charles James Davey, M.B. &c. (late of Colchester, England), of a son.

FERGUSSON.—On the 31st ult., at Peebles, the wife of Alexander Fergusson, M.D., of a son.

JONES.—On the 1st inst., at Blackpool, the wife of Leslie H. Jones, M.D., of a daughter.

MIDDLETON.—On the 7th inst., at Manorhead, Stow, N.B., the wife of James Middleton, M.D., of a daughter.

ROSS.—On the 4th inst., at Bridge-end Cottage, Blackford, the wife of Dr. James Ross, of a son.

WILSON.—On the 5th inst., at Penistone, the wife of Arthur Cobden Jordan Wilson, M.R.C.S.E., of a son.

MARRIAGES.

HEALY — FOLEY.—On the 4th inst., at St. Saviour's, Dublin, Joseph K. Healy, L.K.Q.C.P.I., to Mary Vincent, daughter of William Foley, M.D.

WADE—POWER.—On the 4th inst., at Tooting Church, Dr. Willoughby Francis Wade, to Augusta Frances, daughter of the late Sir John Power, Bart.

DEATHS.

BERRY.—On the 2nd inst., at Appleton Cottage, Great George-street, Wigan, the wife of William Berry, M.R.C.S.E., L.R.C.P.Ed., L.R.C.S.Ed.

CASKIE.—On the 6th inst., at Largs, Ayrshire, James Caskie, L.F.P.S.G., aged 78.

COLES.—On the 3rd inst., at Great Coram-street, Russell-square, George Charles Coles, M.R.C.S.E., aged 37.

DUDLEY.—On the 7th inst., at Knowle, Warwickshire, William Henry Dudley, M.R.C.S.E.

GERRARD.—On the 2nd inst., at West Bromwich, Edward Rotheram Ingoldsby Gerrard, L.K.Q.C.P.I.

HAY.—On the 2nd inst., at Porlock, Richard Francis Hay, M.R.C.S.E., late of Lyme Regis, aged 33.

HEMSTED.—On the 30th ult., at Whitchurch, Hants, Tobias Rustat Hemsted, M.R.C.S.E., aged 69.

HILLMAN.—On the 19th December, John Hillman, M.R.C.S.E., of Kidderminster.

STOKES.—On the 1st inst., at the Tavistock Hotel, Covent-garden, Dr. James Stokes, late of the Hon. East India Company's Service, aged 74.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Feb. 12th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Feb. 6	29·94	S.S.W	44	43	..	48	37	..	Overcast
,, 7	29·69	S.W.	48	47	..	50	42	0·05	Raining
,, 8	29·42	S.W.	45	43	..	48	42	0·63	Cloudy
,, 9	29·45	S.W.	41	40	..	48	37	0·17	Raining
,, 10	29·52	W.	40	39	..	46	38	0·06	Cloudy
,, 11	29·76	E.	40	39	..	46	36	..	Overcast
,, 12	26·74	S.	43	42	..	48	35	0·04	Raining

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, papers, and reports should be written on one side only.

We cannot prescribe or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

FOOT-WARMERS.

IF there be any value in foot-warmers for use in railway carriages—and few will be found to dispute or even question the fact—we fail to see why the Companies should refuse or neglect to supply these apparatus at *all* stations. It cannot be a very difficult matter to keep a little hot water wherever there is a fire, and surely every ticket-office, if not every waiting-room, has its fire. As it is, foot-warmers are not to be procured at even the larger stations. This is one of those pieces of neglect which are offensive by reason of their wantonness. If the Companies have not the courtesy to mend the matter at once, it will be desirable to take measures to compel attention to an affair of detail so obvious as that to which we now call attention, and which has been pressed on their notice times almost without number. It is monstrous to make a difficulty of what is as simple as anything a public trading corporation can be required to do for the comfort of its customers.

Dr. Lowson, (Huddersfield.)—The paper is marked for insertion.

LONG SOJOURN OF A HALFPENNY IN THE ŒSOPHAGUS OF A CHILD.

To the Editor of THE LANCET.

SIR,—On August 12th last year, while I was away for my holiday, a child, four years old, was brought to my surgery, having just before swallowed a halfpenny. The gentleman acting as my locum tenens made search for the coin under chloroform, but failed to find it, and, there being no urgent symptoms, left matters alone. Latterly the child has been suffering more pain, referred to a spot to the left of the ensiform cartilage, with inability to swallow anything solid, or to lie in bed at night without having the shoulders well propped up. In consequence of these symptoms the mother brought the child again to my surgery this morning, and I passed a double probang, bringing the missing coin, coated with mucus and a good deal discoloured, into the mouth as I withdrew the instrument. Yours truly,

Talgarth, Feb. 9th, 1880. T. EDWARD WILLIAMS.

OXYURIS VERMICULARIS.

To the Editor of THE LANCET.

SIR,—Perhaps some of your readers would be good enough to give me the benefit of their advice in the following case:—A young lady patient has for some years been troubled with oxyuris vermicularis. I have tried all kinds of remedies, including the injection of common salt, with little or no effect, until my patient has become quite tired of treatment. I should be much obliged for any hints. Yours &c.,

Feb. 1880. HELMINTS.

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"NERVOUSNESS."

WHAT is nervousness? What is the cause of nervousness? Why is nervousness increasing in the general population? These and other breathless questions of grave practical interest are just now agitating the public mind. As a matter of sober fact, there is probably as much, or as little, "nervousness"—that is to say, nerve weakness and irritability—as there ever was under corresponding conditions. It certainly seems probable that increased railway travelling and other augmentations of the stress and strain cast on the nervous system will cause, if they have not already produced, a condition of greater mobility and higher excitability, and, pending any considerable change in the conditions of life, there will be a seeming prevalence of what is called "nervousness." It will not, however, conduce to the tranquillity of average mental organisms, either here or in America, to be told that nervousness is largely on the increase. If that were the truth, which we doubt, the best plan would probably be to say as little as possible about the evil while striving to remove the cause. The fact has been assumed, and, as a matter of course, the cause is said to be "drink." This argument will not stand, because it so happens that the majority of the intellectually-minded and busy thinkers and brain-workers of the United States (the very persons alleged to be nervous) are declared to be either total abstainers or very moderate drinkers. So marked is this circumstance that if there were to be an *anti*-teetotal movement, it would be open to its promoters to allege that the "increase of nervousness" in America was due to the success of the 'whisky war.' Of course the argument would be absurd, but not more so than the use made of a "fact" which is not a *fact*, and a "cause which is not a *cause* in relation to "nervousness." It is significant that the most recent researches of American neurologists have resulted in the recognition of a peculiar disease or affection of the spinal cord prevalent among the guards and habitual travellers on the jerky railways and tremulous tram-ways of America, which disposes to habits of intemperance, and so engenders as a *symptom* that which has been too hastily set down as a *cause*.

A Young Surgeon.—1. Barnes or Hewitt.—2. Parkes or Wilson.

TYPHOID FEVER AND ASCARIDES LUMBRICOIDES.

To the Editor of THE LANCET.

SIR,—I can add two cases of fatal enteric fever complicated with ascarides lumbricoides to that related by Dr. Foster in your issue of to-day. There is one great difference—namely, that both my cases were adults. They were as follows.

M. A——, aged twenty-three, married woman, first came under my care on Dec. 15th, 1879, with general febricula, which afterwards developed into a very severe attack of enteric fever. I calculated that the 15th was the eighth day of fever. During the week she passed per anum a large round worm. The case ran its course without complication until the evening of the twenty-ninth day, when she sank into a comatose condition, and died on the thirtieth day of fever, Jan. 5th, 1880.

E. C——, aged twenty-nine, sister to M. A——, came a distance of twenty-five miles from a country village to nurse her sister, from whom she contracted the disease. On Jan. 4th she took to her bed. During the week she passed per anum or vomited five round worms. This case proved fatal from nervous exhaustion on Jan. 18th, 1880, on the twenty-second day of fever.

Though both these sisters had the complication of ascarides, it was the only one. Both cases were very severe. Both were fine, well-developed women, E. C—— particularly so, and had been living some twenty-five miles apart. The married one had (owing to her husband being out of employment) been living rather badly.

I think that these cases, as well as Dr. Foster's, go to prove that this complication would lead one to give a rather unfavourable prognosis, for the reasons that they show that the intestinal mucous membrane is in an unhealthy state, and furnishes an abnormal secretion, thereby increasing the susceptibility to the typhoid poison, and giving a greater extent of surface for ulceration &c.

Yours faithfully,

H. A. LAWTON, L.R.C.P. Lond.,

Poole, Jan. 31st, 1880. Medical Officer of Health, Poole &c.

A General Practitioner.—Vaccine lymph direct from the calf may, we believe, be obtained from Messrs. Corbyn, Pharmaceutical Chemists, Holborn, London, E.C.

Dr. Fleming.—"Connaught-square" will be sufficient.

RINGWORM OF THE HEAD.

To the Editor of THE LANCET.

SIR,—My attention has been called to the fact that I described *Coster's paste* in my recent paper on Ringworm as being composed of iodine and oil of cade. I write to say that the original Coster's paste consists of light oil of tar and iodine, and that the preparation I mentioned is a modification which I consider better, as a firmer paste is formed, especially after some exposure to the air.

I remain, Sir, yours &c.,

ALDER SMITH, M.B., F.R.C.S.,

Feb. 1880. Resident Medical Officer, Christ's Hospital, E.C.

SANITARY STATE OF WARSAW.

IT is in contemplation to carry out a thorough system of sewerage and improve the means of water-supply in Warsaw. The exceptionally high mortality of the city, among the great towns of Europe, is assigned to its want of drainage and the impurity of its water-supply. Mr. Lindley, an engineer, who has sewered Frankfort-on-the-Maine and other cities of the Continent, under instructions from the Municipality of Warsaw, has prepared plans for the sewerage of the city, which have been approved by the local authority, but for which the assent of the Minister of the Interior has to be obtained before they can be put in execution. The Mayor of Warsaw (General Starinkévitch) and Mr. Lindley have started for St. Petersburg to submit the plans to the Minister.

Mr. E. G. Younger.—The work is to be obtained only from the author, Parkfield House, Sheffield, price 5*s*.

Mr. Spencer Watson's letter will appear next week.

A POSSIBLE PREVENTION OF THE ABUSE OF SOOTHING AND POISONOUS DRUGS.

To the Editor of THE LANCET.

SIR,—Knowing what a difficult matter it is at the present time to prevent a prescription (containing soothing or poisonous ingredients) being dispensed by several chemists on the same day, and thereby rendering a harmless dose injurious, I hope you will consider the following suggestion worthy of record in your valuable journal.

What I propose is this, that every medical man in practice should be supplied with *special papers* by the registrar or someone, in a similar way that practitioners are supplied with forms by the registrar to certify a death, and that on these papers the prescription should be written whenever it contains any preparation likely to prove injurious, or fatal when taken to excess, such as laudanum, chloral, chloroform, hydrocyanic acid, &c., and more especially when in the hands of highly nervous, alcoholic, and melancholic patients, who are not generally difficult to diagnose. We all know how easy it is for people to poison themselves by being able to procure drugs for other than medicinal purposes; and, as there have been lately several cases of narcotic poisoning, I trust this plan may help to make it more difficult to obtain large quantities of these dangerous medicines.

1. That these papers should be of convenient size, so as to be easily carried in the pocket-case, so frequently used by medical men for letters, cards, &c.

2. That there should be a *small, non-conspicuous mark* stamped on each of these papers, by which the chemist could recognise it, and know it had passed through a medical man's hands.

3. That when the medicine is made up, the chemist should stamp the paper with *his* name and date, so that another chemist could see that it had already been dispensed on that day.

4. That the *date* should be distinctly written by the prescriber, as well as his signature, and that the chemist should be liable to be fined if he dispensed any paper without the above, or transgressed Rule 3.

It would still be possible, by consulting several medical men on the same day, to have each paper dispensed at different shops (supposing that they contained soothing drugs, and so defeat the scheme; but the majority of patients would perhaps be unable to afford the time or money, and would not always find medical men (especially consulting physicians and surgeons) at home to wait upon them.

I believe it has already been suggested that the chemist should keep the prescription after dispensing it, and so prevent its being used a second time on the same day. In many cases this would be useless; for almost anyone could supply himself with duplicates, and have them dispensed at every shop they chose, to say nothing of the great inconvenience of being deprived of one's prescription, especially to those travelling about after the receipt of a bottle of medicine or a box of pills.

Although perhaps not so convenient, yet undoubtedly a safer plan would be for these papers to be written as "mixtures," and not as "pills"; and if pills have to be prescribed, only to order a few; but even this would hardly prevent a poisonous dose when dealing with very delicate preparations. On the other hand, one would not always be prescribing these very "injurious pills" to melancholic or suicidal patients.

There are still some smaller difficulties to be overcome; for instance, very sensitive patients might feel alarmed, or even insulted, at being given prescriptions written on these papers; but they need only be used when a medical man feels he is attending a "suspicious or doubtful case," and could always explain that it was to insure the greatest accuracy on the chemist's part, and draw his attention to a particular drug.

Again, an "opium indulger" (if he would resist long enough) might feel tempted to save his daily allowance, and then go in for a "burst." This could hardly be prevented; but the majority would prefer the daily dose.

Lastly, a chemist might be in doubt how to act when his customer returned, saying "that the bottle had broken," or "the powders were spilled," and required a second supply. The chemist would have either to get the doctor's permission (if he lived near) or refuse. He (the chemist) would run a slight risk of losing his customer; but if he explained the penalty he would be under were he to dispense the paper a second time, the risk would be very small, for the customer would find out that he could not obtain the second supply from any other chemist.

Yours faithfully,

Westgate-on-Sea, Feb. 9th, 1880. G. C. HARDING, M.R.C.S.E., &c.

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THE PHILOSOPHY OF FOGS.

OF course fogs form the complement of a rainy season; but there is a phase of what may be termed the philosophy of fogs which it is interesting to notice, and which the experience of the last thirty years enables us to study. The "back bone," if we may use the simile, of a fog is the vapour rising from the surface of water, as in a "sea-fog," or from ground saturated with moisture, as in the common fog of cities and populous districts. There is probably quite as much fog proper—i.e., vapour given off from the earth and floating in the atmosphere—in rural districts as in towns; but the vapour is in one case colourless, because not charged with solid particles, or at most a little dust; while in the other it is laden with the débris of burnt material, carbon, and putrescent matters lodged at or near the surface of the soil. Before the land on which the metropolis is built was drained by a complex system of sewers, the banking of the Thames, and the intersection of railway cuttings, London fogs were persistently yellow, like the clayey soil underlying the surface. The planting of the outlying districts with houses and paved streets has covered up much of the clay, and the ground generally has been drained. What we principally get now in the way of "fog" is accumulated soot and smoke, and the smarting of the eyes so generally complained of is not due to the presence of an epidemic ophthalmic affection, as some persons have supposed, but to the circumstance that fog is practically a contrivance by which carbon in a very irritating form is continuously brought into contact with the delicate membrane covering the eyeballs and lining the lids. Anyone who has ever tried to enter a house on fire, or even an ordinary room filled with smoke, will understand how the eyes are affected as we have described. The injury inflicted on the mucous membrane lining the voice-organ, the windpipe, and the lungs, is only less noticed, not less severe, than that which falls on the eyes. City fogs may, doubtless, be robbed of their worst features as time goes on and the drainage is improved.

Dr. J. Service.—The paper will appear shortly. We shall be glad to receive the "notes," but they should be as brief as possible.

Mr. J. Roche Lynch.—Our advertising columns will supply information on the point.

HOW DIPHTHERIA IS SPREAD.

To the Editor of THE LANCET.

SIR,—The following remarks may be worth a place in your journal, as showing not only how diphtheria may be spread, but also enabling one to arrive at its period of incubation and development after contagion.

On Tuesday evening, Jan. 27th last, I was called to see a little boy, aged three years, whom I had attended some nine months ago for general strumous debility, and whom I was informed was suffering from swelling of the neck. On my visit I found him very prostrate, with enlargement over the left angle of the jaw, and in a high state of fever, with furred tongue, quick pulse, &c.; he also had that peculiar hoarse talk and breathing, with mouth partly opened, so characteristic of obstruction in the throat. I immediately suspected from the swelling &c. that there was something seriously wrong, and on examining his throat found that it was covered with a thick coating of the diphtheritic membrane, and at once ordered him all kinds of nourishment, iron and chlorate of potash, and a disinfectant application to the throat, but expressed myself as of opinion that, from the constitution of the child, he would die very shortly, which he did on the following day. The infant girl, of about thirteen months, who seemed drooping, I also examined, and found that she had slight patches on the tonsils. I prescribed for her likewise both locally and by internal remedies, and am glad to say that up to the present she is doing well. The remainder of the family, three in number, are as yet free. I advised that the little boy should be buried quickly.

The history of the attack is this: On the 12th January a neighbour of this woman came over the garden-walls which join each other at right angles, in great distress, to ask if she would lay out a little child of hers. She had previously performed the like office for another child, who had died nine days before, or on Jan. 3rd. Nothing was said as to the cause of their deaths; but I happen to know that the second child had had diphtheria, as I saw it one evening during the temporary absence of the medical attendant. The woman went again out of pure good nature, and the consequence was that she, in my opinion, brought the disease home with her. It is a melancholy thing to think this poor woman should have lost her child in this way, and it would certainly be advisable for the parish authorities of this poor neighbourhood to appoint some person to perform the work of laying out people, especially those dying from infectious complaints.

Now the question arises: Was the disease communicated to these children after the first or second visit?—i.e., in twenty days or eleven days. I may say, in passing, that the little boy had seemed out of sorts on the Saturday previous, or four days before I saw him. These cases make in all seven that I have seen in different parts of this neighbourhood during the last six months. I will not enter into the question of treatment, but will merely state that the membranous condition of the throat, swelling of the glands, and albuminous condition of the urine are symptoms that cannot be mistaken.

I remain, Sir, yours truly,

Queen's-park, Harrow-road, Feb. 1880. A. L. GRIFFITH, M.D.

BOARDING-OUT PAUPER CHILDREN.

AN interesting report from the Committee for Promoting the Boarding-out of Pauper Children, of which Mr. F. Peek is Chairman, has just been issued. The Committee state that they have "advocated the extension of the Grouped Cottage Home System, which it is gratifying to observe is extending as a system for training pauper children. 'District' schools, notwithstanding the disadvantages of the large number of children congregated within them, were a marked advance upon 'workhouse' schools. The Grouped Cottage Home System is a still further improvement. Yet, in the case of girls in particular, the boarding-out plan (when and where only it is under strict provisions for due and frequent oversight) is, in various respects, the best of all modes of training. There still remain more than twelve thousand children in union houses, who neither enjoy the advantages of district schools, nor grouped cottage homes, nor boarding out. Many of these are subjected to the companionship or oversight of most unsuitable adult paupers, and altogether there is little hope that they will escape imbibing for life a pauper taint. A chief objection to the boarding-out system is the alleged difficulty of finding suitable homes. In actual practice it is proved that a number of decent and well-managed cottages are to be met with in most districts."

Mr. Wm. Percy Trueman.—There is no ground for believing that salted mortar would, *per se*, be injurious to health.

D. C.—Yes.

Mr. W. H. Rikes.—A letter on the subject appeared in our issue of Jan. 10th, page 77.

THE DIAGNOSIS OF HEPATIC ABSCESS.

To the Editor of THE LANCET.

SIR,—I am pleased to find that Dr. Jas. Johnston, of Shanghai, was not surprised that I failed to reconcile the notes of his case with the subsequent remarks. The reason was, however, not that I had overlooked any part of the description, for I carefully perused the whole case two or three times, and could not see any justification of the diagnosis. The chill which his patient had on the 18th July, Dr. Johnston states was followed by *all* the symptoms of hepatic abscess, but the only one mentioned was pain in the right side of the chest and abdomen. In his recent letter, the author states the co-existence of pleurisy and pneumonia, neither of which was hinted at previously, and gives a new physical sign which I cannot quite follow. It runs thus: "The lower half of the normal right mammary and median lines of hepatic dulness was resonant." To me this reads as unintelligibly as Chinese. Nor can I think his diagnosis established fairly when he states that the collateral symptoms were pyrexia, cough, and dyspnœa. Moreover, with the dulness which existed, and with these symptoms, Dr. Johnston denies that there were *any* physical or other signs of fluid in the pleura! Again, he denies that the aspirating-needle was ever in that cavity, yet affirms that the point of its entrance was "half an inch below and two inches to the left of the right nipple, and that it was introduced to the depth of four and a half inches." I can only comment on this by saying that his patient's anatomy must be peculiar.

Of course it may seem presumptuous in me to argue that Dr. Johnston's case was not one of hepatic abscess; but I merely say that I cannot find that the notes of the case suggest to my mind this diagnosis. Possibly Dr. Johnston's large experience of this disease has caused him inadvertently to omit some points which, though familiar to him, may not be equally so to those who have had less opportunity of witnessing many cases of tropical abscess of liver. However this may be, I caused the case to be carefully read by three other medical men of my acquaintance, and am sorry to say they were all equally as dense as myself. The pathognomonic symptom seems to have been the pain in the *side*, and as this locality in one's patient's language is usually so vague as to mean anywhere between the chin and the pubes, it has not much significance in itself, and the collateral symptoms to my mind point elsewhere than to the liver. So that I may conclude by apologising to Dr. Johnston for having mistaken him, if such is the case, and to you, Sir, for occupying so much of your valuable space.

Yours faithfully,

St. Ives, Cornwall, Feb. 1880. BOYD B. JOLL, M.B. Lond.

PORT OF BOMBAY.

A CORRESPONDENT, writing from India, says:—

"It is gratifying to observe the following hygienic provision amongst the regulations recently issued for the guidance of pilots in the port of Bombay:—'Before boarding a vessel, the pilot will ascertain whether there is any epidemic disease on board. If there is, and the epidemic be of a severe nature, such as plague, yellow fever, or a number of cases of cholera, small-pox, or measles, he will direct the vessel to be anchored at the quarantine anchorage, and to hoist the quarantine flag; but in the latter three diseases, if there is or only has been one or two cases during the voyage, he will board and (after obtaining certificate from a commander to that effect) berth the vessel in the harbour, hoisting the letter R. flag, the signal for the health officer of the port to inspect. In the event of the pilot having boarded a vessel which requires to be placed in quarantine, he will remain on board till the vessel obtains *pratique*.' Typhoid fever is reported to be prevalent in the cantonment of Lucknow. Warm clothing is reported to have been issued to the troops in Afghanistan."

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"SURGICAL KIDNEY."

To the Editor of THE LANCET.

SIR,—The question of one kidney only being involved in the suppuration consequent on old stricture of the urethra was discussed by Dr. Goodhart in the "Guy's Hospital Reports," vol. xix., p. 395, Series iii., and by him was considered to result from irregularity in the hypertrophy of the muscular fibres of the bladder, one ureter being thus more compressed at its entrance than the other. The whole subject of surgical kidney is there gone into at considerable length, and for farther details I would refer Mr. Puzey to the article itself.

I am, Sir, yours truly,

Bath, Feb. 9th, 1880. ERNEST FIELD, M.B.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Buzzard, London; Mr. S. Watson, London; Mr. Bader; Mr. L. Tait, Birmingham; Mr. J. Moore, London; Mr. Dalton, London; Mr. Faber, London; Mr. Snell, Sheffield; Mr. Harding, Westgate-on-Sea; Mr. Spencer, Dublin; Dr. Neil, Macclesfield; Mr. Tuckey, Tywardreath; Dr. Fleming, Worksop; Mr. Jay, Audlem; Dr. Swift Walker, Hanley; Mr. Craigie, London; Dr. Barton, Fulbeck; Mr. Williams, Talgarth; Mr. Field, London; Dr. J. H. Hunt, Brooklyn; Dr. M'Neill, Tiverton; Dr. Jacob, Leeds; Dr. Dowdeswell, London; Mr. Welchman, Southea; Dr. Joll, St. Ives; Mr. E. Morgan, London; Mr. Harrison Cripps, London; Mr. Alder Smith, London; Dr. Kidd, Gipsy-hill; Mr. Hill, Crickhowell; Mr. S. Baker, London; Mr. Stocker, Upton; Mr. Peirce, Kensington; Mr. Wright, Manchester; Mr. Chippendale, London; Mr. Reynolds, Kennington; Dr. Bell, Glasgow; Mr. Foote, Rotherham; Dr. Lowson, Huddersfield; Mr. Buckston Browne, London; Mr. Younger, Hanwell; Colonel Forester; Mr. Sutcliffe, Clapham; Messrs. Agnew and Sons, London; Dr. F. E. Hoggan, London; Dr. W. G. King, Godalming; Mr. Markey, Kandahar; Mr. Colson; Dr. Service, Newcastle-on-Tyne; Mr. Ribes, Leytonstone; Mr. Wright, London; Captain Hobson, London; Dr. Sinclair, Dundee; Mr. Ash, Holsworthy; Dr. Eklund, Stockholm; Dr. Patterson, Brazil; Mr. Baker, Birkenhead; Mr. F. Smith, London; Mr. Whysaw, London; Mr. Pepper, London; Mr. Fraine, Aylesbury; Mr. Greenwood, Liverpool; Mr. Page, Dublin; Dr. Thorn, Crieff; Dr. Ryley, Cheltenham; Messrs. Parsons and Co., Manchester; Surgeon-Major Scott, London; Dr. F. Page, Newcastle-on-Tyne; Mr. Comfield, Stoke Newington Mr. Chapman, Hull; Mr. Woolcott, London; R. H. M., Bristol; M.D. Scot.; R. M. O.; L.R.C.P.; Crucible; A. B. C., Yorks; Omega, Peterborough; Alpha, London; M., Scarborough; Student, Belfast; H. W. H.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Callard, London; Mr. Grant, Birmingham; Mr. Ridge, Enfield; Mr. Horne, Bootham; Messrs. Robinson and Son, Chesterfield; Mr. Nicholas, Buckden; Mr. Watson, Manchester; Messrs. Schacht and Co., Clifton; Mr. Snell, Barrowden; Mr. Jones, Dulwich; Mr. Stuart, Dowlais; Mr. Davey, Thorpe-le-Soken; Dr. Lowe, King's Lynn; Mr. Madeley, Higher Ardwich; Mr. Scott, Liverpool; Mr. Abbo, Dewsbury; Mr. Baker, Mere; Mr. Gibbon, Ilchester; Mr. Cresswell, Dowlais; Mr. Clark, Macclesfield; Mr. Jackson, Leeds; Mr. Essex, Pontypool; Mr. Tate, Knowle; Mr. Hewes, Woodbridge; Mr. Rodgers, Sheffield; Mr. Calder, Hereford; Mr. Ivers, Kidderminster; Mr. Crackle, Ilchester; Mr. Martin, Crawley; Mr. Coxeter, London; Medicus, Newcross; Chepstow; B. D. F.; Delta, London; Doctor, Stonycroft; E. K., Walsall; M.D., Notting-hill; Medicus, Gorton; Semper; Y. Z., Swaffham; Medicus, Nottingham; Omega, Stoke-on-Trent; Alpha, Stoke-on-Trent; A. B. C.; M. and R., Reading; X. A., Huddersfield; &c.

Glasgow News, North British Daily Mail, Bristol Mercury, Madras Mail, Times of India, Dover Chronicle, Stroud Journal, Lincolnshire Chronicle, Vaccination Inquirer, &c., have been received.

TERMS FOR ADVERTISING IN THE LANCET.

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Front Page .. .. per Line	0	1	0
Quarter Page	1	10	0
Half a Page	2	15	0
An entire Page	5	5	0
Advertisement Index .. .. per Line	0	0	6

Terms for Serial Insertions may be obtained on application to the Publisher.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

Agent for the Advertising Department in France—

M. BERTHIER, 104, Boulevard St. Germain, Paris.

Medical Diary for the ensuing Week.

Monday, Feb. 16.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Structure and Functions of the Vertebrate Skeleton."
MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. H. F. Baker, "On the Treatment of Genu Valgum without Division of Bone."—Dr. Thudichum, "On Polypus in the Nose and its Connexion with Asthma, with a new mode of treating Asthma, Bronchitis, and Consumption by the Inhalation of the Pyrolytic Vapour of Vegetable Alkaloids and Extracts."

Tuesday, Feb. 17.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Schäfer, "On the Physiology of Muscle."
STATISTICAL SOCIETY.—7¾ P.M. Mr. Thomas A. Wellon, "On certain Changes in the English Rates of Mortality."
PATHOLOGICAL SOCIETY OF LONDON. — 8½ P.M. The following Specimens will be shown: — Congenital Occlusion of Duodenum; Gangrene of Colon; Drawings of Skin Diseases; Epithelioma of Larynx; Secondary Tumour after Removal of Breast; Epithelioma of Penis; Melanosis of Finger; Sarcoma of Spermatic Cord; Cancer surrounding the Colon; Blood-casts from the Bronchi; Microphotographs of the Blood in Yellow Fever; Cicatrices on the Air-passages and Fibroid Disease of Lung from Syphilis; Diaphragmatic Hernia; &c. &c.

Wednesday, Feb. 18.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Structure and Functions of the Vertebrate Skeleton."
SOCIETY OF PUBLIC ANALYSTS. — 8 P.M. Dr. J. Muter, "On the Estimation of Cane-sugar in Milk."—Mr. A. Wynter Blyth, "On a new Method of taking the Specific Gravity of Solid Fats at ordinary Temperatures."—Mr. J. West Knights, "On the Action of Alum in Breadmaking."—Mr. F. Maxwell Lyte, "On Blowpipe Assays of Silver Lead."—Mr. F. P. Perkins, "On the persistent occurrence of Starch."—Mr. H. Macagno, "On the Tannin of Sumach-leaves" and "A Series of Analyses of Air."
ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY. — 8 P.M. Council.—8½ P.M. Mr. S. H. Cartwright, "On the Recognition of certain Constitutional Lesions by means of Examination of the Teeth and Mouth."

Thursday, Feb. 19.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Dewar, "On recent Chemical Progress."
HARVEIAN SOCIETY.—8½ P.M. Dr. Alfred Meadows: "Cases of Gynæcology."—Dr. Broadbent, "On Venesection."

Friday, Feb. 20.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Structure and Functions of the Vertebrate Skeleton."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Guistonian Lectures: Dr. Gowers, "On Epilepsy."
SOCIETY OF MEDICAL OFFICERS OF HEALTH.—7½ P.M. Dr. G. B. Longstaff, "On some Facts bearing on the Etiology of Summer Diarrhœa." (Illustrated by Diagrams.)
ROYAL INSTITUTION. — 8 P.M. Evening Meeting. — 9 P.M. Rev. H. R. Haweis, "On Old Violins."

Saturday, Feb. 21.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Pauer, "On Joseph Haydn." (With Musical Illustrations.)

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Lecture
ON A
CASE OF INTRACRANIAL SYPHILIS.[1]

BY
J. HUGHLINGS JACKSON, M.D., F.R.C.P., F.R.S.,
PHYSICIAN TO THE LONDON HOSPITAL, AND TO THE NATIONAL HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

HENRY C——, aged thirty-eight, was first seen on Feb. 17th, 1877. (For the notes of this case I am indebted to Mr. Richard Atkinson, my late house-physician.) The patient had paralysis of the fifth and sixth nerves, both of the right side. Before that he had had first severe headache, and then paralysis of the right third nerve. Later still, on March 7th, he was admitted as an in-patient for left hemiplegia, the paralyses of the fifth and six remaining. He recovered from the hemiplegia. So we have to consider four symptoms—(1) headache; (2) paralysis of the right third nerve; (3) paralysis of the right fifth and sixth nerves; (4) hemiplegia. We believed all these symptoms to be owing to syphilis.

I may at once give the evidence of syphilis in this case. Six years before admission the patient had a chancre, but we have no history of any secondary or tertiary symptoms (unless the nervous symptoms are to be so called), with the exception of the following:—He had on his second admission a rounded swelling on the left side of his chest, and another on the thigh; these were probably cellular nodes; they disappeared under the iodide of potassium; he had had several before that date, some of which had suppurated. That the nervous system suffers from syphilis no one nowadays disputes. All the more reason that we should never forget our debt to Reade of Belfast, who was, I suppose, the earliest worker in the subject in this country, and whose first researches were, I believe, received with great incredulity.

I wish to impress on you in this lecture that we may sometimes correctly diagnose a nervous affection to be syphilitic *from the style of the nervous symptoms themselves*, when the direct evidence of syphilis itself is vague or even *nil*. We shall assume that the evidence of syphilis in this case is uncertain, or, better still for our purpose, we shall ignore it; ignore it, that is to say, for a clinical study in order to bring into relief the evidence from the nervous symptoms themselves. It goes without saying that the best evidence that there is intracranial syphilis in any case of nervous disease is supplied by the ordinary outward signs of syphilis. But if a young man has such a symptom as paralysis of a motor cranial nerve along with a hole in his palate, it is an abuse of language to say that *we* diagnose intracranial syphilis to be the cause of his local paralysis; the case diagnoses itself. If he have a tender frontal node, the diagnosis is, metaphorically speaking, written on his forehead. There is more reason to urge caution in some cases. If a man's body does present unequivocal signs of constitutional syphilis, we must not, if he be past middle age, hastily conclude for intracranial syphilis if his nervous symptom be that very common one, hemiplegia coming on without convulsion and without loss of consciousness; it may be local softening from thrombosis of an atheromatous cerebral artery.

Observe, no single nervous symptom is diagnostic of syphilis. This is Dictum No. 1. But some groupings and successions of certain symptoms are very strong evidence in favour of it. This is Dictum No. 2, of which more anon. We are, however, occasionally misled by trusting to this kind of evidence, as I know to my cost. We have recently had under care a woman in whom there was such a grouping of different symptoms as led me to think there was intracranial syphilis; there was, however, but one lesion of the cerebellum found post mortem. I shall shortly report this case, with a careful examination of the encephalon by Dr. Gowers. But in the absence of signs of syphilis the "style" of the nervous symptoms is the only evidence we have to rely on. In the case of a married woman we must be careful not to ask questions which might lead her to suppose that her husband had brought on her, and perhaps on her offspring, so great a calamity as constitutional syphilis. The history of miscarriages or of very early deaths of children, or the presence of signs of congenital syphilis in children, sometimes supply indirect evidence of syphilis, confirming what the style of their parents' nervous symptoms suggests.

There is a third dictum. Most nervous symptoms "caused by syphilis" result very indirectly from syphilis. This Dictum No. 3 is very important with regard to therapeutics.

I will now consider our patient's symptoms *seriatim*. But I do not intend to keep rigidly to this case. It is a delusion to suppose you can properly understand syphilitic affections of the nervous system unless you see the symptoms in relation to other symptoms not caused by syphilis. No one is fitted to *begin* the *special* study of syphilitic affections of the nervous system until he has well studied nervous diseases in general.

Headache.—Our patient's illness began about two years before we saw him. It began by one of the most important of all nervous symptoms—viz., severe headache. At first it was a dull, heavy pain. About eight months before his admission the pain became more severe, and about this time he had, judging from the account he gave, paralysis of the right third nerve. The presumption is that he was then treated by anti-syphilitic remedies, for the paralytic symptom passed off; it did not return. But the best time for treatment of his case was months before this local symptom appeared—that is, in the earlier stage of headache. The pain in the head may signify syphilitic disease of the cerebral membranes, or a syphilitic osteitis, or both. The presumption is that, at any rate, it was syphilis beginning its nervous campaign. It was, no doubt, the earliest sign of cranial or intracranial syphilis, and should have been treated promptly. But patients very often neglect headache until the pain is excessive. They explain their headaches away as being owing to disorder of the liver, &c. I often tell you, perhaps with exaggeration, that severe headache is the worst nervous symptom a patient can have. It is not only bad in itself, but it is an evil sign of worse to come. I will take this opportunity of speaking of it again. Suppose an acute case of cerebral illness, in which there is partial aphasia and intense headache. So far as diagnosis of the gravity of the case and consequent prognosis go, the severe headache is of infinitely more consequence than the aphasia. The aphasia points to cerebral disease, but the intense headache too often points to fatal cerebral mischief. The aphasia may be a symptom of tubercular meningitis in such a case. Never underrate headache. No one has any business to have a severe headache. In Erewhon what we call crimes were treated as diseases, and diseased persons were brought before the courts as criminals. A well-educated judge in Erewhon would, I think, pronounce a severe sentence on anyone who had intense headache in an acute illness, especially if it were at the back of the head or on one side—a far more severe sentence than on anyone who had paralysis of a motor cranial nerve, hemiplegia, aphasia, or epilepsy without intense headache. We must not take too nervous a view of nervous diseases by exaggerating the importance of "interesting symptoms" like aphasia, and underrating such as headache and vomiting. I except cases of migraine, of course; these are cases of misery rather than of danger. One speaks of severe headache in persons not accustomed to it. Let me impress on you the importance of treating what I may briefly designate "syphilitic headache" by an illustration. When, as is not uncommon, a patient has, from syphilis, unilaterally beginning convulsions (epileptiform seizures), there is a gumma involving some part of his cortex cerebri. The gumma exists there before the first fit occurs. One day the patient has the first fit of a series, but before that day the gumma was slowly growing and damaging the brain, making it ready for the production of a fit. There is at any rate often a stage of pain in the head corresponding to the growing of the gumma, and prior to the first fit. Most likely were the headache "attacked" promptly by remedies, the early changes leading on to the gumma would have been reversed, and thus the patient would have had no convulsion. Remark of syphilis that we can beneficially interfere with *changes going on*. It is when the pia mater and other membranes are in a condition analogous to that

[1] This lecture was delivered some time ago. I have not hesitated to make additions to it, and to refer to more recent cases.

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in acute iritis that our drugs do good, and not when these membranes are in a stage the analogue of occluded pupil from bygone iritis. Large doses of the iodide of potassium or mercurial treatment quickly rid the iris of the new morbid products of acute iritis, but no drugs will get rid of old iritic adhesions. It is, then, when the patient comes with headache, especially if the pain be on one side of his head, that we may reasonably hope to do much for him. When, some time later, the patient is "well" of this, and has become subject to epileptiform convulsion, beginning in some part of the opposite side of the body, there is less hope. What we have called his being "well," is being rid of pain, not of the gumma, whose growth was attended by pain. We may, perhaps, say that the changes have become "latent," to appear again in producing trouble later on—e. g., an epileptiform seizure. When an epileptiform seizure is produced by a gumma, the gumma is to be then looked on generally rather as a "foreign body," as one of a class all of which produce secondary changes of instability in neighbouring grey matter, than individually as a *syphilitic* product to be absorbed. We have first, I believe, active syphilitic changes attended by local pain, then a mass the result of them (an aggregate of slow changes), which mass when formed acts like any other mass, for example just like a glioma, and may produce an identical convulsion, or, rather, produce changes of instability in grey matter (a discharging lesion), like those produced by a glioma. It also produces just the same kind of optic neuritis as a glioma or any other kind of adventitious product may do.[2] At the same time there is pain, pain again. We must try to distinguish the earliest local pain during the actual acute syphilitic change, from the diffused pain, which latter may, along with optic neuritis, follow as a secondary result from the formed gumma, which when formed is a foreign body, and leads to the same symptoms as any other foreign body (glioma, &c.) similarly placed. Neither the optic neuritis nor the convulsion (or rather the local changes of instability of which the convulsion is the outward sign) are syphilitic, but the indirect results of the action of a syphilitic mass. Here is a very good illustration of the Dictum No. 3. "*Most syphilitic nervous affections are very indirectly owing to syphilis.*" We shall say more on this later on. Of course you try to absorb syphilitic masses, but very often you fail. Besides, you must never forget that the convulsion depends on secondary changes in grey matter, which, so to speak, becomes autonomous; there is established what I call a "discharging lesion." You must then give anti-epileptic, as well as anti-syphilitic remedies. Remembering the grave significance of the symptom severe headache, treat it by iodide even when you are in doubt as to its syphilitic causation.

Paralysis of the third nerve.—The first striking nervous symptom, but not one practically more important than the headache, was doubtless paralysis of the right third nerve, July, 1876. He got rid of this by treatment at Moorfields Hospital. Paralysis of the third nerve suggests syphilis; after or along with severe headache in a chronic case it suggests it very strongly. I say in a chronic case, to exclude basilar meningitis, in which, however, I have not yet seen clean-cut paralysis of but one third nerve, as the only cranial nerve affected. If there were not headache we should investigate more widely. We should run over the possible causes of this paralysis. I will mention some. There might be a non-syphilitic tumour compressing or involving the nerve—this is rare and could only be inferred from other symptoms of tumour, such as double optic neuritis,[3] severe headache, and urgent purposeless vomiting. Yet if these three symptoms existed with paralysis of the third nerve, there might be a syphilitic neuroma of the trunk of that nerve, and also a syphilitic mass in the cerebrum or in the cerebellum. In fact, syphilis would be the most likely cause of the symptoms. So I think, instead of using the word inference, we should say that the diagnosis of non-syphilitic tumour in such a case, in the adult, would be little better than a lucky guess. I remind you that I am not speaking of cases which "diagnose themselves." Especially should we search for symptoms of locomotor ataxy. Paralysis of the third or sixth nerve is not an uncommon forerunner of locomotor ataxy. If the patient be a woman, this sequence is improbable. Suppose the sex is masculine, you ask about "lightning pains;" if the patient has these he is already in locomotor ataxy. You must not be misled by the name; you may have locomotor ataxy without any ataxy of locomotor, just as you may have paralysis agitans without any agitation. Hence it is better perhaps to call the former "tabes dorsalis," and the latter, as Charcot has suggested, "Parkinson's disease." Westphal, Erb, Grainger Stewart, Buzzard, Gowers, Byrom Bramwell, James Russell, and others, have pointed out that in tabes dorsalis patellar tendon-reflex is nearly always wanting. Of the truth of this there is not the smallest doubt. Westphal and Erb have presented us with a most valuable aid to the diagnosis of tabes dorsalis in what I may call the pre-ataxic stage of this disease as well as in the ataxic stage. The reflex may be absent before disorderly gait appears. Buzzard, in his recent lectures, and in his lectures in 1878, insists strongly on this. Thus you should test the knees in every case of ocular palsy, whether this be intra-ocular or extra-ocular. I spoke above of the absence of headache, but of course a patient with tabes dorsalis might have headache. Moreover, Pierret and Buzzard have drawn attention to the fact that in some cases of tabes there are "lightning pains" about the head; these must be distinguished from headaches of more ordinary kinds. We now pass to another possible cause of paralysis of a third nerve. We should consider, especially in a young person, the possibility of aneurism at the base. For evidence of such a condition we should examine the heart, because aneurisms of the larger cerebral arteries frequently occur with vegetations on the heart's valves (John W. Ogle, Church, Goodhart). I have always found vegetations in these cases since, after reading Ogle's and Church's observations, I looked for them. However, such aneurisms are rare, and are rare causes of paralysis of the third nerve. A year or two ago we had in this hospital an old woman who was sent in for paralysis of one third nerve; one day she became suddenly apoplectic from meningeal hæmorrhage, owing to rupture of an aneurism of the posterior communicating artery, which aneurism had compressed the third nerve and paralysed it.

Suppose you cannot determine the cause of this local paralysis. The rule is, treat for syphilis, when *any* nerve-trunk, cranial or spinal, is anyhow affected; whether there be localised pain, paralysis, or anæsthesia, if in any doubt about syphilitic causation. Remark, I say, nerve *trunks*. I am not now speaking of paralysis, nor of anæsthesia, nor of tremor, nor of wasting of parts owing to disease of nerve-*centres*. So far we have only spoken of the facts supplied by the patient's history.

Paralysis of fifth and sixth nerves.—On Feb. 17th, 1877, I first saw him as an out-patient. There was at that time, besides headache, well-marked paralysis of the fifth and sixth nerves, both of the right side. We considered each of these symptoms in detail when the patient was before us, and need say little further of them now as individual paralyses. I may assume that you know the symptoms of each of these varieties of paralysis. I may remind you, however, of two little things. The patient could not open his mouth widely. I suppose this was from contraction of the paralysed and wasted masseter and temporal muscles. He complained that he could not bite so well on the right side. You could almost "see" paralysis of the fifth nerve in this case by the hollow in the right temple and the flattening on the right side of the patient's face.

Paralysis of *two* such cranial nerves on *one* side is by itself strong evidence of intracranial syphilis, especially strong when they come on in a man who has had paralysis of such another cranial nerve as the third. Mark, I say on one side, and, of course, I am assuming that there is no paralysis of the limbs on the other side. If there were, the case would not be one of disease of nerve-trunks, but of nerve-centres, or certainly of nerve-centres also. Hutchinson teaches that syphilitic paralyses of cranial nerve-trunks are rarely symmetrical, and especially that double paralysis of the fifth nerve is rarely caused by syphilis. With this my experience agrees. On more than one occasion Mr. Hutchinson has correctly diagnosed cancer of the base of the skull as the cause of double paralysis of the fifth nerve. Very recently I made a similar diagnosis in a case of double paralysis

[2] I may here remark that Buzzard agrees with me in the opinion that when a unilaterally beginning convulsion occurs in a person who has also double optic neuritis, there is in all probability local *syphilitic* disease of the brain; we are both of us aware that the disease may be a non-syphilitic growth. I have published cases of this kind, Lond. Hosp. Rep., vol. iv., 1868.

[3] Strictly speaking, optic neuritis is not a symptom; it is a pathological condition. This is not a pedantic refinement. Over and over again do we see this pathological condition without any attendant symptom; the patient may read the smallest type.

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of the fifth (with paralysis of other cranial nerves); perhaps it ought to be said that that case "diagnosed itself," as there was a mass to be felt behind the soft palate. This, along with certain evidence of intracranial disease, left little for diagnostic acumen (cancer of the base of the skull coming through was found on post-mortem examination). If further evidence favours Mr. Hutchinson's opinion we shall gain a valuable aid to the diagnosis betwixt intracranial syphilis and cancer of the basis cranii. Cancer of the base of the skull, paralysing cranial nerves, is the thing most likely to be mistaken for syphilitic disease of cranial nerve-trunks. Of course it is not asserted that double paralysis of the fifth nerve is not sometimes caused by syphilis. Dr. Althaus has published such a case.

When it is said that syphilitic paralyses of cranial nerves are rarely double, those cases are meant in which the nerve-trunks are affected. Of late years Mr. Hutchinson has described cases of paralysis of all the ocular motor nerves supplying the two eyeballs under the name "exophthalmoplegia externa." He believes that these are really cases of muscular atrophy due to central changes similar to those found in the anterior horns of the cord in the commonest variety of the progressive muscular atrophy of Duchenne and Aran. Indeed, in one of Hutchinson's cases, Gowers (to whom the specimens were given for examination) found atrophy of the nuclear origin of the nerves.[4] Gowers writes: "The degeneration of the nerve-roots and disappearance of the nerve-cells from their nuclei of origin, are precisely similar to the changes seen in other parts in progressive muscular atrophy." Further, Hutchinson believes that syphilis is probably one cause of the central changes in these total and symmetrical ocular palsies; in other words, Hutchinson's opinion, then, is that syphilis may paralyse the ocular muscles, not only, as is most common, by leading to gummatous disease of their trunks, but by leading, probably without gummatous disease, to atrophy of the cells of their nuclear origin. Now, in my patient the palsies were of one side, the trunks of the nerves were beyond question the parts diseased.

There was another symptom in this case, owing to the paralysis of the sixth nerve, besides strabismus. He would see double, of course, but there was a more important symptom. When the man walked he walked well, but he could be easily made to walk with a slight reel, so that we may amend our statement and say that another symptom could be easily developed. When he walked as he liked, he closed the right eye; then his gait was normal.

It might seem at first glance that he walked well when, by closing the right eye, double vision was impossible. If, however, he was made to walk when the sound eye was closed, and the lamed one was alone used, he reeled slightly, at the same time he felt giddy. Two things are to be mentioned. He did not walk badly from double vision, for double vision was impossible when he walked with but one eye open, but when he used the lame eyeball only there would be erroneous estimation of the position of objects, and this, to speak metaphorically and not very exactly, misled his locomotor movements, and made him reel. Here let me guard you against a not uncommon confusion. The man felt giddy, but we must not say that the sensation of giddiness "caused" the disorder of locomotion. Giddiness is a sensation—a crude one, no doubt, but still a sensation or a feeling, and thus a psychical state—which is never the cause of anything physical; we could only say that the physical process during the feeling of giddiness leads to the further physical process of disorder of locomotion. We may more properly say, I think, that the *physical basis* of giddiness is itself incipient or rudimentary disorder of co-ordination. Ocular giddiness, or, more technically, vertigo, is a variety of desorientation, is, physically, defect in adjustment of the body to its surroundings by the most representative of all movements, those of the eyes. In ocular vertigo, to speak figuratively, the eyes see things in wrong places—that is, where the legs cannot find them; or, speaking more metaphorically, the eyes tell lies to the legs, which are thus misled to place themselves where the floor or other external objects are not.

Giddiness with the reel was not strictly another symptom, except in the very limited sense of being, in addition to the double vision, another manifestation of the paralysis of the sixth nerve. In many cases of paralysis of one sixth nerve there is neither double vision nor vertigo; the patient either instinctively closes the eye on the side of the external rectus paralysed, as our patient did; or he inclines his head to one side, and thus "dodges" the effects of that paralysis. When you see a patient walking with his head on one side, or with one eye closed, you examine for paralysis of one sixth nerve. Paralysis of the sixth nerve from any morbid process would of course produce vertigo and reeling, and thus it may seem that we are going out of our way in considering these symptoms in a lecture on syphilis. Yet they are properly mentioned here, as it would be a grave error to suppose that the man's reel or vertigo was an additional symptom, betokening another lesion. This is important because, as I shall insist later on (Dictum No. 2), a random association of different nervous symptoms is strong evidence of syphilis. Vertigo is a very different symptom from paralysis of a cranial nerve; but we see that here it is only an indirect consequence of paralysis of the sixth; it is not *another* symptom in the sense of depending on another separate lesion.

Treatment by large doses of the iodide of potassium, I may mention, did nothing for the paralysis of the sixth nerve, and little for that of the fifth. These palsies had existed too long; there was much less anæsthesia of the right side of the face, however. Mr. Hutchinson some time ago told me of a case in which, under long-continued doses of the iodide of potassium, the masseter and temporal muscles, which were seemingly atrophied as a part of a fifth nerve paralysis from syphilis, plumped out again and acted normally. I have since seen with Mr. Hutchinson a case in which under similar treatment paralysed masseter and temporal muscles, in another case of paralysis of the fifth nerve from syphilis, nearly completely recovered. (I may mention that in this case the depression in the temporal region and the flatness of the cheek in the regions of the temporal and masseter muscles had made me infer paralysis of the fifth before a proper examination rendered it certain.) Hence I have misgivings that I did not give enough iodide, or give it long enough, in the case I am now relating. Most unfortunately I have no mention of the exact duration of the paralysis of the fifth nerve; the sixth had been paralysed for about four months. The patient may have had the paralysis of the fifth nerve as long; some patients do not know that they have this kind of paralysis; some who have it go to an ophthalmic hospital for ulceration of the cornea on the paralysed side, and it is then pointed out to them that one side of the face is without feeling.

(To be concluded.)

[4] Med. Chir. Trans., vol. lxii.

Clinical Lectures
ON
SOME CASES OF HEART DISEASE.

Delivered at the Hospital for Consumption and Diseases of the Chest, Brompton,

BY R. DOUGLAS POWELL, M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL, SENIOR ASSISTANT-PHYSICIAN TO THE MIDDLESEX HOSPITAL.

LECTURE II.

GENTLEMEN,—At the end of my former lecture I was referring to the prognosis in cases of mitral regurgitant disease, and we examined two cases in which a simple systolic bruit but partially replaced the first sound, in which, although of some duration, there was yet no considerable ventricular hypertrophy or dilatation present, and which might be regarded therefore as of favourable prognosis. Not a few people live an active life unconscious of the presence of such a mitral leaking, and we must be cautious not to allow the length of our ears to exceed that of our judgment in discovering such a lesion, without taking into due account its attendant phenomena, and in thus too hastily condemning a case of heart disease without well ascertaining and taking into consideration what may be the possibilities of the case on the side of compensation. The question now comes—Is the mitral valve rendered incompetent by rheumatic endocarditis ever restored to

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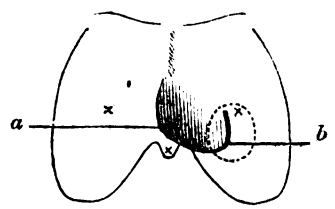
competency? Certainly in a few cases. A soft variable bruit may make us hopeful, but I do not think we shall ever be wise in giving an opinion upon this point until some little time has elapsed after the attack of rheumatism. I have seen one instance in which a very distinct mitral bruit, existing some time after rheumatic fever, has completely and permanently disappeared. The disappearance of such a bruit may be due to a smoothing down or, possibly, the absorption of small vegetations, or to restoration of the tone of relaxed and temporarily dilated ventricle and papillary muscles, or to a slight narrowing of the mitral orifice within the capacity of the valves. The latter, if it exist, is but a dangerous and only temporarily remedial process, however, which is apt to continue to constrict the orifice, and to shorten and thicken the valve, producing a reappearance of the murmur in association with constrictive disease. With a more thorough incompetence of the mitral valve, we have perhaps the gravest of heart diseases, with the later phenomena of which I will not detain you, as cases are not now before us.

Our special object to-day, however, is to speak of some cases of mitral constrictive disease, some living examples and morbid specimens of which I have brought here for your examination.

Of this disease—mitral narrowing—there are at least two kinds, differing in pathology, in duration, and, as I believe, in origin—viz., the funnel form and the diaphragm form of mitral narrowing. I will ask you to examine some cases illustrating the former of these two varieties.

CASE 1.—Mrs. H——, aged twenty-two, an in-patient under Dr. Powell's care from March 5th until May 31st, 1878. Has married since leaving hospital. Fairly well developed woman, with narrow chest. No hereditary predisposition to phthisis or heart disease. Six years ago first began to suffer from breathlessness on exertion, but had no definite illness until five years ago, when she had pleuro-pneumonia with pericarditis. Never had rheumatic fever. On admission patient complained of troublesome cough, with expectoration occasionally streaked with blood. Some bronchitic râles were audible over the bases, and from time to time some crepitant spots could be detected at different parts of the chest. The respirations were always rapid, about 40 in the minute; the pulse from 80 to 100, quite regular. On one occasion, April 24th, 1878, the patient was suddenly seized with a peculiar sense of excitement and anxiety, with confusion of mind, "felt as if going to have a fit," and experienced painful cramps in muscles of fore-arms, arms, and legs. No squinting or alteration of pupils. The symptoms subsided in half an hour. Patient has had one or two chest attacks during the past winter, but has otherwise kept well.

FIG. 1.



The shaded area shows cardiac dulness. *a*, Impulse of right ventricle increased. *b*, Apex in normal situation. The dotted line marks area of murmur and thrill.

Physical signs.—Heart's apex-beat in normal situation. Impulse decidedly strong between the fourth and sixth cartilage left margin of the sternum (see Fig. 1), and at the apex a thrill is felt preceding the beat of the heart. At the second space near the sternum a distinct shock or tap is felt by the finger applied, corresponding with the closure of the pulmonary valves. The first sound of the heart is distinct and ringing, the second sound clear and accentuated over the pulmonary cartilage. A rough rasping bruit extends with increasing intensity from near the second to the first sound, with which it abruptly terminates (see Fig. 2). This bruit is limited to the apex, and is not audible at the angle of the scapula, where the first and second sounds are distinct.

CASE 2.—Emily A——, aged twelve, an undersized but intelligent child, with small contracted chest, admitted under Dr. Powell, March 20th, 1879; discharged June 16th. Mother healthy; father was an out-patient at this hospital. Had had no previous illness except measles and whooping-cough until February, 1878, when she became troubled with shortness of breath and cough, and has been more or less under treatment since.

The *physical signs* in this patient closely resembled those of the preceding case, and the same diagrams would equally well indicate the murmur and thrill in both. The second sound over the pulmonary cartilage was markedly accentuated, although not perceptible to the finger. The impulse of the right ventricle was more decidedly hypertrophic, and the apex-beat was in the nipple line, the thrill and murmur being both most distinct immediately to left of nipple line. On admission there was dulness with weakness of breath-sound, and some crepitation at the right posterior base. These pulmonary signs have cleared up, and the patient is active and sprightly in movements, and, beyond shortness of breath and slight occasional cough, presents no features characteristic of heart disease. The pulse is regular, 88.

CASE 3.—The heart I now pass round for your inspection was removed from a woman, aged fifty-eight, who died in the Middlesex Hospital with pleurisy and effusion. Hæmorrhagic infarcts were found in the right lung, and some thrombosis in the left auricle of the heart. The heart weighed eleven ounces. The right ventricle was somewhat enlarged. The mitral valve, competent to water-test, presents a very good example of the form of disease or deformity which I believe exists in the other two cases. Its margins are adherent, so that it projects into the ventricle in the form of a funnel, having a narrow opening at its truncated apex. There are no vegetations on the valve. A loud presystolic murmur was heard during life. The patient had never had rheumatism; she was married, and had had thirteen children. She had for the last nine years complained of palpitation and shortness of breath, and had finally died of a chest disease, which may or may not have originated in her heart affection.

Perhaps I shall most concisely, and with least repetition, point out to you the peculiarities of this form of heart disease, of which these cases are examples, by referring you to the following summary in which I have enumerated the chief phenomena to be noted. I will presently contrast the signs and history here detailed with those of another form, or, perhaps, other forms of mitral stenosis, to which, for convenience of reference, I have given the name of diaphragm mitral.

CHARACTERISTICS OF FUNNEL VARIETY OF MITRAL STENOSIS.

MORBID ANATOMY OF HEART.

Valve.—Projects downwards into the ventricle, as does the normal valve, but with the margins of leaflets adherent, so as to give a funnel shape. The apex of the funnel presenting an oval opening, that will only admit the top of the little or forefinger. Valve admits of no regurgitation, and presents no vegetations. It is not thickened, save in some cases, in such degree as may be accounted for by long-continued mechanical strain.

Left ventricle.—Of normal size, or rather small.

Left auricle.—Notably thickened and enlarged.

Right ventricle.—Markedly hypertrophied, and more or less dilated and hardened. Usually projects below the left ventricle to form the apex of the heart.

Other phenomena.—Lungs heavy, congested, and toughened. Tendency to pulmonary apoplexy, and to infarcts in other organs—kidneys, spleen, brain, &c.

CLINICAL PHENOMENA.

Cardiac impulse.—Apex-beat in or about normal situation. Impulse not increased there. But impulse of the right ventricle is strongly felt near the left margin of the sternum at the ensiform level. (See Fig. 1.) Action of heart regular.

FIG. 2.

In this figure the two sounds of the heart are indicated by the firm lines 1, 2, vertical to the base line. The shading represents the murmur commencing soon after the second sound, and gathering force up to the first, with which it abruptly terminates. The dots mark the time and relations of thrill.

Thrill.—At the apex very distinct; usually prolonged,

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occupying the latter part of the "pause," and abruptly terminating at the systole. (See Fig. 2.)

Bruit.—Prolonged rasping, commencing soon after the second sound, and continuing with increasing intensity up to the first sound, with which it abruptly terminates. (See Fig. 2.)

First sound.—Unattended with murmur. Notably clear, and of accentuated valvular quality.

Second sound.—Clear and accentuated, especially over the pulmonary cartilage, where it may often be *felt* to give a shock to the finger, lightly applied. Often reduplicated.

Pulse.—Regular in force and rhythm, and whilst patient is quiet but little accelerated. On effort or extra excitement is apt to become irregular.

Patients.—Often undersized, with small, contracted, more or less "pigeon" typed chests. Subject to repeated catarrh, and presenting œdema sounds over the pulmonary bases. Such patients often say they have been "asthmatical" all their lives.

Onset of symptoms.—Insidious, with increasing breathlessness and frequency of catarrhal attacks. During one of such attacks the murmur is discovered. In other cases symptoms remain entirely dormant, until they are developed by some unusual fatigue or violent effort.

Origin of disease.—Never rheumatic. Probably a congenital defect.

Prognosis.—Often exists a long time undiscovered, and with care and quietude may but little shorten life. Under the fatigue and excitement of an unguarded life, however, the pressure upon the valves leads to thickening, and sometimes shortening, from interstitial growth, or the right ventricle may be readily overstrained. A tendency to embolism of organs, especially of the brain.

I find that the term "funnel-shaped" was first applied to this form of mitral disease by Dr. Conway Evans in 1866,[1] when he brought a case before the Pathological Society of London, which he regarded as of congenital origin, and which he brought forward to show the effect of strain in producing atheromatous changes in the pulmonary artery and its branches. Dr. Kelly, in 1870,[2] more formally attributed this condition of valve to congenital defect. And in 1871[3] I endeavoured to separate clinically the two forms of mitral disease from one another. Dr. Hilton Fagge's[4] experience is not quite in accordance with mine, either as to the non-rheumatic origin of the funnel form of the disease, nor as to the distinctness with which that variety may be separated clinically from the ordinary button-hole, or, as I prefer to term it, diaphragm variety of constriction.[5] Both Drs. Fagge and Moxon agree, however, in the comparative rarity with which a history of rheumatism is obtained in cases of mitral constriction. I am convinced that the more carefully the purely funnel cases are separated out the more clear it is that the preponderance of non-rheumatic cases is accounted for by them.

I have here tabulated from my case-books nineteen cases of mitral stenosis—thirteen females and six males. Of the thirteen females, in eight cases the physical signs and other characters were those of the funnel variety of the disease, as referred to in the above summary. In six of these cases there was absolutely no rheumatic history. In two cases there were statements of "inflammation of heart ten years ago," and "pains in knees five years ago." Of the five remaining cases, in which the description of disease corresponds with the second variety, in all there was a clear history of rheumatic fever, and in two instances of two separate attacks. Of the six male cases in only one did the disease correspond with the funnel type.[6] In this one there was no rheumatic history; of the other five cases all had had rheumatic fever, two of them having had a second attack. The large proportion of cases of the funnel variety of the disease occurring in the female sex is very noteworthy, and the more so in these tables because the female table was drawn up from cases met with between the year 1876 and the present date (1879), whilst the males were taken from case books, 1872 to 1879. I have only now freshly considered this matter since 1871, and to my mind it seems that the condition of valve and of the heart found post mortem, the sex of the majority of the patients, the physical condition of the patients, and the entire absence of history of rheumatism or of any other cause of endocarditis in the immense majority of them, conclusively point to the funnel form of mitral stenosis being of congenital origin. We need to know, however, more respecting the development of this valve in the fœtus.

In funnel mitral disease the diagnosis is, as a rule, very easy; the accentuated second sound remains distinct, as, passing the stethoscope down the sternum to the fourth cartilage, and working towards the apex, we hear the clear and valvular first sound also, and the murmur, rough and thrilling, running up to it from near the second sound. This murmur is perceived over a restricted area, of which the vertical line from a little above the nipple to the apex-beat is the diameter. (Fig. 1, *b*.) As we pass round to the scapular region both the sounds of the heart may be often heard (as in Case 1), but unaccompanied by any murmur. On placing your finger over the second space near the sternum in Case 1 you will distinctly perceive the shock of the closure of the pulmonary valves. The thrill at the apex and the increased impulse at the fifth cartilage left margin of sternum are in both cases plainly discernible. The problem, as regards the circulation, in these cases rests with the right ventricle and the left auricle, and not with the left ventricle, as in the cases of mitral regurgitation. The difficulty is on a different side of the valve. It is a simple narrowing of the systemic portal of the pulmonary circulation to be overcome by increased power of right ventricle and left auricle. The escape of blood into the left ventricle takes place during the pause, and so long as that pause is sufficiently long—*i.e.*, so long as the heart's action is quiet—the left ventricle is sufficiently filled, and the circulation goes on fairly well. The valve, as a valve, is perfect, and it is a fair assumption, and certainly one in accordance with the finding of experience in these cases, that hypertrophy commencing in early life is more enduring than that called forth at a later period. Persons with this lesion, however, must be content to lead a quiet, physically inactive life, temperate in habits and diet. Their normal state is one of a certain degree of pulmonary fulness or congestion. They are, therefore, prone to catarrhs and to attacks of active congestion, and should be guarded from the causes of such attacks. Under favourable circumstances such patients may go on indefinitely in the enjoyment of fair health, may marry and have families without being conscious of their cardiac disablement (Case 3), and the sex of the majority of these patients is much in their favour. With hard work and exposure, however, they get overstrain of the right ventricle or of the pulmonary circulation, and a rapid breakdown is the consequence. The onset of symptoms in these cases is often sudden after some unusual fatigue or severe effort. A short tricuspid bruit may be added to the other signs—it was so in three of the eight cases,—or the ventricle and auricle may work on with astonishing vigour against adverse circumstances; but the increased strain gradually tells upon the valve—it becomes thickened, stiffened, and begins to leak; a systolic apex bruit is added to the presystolic, and the safeguard of the patient is invaded. In either of these cases irregularity of the heart's action is increased, pulmonary congestion, pulmonary apoplexy, and commencing dropsy supervene, and the case enters upon the phase for active medication, the beginning of the end.

Do not forget the disposition to embolism in these patients. Anomalous brain symptoms, fugitive albuminuria with hæmorrhage, painful engorgement of the spleen, and sudden blocking of other systemic vessels, may thus arise. Two cases within my own experience have terminated with embolism of the brain, and I have seen a well-marked case in which splenic enlargement and hæmaturia with local peritonitis were accounted for by the presence of this form of cardiac disease. The retarded circulation in the left auricle is favourable to the formation of thromboses there, or of but slightly adherent coagula, which in due time may pass into the left ventricle and be distributed in the general circulation. We do not find vegetations on the valve itself, but sometimes its upper (auricular) surface may be roughened by small scaly laminæ.

[1] Path. Trans., vol. xvii.
[2] Path. Trans., vol. xxi.
[3] THE LANCET, June 10th, 1871. Med. Times and Gazette (1871), vol. i., p. 368.
[4] Diseases of the Valves of the Heart, Reynolds's System of Medicine, vol. iv., p. 668.
[5] Dr. Burns (Diseases of the Heart, 1809, p. 174) describes the latter stages and post-mortem observations of a case which may have been one of funnel mitral, with extreme narrowing.
[6] I have been obliged to omit one case from this list from unfortunately having omitted to record as to rheumatic fever, and one case from female list, in which, although absence of rheumatic history is distinct, yet physical signs are not quite clearly put.

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CONTRIBUTIONS TO AURAL SURGERY.

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No. VIII.—THE PROGRESS AND TERMINATION OF INFLAMMATION WITHIN THE TYMPANUM.

IN the early stage of inflammation within the tympanic cavity, none but a very rash or ignorant man would venture to do more than suggest probabilities in regard to the future—either as to life or death, good or faulty hearing, perforate or an entire membrane. Again, should the membrane give way from ulceration, a similar uncertainty may be said to exist as to its ultimate closure, unless it has been entirely destroyed during such a process. To the patient, however, it is of immense importance which out of this list of possibilities may eventuate, and it is satisfactory to be able, by a careful consideration of the parts under observation, to direct his attention to the details which should be attended to in the management of his case. For example, when, in an adult, a few days of pain in the ear is succeeded by a purulent discharge and relief from the pain, what is more common than to find him syringing the ear with some astringent lotion, perhaps composed of a solution of sulphate of zinc or acetate of lead, with the idea of checking the discharge, which annoys him? The effect of this treatment is threefold. The edge of the perforation cicatrises, the discharge visibly decreases, and the patient is more deaf than before he commenced this treatment. Thus the chance of a closure of the perforation is enormously decreased, and so perhaps for the rest of his life he is in more or less danger of cerebral complications. Now whilst no pathological state of the ear is more frequent than a perforation, a scarcely less common one is an entire membrane that has at some previous time been the seat of a perforation, and this is due to the fact that a discharge from the ear in children is often allowed to remain without any treatment, and so they escape being subjected to the syringing by astringents just mentioned. Children, as we know, are peculiarly liable to inflammation of the middle ear from catarrhal causes; the membrane most readily gives way, and, when no very great extent of tissue is lost, it as readily heals. The condition most favourable to healing is scrupulous cleanliness, and this, to be effectual, cannot be achieved solely by syringing, but should include the expulsion of purulent matter from the tympanum. In other words, whenever the patients are old enough to be taught, they should blow through the perforation whilst the ear is being syringed; or, if too young to do this, the same result must be brought about by using Politzer's method. In doing either, the cavity of the tympanum is freed from the pus which collects in it, and it is this collecting of purulent matter which helps to retard the healing. If it be thought that such a mode of cleansing the tympanum is likely to interfere with the healing process, it may be remembered that when an opening has been artificially made, a similar proceeding, however assiduously employed, will not prevent closure for more than a few days at the most. But what is more useful than theorising by analogy is the fact that experience shows this cleansing process to be constantly followed by healing when it is commenced sufficiently soon—i.e., before cicatrisation of the edge of the perforation has taken place. In the early days, then, of a small perforation, the prospect of healing is very good, and anything even of the most simple nature which will facilitate this is well deserving of attention. In a previous contribution I have shown how general is the closure of a perforation accidentally produced, even after the purulent discharge has been established, and such a case differs but little from a perforation effected by disease if the loss of tissue has been small. But how fares it when the loss has been extensive? To this it must be answered that where there is a very large opening it remains for a considerable period, and at times during life; certainly for life if all the membrane save a narrow rim has been lost; but healing can never be declared impossible if so much as half the membrane is left; indeed, even two-thirds have been known to be restored. This restoration, after long periods of discharge, cannot be definitely started in such instances, and it is delayed perhaps for years; but that it does take place, and apparently from no assignable cause, is a matter of common observation when patients present themselves, after an absence of several years, with an entire membrane, but one that had previously been noted in the case-book as having been perforate.

When the function of the membrana tympani as a protective membrane is suspended by the admission of air through a perforation, and the lining membrane of the tympanic cavity is thus converted into a suppurating surface—in other words, when a fistulous opening has been fairly established, the minimising of the discharge is found to be accomplished by the application of some suitable material to the tympanum, which protects it from the external air. The unsuitable nature of gutta-percha is one of the several reasons which has led to the disuse of Toynbee's so-called artificial membrane, and the theory of the manner in which this occasionally increased the hearing power need not be discussed here. Suffice it to say that, if pressure on the stapes is required, it may be effected in a variety of ways, and in such a manner that, whilst air is excluded from the tympanum, the exposed mucous membrane is tolerant of the application. Until both these requirements are satisfied, no permanent diminution or cessation of the discharge may be expected; but when they are, there can be no sort of doubt but that the chances of cerebral inflammation are enormously lessened and wellnigh destroyed. Under such favourable conditions, the membrane, in the course of months or years, is often found to be considerably increased in area; the exuberant granulations disappear, and are replaced by a fairly healthy surface. The complaisance with which a discharge from the ear is regarded for the best part of a lifetime would be surprising if the same carelessness were not exhibited in other matters connected with the health, and the idea with the public seems to be generally prevalent that it is comparatively harmless, until perhaps an insurance office, more cautious than usual, refuses to insure the life of the individual so suffering. Another very general impression (and one not altogether confined to the public) is that a large perforation is more serious than a small one, the reverse of this being more in accordance with facts, as a large opening of this kind is far more easily managed than one of less size, not only as regards the hearing, but also as to the facility with which the tympanum may be protected.

If in the course of inflammation of the middle ear the portio dura in its passage through the tympanum becomes affected, it by no means follows that inflammation should have been so severe as to cause rupture of the membrane, or, indeed, very severe at all. No doubt facial palsy constantly occurs when the inflammation has been acute, and so acute as to cause in addition to the perforation caries of the bone, but the same accident to the nerve may happen after a very slight attack of earache followed by very trivial deafness, which is soon recovered from. The advent, then, of facial paralysis in ear affections need not necessarily be regarded as pointing to serious change within the tympanum, but rather to the fact that the bony covering of the aqueduct of Fallopius is abnormally thin, and probably so perforate as to leave the nerve in an unusually exposed position. But whether the nerve soon or ever recovers its function will certainly depend upon the severity of the inflammation which has caused its paralysis. Thus I have often observed the paralysis following slight earache to be completely recovered from in the course of a few months, but in a case where the facial palsy followed the enterprising treatment of injecting a strong astringent through the Eustachian catheter, the action of the muscles was not regained for a very long period, and then only after prolonged treatment by the continuous current. Any change for the better is of course not to be expected when caries of the bony canal just mentioned has taken place, and in illustration of the tediousness of recovery may be cited two cases previously mentioned in these papers, the one where the nerve was injured by the point of a pair of scissors accidentally plunged through the membrane, and the other in which the paralysis followed the removal of an exostosis from the auditory canal by electrolysis.

From these remarks it will be obvious that whenever acute catarrh of the ear ends in a perforation of the membrane the sooner this structure gives way the better, for by this event the more or less complete disorganisation of the contents of the tympanum is avoided. Whilst it is clearly most desirable that, when it is possible, the inflammatory process should be controlled, as it often may be by leeching in front of and behind the ear, its progress is often so rapid as to preclude this possibility; and in scarlet fever and other exanthemata

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the serious condition of the patient very generally prevents the ear trouble attracting the attention which it otherwise would. How the hearing may suffer if the membrane in such cases remains imperforate for many days can be estimated by noting that it is sometimes quite lost in the ear so affected, and damaged but slightly in the other from which the discharge appeared much earlier in the attack. Again, it is not unusual to find a patient after simultaneous inflammation of both tympana totally deaf in the ear with an entire membrane, and hearing fairly well with the ear whose membrane is perforate.

If the results of inflammation within the tympanum are important as regards the loss of hearing or facial palsy, how much more so is the further disorganisation and complications which may follow the prolonged suppuration induced by a fistulous opening into this cavity, such as bony enlargements in the external canal and morbid growths arising from the mucous membrane lining the tympanum. Both of these are often without doubt excited by the constant irritating presence of purulent matter, and either may at any time interfere with the escape of pus from the ear.

In the last volume of the Transactions of the Medical and Chirurgical Society I related a case of malignant growth which commenced in the tympanum, and since that was published a similar case has come under my notice, in which death occurred from sudden hæmorrhage from the internal carotid. In this latter, as in similar instances recorded, a discharge from the tympanum had persisted for many years, and that which had all the appearance of a small polypoid growth, assumed, after a long period of quiescence, a malignant character. The same sort of history preceded another case, in which the growth was a round-celled sarcoma. Generally speaking, however, the importance of growths in the tympanum lies not so much in their structure (which is usually of a most simple character), but in the fact that they may, and do, become the indirect cause of death, by preventing the free exit of pus from the tympanum. If any point more than another demands careful attention in their treatment, it is not only their early removal or their complete eradication, but the defence of the tympanic cavity by some arrangement already referred to.

THE ALKALINE, SALICIN, AND SALICYLATE OF SODA TREATMENT OF ACUTE RHEUMATISM.

By ROBERT SINCLAIR, M.D.,
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(Concluded from page 246).

AN admirable *résumé* of the physiological and therapeutical actions of salicylic acid was lately read before the Harveian Society of London by Dr. Squire, and published in THE LANCET of Dec. 20th, 1879. Dr. Squire vigorously defends the drug as the best remedy hitherto proposed for acute rheumatism, and quotes several authorities in its favour. Fully acknowledging the excellence of the results in his limited series of eight cases, I cannot but think that a more extended experience will give him less cause for satisfaction, while more careful research will probably qualify the remarkable statement that "none of the methods, before the use of salicylic acid, would markedly lower the fever, and shorten its duration, or lessen the liability to heart disease, or diminish the anæmia of convalescence, with its tendency to relapse." The results of Dr. Oliver Moore, quoted by Dr. Squire from the *New York Medical Journal* for August last, are so brilliant and startling that British physicians may well look to their laurels. Having, unfortunately, at this moment no means of access to Dr. Moore's paper, I must quote from Dr. Squire:—"305 cases treated by salicylates relieved in an average of 2·9 days, discharged cured in 9·5 days average." This achievement is clearly without its rival, during historic times at all events. Dr. Cavafy's results, which are also praised by Dr. Squire, need not detain us, as I have already dealt with them. But I must enter an emphatic protest against the method adopted by Dr. Squire in manipulating the figures placed on record by Dr. Jacob, of Leeds. It is surely one of the simplest axioms of practical medicine that, if knowledge is to be advanced, it must be by the impartial record of unsuccessful as well as of successful results. Dr. Squire tells us that "63 per cent. of Dr. Jacob's cases were relieved in an average of less than three days, and discharged cured in twelve days. Only 3·5 had heart affection." These figures are correct enough as far as they go; but they do not tell us the whole truth. I now quote from Dr. Jacob:—"In the second class were 30 cases, with an average duration of eleven days, and stay in hospital of thirty-five days. Two cases appeared not to be influenced by the drug, besides five cases which proved fatal. Forty-five cases were admitted without cardiac complication; of these, three contracted pericarditis while under treatment, making a percentage of cardiac disease under treatment of 6·6. Relapses were very frequent, five patients being readmitted with second attacks, and two a third time."[1] Let us carefully look these facts in the face. If we add the two classes of cases together, we find the average duration of the rheumatic symptoms to be as nearly as possible seven days, and the average residence something like twenty-three and a half days. The percentage of cardiac complications, though not excessive, is not unprecedented. The two cases of failure, the frequency of relapses, and the five fatal cases, speak for themselves with an eloquence which I shall not attempt to emulate.

Accuracy is desirable in all things, and in none more than in dealing with statistics which involve important issues. Dr. Squire credits Dr. Jacob with having "brought the results of more than 300 cases so treated" (by salicylic acid) before the Manchester meeting of the British Medical Association in 1877. As a matter of fact, Dr. Jacob gave the results of *100 cases of rheumatism treated by salicin and salicylic acid.*

One word more. A teacher at whose feet the whole profession is willing to listen and to learn, has recently uttered a note of warning in reference to the free external use of cold water in pyrexia, which should be carefully pondered by Dr. Squire and all other advocates of powerful remedies. "By its use (cold water) Musa saved the life of Augustus. But it is not to be ignorantly or rashly used; for while it cured the emperor, it killed his nephew."[2]

The experience of the physicians of the Dundee Royal Infirmary in the use of salicylate of soda has been considerable, and the record of it will form a contribution of some value to the question. I have, therefore, gone carefully over the case-books for the last three years and a half, and have tabulated the results. The table is too long for insertion in a paper already very lengthy, so I shall content myself with mentioning the principal points of interest. In the first place, I must state that the great majority of the cases were treated by Drs. Maclagan and James Duncan, my term of office having begun only in the middle of February, 1879. In seventy-seven cases the average duration of the rheumatic symptoms—viz., pain, swelling, and elevated temperature—was 8·9 days, and the average residence in hospital was 21·48 days. Pneumonia occurred once, pericarditis once, and endocarditis twice, after the patients were fairly under the influence of the drug. In this group I have not included a number of extremely obstinate and relapsing cases in which the drug was abandoned, after fair trial, in favour of other remedies, such as alkalies, salicin, and blisters. Nor have I taken into account the case of a previously healthy boy, who, during a first attack of relapsing rheumatism, was treated with salicylate of soda and salicin, and became affected with pericarditis, endocarditis, and pleurisy, which prolonged his residence in hospital beyond three months, and culminated fatally two months after he was discharged at his own request.

The practical outcome of our experience does not differ widely from that of Dr. Cavafy, if the larger number of our cases be considered. The average duration of rheumatic symptoms and of hospital residence has been rather less with us. But, on the other hand, we have had graver cardiac complications. As regards the proportion in which poisonous symptoms were developed, I am unable to speak, because they have not been inquired for in every case, or always noted when they occurred. But I do know that they are by no means rare, as the St. George's Hospital Reports and the periodicals of the last three

[1] Brit. Med. Jour., Aug. 25th, 1877.
[2] Pharmacology and Therapeutics, by T. Lauder Brunton, M.D., &c., p. 191.

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years amply testify. The slighter symptoms — deafness, giddiness, and nausea — are doubtless of little moment. But we cannot afford to despise cardiac depression, delirium, and unconsciousness.

Like many others, I cherished expectations that salicylate of soda would accomplish marvels in this, one of the commonest and most agonising of human maladies. The stern teaching of experience has banished the hope and cleared the mental vision. Who can tell how long the present method of treatment will reign supreme, or what is to be the next effort of sanguine empiricism?

Conclusion.—The immense variety of measures that have at different times been advocated in the treatment of acute rheumatism is almost appalling. Bleeding, blistering, sweating, purging, calomel, opium, cinchona, colchicum, antimony, aconite, guaiacum, nitre, and actæa racemosa, have had every virtue claimed for them that the most ardent practitioner of the healing art could desire, and they have all had their day. In too many instances "specifics" have been lauded to the skies on wholly insufficient grounds, and after the most limited experience. The doctor and the drug have far too often been credited with results that belonged by right to the good constitution of the patient and the benign influence of nature. On the other hand, remedies that have produced unquestionably good results in the practice of competent physicians have been pronounced inert or baneful by their contemporaries or successors. To arrive at the truth, with such conflicting statements before us, is no easy matter. It is probable, as has already been hinted, that there are cases which yield to every kind of treatment, or to no treatment, and some which pursue their destructive career in spite of all the artillery in the Pharmacopœia and out of it.

Of the drugs in vogue at the present time, alkalies, salicin, and the salts of salicylic acid, appear to be those most deserving of careful and extensive trial. But, in order to obtain all the good of which these remedies are capable, full and frequently-repeated doses must be administered, and to adjudicate fairly their several places it will be necessary to have before us the carefully-recorded experiences of many physicians in large numbers of consecutive cases. Concerning the alkaline method we do possess some very valuable statistics, which show results that, in the matter of cardiac inflammations, at least, have not yet been rivalled by any other system. Whether our new remedies are capable of rivalling or surpassing the alkaline method is a question that is not yet ripe for settlement, though it has been often answered of late, with a strange disregard for the laws of evidence. I know very well that it is just now the fashion to congratulate ourselves on what we call our progress, and to compare with complacency our present powers of dealing with rheumatic fever with those we possessed only a few years ago. The grounds for this satisfaction are, unhappily, not nearly so strong as the satisfaction itself. The men who speak so enthusiastically about their results are abundant enough and honest enough; but I find that they very commonly make two important errors—the comparison of a few recent successes with a few old, but well remembered, failures, and the disregard of the analysis of their results, as well as of the statistics of other methods. I do not mean to say that we have made no advance. The future must decide this. But I do say unhesitatingly that, so far as published results enable us to judge, the advance is less real than is usually supposed. If, however, our therapeutic progress has been thus unsatisfactory, we have made one important step forward, the end of which it is impossible to see. Dr. Southey's laborious investigations have opened the way to a true knowledge of the natural history of the disease. I, and many others, I hope, intend to begin immediately a record of my cases on the lines he has so clearly and ably laid down. By and by, we shall, perhaps, have something to say that is worthy of British medicine.

And now we must make the confession that neither ancient nor modern therapeutics have given us the power of mastering this terrible and painful malady. Medical literature teems with instances of remedies proposed as infallible cures for rheumatic fever, and shortly afterwards condemned to the limbo of forgotten nostrums. Both lines of action, the constructive and the destructive, have not unfrequently been too hasty. The moral is obvious. Let us neither approve nor condemn the remedies at present in use after a few isolated successes or a few isolated failures. Let us try them wisely and fairly in large numbers of cases, over long periods of time; and, above all, let us try to find out all that can be known about the disease, while we honestly record our results. A course of historical and statistical investigation is the best corrector of sanguine hopes from therapeutics, though neither facts nor figures should be allowed to damp our ardour too much. It becomes us, in the meantime, to employ judiciously whatever line of treatment our own study and our own experience may indicate as the best. But the physician who places a blind reliance on any one drug or on any one combination of drugs is like a general who subordinates his tactics in the field to the crude experiences of Aldershot and Hyde-park. In either case the result will be the same. A career of smooth, unbroken success may for a time lull the routinist into a dream of fancied security. But, sooner or later, emergencies will arise, for which no amount of "peaceful training" can prepare, and before which the cherished *system* must utterly and hopelessly break down.

ON THE TREATMENT OF DIPHTHERITIC OPHTHALMIA BY LOCAL APPLICATIONS OF SOLUTION OF QUININE.

BY JOHN TWEEDY, F.R.C.S. ENG.,
ASSISTANT-SURGEON AT THE ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

(Continued from p. 126.)

I AM, of course, prepared to admit that a successful issue will not, of itself, justify the adoption of a purely experimental mode of treatment in so serious a malady as diphtheritic ophthalmia. A reasonably intelligible explanation should be forthcoming. This, I venture to think, I am able to produce.

I will first state why I rejected the plan of treatment recommended in the text-books, and then give the reasons which led me to try local applications of quinine.

My dislike of the usual treatment was, I must confess, in the beginning, little more than prejudice. I shrank from lavish mercurial inunctions, copious vascular depletions by means of large and frequent relays of leeches,[1] repeated doses of tartar emetic, and starvation diet, as false and barbarous, and only to be tolerated on the most unequivocal evidence of uniform and unvaried success. This evidence is, however, if I may so speak, conspicuous by its absence. The percentage of failures given in the published statistics, including total destruction of the eyeballs and dense adherent leucomata, is very large. The exact proportion I have not been able to ascertain. In general terms, it may be said to exceed fifty in the hundred. Under these circumstances I was entitled to some freedom in instituting a therapeutic experiment.

The reasons which induced me to employ quinine were, primarily, referable to the pathological and histological investigations of Colnheim, Recklinghausen, and Stricker, on the processes of inflammation in the cornea, and to the researches of Binz, Scharrenbroich, and Martin, on the antiphlogistic properties of quinine. According to the three first-named observers the principal changes that occur in traumatic inflammation of the cornea consist of the germination of the protoplasm of the stellate corpuscles and of the immigration of leucocytes from the adjacent capillary vessels,[2] and the last three have conclusively proved that quinine, whether given internally or injected subcutaneously, exerts a specific influence on the processes of inflammation by hindering or retarding the germination of protoplasm, and checking the vital amœboid movements and consequent migration of leucocytes.[3] Dr. Binz says the escape of leucocytes, and the formation of pus that ensues, may be distinctly limited in animals by quinine, independently of the condition of arterial pressure. This property is due, he says, to a lowering of the affinity of the corpuscles for the

[1] Graefe in some cases used as many as 160 leeches, applied to the root of the nose, in the course of seven days. From twenty to thirty is the usual number.

[2] For a succinct account of the changes see the article by Dr. Burdon-Sanderson on "The Process of Inflammation," in Holmes' System of Surgery, 2nd ed., vol. v., pp. 766-772.

[3] See the Practitioner, August, 1868, and vol. iii., pp. 107-109.

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oxygen of the hæmoglobin, this oxygen being the stimulus which excites the independent movements by which emigration from the veins and capillaries is partly effected.[4] The experiments of Dr. Binz confirm, moreover, the statement of many independent observers that quinine possesses in a high degree the power of arresting putrefaction and fermentation.

Now all these alleged properties of quinine are desiderata in a remedy for diphtheritic ophthalmia. As far as possible, the germination of the corneal protoplasm and the immigration of leucocytes must be arrested, and the facile putrefaction of the pseudo-membranes prevented. And if it be true, as Buhl, Hueter, Oertel, Eberth,[5] and others affirm, that the diphtheritic inflammation is caused by minute microscopical organisms, these too must be either destroyed or rendered innocuous. On *à priori* grounds, therefore, quinine was specially indicated, and indeed it was the only known drug that seemed likely to fulfil all the theoretical conditions; and the practical test was not disappointing. Not only was the fatal progress of the case I have described speedily arrested by means of local applications of quinine alone, but a perfect recovery ensued even after the hope of sight had been abandoned by competent authorities.[6] Nor was that case unique. At the same time, and for some weeks afterwards, other cases of diphtheritic ophthalmia were seen at Moorfields by some of my colleagues, who kindly sanctioned a trial of the quinine treatment. Two or three of these cases I had an opportunity of watching; the others occurred during my absence from town. Though in none of the cases that I saw was the pseudo-membrane so extensive, nor so thick as in my own case, there was no mistaking its true character. There was in every instance well-marked exudation into the palpebral mucous membrane, which no reasonable amount of force could remove. All recovered perfectly. In another case, which occurred during my absence, there was, I am told, great exudation and complete opacity of both corneæ. That child also recovered as regards the eyes, the cornea becoming, according to the statement of Mr. Burnham, the house-surgeon, perfectly clear and transparent. Two weeks after dismissal the mother called at the hospital to say that the child had just died of diphtheria; but she volunteered the statement that the eyes were "nice and bright."

My excellent clinical assistant, Dr. Charnley, has supplied me with the following notes of another case treated by him, at Moorfields, during my absence:—A boy, aged five years, had had a bad eye for seven weeks, and had been attending another hospital. As the eye was getting worse the mother took the lad to Moorfields on August 30th. The child had not had a bad throat, nor had any of the children about. Both lids of the right eye were much swollen, and red; and there was a considerable yellow discharge. The middle third of the conjunctiva of the lower lid was occupied by a thick whitish-yellow membrane, which could not be wiped off with cotton-wool; an extension of this membrane ran on to the conjunctiva bulbi, and up to the lower edge of the cornea. The lower part of the cornea was opaque. The child was ordered a quinine lotion, four grains to the ounce, to be used frequently, and ice compresses. Ten drops of tincture of yellow chinchona were given in water three times a day. The child was pale and weak. The eye recovered without a check, and when last seen was normal with the exception of a slight nebula at the lower part of the cornea. I may add that I saw the boy in October, and could discover nothing but the faint nebula.

Assuming all these cases to have been identical with those described by von Graefe as diphtheritic ophthalmia, it still remains to be considered whether they were really manifestations of diphtheria. The answer that each one will give to this question will depend upon the opinion he entertains of the nature and origin of diphtheria. I may say at once that I am of those who regard diphtheria as primarily a local disease, developing afterwards into a general one from the local inoculation.[7] And if the general infection of diphtheria invariably follow a local inoculation, and if diphtheritic ophthalmia be one of the modes of local inoculation, we may hope that, in possessing a means of arresting this form of local disease, we possess likewise a prophylactic in the pharyngeal mode.

Little doubt as to the diphtheritic nature of these cases of ophthalmia will remain if it once be conceded that they are identical with those of Graefe. The observations and experiments of Graefe, Gibert, Hirschberg, Saemisch, De Wecker, and others have proved that to demonstration. I will merely add that most, if not all, the cases I have related came from the same district, and that diphtheria was prevailing there at the time. In one instance, at least, there had been (possible) communication between the mother of the child and a member of a family that had lost five of its number from diphtheria, and in another the child was reported to have died of diphtheria two weeks after the eyes had recovered from what had been diagnosed as diphtheritic ophthalmia.

In conclusion, I may state that there is scattered through the literature of diphtheria for the last 130 years a large amount of independent but concurrent testimony to the virtue of chinchona bark and its alkaloid, quinine, in diphtheria. As far as I can find, the first person who recommended the internal administration of bark in diphtheria, or putrid sore-throat as it was then called, was Dr. John Wall of Worcester, in an article which appeared in the *Gentleman's Magazine* for December, 1751.[8] The drug was then employed by Fothergill, Huxham, Johnstone, Saunders, Skeete,, Kentish, Withering, Penrose, and many others, who have all left printed testimony of its great efficacy. In later times it was recommended by the learned Mason Good, by Dr. Perceval and Dr. Paul; and in our own times Dr. John Day[9] of Geelong, Australia, and Dr. Brakenridge[10] of Edinburgh, have spoken in the strongest terms of the value of quinine, both locally and internally.

CONSTIPATION VIEWED AS A DISEASE 'PER SE' AND AS AN EXCITING CAUSE OF DISEASE.

BY ROBERT BELL, M.D.,

PHYSICIAN TO THE GLASGOW INSTITUTION FOR DISEASES OF WOMEN AND CHILDREN.

(Concluded from p. 244.)

IN illustration of the foregoing remarks I append a series of cases, commencing with the youngest.

CASE 1.—Mrs. J——'s baby, aged nine months, has been for some nights suffering acute pain, as evidenced by crying most bitterly, and kicking for hours at a time, and there was also a considerable amount of fever; but as the symptoms always subsided towards morning, some days were allowed to elapse before I was sent for. I ascertained that the following symptoms had been remarked by the mother and nurse, besides those enumerated above:—If by chance the child fell asleep, it invariably wakened with a start, and began to shriek as if in pain. There were frequent evacuations from the bowels, and latterly a good deal of mucus mixed with small pieces of feculent matter had been voided. Moreover, the child began to fall off in flesh, and it was when this manifested itself that I was sent for. I observed the child had a blanched and sallow physiognomy. The abdomen was very much distended, and it was ascertained that there had been pretty constant vomiting after taking food. One would naturally suppose that such a train of symptoms pointed clearly to some head mischief, and I cannot help thinking that in many cases of supposed hydrocephalus in children, the symptoms are due to no more than an accumulation of scybala in the colon, the presence of which acts as a direct irritant to the nervous system. The treatment consisted in giving an enema of salt and water—two teaspoonfuls of the former to a teacupful of the latter, the good effect of which was manifest in a few hours, and

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[4] The Elements of Therapeutics, translated by Dr. E. L. Sparks, London, 1877.

[5] Von Ziemssen's Cyclopædia of the Practice of Medicine. Art. Diphtheria, by Dr. Oertel. American translation, vol. i., pp. 588, et seq.

[6] THE LANCET, Jan. 24th, p. 129.

[7] For a full discussion, see Dr. Oertel's article, op. cit., p. 577.

[8] "On the Cure of Putrid Sore Throat." Republished in the Medical Tracts, Oxford, 1789. No. III.

[9] "On Diphtheria," Australian Medical Journal, Sept. 1868.

[10] Practitioner, August, 1875. Copied into Braithwaite's Retrospect, 1875, vol. ii., p. 26.

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the infant had a refreshing sleep after the enema had acted freely. This was the first satisfactory sleep the child had had for several days. No other remedies were called for. It may be remarked by some that a dose of castor oil would have had quite as good an effect, but it had been tried more than once without giving any prolonged relief, although it acted upon the bowels. I have often seen this happen, and I can only explain it in this way, that the scybala lie impacted in the sacculæ of the colon, and are not dislodged by the action of the oil, the matter removed by the oil simply passing over the accumulations of hardened fæces. In this case there was observed the anæmic look, falling off in flesh, flabby condition of the muscles, starting during sleep, fever at night, &c., all of which symptoms disappeared when the irritant was removed.

CASE 2.—F. M——, aged three, had prolapsus of the rectum, induced by a prolonged constipated condition of the lower bowel, but the prolapse was attributed by the mother to the boy's health having become deteriorated, whereas the ill-health was consequent upon the same cause as the prolapsus. The fact was elicited that the nurse had not been attending to the state of the child's bowels, and they had become so constipated that the little one shrank from going to stool because of the severe pain it produced. Coincident with this the boy's health began to fail. He was losing flesh, became feverish towards night, was restless, and started up during sleep, and throughout the day was listless and easily fatigued. At the same time his appetite was very fitful. It was the above symptoms which led to the conclusion that the prolapsus was due to the difficulty and consequent straining accompanying a motion of the bowels. An enema was ordered to be given every second day, and within a short time the child's health was completely re-established.

CASE 3.—My own boy, aged six, gradually began to lose flesh, and became very lethargic and easily fatigued. There was also a feverish condition at night, and sleep was always disturbed by starting, and sometimes a species of delirium would come on for a period varying from a few minutes to an hour or so during the night. He was drowsy and irritable, and cried on the least provocation. There was also loss of appetite and failing strength. The bowels acted every day, and seemed to be in very fair order. On examining the stools, however, they were found not to be sufficient in quantity, and were not soft enough in their consistence. He had an enema of salt and water, which brought away a large evacuation of hard fæces, and within a very few hours a decided improvement was observed in his health. He had all the appearance as if a heavy load had been lifted off him. He slept well the following night, and very soon regained his wonted health and spirits. This was all the treatment adopted. It may here be remarked that mothers and nurse-maids are very apt to be put off their guard when the condition of the child's bowels is being inquired into. The answer will frequently be given that the patient is quite regular in this respect. In fact, one is often informed that "the little invalid is very regular indeed," having often "more than one motion in the day." Now this is always a suspicious circumstance, and requires close attention. The stools should be examined, and we will almost invariably find that they are very small in quantity and of very hard consistence. Inquiry will further bring out the information that the child inclines to sit at stool and strain for a long time after having had a motion. This is because the rectum is not completely emptied, and the reason of the frequent small stools is due to the same cause. Another effect of this, more especially in boys, is an inability to retain the urine for any length of time, and thus in many instances we may account for the habit boys so frequently have of wetting the bed during sleep.

CASE 4.—J. P——, aged twelve, a girl, tall of her age, very thin and anæmic. She complains of being languid and easily tired, and inclines to lounge about all day. Naturally she is a sharp and intelligent girl, and is fond of her books, but for the past few weeks she does not care for her lessons, and altogether is quite changed in her demeanour. She inclines also to lie still in the morning, instead of rising at her usual hour, and always expresses herself as "feeling so weary." Her sleep at night is very much disturbed by dreams and nightmare. Her appetite is variable. The bowels are very costive, and she confesses that she has been in the habit of putting off going to stool when she has felt the desire to go. She also complains of pain at times over the right iliac region, which is tender on pressure.

The treatment consisted of an enema of salt and water every second night, which speedily removed all the symptoms, and a rapid restoration to health was the result.

CASE 5.—M. P——, aged sixteen, presents a chlorotic appearance. She is very weak, and is changed from being a lively and active girl, into one of languid, lethargic, and desponding appearance. She is irritable and hysterical. Her sleep is broken, and in the morning there is no refreshment from sleep, and in consequence there is a wish to lie still in bed, and a disinclination to perform any of the duties she used to enjoy attending to. She very speedily becomes breathless on moving about, and complains of an inability to walk even a short distance without it entailing great fatigue. The extremities, especially the feet, are hardly ever warm. The menses are regular, but the amount of discharge is much less than usual. The bowels are costive, and on inquiry the patient says that when she has a stool, there is a feeling that the relief is not complete.

The treatment consisted of an enema containing a tablespoonful of salt in one pint of tepid water, every second day. In a few days there was a marked improvement in all the symptoms. Blaud's pills were also prescribed, and in three weeks the girl was quite restored to her usual colour and active health.

CASE 6.—Miss R——, aged twenty, a healthy-looking country girl, came to town to be treated for dysmenorrhœa, which had caused her intense suffering for close upon three years, and which was growing month by month more severe. The patient was very hysterical, and her mother informed me that she was low-spirited, and irritable in her temper. She was gradually becoming less able for the least amount of fatigue; and however much sleep she might obtain it never was followed by a feeling of refreshment. Her digestion was very much impaired, and she complained of cold feet, and there was a tendency to shiver even when the temperature was high.

As the dysmenorrhœa was so severe, all the above symptoms were attributed to this, and I was inclined to endorse this view before I had made a vaginal examination, but on passing the finger into the vagina with the object of guiding the uterine sound, I found that the rectum was loaded with scybala. In consequence of this discovery my opinion as to the *casus morbi* became considerably modified, and I was inclined to attribute, if not *in toto*, at least to a very considerable extent, many of the symptoms to this sluggish condition of the bowel, instead of to the dysmenorrhœa. No doubt the uterine affection had a very powerful influence on the girl's bad health; at the same time, when we know the disastrous effects of constipation—rendering as it does the nervous system highly susceptible of morbid impressions, besides acting in this instance as a direct irritant to the womb, in consequence of the close proximity of the hardened fæces to the organ,—we dare not ignore this morbid condition of the bowel in considering what the factors of disease were in this case. Moreover, it was ascertained that constipation had troubled the patient for a longer period than the dysmenorrhœa had, and she informed me that she rarely felt completely relieved after she had been at stool.

The treatment consisted in having the uterine sound passed bi-weekly; and an enema of a tablespoonful of salt to a pint of tepid water was ordered to be used every alternate day.

Before the monthly period came round her health was decidedly improved, so that the improvement could not be due to any alleviation of the uterine disorder. After about six weeks' treatment she went home, quite recovered. It is now nearly two years since the treatment was carried out, and I understand there has been no return of the dysmenorrhœa, and the young lady's health is otherwise all that can be desired.

CASE 7.—Mrs. S——, aged twenty-six, is a highly nervous lady who can hardly speak without bursting into tears. She complains of great prostration and want of energy. She sleeps pretty well, but never feels refreshed in the morning. She is troubled very much with dreams and sometimes with nightmare. The patient is very low-spirited, and takes a very gloomy view of life. There is little or no appetite, and when she does eat she always wishes she had not done so, as there is so much discomfort after a meal. She is losing flesh; and complains of palpitation of the heart, severe frontal headache, bad taste in the mouth (especially in the morning), severe pain over the lumbar region, and a bearing-down sensation "as if her inside were coming down." Her

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ulse is very feeble. She says her bowels are very costive, nd, though her menses are regular, there is always severe ysmenorrhœa.

A vaginal examination reveals retroflexion of the uterus, and the rectum loaded with hardened fæces, which are pressing on the fundus of the uterus, and actually tending to hold it in its abnormal position. The womb measures three inches, and its walls are soft and flabby. My impression on making the examination was, that the constantly loaded condition of the rectum was really the cause of the malposition of the organ, as the patient had never been pregnant, and the walls of the uterus were flaccid and therefore more easily bent out of position.

Whilst attending to the uterine ailment, I ordered an enema of salt and water to be used every alternate day, which gave the greatest possible relief to the patient, and she gained strength so rapidly that at the end of three months she expressed herself as feeling perfectly well.

It would be quite possible to go on quoting cases almost *ad infinitum*, all of which would demonstrate the baneful effects of constipation; but I trust that the few I have selected will be sufficient to direct the attention of the profession more particularly to this morbid condition, which proves itself not only to be a most distressing disease, but is the superinducing cause of so many other disorders. It will be observed that I have not related any cases of adult males who have been treated by me for this affection, but it is not because there is a paucity of such cases, for although females are much more prone to this disease, and suffer more from it than members of the male sex, yet one often meets with constipation in men which not only itself produces a whole host of distressing symptoms, but when allowed to go on unchecked, helps to develop what but for it might still remain latent disease. I do not happen to have notes of such cases, but I can recall to my mind quite a number of instances where constipation was really the cause of great mental depression, irritability of temper, and weakness of body, these all being attributed to want of tone, but which speedily disappeared when enemata were regularly employed to keep the bowels in a state of action.

Glasgow.

CASES OF CONGENITAL HYDROCELE OF THE TESTIS CURED BY ACUPUNCTURE.

By SAMUEL OSBORN, F.R.C.S.,
ASSISTANT-SURGEON TO THE SURGICAL APPLIANCE SOCIETY.

CASE 1.—J. D——, aged six months, has suffered from hydrocele on the right side since birth. He was ordered by a surgeon to wear a truss, and has done so for one month, the last fortnight wearing it night and day. No alteration has occurred in the size, and his mother fancies, if anything, it is somewhat larger. The scrotum is swollen and red from the constant pressure of the truss, which was consequently discontinued, and the scrotum ordered to be bathed twice daily with cold water. The hydrocele is transparent by transmitted light, oval in shape, and gives only a slight impulse on the patient's coughing. There is no alteration in size when the patient is in the recumbent posture.

Jan. 15th.—Swelling and redness have disappeared. The hydrocele was punctured in three places with an ordinary suture needle; the flat-shaped needle after insertion being turned at right angles to the wound of entrance. A small quantity of clear hydrocelic fluid escaped, the greater quantity passing on manipulation into the cellular tissue, external to the tunica vaginalis. The bathing of the scrotum with cold water three times a day to be continued.

16th.—The swelling is much larger than it has ever been, accompanied with much redness, extending up to the navel, and involving the right iliac region and corresponding half of the umbilical region. Cold water application still continued.

17th.—Swelling beginning to go down, and the redness to disappear.

29th.—Hydrocele has entirely disappeared.

Feb. 16th.—No reaccumulation of fluid.

CASE 2.—E. H——, aged two years, made application for a truss, but the child was found to have a hydrocele on the right side, which had only been noticed six weeks previously. Evaporating lotions and cold water had been used for the last six weeks without benefit. Hydrocele is transparent, oval in shape, and gives hardly any impulse on the patient's coughing.

Oct. 26th.—Hydrocele punctured in one place with a broad needle, and about a tablespoonful of perfectly clear fluid withdrawn. Douching of scrotum with cold water ordered several times daily.

Nov. 16th.—Hydrocele is less by two-thirds the size it was previously. Cold douching to be continued.

Dec. 30th.—No sign of hydrocele.

CASE 3.—E. B——, aged nine years, applied to the Surgical Appliance Society for a truss, supposing himself to be ruptured. He was found to be suffering from a congenital hydrocele of the right side, which had been noticed when an infant by his mother, who states that it then looked "puffed like a bladder." The last three months it has altered in character, "becoming larger and more solid." It is now pear-shaped, transparent by transmitted light, and gives a distinct impulse at the neck on the patient's coughing, and is diminished in size on assuming the horizontal posture.

Dec. 10th.—Punctured by an ordinary suture needle in one place, and about a teaspoonful and a half of clear water-like fluid came away. Sac freely manipulated, some of the fluid escaping into the subcutaneous areolar tissue. Patient ordered to lay up in bed for a week, and an ice-bag to be applied to the scrotum, so as to keep up contractility in the muscular dartos.

18th.—No alteration; sac continues empty, as after the tapping.

Jan. 13th.—The mother writes saying, "The swelling has quite disappeared, and the child perfectly well."

Remarks.—These three cases are probably all instances of congenital hydrocele of the testis, the communication with the abdomen in each case being more or less distinct, according to the size of the opening of the funicular process into the peritoneal cavity. They are also all on the right side of the body, this being accounted for by the right funicular portion of the vaginal process of peritoneum being the later of the two in closing; the left testicle descending prior to the right in the majority of instances. It is also noticeable that the fluid in these cases is generally clear, and more like the fluid of the peritoneum than in those cases of hydrocele which are shut off from that cavity.

Maddox-street, W.

FURTHER NOTES ON A CASE OF LEPROSY ASSOCIATED WITH FILARIA.[1]

By JOSEPH BANCROFT, M.D.

SINCE my previous account of this case I have seen the patient frequently. I removed a carious phalanx from a finger of the left hand. The finger was extremely painful afterwards, though otherwise anæsthetic. The stump was dipped often in laudanum for relief, after which it healed. The blood that was lost during the operation was collected, diluted with water, and allowed to subside in a conical vessel, but no filariæ were seen either in the blood or in the tissues of the amputated phalanx. I examined blood repeatedly afterwards, taking it from enlarged cutaneous veins of the thigh, the lobe of the ear, and the fingers, with negative results. Bullæ on the fingers have repeatedly formed during this winter; they appear like the results of contact of a hot body, and contain serum and coagulated fibrine, like the jelly blister produced by cartharides. No microscopic peculiarity was noticed in the contents. There are enlargements on the musculo-spiral and median nerves. One of these causes a peculiar thrill when slightly pressed. They are above the elbow, in the neighbourhood in which abscesses form, containing parent worms in the lymphangeitis cases. Patient tells me that the anæsthetic patches on his arms and body keep quite dry when he is visibly perspiring.

About a month ago a bulla formed over the dorsal surface of the last joint of the right forefinger. The bulla burst; an ulcer formed, which penetrated the joint, destroying the extensor tendon; the flexor then drew the phalanx a little

[1] Recorded in THE LANCET for May 17th, 1879, p. 696.

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towards the palm. Much pain was experienced, though to contact the finger was devoid of sensibility. Patient would insist on having the finger removed. I cut through the first phalanx a little above the metacarpal joint. There has been much less pain in the healing of this stump, owing, I imagine, to more diseased surface being removed. All the blood was collected and set aside, but in it no filaria was found. The tissues of the dissected finger gave also negative results, except the diseased scrapings of the joint. In these one filaria was found, which under the ⅛-inch was seen to coil itself up repeatedly into a spiral of four close rings, after which it suddenly straightened itself. The presence of a worm which fills the field of the ⅛-inch, and sets all the blood-cells into violent motion, when once seen, does not admit of doubt.

Case 11 of my first series in the Pathological Society's Transactions suffered in June from two abscesses of the arm. I obtained from each, in the matter discharged, a dead parent worm. I searched over much blood before I found a single microscopic filaria. In winter it would seem that embryonic worms are not given off in great numbers.

Brisbane, July, 1879.

A CASE OF FATAL PERITYPHLITIS FROM PERFORATION OF THE VERMIFORM APPENDIX BY AN ORANGE-PIP.

BY JOHN SERVICE, L.R.C.S. & L.R.C.P. EDIN.,
SURGEON TO THE BOLDON COLLIERY, NEWCASTLE-ON-TYNE.

THE following case, which occurred in the practice of my friend Dr. Whamond, of Jarrow, whom I was assisting at the time, proves, I think conclusively, that *foreign* bodies do sometimes perforate the cæcal appendix with fatal results.

Sarah Jane P——, of Monkton, in the parish of Jarrow, aged eleven, previously in good health, was suddenly seized on the night of Dec. 1st, 1877, with a severe pain in the right iliac region. When seen shortly after, she was lying in bed with the right leg drawn up, an anxious expression on the face, and respiration performed with evident fear. Temperature slightly over normal. The chest sounds were natural; there was no appearance of spinal disease, no deposit in the urine, and the bowels were unaffected; the tongue was moderately clean, nor did the girl complain of headache or thirst. An opiate was given and a blister applied to the part. Next day her condition was much the same, and the pain, though unaffected by large doses of opium, would yet, seemingly irrespective of any treatment, intermit for as long as three hours at a time. There was now slight fulness and slight percussion-dulness over the seat of pain, but both were very trifling and not constant. Her condition became gradually worse, rapid weak pulse, furred brown tongue, &c., while the pain extended over the whole abdomen. Death occurred suddenly, with vomiting of black matter, at 9 A.M. on Dec. 14th, thirteen days from the beginning of the illness.

Necropsy, thirty hours after death.—The body was fairly nourished, and of the average size for the age. There were no external marks save that of the blister. The abdomen only was examined. An incision having been made through the linea alba, the peritoneum was found to be inflamed and adherent to the bowels. On section a large quantity of pus welled out from the right iliac fossa, and, together with what was now dipped and sponged out, would amount to fully a quart. During the removal of the fluid a little greyish-white substance, of about the size and appearance of an orange-pip, was discovered and laid aside for subsequent examination. A large ashy-grey membrane, equal in size to a small saucer, was found attached to the cæcum, and a portion of the same material adherent to the tip of the vermiform appendix, which was perforated and had evidently communicated with the pyogenic membrane referred to. The kidneys and ureters were found to be healthy. We concluded that death had resulted from peritonitis, due to the bursting of a large abscess, which again had been caused by perforation of the cæcal appendix by a foreign body impacted there, and a consequent extensive amount of perityphilitic inflammation.

On examining the foreign body found, it had the appearance already described, was soft, and cut readily with a knife. It was insoluble in water cold or hot, insoluble in nitric and in hydrochloric acids, but slightly soluble in nitro-hydrochloric with heat. The solution gave no precipitate with ammonic oxalate nor with hydro-disodic phosphate, proving it to be neither lime nor a phosphate; nor did it effervesce with an acid, showing the absence of a carbonate. On microscopic examination, *a section of the substance showed a distinct fibro-cellular structure mingled with a soft débris.* Upon inquiry being made, it was found that the girl's father had brought home some oranges about a week previous to the beginning of her illness, and it was also ascertained that of these she ate one on the 25th of November; that was six days before her illness began and nineteen days before death.

That from the presence of glandular elements within the appendix natural secretions may become the nuclei of small calculi, nobody, I think, can doubt; and even fæcal matter, as in the case reported by Dr. Maunsell Collins in THE LANCET of December 13th, 1879, may occasionally lead to the same result; but, on the other hand, it seems to be equally certain that this trap in the alimentary canal may sometimes catch larger travelling substances, and has often done so, notwithstanding the high authorities quoted by Dr. Collins to the contrary. It would almost seem, indeed, as if popular belief pointed to some salutary lessons of the kind in the past. Who does not remember having been cautioned in childhood against the swallowing of fruitstones, "because they were poison" (as some of course are), or because "a tree would grow up into the throat and produce suffocation"?

West Boldon.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

SURGICAL CASES ILLUSTRATING WOUND TREATMENT AND REPAIR.

(Under the care of Mr. BRYANT.)

THE following cases show that serious wounds may be made and repair take place under a plan of simple dressing, without the occurrence of any important rise of temperature or serious disturbance of the constitutional state.

Recurrent Sarcoma of Breast; Excision; Primary Union. (From notes taken by Mr. C. L. Jones.)—Matilda H——, fifty-one years old, was admitted into Lydia ward on April 30th, 1877. She had been in the hospital in October, 1874, and her right breast was then excised. The wound healed partly by primary intention and partly by granulations. About two years after that operation she noticed the tumour began to grow again at the lower part, and, latterly, had increased very rapidly. When admitted she appeared a fairly healthy-looking woman. There were enlarged veins over the remains of the right breast, and a large transverse scar entirely healed. There was a tumour rather larger than half an orange occupying the situation of the breast; it was irregularly circular in form; the surface felt irregular, lobulated, not very hard, rather spongy, not adherent to skin or pectoral muscle, and there were no enlarged glands in the axilla.

On May 15th the patient was placed under the influence of chloroform, and the growth was excised, the edges of the wound being brought together with sutures. The growth appeared to be a typical sarcoma. There was some sickness after the chloroform, and she had no sleep. Temperature 101·3°; pulse 120. On the 17th she had quite recovered from the operation, and the wound seemed to have healed by first intention; temperature 100°, pulse 108. On the 24th the wound had healed, and on the 25th she left the hospital. After the 17th the temperature never exceeded normal.

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Recurrent Carcinoma after Excision of Breast; Operation; Relieved. (From notes by Mr. C. L. Jones.)—Esther P——, aged fifty-eight, was admitted into Lydia ward on May 1st, 1877. She had been a patient during the previous summer. When, on Aug. 22nd, her right breast was excised for carcinoma, two indurated glands were at the same time removed from the axilla. She was discharged cured, but about four months after the operation a small sore appeared on the site of the scar. She poulticed it, but it gradually grew. Since the operation she had never had proper use of her right arm; there was no absolute paralysis, but the middle and index fingers became contracted, and all movements were more limited than on the left side; sensation was perfect, but the arm was smaller than the left. When admitted there was a circular ulcer on the centre of the scar in right breast, about two inches in diameter; the surface was raised above the skin by exuberant granulations, the edges were everted and thickened, and there was a thin scanty discharge. There were no indurated glands in axilla. On the 11th the tumour was freely removed under the anæsthetic mixture of alcohol, chloroform, and ether. Bleeding was arrested by torsion and pressure. The edges of the wound were not brought together, but left to granulate up. There was a little sickness after. On the 13th the temperature was 98·2°; the 14th, temperature 97·4°; the 16th, temperature 99°, pulse 160; and on the 17th, temperature 98·5°, pulse 155. On the 24th the wound was granulating and healing well; it had been dressed with terebine and oil. On June 2nd she was discharged.

Cancer of Breast; Removal, Recovery. (From notes by Mr. F. V. Duckworth.)—Louisa P——, aged fifty-seven, was admitted into Lydia ward on April 1st, 1879. She was married, but had had no children. Two months before she noticed a swelling about the size of a walnut on the outer side of the right breast; it was painful; the skin over it was red and tight.

On admission the swelling was about the size of a pigeon's egg. The skin was infiltrated, red, and deeply puckered. The parts beneath were also infiltrated, as there was a good deal of fixity. There was pricking sensation at times, and a burning pain at chest. The nipple was not retracted, and the axillary glands were not enlarged.

On the 4th, under chloroform, the breast was removed by two curved incisions. The edges were brought together with sutures and strapping, after being washed with iodine and water, and the parts were dressed with terebine and lint. The growth consisted of a well-marked nodule of scirrhus. On the 7th the patient complained of pain on inspiration. The dressings were removed; the parts looked red, but were well. There had been a little bleeding. On the 22nd the wound and granulations looked very healthy. The patient complained of pain in the part. Bowels confined. On May 9th, the granulations, being rather weak, were touched with nitrate of silver. On the 17th the wound was healthy, though there was some discharge. Discharged.

Temperature Chart.—On April 5th the temperature was 99·1°; 7th, 99°; 8th, 99·4°; 9th, 99·1°; 10th, 99·2°; 11th, 97°; 12th, 99°; 14th, 98°. From this time the temperature remained normal.

Cancer of Breast; Excision; Recovery. (From notes by Mr. Dashwood.)—Jemima L——, aged sixty, was admitted into Lydia Ward on June 24th, 1879. Patient's paternal grandmother died of cancer. Patient was a married woman, and had always enjoyed good health. About two years before she noticed a hard lump like a marble in the left breast on the inner side of the nipple, and it had steadily increased since catamenia ceased, ten years before admission. On admission patient had a large hard tumour in the outer part of the left breast. It felt nodular; was freely movable on the chest wall. The skin was red and not movable over the tumour; the veins at this point at upper part of left breast were prominent. There was a hard lump in the left axilla. Mr. Bryant pronounced the case to be one of cancer.

On June 27th, under chloroform, two excisions were made from the axilla to the lower and inner side of the breast; the skin and subcutaneous tissue were dissected off, and the whole breast removed. The tumour did not appear to be adherent to the pectoralis muscle. Several small arteries were twisted, the wound was washed with iodine-water, and the edges were brought together with about fourteen silk sutures, and terebine dressings were applied; a drainage-tube was introduced.

On July 4th there was a good deal of discharge, which had evidently been too much confined. On the 7th the sutures were removed. On the 22nd the wound was completely healed.

Temperature Chart.—June 28th, morning, 99·1°; evening, 100·2°; 29th, 99·8°; 30th, 98·3°; July 1st, 99·9°; 2nd, 100·6°; 3rd, 101·4°; 4th, 99·6°; 5th, 98·3°. From this time the temperature remained normal.

In this case, it may be noticed, the evening temperature was 100·2 the night after the operation, and then dropped to 99, rising but once, when some slight retention of discharge took place.

(The series will be continued in a future number.)

TUNBRIDGE WELLS INFIRMARY.

CASE OF LARGE INCARCERATED CONGENITAL INGUINAL HERNIA OF LARGE INTESTINE IN A CHILD FOUR MONTHS OLD; OPERATION; RECOVERY.

(Under the care of Mr. MANSER.)

FOR the following notes we are indebted to Mr. John Footner, F.R.C.S., house-surgeon.

F. W. B——, a male child, aged four months, was admitted on August 12th, 1879, suffering from a large tumour of the left side of scrotum.

The patient was the subject of a congenital left inguinal hernia, of which the mother had taken no notice. Two days before admission the child suffered from constipation, and on the following day from frequent and persistent vomiting. The latter ceased on the day of admission, but the former remained, and the child was taken to a doctor, who recognised the existence of a hernia, and applied the taxis, but, failing to reduce it, recommended the child's instant removal to the infirmary.

On admission there was found to be a large elongated oval tumour extending from the testicle up into the left inguinal canal; the testicle could be felt below it. The tumour was of almost stony hardness, but on careful examination it was found that it pitted slightly on pressure. There was a slight impulse to be felt in it when the patient cried. A soap-and-water enema was administered with no result, followed by the application of an ice-bag to the tumour.

The same evening—the child being very weak and feverish, pulse 170, temperature 103° F., and there being very little doubt that the tumour was a hernia—chloroform was administered, and, after a short and ineffectual application of the taxis, the usual operation for the relief of strangulated inguinal hernia was performed. The tumour was then seen to consist of a knuckle of large intestine, about three inches and a half in length, firmly distended with solid impacted fæces. The bowel was not strangulated, and very slightly congested. The sac contained a small amount of clear amber-coloured serum. The abdominal ring was enlarged by incision and by a process of gradual kneading. The intestine was at length emptied sufficiently of its contents to allow its being returned into the abdominal cavity. During this process the bowel was necessarily subjected to a considerable amount of handling. The wound was then stitched up and dressed with carbolic oil.

Almost immediately after the operation the bowels were freely opened. The wound healed by the first intention, and the child recovered without a bad symptom, and was discharged from the infirmary cured on August 22nd.

Remarks.—The result of this case shows what a large amount of handling healthy intestine will bear with impunity. The bowel was in this instance of necessity subjected to much and long-continued pressure, yet no harm resulted. It also shows the evil of feeding such young children with biscuits. The mother had for about a fortnight before the impaction of fæces occurred been in the habit of feeding her child with biscuits soaked in milk, and to this cause may probably be attributed the impaction of solid fæces in the large intestine.

THE STRATFORD-ON-AVON INFIRMARY.

MALIGNANT PAROTID TUMOUR.

(Under the care of Mr. HARRY LUPTON.)

THOMAS C——, aged forty-five, presented himself at the out-patient room on Dec. 3rd, 1878, with a tumour extending from the petrous portion of the temporal bone to about two inches below the angle of the jaw longitudinally, and

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from the ramus of the jaw about three inches posteriorly, the tumour being prominent, and about the size of a closed fist.

The history he gave was as follows:—About ten years ago, after an attack of "low fever" (typhoid ?), he noticed a small lump about the angle of the jaw. For some years its condition remained unchanged, but about two years since it began to enlarge rapidly, and during the past six months its progress had been very rapid, and it had become very painful, insomuch that his life was a burden to him, and he could not lie on his right side or rest in any comfort; he had been treated outside, but the tumour continued to increase, and he was now very anxious to have it removed. The tumour was hard, except at the most prominent part, and fairly movable, except at the upper part, where it was evidently firmly attached to the petrous portion of the temporal, and there was evidently a process dipping in under the ramus of the jaw; the surface was red and angry-looking, but there was no distinct fluctuation, even at the softest part of the tumour.

Under the circumstances Mr. Lupton was loth to interfere with it—it looked too malignant; but the man was anxious that something should be done for him, and Mr. Lupton's colleagues, Messrs. Rice and Mason, thought that removal migh be attempted. The matter was, therefore, put fairly before the man in all its aspects, not omitting the risk of removing a large growth in such a situation, and its possible rapid recurrence. He decided to have the operation done. Accordingly, on Dec. 10th, 1878, he was admitted, and on the 12th, with the assistance of Messrs. Rice and Mason, and Mr. Ross (Mr. Mason's assistant), Mr. Lupton proceeded to remove it. It was found to be more generally adherent than had been anticipated, and there was a strong fibrous adhesion to the angle and ramus of the jaw, and it dipped under the jaw, reaching close to the mucous membrane of the mouth; it was adherent by its deeper surface to the underlying structures, and very firmly adherent for some distance to the petrous portion of the temporal. The operation lasted nearly two hours, during which time chloroform was administered by Mr. Ross.

The edges of the wound were brought together by silver-wire sutures (a space being left at the lowest part for the escape of discharge), and covered with carbolised lint, over which a good pad of tenax was laid to absorb any discharge. No vessel required either ligature or torsion.

The wound was first dressed on the third day after the operation. There was union in the upper part of the incision (about one-third), and a little healthy discharge had escaped from the lower; the whole aspect of the wound was healthy. Pulse 80; temperature 100°; respiration 23.

It went on well until about Jan. 7th, when it was evident that the growth was recurring. On the 9th there was hæmorrhage from a small ulcerated point, the size of a pin's head, about half an inch anterior to the line of incision; and this was followed by hæmorrhage—sometimes more, sometimes less—on the 12th, 17th, 20th, 25th, and 26th, the last two being from newly ulcerated points near the angle of the jaw; there was no hæmorrhage from the line of incision.

Wishing to go home, he was, at his own request, discharged on Feb. 17th, 1879.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Treatment of Traumatic Salivary Fistula.—Suture of divided Median Nerve.—Disease of Finger-nails, probably Strumous.—Results of Excision of Lower Ends of Radius and Ulna for Myeloid Tumour.—Treatment of Popliteal Aneurism by Esmarch's Bandage.

THE ordinary meeting of this Society was held on the 13th inst., the President, Dr. E. H. Greenhow, F.R.S., in the chair. At the opening of the business the President laid on the table a copy of the Index to the Transactions, which had just been prepared by Mr. Wheatley. Mr. H. Morris read notes of a case of salivary fistula, and Mr. Hulke of a case of sutural junction of a severed ulnar nerve. Dr. Sangster contributed notes of a case of disordered nutrition and exfoliation of the nails, which had been previously shown to the Society; and the paper which gave rise to most discussion was one by Mr. Heath on popliteal aneurism treated by Esmarch's bandage. Mr. Heath laid stress upon the value of keeping the sac tense with blood as promoting coagulation, and in his cases the application of the bandage was maintained for a longer period than has hitherto been deemed advisable.

The following cases were shown in the ante-room:—A patient from whom a Myeloid Tumour of the Radius was removed four years ago by Mr. Henry Morris; a case of Ichthyosis by Dr. Bristowe; of Anæsthetic Leprosy by Dr. Crocker; and one of Trade Neurosis (spasmodic form) by Dr. Allen Sturge.

Mr. HENRY MORRIS read notes of a case of Traumatic Salivary Fistula treated by passing a fine catgut bougie from the mouth along Stenson's duct. The case was that of a man admitted into the Middlesex Hospital on June 24th, 1879, having been stabbed in a fray at a public-house. There were wounds on the arm and forearm, in the right occipital region, and on the right cheek. In four days these were nearly well, except that a sinus whence saliva oozed remained on the face, and the mouth felt dry on that side. The mucous membrane not being injured, Mr. Morris thought the parotid duct might only be partially severed, and passing a fine catgut bougie into the duct, through the buccal orifice, it appeared at the wound. The proximal part of the duct was then sought for, and the bougie guided into it. The case did well, but it was not until July 15th that saliva wholly ceased to escape through the wound. Mr. Morris remarked upon this method of treating salivary fistula, as affording encouraging results by reopening the natural passage, and, if such could not be effected, the duct might be opened into the mouth. If the orifice of the duct, which is its smallest part, were closed, it might be re-opened.

Mr. HULKE read notes of a case of Sutural Union of the Median Nerve in the lower part of the Forearm five weeks after division by a broken glass bottle; followed by return of function. The patient in washing bottles cut his forearm, severing the median nerve and artery above the wrist. The artery was secured by torsion, and as on the following day, when Mr. Hulke first saw the case, immediate union appeared to be taking place, he hoped that the divided ends of the nerve would unite. But suppuration followed, and cicatrisation was not completed till five weeks after the injury, and the anæsthesia of the fingers supplied by the median nerve persisted. An attempt was then made to effect sutural junction of the severed nerve, Esmarch's bandage being applied, the wound was laid open, and the bulbous nerve-ends, which lay three-quarters of an inch apart, exposed. About one-eighth of an inch was cut off each of the ends, which were then approximated by flexing the hand and by slight stretching of the proximal end of the nerve. Fine sutures were used to secure the divided parts, and the limb was placed on a specially devised splint. After three weeks passive movement was employed at the wrist; and about four weeks after the operation sensibility had returned to nearly all the parts supplied by the nerve, except the terminal phalanges of the index and middle fingers. The case afforded a hint also as to similarly joining severed tendons, for before the operation the long flexor tendon was almost functionless. The dissection set them free from the scar-tissue, and the subsequently flexed position of the wrist favoured their union, so that eventually they acted well. The case showed the propriety of securing severed nerves in all *fresh* wounds. Were this done immediately better results might be anticipated.—Mr. MARSH mentioned a case recently under Mr. Holden's care, where the operation was done some time after the injury. Return of function began within twenty-four hours of the operation. Did Mr. Hulke stretch the nerves, as in his previous case?—Mr. HULKE said that he pulled down the nerve-sheath of the upper fragment with considerable force. He used very fine silk sutures.—The PRESIDENT had had several cases of tic which were treated by nerve-section; but in every case the pain returned after a time, the divided nerves re-uniting.

Dr. SANGSTER contributed a case of Disturbed Nutrition, with Suppuration and Exfoliation of the Nails, probably of strumous origin. The patient was a girl seven years of age, one of seven children, two of whom had died from chest

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disease. The child was delicate, had suffered from enlarged cervical glands and ulcerative stomatitis. When seen, the terminal phalanges of the fingers were red and hot, some of the nails were blackened, others ridged, and others stunted and misshapen, and in addition there was ulceration and suppuration in the matrix of some of them. The change had been first noticed twelve months before. There was no symmetry in the distribution of the affection. No history of syphilis in the case; no fungus found in connexion with the local lesion, so that Dr. Sangster was forced to conclude that the affection was probably due to struma in a child of "dartrous tendency." Mr. Hutchinson describes a somewhat similar case in his clinical lectures, but in all the other cases mentioned by him he describes a great increase in the epidermal layers, which was not the case in this instance. The suppuration was probably due to accumulation of dirt beneath the diseased nail.

Mr. HENRY MORRIS, on the invitation of the President, introduced his case of a woman from whom he had removed a myeloid tumour of the radius about four years ago. The case is recorded in vol. x. of the Transactions. The lower part of the radius, and four inches of the ulna, were removed. Dr. Gross, of Philadelphia, in a recent paper, had collected nine cases, which he regarded as unsuccessful, including this one, the details of which, however, he had only gathered from a journal report; for the patient's hand was sufficiently useful to enable her to follow her household duties. She could sew, wash linen, using her index and middle fingers, and the case showed that excision should not be condemned too hastily as opposed to amputation. Mr. Morris wished now that he had removed as much of the ulna as of the radius, for from retraction of the parts the end of the former projects over the carpus.

Mr. C. HEATH read a paper on two cases of Popliteal Aneurism, cured by the application of Esmarch's bandage. CASE 1. A coalminer, aged thirty-two, admitted into University College Hospital on October 22nd, 1879, with a right popliteal aneurism, attributed to his working in a cramped position. No history of injury, sudden strain, or syphilis. He had had pain in the ham ten weeks before admission, and soon after the swelling appeared, which gradually enlarged to the size of a hen's egg. The right posterior tibial pulse was not perceptible. On Oct. 25th, at 3 P.M., half a grain of morphia was injected subcutaneously, and Esmarch's bandage applied to the leg as far as the lower border of the sac. A piece of Martin's bandage was then applied to the thigh from above down, and over it the elastic cord of Esmarch was fixed. The aneurismal sac was thus rendered tense and full of blood. At 4 P.M. bichloride of ethylene was administered and kept up till 6 P.M., when the tourniquet and bandages were removed, the former first. There was no pulsation, but an hour afterwards slight impulse could be felt. A Carte's compressor was then kept on the femoral till 9 A.M. next day. There was no recurrence of pulsation; and on Nov. 14th the case was shown to the Society. He then presented a hard, ovoid, non-pulsating swelling in the ham; and an enlarged artery could be traced on the inner side of the thigh and ham; the posterior tibial pulse could not be felt.—CASE 2. A potman, aged thirty-seven, muscular and healthy, without signs of general vascular degeneration. His aneurism was longer and narrower than the other, and there being no bruit, it was thought to be fusiform. Pain in the popliteal space had existed for six weeks. There was no history of syphilis, but he had rheumatic fever in 1874. On Dec. 3rd, 1879, Esmarch's bandage and tourniquet were applied for three and a half hours, the patient being under the influence of bichloride of ethylene. Pulsation immediately returned on removal of the bandage. An attempt to compress the artery by Carte's tourniquet failed from the pain caused by it. On Dec. 4th digital compression was tried from 1.30 P.M. to 4.30 P.M., and flexion from 4.30 to 11 P.M. On the 5th, pain, but still pulsation in the tumour, and flexion again had recourse to for four hours. On the 8th Esmarch's bandage was applied for three and a half hours, followed by flexion for six hours. On the 9th the tumour was harder, but still expansile. On the 10th no pulse could be felt in the posterior tibial, and an enlarged artery was observed on the inner side of the patella. There was much pain in the leg. The tumour was consolidated, and recovery was established. In the first case one application of three hours practically sufficed for the cure, which was complete two weeks afterwards. The second case required a reapplication, and Mr. Heath laid stress on the fact that at the first trial the tension in the sac was but slight. No bandage was placed over the aneurism, and the elastic band was adjusted over the thigh. Of the four cases reported last year by Mr. Hutchinson, in only one was solidification complete, and in three out of the four cases recourse was had to digital compression. Mr. Hutchinson points out that the bandage was only applied for one hour, and no attempt was made to empty the sac. Mr. Heath urged that any diminution of the contents of the sac would tend to prevent coagulation; for he was under the impression that a sac filled with blood under high pressure would have its contents more rapidly coagulated. An attempt he had made to prove this experimentally had, however, yielded negative results.—Mr. SYDNEY JONES said that the cases showed that Esmarch's bandage could be kept applied for three hours without any serious detriment to the nutrition of the limb. He had used the bandages in three cases of aneurism; one axillary, without success; the others popliteal, with success. But he had only kept on the bandage for one hour in each case, and in two cases its use was followed by digital compression, and this again in one instance by the reapplication of the bandage. He applied it tightly over the leg from the foot to the knee, then loosely over the aneurism, and again more tightly over the thigh, where the ligature was put on. He thought that allowance should be made for the contraction of the sac, which was shown by Hunter to follow on his plan of ligature.—Mr. HULKE thought the plan of keeping the sac in full tension involved some risk of its rupture.—Mr. MARSH asked why Mr. Heath removed the tourniquet first and the bandage afterwards, in preference to the reverse plan.—Mr. CROFT had reported a case of popliteal aneurism cured by the interrupted bandage in January, 1878. The bandage was left on for one hour, and within six hours the aneurism was absolutely solid. Since then he had treated another case. The patient was a man thirty-six years of age, who had had syphilis, and who had noticed the swelling in the ham (which was of the size of a small orange) for ten weeks. The interrupted bandage was applied for an hour, when, pulsation recurring, digital compression was had recourse to, and kept up for two hours and a half, when the cure was completed. He asked what was the least amount of time during which the bandage could be applied for cure; for its lengthened application, added to the prolonged influence of anæsthetics, could not influence the case for good. In his own two cases one hour's application sufficed, but it seemed that in Mr. Heath's case even three hours and a half was inadequate. Then he thought the prolonged use of anæsthetics may retard coagulation. It was not necessary to get complete coagulation to effect a cure; semi-coagulation might start the complete process.—Mr. T. SMITH agreed with Mr. Jones that Mr. Heath's cases proved that a limb could be deprived of its blood for three hours without injurious effect. This was important, for under an opposite belief he (Mr. Smith) had limited the time of application to one or one and a half hours, and then varied it with the tourniquet. It was an important matter of detail to apply the india-rubber band *over* the bandage, as the risk of injuring the nerve-trunks by the pressure of the ring was thereby obviated. He had treated five cases by this method, and had noticed that sometimes the rapidly-formed clot was not permanent. Thus on three separate occasions he had known a clot to disappear, so that ligature had to be had recourse to. No doubt there were differences in the composition of the blood favouring coagulation or otherwise, and thus the time required for consolidation to take place would vary in different cases. As to the influence of anæsthetics on the blood, he said that the case of most rapid coagulation he had seen was one where no anæsthetic was had recourse to (other than a pipe of tobacco and the evening paper). The patient was a member of our profession, and consolidation occurred within two hours.—Mr. HULKE remarked, in reference to deprivation of blood impairing the vitality of a limb, that in a recent number of Pitha and Billroth's Handbook cases of successful skin-grafting are related, where the grafts were taken from corpses as long as from four to twelve hours after death. In one case as many as two hundred grafts were made.—Dr. MAHOMED suggested that coagulation might be promoted if an aneurism rendered tense and full of blood by the use of the bandage, as described by Mr. Heath, were punctured with the galvanic needle, or were injected with substances to favour clotting—e.g., perchloride of iron.—Mr. MORRANT BAKER said that he had contributed details of a case treated without anæsthetics in the last volume of

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St. Bartholomew's Reports. The bandage was kept on for an hour, when, pain being severe, digital compression and then a shot-bag were applied to the femoral artery, then the bandage for another half an hour, and, lastly, digital compression for the second time, when consolidation occurred. The question of the effect of anæsthetics on the blood was important, and he asked Mr. Heath whether he was guided by this in choosing bichloride of methylene. The strong cardiac stimulant action of ether might require more pressure to be applied to arrest the flow of blood.—Mr. T. SMITH was reminded by Mr. Baker's remark that in the case he had mentioned, where no anæsthetic was used, it was found almost impossible to compress the artery until the patient was smoking tobacco.—Mr. CROFT said that in his two cases no anæsthetic was inhaled; the patients only had one-third of a grain of morphia injected subcutaneously.—Mr. HEATH, in reply, said that the anæsthetic used in his cases was the bichloride of *ethylene*—a safer preparation than the methylene compound. He could not agree that the anæsthetics had much influence; and it was most important to relieve pain, which was one evidence of the cure being effected. Both his cases were small aneurisms, well known to be more difficult of cure than large ones; and one of them was distinctly fusiform. But he quite agreed with Mr. Hulke as to the risk involved by heightening the tension in the case of thin-walled and degenerate sacs. He attributed the first failure in Case 2 to the fact that the sac was not rendered tense; for in Case 1, where it was made so tense that subcutaneous ecchymosis occurred, the cure was rapidly effected. Therefore on the second trial in Case 2 he made the sac tense. The mode of cure differed from that which takes place after ligature, where no doubt some contraction of the aneurism may take place. But here coagulation involves the whole contents of the sac at one time. Broca believed such a "passive clot" to be dangerous, from its liability to break down and lead to embolism, but it had been otherwise proved clinically; and Mr. Heath believed the readiest way to insure the formation of such a clot was to keep the sac distended with blood. The application of the bandage for three hours was purely empirical; but as to any effect on nutrition of the limb, every surgeon must have seen cases where the blood has been cut off from a part for quite as long a time without any ill result. When the subject was under discussion last year, Mr. Bryant said that he had had a case where gangrene ensued probably from a portion of clot being washed away; and it was remarkable that no such untoward results followed in the three cases mentioned by Mr. Smith when the clot disappeared. The tourniquet was removed before the bandage because it overlaid this; and the support given by the bandage would prevent any tendency of the clot being detached when the blood-flow recommenced. He would be loth to supplement these measures by electro-puncture, from which he had not seen any good results. Simple steel needles might be used, but their use would destroy that which it was his aim to secure—viz., heightened tension of the sac.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Treatment of Genu Valgum without Division of Bone.—Treatment and Complications of Nasal Polypus.—The Use of Pyrolytic Vapours in the Treatment of Painful and Spasmodic Affections.

AT the meeting on the 16th inst., Dr. Cockle, President, in the chair, a paper was read by Mr. H. F. BAKER on the Treatment of Genu Valgum without Division of Bone. He did not intend to enter into the respective merits of the several operations for the cure of genu valgum. Whatever opinion might be held as to the risk of cutting into the knee-joint, or producing a compound fracture in its immediate neighbourhood, he thought all surgeons would agree that in many of the cases that came under their notice the deformity was not of so serious a nature that the proposal to perform a severe operation would be entertained by them or consented to by the friends of the patient. It was a matter of great importance that these cases should be entirely cured, lest tilting of the pelvis should take place, followed by lateral curvature of the spine. Cases of genu valgum may be divided into—(1st) those curable by gradual extension alone, and (2nd) by gradual extension after the subcutaneous division of tendon or ligament. To carry out this mode of treatment satisfactorily, in the first place, it is absolutely essential that the patient should be kept off his feet, and the important points to attain in the construction of a proper instrument are that it should keep the knee in an *extended* position and prevent the leg from rotating, at the same time that by its means the knee-joint can be acted upon in the *lateral* direction, with sufficient force to gradually overcome the deformity. He exhibited an instrument by means of which these indications could be fulfilled. It consisted of a trough for the thigh, which takes its bearing on the great trochanter of the femur, and is connected with the leg-splint by a stand on the outer side of the leg, which is provided with a cog-wheel opposite the knee-joint. A band encircles the knee. The special points in which it differs from the trough-instruments in common use are, that it has a wing hinged to the back part of the leg-splint on its inner side, which keeps the heel from rotating inwards, a pad being introduced within the wing to press on the internal tubercle of the os calcis. There is also a rigid bar at the back of the knee, to which is attached a carefully-made leather strap, and its action is to keep the joint in a perfectly extended position, whatever amount of force is used laterally. In those cases, in which it is necessary to divide subcutaneously any tendon or ligament, the same apparatus may be employed, but its application must be deferred for four or five days until the punctures are healed.—Mr. ROYES BELL had, in conjunction with Mr. Rose, brought forward some cases successfully treated by bilateral division of the inner condyles. The cost of the apparatus, the time occupied by the cure, and the subsequent weakening of the joint, were objections to the author's plan. What were the number of cases, the results, and the ages of the patients so treated by Mr. Baker?—Mr. ADAMS wished the author had classified his cases. He considered the splint a good one.—Mr. NOBLE SMITH considered the treatment very successful.—Mr. BAKER, in reply, said that the cases he referred to were cases of true genu valgum, and not cases where the bones are implicated. He recognised the value of Ogston's operation.

Dr. THUDICHUM read a paper on Polypus in the Nose, its radical treatment by the electro-caustic method, and its connexion with asthma. His experience extended over more than three hundred cases. He never employs the forceps, as it is painful, injurious, and ineffectual; and he described cases where severe permanent injuries had followed its use—e.g., partial or entire closure of a nostril, membranous adhesions between turbinate bone and septum, dislocation of turbinate bone, fracture of septum, &c. His own method obviated such risks. The polypus is drawn forward by hooks or fine forceps and then included in the platinum loop of the electro-cautery. "Posterior rhinoscopy," or as it was preferably termed, "Choanoscopy," was useful for diagnosis but not for operating; and he thought Voltolini's and Zaufel's methods imperfect. He showed how atresia of the nostril was opened by burning inward into the closed loop and then excising the projecting parts; enlarged spongy or cavernous turbinate tissue by ablation in pieces. Ablation of the turbinate bone was effected by first cutting away the cavernous tissue with the electrocautery, and then cutting away the bone with nippers, or chisel and hammer. Bony excrescences in polypi were similarly treated. Adenoid tumour of the choano-pharyngeal cavity he had removed through the nose by torsion and the electro-cautery. Epithelioma of the nasal cavity was soft, gave rise to great hæmorrhage, and must be treated cautiously. Concealed abscesses of the nasal cavity, often of traumatic origin, were difficult to deal with. He had once met with abscess complicated with aneurism. He referred also to the treatment of fibro-cartilaginous growths on septum, and to fibrous, osteo-fibrous, and osteo-cartilaginous tumours arising on the roof of the pharynx. Chronic disease in the nose caused by foreign bodies was sometimes difficult to diagnose. Hearing was frequently affected from a polypus pressing on the Eustachian tube, and he had met with many persons who had been thrown out of career, employment, or situation by disease of the nose. The most common complication was asthma; about every fifth case of polypus had or had been suffering at one time from asthma, which frequently disappeared on the removal of the polypus.—Dr. DE HAVILAND HALL had seen two cases in which nasal polypi had set up chronic laryngitis. His first patient had been under treatment for some time for the laryngitis, when

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two small nasal polypi were discovered and removed, and the laryngitis then disappeared. In the second case the polypus was suspected, discovered, and removed, a cure resulting.—Mr. SPENCER WATSON was sorry the connexion with asthma had not been more thoroughly worked out. He was surprised to hear that such serious results had attended the removal of nasal polypi by the forceps; but he knew of their frequent recurrence after this method of removal.—Mr. CUMBERBATCH was also surprised to hear of the serious results attributed to removal of nasal polypi by the forceps. He thought it wrong to attempt the removal of pharyngeal polypi through the nose when they could be more readily removed through the mouth.—Dr. JAGIELSKI asked if the author had injected polypi, and Mr. MACHARDY if he had tried Ruge's operation.—Dr. THUDICHUM replied in the negative to the latter query.

The same gentleman read a paper on the Treatment of Asthma, Bronchitis, Phthisis, Neuralgia, &c., by the inhalation of the pyrolytic vapour of vegetable extracts and alkaloids. By a "pyrolytic vapour," he meant a vapour produced by the heat of fire or flame, but without combustion in the air. Confining his remarks to opium, he said that the method and instrument he employed were close imitations of those adopted by the Chinese opium-smoker. He entered into details about opium-smoking in China, and gave the experience of Chinese physicians upon its use in certain diseases, and the objections that had been raised to it. Experiment showed that in the pyrolytic process morphia was volatilised, and when inhaled it entered the blood directly, and produced all its well-known effects quickly and safely. The indications for its medical use were discussed—all neuralgiæ, lead colic, rheumatic affections, cancer, &c. Many patients suffering from inflammation were benefited by the opium vapour. A common "cold in the head," without or with "cold in the chest," was shorn of almost all its most disagreeable symptoms directly. The pyrolytic vapours produced the most direct and useful effect in spasmodic and convulsive nervous affections. Laryngeal cough, sneezing, and nervous asthma were prevented or arrested by its means; and so was the spasmodic breathing of chronic emphysema. Gastralgia, nervous irritability, &c., were at once calmed by it.—Dr. THOROWGOOD had had no experience of opium inhalation. The late Dr. Snow used opium-smoking with much success in his practice.—Dr. ROUTH asked if opium-smoking ever caused sickness.—Dr. DOUGLAS POWELL said that at the Brompton Hospital cigarettes containing one-sixth of a grain of opium had been used in cases of spasmodic cough with considerable success.—Dr. C. T. WILLIAMS asked if it could be inhaled in any way which would obviate the use of a pipe.—Dr. ROGERS had seen opium-smoking used for dental neuralgia at Naples. A pastille was made, ignited, and placed in a long horn, the tip of which was placed against the tooth. The vapour from the pastille was blown in to the tooth with almost immediate relief to the pain.—Dr. THUDICHUM in reply, said that out of thirty cases he had met only with two in which sickness occurred. Cigarettes were objectionable from the acridity of the fumes produced by their combustion.

EPIDEMIOLOGICAL SOCIETY.

Enteric Fever in India, with some Observations on its Probable Etiology in that Country.

AT the meeting of this Society, on the 4th inst., a paper on "Enteric Fever in India, with some Observations on its Probable Etiology in that Country" was read by JOSEPH EWART, M.D. In venturing to bring the subject of enteric fever before the Society, Dr. Ewart said his chief object was to offer the results of his own experience bearing upon the probable etiology of the disease as it presented itself to him, in Europeans and natives, during his service in India. That it had long found a congenial home in our Eastern Empire may be gleaned from the classical works of Clark, Annesley, and Twining. But the distinguished honour of first identifying it there, on the lines laid down by Gerhard, Stewart, and Jenner, belongs exclusively to Surgeon-Major Scriven, of the Bengal Medical Service (now Civil Surgeon of Lahore). Scriven had learnt the error of the prevailing opinions which excluded the affection entirely from India and the tropics, from a post-mortem examination at Meerut in November, 1851, in which the ulceration of Peyer's patches and other appearances characteristic of typhoid were unmistakably demonstrated, whilst the history of the previous symptoms of the case agreed fully with the view entertained regarding its true nature.[1] In 1854 he published some rough notes of three cases met with in Burmah.[2] He subsequently saw, whilst serving at the European General Hospital, Calcutta, one or two doubtful cases which recovered, and three others regarding the nature of which there never was any doubt, and in all these the diagnosis was confirmed by the autopsies.[3] The subjects of the disease were young Europeans residing in such widely scattered localities as British Burmah, Lower Bengal, and the North-Western Provinces.

In the latter part of 1855 Dr. Ewart detected the presence of enteric fever among the native prisoners in the Ajmeer gaol. Three well-marked cases, with an epitome of the symptoms during life, and of the necroptic appearances at the inferior end of the ileum, were recorded and published in the seventh number of the *Indian Annals*. At the concluding part of that paper he remarked:—"I would further observe that, without the most scrutinising post-mortem examinations being made in all those fatal cases which are denominated remittent fever, the conclusion drawn must be attended with some degree of uncertainty. Are not many of these examples of typhoid and typhus fever?" When subsequently attached to the Meywar Bheel Corps, Kherwarrah, Rajputana, he noted several well-marked cases among the Bheels of the regiment and the aborigines of the district. It prevailed more especially in the autumn and early months of the winter season, when the worst forms of malarious fever abounded. This experience, coupled with that obtained at Ajmeer, induced him to inquire, through the columns of the *Indian Lancet*, whether many of the remittent fevers met with in hot climates were not, in reality, either typhus, typhoid, or relapsing fever modified, and often materially aggravated by, the presence of malaria in the system. In 1860, during great scarcity, he noted the prevalence of relapsing fever at Kherwarrah. That many of the so-called malarious remittents were simply typhoid or typhus fever modified, often masked, for a time, by malarious poisoning, he has repeatedly observed, ever since this declaration was made, both in and around Calcutta, and elsewhere in India. In a very large number of remittents, with diarrhœa and severe typhoid symptoms, the chief factor is the typhoid fever poison. When the blood is also surcharged with a large and effective dose of malaria, death often ensues from the combined operation of these causes before ulceration of the agminated glands occurs. This happened in three of his patients, residing in the suburbs of Calcutta, in 1875, who succumbed in from eight to twelve days from what would formerly have been designated as remittent or jungle fever, but in all there was very marked swelling and prominence of the agminated glands. Had these patients survived long enough, ulceration would have been developed in due course. In both natives and Europeans, who have been subjected to the influence of malaria, the fluctuations of temperature in enteric fever are greater than in those who have never been exposed to the action of this poison, the morning remission being so marked as to delude the observer into the belief that he is dealing with a malarious remittent simply, when he is really called upon to encounter enteric fever modified by malarious infection of the system. In his practice at the College and General Hospitals and among the various classes of the community of Calcutta he has seen the disease in all its phases; so mild that persons have gone about their ordinary business during the greater part of the fever, so severe as to end fatally in a few days, either singly from an overpowering dose of the poison, or when complicated with serious malarious poisoning; or to terminate rapidly by uncontrollable hæmorrhage from ulcerated agminated glands, or by perforation of the gut and general peritonitis. In natives the rash is not so easily made out as in Europeans; but, with care, it can often be distinguished in those whose shades of colour verge upon brown rather than black. In a certain proportion of Europeans it is not observed, or escapes notice. But, in fatal cases of this kind, the characteristic and unmistakable ulceration of Peyer's patches are nevertheless found after death. Ever since Scriven directed

[1] Indian Annals of Medical Science. No. viii., p. 512, 1857.
[2] Medical Times and Gazette, p. 70, 28th January, 1854.
[3] Indian Annals. No. viii., p. 521, *et seq.*

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attention to the subject, enteric fever has been recognised as a constant factor in the sickness and mortality in the Calcutta General Hospital, to which he was attached for several years. The conduct of the disease has been most carefully watched, and fatal cases, whenever possible, tested by post-mortem examination. The following information is extracted from Dr. Ewart's reports for 1873 and 1874 :—

	'65.	'66.	'67.	'68.	'69.	'70.	'71.	'72.	'73.	'74.
Cases of typhoid	17	18	12	5	4	14	15	17	7	11
Died	..	..	3	3	4	3	1	5	3	5

In Scriven's discovery of enteric fever among young Europeans, and Dr. Ewart's recognition of it among natives, the first thing which attracted attention was the morbid anatomy of the agminated and solitary glands at the lower portion of the ileum. Its endemic occurrence has since been established and acknowledged by Edward Goodeve, Chevers, Fayrer, Morehead, Francis, Cornish, Furnell, Lyons, Moffatt, Massy, O'Brien, Cleghorn, Green, Hanbury, and a host of others, comprising many of the most able and zealous members of the Indian and British medical services practising in India. A place has been assigned to it in the statistical returns since 1871. The general result is that enteric fever now figures as the most fatal form of pyrexial disease met with among the younger European soldiers sojourning in India. Year by year more and more has been heard regarding its extensive prevalence; so that, according to the statistics lately furnished by Dr. Bryden, there occurred, in the course of the three years ending 1876, no fewer than 368 deaths among the European troops in India, ascribed to the ravages of enteric fever. From the facility with which necropsies can be commanded in the British army, most of these cases must have been verified by post-mortem examination. Apart from the much greater number of recoveries which must have been observed, these fatal cases constitute a significant and important outcome of clinical and pathological work by a large body of medical officers scattered over the length and breadth of the land, who were, before they migrated, in the ordinary course of duty, quite as competent, from previous training, education, and experience gained in the medical schools of the United Kingdom, to diagnose enteric or typhoid fever as to distinguish any other grave specific disease or fever in our nosology.

The disturbing influence of malarious poisoning is not specially peculiar to enteric fever. During malarious seasons it has to be taken into account in the diagnosis, prognosis, and management of many other morbid conditions, both surgical and medical. Every experienced physician and surgeon knows how materially convalescence or recovery from acute disease, local and general, is retarded or hindered by its existence in the economy. This fact is, doubtless, equally well recognised by those having experience of the ailments among persons who have finally taken up their abode in this country after protracted residence in the more malarious parts of tropical and tropoidal regions. But, whilst acknowledging so much, there does not seem to be any valid grounds for admitting that there is any more intimate relationship between malaria—the potential cause of genuine paroxysmal fevers — and the poison or materies morbi of enteric fever than there is between the former and the cause of any other affection, whose course it may modify, complicate, aggravate, or even mask. In reviewing this department of the subject, it should not be forgotten that in medicine decentralisation has been the tendency of our times. It behoves us also to bear in mind that formerly it was the fashion to ascribe the invasion and development of small-pox, measles, and scarlatina to the operation of a single causative agency; and that prior to the investigations of Bretonneau, Louis, Gerhard, Stewart, and Jenner, typhus, typhoid, and relapsing fevers were all viewed as springing from a common source. The result, however, of the accumulated observation during the past thirty years has been to demonstrate more and more clearly the non-identity of the poisons exciting typhus, typhoid, and relapsing fever, with as much precision and exactitude as clinical research had proved long before the non-identity of the poisons lighting up an attack of variola, measles, or scarlatina. Such being, with very general consent, the present state of scientific opinion in this sphere of etiology, it is difficult to subscribe to the hypotheses recently promulgated, that, on the one hand, enteric fever in India is only one of the various expressions of malarial poisoning, and that it is only malarious, remittent, or continued fever with intestinal complications; or, on the other, that it may be the product either of a specific cause or of malaria. Experience of enteric fever in India tends to show that malaria —such as is the accepted cause of paroxysmal fevers—is never the cause *per se* of enteric fever in India. And though it is not perhaps necessary, in the existing state of our knowledge, to accept in its entirety the pythogenic theory of its origin or the spontaneous generation of the poison, yet the intensely insanitary condition of the cities, towns, villages, and hamlets throughout India renders it inexpedient to dispense with it as unquestionably the best working hypothesis hitherto advanced to explain the endemic prevalence of the disease there; or to fall back upon the existence of two or more efficient sets of exciting causes for the same specific affection. There is, indeed, no more ground for allowing that enteric fever, as observed in tropical climates, can be roused into activity in the human subject by two or more sets of poisons—viz., marsh miasmata or malaria, and a specific poison too, than there is for proclaiming the theory that any of the contagious exanthemata can be originated by more than one specific poison.

That of late years, or at least since 1862, the cause of enteric fever in temperate climates has usually been attributed to the existence of putrescent or decomposing filth of an animal nature, is very patent from the published literature of the subject. The evidence thus available goes to show that whether the potential poison is generated in such a nidus *de novo*, as was believed by the late lamented Dr. Murchison or not, it is, in its beginnings—in its genesis—in some way or other intimately associated with the presence of animal matter or filth undergoing putrefactive metamorphosis. As it is probably with the cholera evacuations, so it may be with the excreta of enteric fever, the effective materies morbi, or germ, or poison—call it what we may—may not exist in a perfected and matured state, as maintained by the late Dr. Budd of Bristol, and others, in these at the time of their escape from the alimentary canal. But that in both instances the material exists in these dejecta out of which the effective poison can be reproduced under favouring conditions, it may be in conformity to the law of the "alternation of generations," is quite within the region of possibility, if not, indeed, of probability. At any rate, the phenomena of this fever are constantly being reproduced in identically the same form, attended by a characteristic train of symptoms, and accompanied by a series of pathognomonic lesions in all parts of the world, in the white as in the black races, but subject, during malarious seasons, in hot countries, to some modification, as has already been admitted in the foregoing observations, from the action of a single cause, with as much unerring certainty as is a potato or a turnip, placed in a congenial soil, under the needful conditions of heat, moisture, and light, from their respective seeds, or as is syphilis or small-pox from their respective poisons or germs. On such a hypothesis as this, the generation of the disease and its subsequent dissemination to the predisposed through infected air, water, milk, and other articles of aliment—it may sometimes be by means of foul clothing, bedding, or the ill-ventilated and neglected rooms, in which cases may have been accommodated—become intelligible.

When Dr. Ewart detected enteric fever among the prisoners of the Ajmeer gaol, the outbreak was attributed to the extremely insanitary condition of the prison itself. No word painting could exaggerate the abominable filthiness of the sleeping accommodation set apart for the convicts. They were arranged in groups of from fifteen to twenty in narrow low-roofed cells, and packed far too closely together. A few earthenware vessels were provided as urinals and commodes. In this way they were herded together from 8 P.M. to 6 A.M. daily. After the removal of the prisoners generally for out-door labour on the roads the filth was taken away, but much of it was washed into shallow channels, leading to a neglected cesspool just outside the building, from which unspeakable odours emanated on the south-western aspect, or in such a situation as to allow the effluvia issuing therefrom to be wafted back into the interior of the gaol by the prevailing wind. The well from which the drinking water was drawn was not far distant, only a few yards. In addition to direct sources of contamination, which were self-evident, it was so near the cells, drains, and cesspools, that it must have been exposed to pollution by percolation through the intervening gravelly soil.

In those days, the pythogenic theory had not been propounded. Milk had not been regarded as a possible vehicle

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for the conveyance of the poison into the human economy. But, in relation to this latter point, Dr. Ewart briefly narrated an incident which happened to him when civil surgeon of Ajmeer. A complaint having been submitted concerning the quality of the milk provided for the consumption of the prisoners; it was found that it had a most offensive taste and smell. His native doctor suggested that this arose from its being mixed with impure water. They visited the village from which the milk was supplied. Some fresh drawn milk was then mixed with water obtained from a neighbouring stagnant pool, which was used for ablution and bathing by men, women, and children, and around which were the evidences of fæcal pollution. The mixture thus procured corresponded in its offensiveness of taste and smell to that which had been objected to as unfit for use, and condemned. On urging these facts in the proper quarter, the contractor was changed, and no more milk adulterated with stinking water was supplied during the remainder of his residence at Ajmeer.

When, at this station, he met with cases of enteric fever among the population of the city. But confirmation of the diagnosis in fatal cases was not practicable owing to the objections of the natives to post-mortems. This unavoidable defect is all the more to be regretted, because, as has already been pointed out, it too often happens that in the very dark skin, the lenticular rose-coloured eruption coming out in successive crops, and in all their phases, disappearing on pressure, and quickly returning on the withdrawal of the same—such a valuable indication in the fair-skinned European—cannot always be distinguished. Here, again, there was no difficulty in discovering abundance of animal filth. In almost every house in the town there was a privy, and in many a cesspool in addition; the evil odours emanating therefrom in close, still, and warm weather tainted the atmosphere within; whilst the drains in the streets, receiving liquid sewage from overflowing privies and cesspools, polluted it without.

Dr. Ewart recorded similar experiences at Kherwarrah, among the Bheels of his regiment and the community; and at Calcutta, during his connexion with the Medical College and General Hospitals. The disease was most abundant in the autumn, then in the cold season, next in the hot weather, and least so during the monsoon. The modifying power of malaria was most apparent in the autumn and first half of the cold season, becoming less so in the middle and end of this, and scarcely perceptible in the remainder of the winter and during the hot months. Strangers of the dark and fair races below the age of thirty were most exposed to attack. It prevailed in the palaces of the rich and well-to-do, and in the huts and hovels of the poorer classes. It spared neither sex. His impression, derived from unremitting attention to this subject, was that enteric fever was domesticated in Calcutta.

Looking around for the reason of this, a little attention will show that the same insanitary conditions as are generally considered to lie at the foundation of the disease, in temperate regions, exist, to a very marked extent, in the metropolis of British India. After giving in detail a description of the utterly indescribable filthiness of the back slums of many parts of the European, and most parts of the native quarter; the difficulty does not consist in not finding plenty of animal filth to account for any amount of enteric fever; but in understanding how or why it is not still more prevalent than it is in such an unsavoury city. It is explained that "the reason why this form of fever is not more frequently met with amid such an abundance of fæcal matter in a state of putrescent fermentation, is probably to be discovered in the fact that fortunately most of it is not pent up in ill-ventilated sewers, but exposed daily to the powerful antiseptic influences of the atmosphere and sunlight in open drains, open privies and latrines, and in comparatively open cesspools. The impression which has been gaining ground of late years, that as the sewering of the town has been advanced, so has enteric fever been more frequently observed, lends countenance in support of this view. The augmented prevalence, however, may, in some measure, be owing simply to greater recognition of the fever, although it must not be forgotten that attention has been directed to the endemic existence of the disease during the past fifteen or twenty years."

As regards the assertion that such insanitary conditions are not to be found in military stations, barracks, and hospitals, Dr. Ewart is not satisfied with "the condition of the privies used by natives in the service of officers, and of the latrines employed by the numerous followers of native and British regiments. Even if the sanitary excellency of these is unimpeachable, there is still overwhelming evidence, in the reports of the Sanitary Commissioners, to prove that the neighbouring bazaars, frequented more especially by the younger soldiers, present, in unmitigated intensity, all the insanitary blemishes summarised in the foregoing narrative. It is here, it may be far away from their barracks, where they are not only liable to breathe air impregnated with emanations from decomposing animal filth, but to obtain food, milk, drink, and water of questionable quality and purity."

On a full review of the subject, there is nothing, in the occurrence of enteric fever in India, repugnant to the Murchisonian doctrine that, in its etiology, it is intimately connected with the presence of putrefying anima or fæcal filth. "The reason why the origin of the disease has not been more frequently traced to pythogenic causes is probably due to the stage of incubation having been too much excluded from consideration. The difficulty, especially in the case of those who dwell in clean and well cared-for barracks, is greatly magnified by the period of latency or incubation. This varies from seven or ten to fourteen or twenty days. So that to trace the origin of any case, the investigation must be of a much more searching and comprehensive character than any which has hitherto been conducted in India. It is manifest that the alleged freedom of the barracks and their immediate surroundings from filth is, in itself, scarcely sufficient. The inquiry should embrace a calm and impartial review of the patient's history and habits, derived first from himself, and secondly corrected by the collateral evidence of his friends, extending over a period of many days antecedent to the attack. As the disease is rarely spread by direct contagion, in the well-ventilated military hospitals in India, it follows that, in almost every isolated case or series of cases, a similar exhaustive investigation would have to be undertaken if the source of it, in all cases, is to be identified to the utmost extent attainable."

Dr. Ewart does not believe that the enteric fever lately prevailing in the "Madras Command" has been merely "malarial or climaterial fever of the continued or remittent type with intestinal complication." Even should the results of future investigation go against the filth theory of its origin, this conclusion, however well grounded, would not suffice to justify us, with the evidence of so many independent clinical observers proving the contrary, in disputing the domesticated existence of the fever in India. It would rather have the effect of causing inquiry on some other line or lines with a view to discover the habitat and nature of the cause not only in that country, but in Europe and America." Whatever views may be held concerning the cause, so long as the thing—enteric fever—is present in India, it will, now that so much attention has been attached to it, continue to be more and more generally recognised as a distinct entity, generated and diffused independently of malaria, though, like many other affections, being liable to be modified by it, perfectly irrespective of the views that may, from time to time, prevail about its precise etiology.

Reviews and Notices of Books.

The Spectroscope in Medicine. By CHARLES A. MACMUNN, B.A., M.D. Univ. Dub. With Chromo-lithographic Plates and other illustrations. London: J. & A. Churchill. 1880.

A WORK of this kind has long been called for. The progress of pathological and physiological research by means of the spectroscope has not attained its due development from the want of a simple treatise clearly defining the methods of investigation and their application to this branch of medical study. Already, however, the spectroscope has done good service in physiology by correcting many erroneous ideas regarding various animal pigments, and also by explaining the difference in colour between arterial and venous blood, and showing wherein the oxygen-holding power of the red corpuscle resides. In forensic medicine the spectroscope, too, renders invaluable aid in affording the

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only reliable means for detecting the presence of blood when present in almost unappreciable quantities. The presence of poisonous metals, again, such as arsenic, antimony, mercury, copper, lead, &c., can readily be demonstrated by means of their respective spectra. The practical application of the spectroscope in clinical medicine is still, however, extremely limited. Nor can much advance be expected in this direction till clinical observers are made familiar with the practical working of the instrument. Dr. MacMunn's work appears to us admirably suited for this purpose. It is simple in style, lucid in exposition, and modest in tone. The first two chapters are devoted to a consideration of the various kinds of spectra, with a description of instruments and methods for using them. Chapter 3 deals with the application of the study of bright line spectra to medicine, particularly drawing attention to the late Dr. Bence Jones's researches in determining the time that salts take to reach various tissues and organs. Chapters 4, 5, and 6 treat of the absorption spectra of blood, and give easy methods of preparing most of the important spectra which have been hitherto described. Speaking of a simple process, by which the important spectra of hæmatin and cruentin can be procured, Dr. MacMunn states, that it was not till after he had studied Dr. Thudichum's method that he was able to procure the various decomposition products of hæmoglobin by simple and rapid means. Dr. MacMunn thinks that this gentleman's method ought to be more generally known, and takes this opportunity of observing, "that he has not been sufficiently thanked by the members of his own profession for the great and valuable additions to our knowledge of physiological and pathological chemistry which he has made." As we have lately been in conflict with Dr. Thudichum with respect to another matter, we have pleasure in giving prominence to this just tribute with regard to the value of his scientific researches. Chapter 7 gives an account of the absorption spectra of bile, urine, &c. Reference is made to the pathological importance of Jaffé's isolation of the pigment, which gives an absorption band at F, for this pigment appears to be identical with the uro-bilin, which Dr. MacMunn has found in every specimen of healthy human urine. With regard to urine, there is only one pigment which gives a well-marked absorption band, and this is the pigment just named (uro-bilin). Dr. MacMunn remarks that this is the pigment which ought to have the greatest attention paid it by clinical observers, for, although constantly present in healthy human urine, it is sometimes absent in disease, though in what diseases it is absent he is at present unable to say. Another bile pigment, according to the author, besides uro-bilin, which does not, however, give the characteristic colouration with Gmelin's test, occasionally appears in certain morbid conditions of the urine. It was found to occur in the following specimens of urine :— 1. Taken from cases of rheumatic fever. 2. Pregnancy (sixth month). 3. Thoracic aneurism accompanied with albuminuria. 4. Cirrhosis of the liver. 5. Cancer of the pylorus. As a second absorption band has never been obtained in some hundreds of specimens of urine from patients suffering from trifling ailments, Dr. MacMunn infers that it only appears in those cases where there is undoubted disease of a severe character.

OUR LIBRARY TABLE.

Report by Dr. Milne Robertson upon Certain Peculiar Habits and Customs of the Aborigines of Western Australia. By Dr. A. MILNE ROBERTSON, Surgeon, Convict Establishment, Western Australia.—This brief report has been prepared "for the information of gentlemen of the medical and other scientific professions," and to accompany the collection of weapons, implements, &c. sent to the exhibition at Sydney, N.S.W., 1879. It relates to the practice of circumcision at the age of puberty, and also to slitting the urethra, also at puberty, among certain families of the aborigines of Western Australia. The two practices are not found to exist together in the same group of families, and the families slitting the urethra differ as to the extent to which the slit is carried. Dr. Robertson's account is full of interest to the anthropologist.

A Brief Account of the Natives of Western Australia, their Character, Manners, and Customs. Prepared under instructions from H.E. Major-General Sir N. H. GEORGE ORD, K.C.M.G., C.B., Governor of the Colony.—An excellent summary account, written to illustrate the collection of weapons, implements, &c. sent to the exhibition at Sydney, New South Wales.

A Systematic Course of Practical Qualitative Analysis. By THOS. ELTOFT, P.C.S., P.I.C. London: Simpkin, Marshall, and Co. 1879.—We fail to perceive any real advantage possessed by this little book beyond that of being printed in strong clear type. There are already too many small text-books of the kind.

INSTRUMENT FOR ILLUMINATING THE EYE.

To the Editor of THE LANCET.

SIR,—A common difficulty in ophthalmic surgery is met by the suggestion made by Mr. James E. Adams in his remarks on "an instrument for illuminating and magnifying the anterior parts of the eyeball." A small black foreign body on the cornea near its centre, especially if the iris is dark-coloured, is absolutely invisible to the naked eye, even in a good light; but with the aid of a convex lens and focal illumination, by means of a second lens, is easily discovered. When discovered, however, its removal is extremely difficult without skilled assistance. Mr. Adams's instrument overcomes this difficulty, though I venture to think that the use of a pair of spectacles (with biconvex glasses of, say, ten-inch focal length) worn by the surgeon is a simpler and better way of obtaining the magnified image, and obviates certain disadvantages attending Mr. Adams's method. The lens fixed to the patient's head must have a more or less limited range of motion, whereas the observer, with a pair of spectacles on his nose, can alter the line of observation to any required angle. The fixed lens, too, may puzzle the observer by the reflected image of the surrounding objects if not set carefully, and this is not the case with the use of the spectacles. If therefore Mr. Adams's apparatus is employed, I would suggest that the lens for magnifying the image should be dispensed with altogether, and the spectacles be used by the operator. The focal illumination may also be dispensed with in good daylight, and even in the absence of daylight the benzine lamp supplied by Messrs. Krohne and Sesemann answers every purpose in the majority of cases. There will, however, still be exceptional occasions in which Mr. Adams's instrument, with the modifications of form that I suggest, would be a valuable addition to our resources. The use of spectacles is not necessary for myopic surgeons, but for the emmetropic, hypermetropic, or presbyopic will be found of great value, and, when once tried, will not be easily laid aside for the merely fanciful objection that their use is, perhaps, regarded by the patient as a confession of inefficiency. The successful issue of an operation will easily reconcile the patient to any such imaginary defect in the operator.

Even focal illumination and a magnified image sometimes fail to give the information required in the search for a foreign body. The illumination of the pupil by the ophthalmoscope is then the most efficient method; and when the two methods are resorted to any doubts as to the depth of the foreign body, as to its having penetrated deeply into the cornea, as to its having passed into the anterior chamber, and whether it has penetrated or wounded the lens, will be much more satisfactorily solved than if one method only has been resorted to. The same reasoning will apply to traumatic lesions, or the result of disease in the same regions without the presence of a foreign body.

I am, Sir, yours, &c.,

Feb. 6th, 1880. W. SPENCER WATSON, F.R.C.S.

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THE LANCET.

LONDON: SATURDAY, FEBRUARY 21, 1880.

THE Premier's reply to the Marquis of LOTHIAN'S question on the subject of Dr. FARR and the Registrar-Generalship may be considered satisfactory only inasmuch as it averred that it was originally the wish of the Government to appoint Dr. FARR to the vacant post, and that it was only on the ground of his failing health that this intention of the Government was not carried into effect. The admission or assertion that, but for certain representations made as to the state of Dr. FARR'S health, he would have been appointed to succeed Major GRAHAM, is in some sense an acknowledgment of the justice of the expectations entertained by the public and the profession, that Dr. FARR had earned a right to be the new Registrar-General. It would serve no useful purpose now to inquire who made those representations as to the state of Dr. FARR'S health, which caused the Premier to shrink from the responsibility of appointing him to the vacant post which Dr. FARR considered himself capable of holding for a short period. It is, however, necessary to protest against the convenient ambiguity of one part of Lord BEACONSFIELD'S statement on the subject, which has led one or two contemporaries to misunderstand the true bearing of some of the facts of the case. It has been inferred from Lord BEACONSFIELD'S remarks, which certainly suggested such an inference, that the official document asking for the superannuation of Dr. FARR was received at the time when inquiries were being made with reference to the proposed appointment of that gentleman to the post about to become vacant. It is easy to comprehend how acceptable to the Government would have been an application for superannuation from Dr. FARR at the time the Premier was weighing his claims against those of Sir BRYDGES HENNIKER, the brother-in-law of a member of the Cabinet, although not honoured with the personal acquaintance of the Premier. Unfortunately, however, facts and dates are against the presumption as to the time of the receipt of Dr. FARR'S application to retire on superannuation. It is now simply a matter of history that Dr. FARR did not ask to retire until the Premier had, without any expression of regret to Dr. FARR, ignored his request for promotion, and had appointed Sir BRYDGES HENNIKER. We will refrain from raising the question whether the Premier or Dr. FARR is most competent to form a sound opinion whether the health of the latter would have allowed him to perform the duties of Registrar-General, but it is somewhat amusing to hear of the arduous duties of the post, assisted as the Registrar-General is by a large and efficient staff of permanent officials at the central office, very many of whom have been trained, and have served under the late Registrar-General and Dr. FARR for more than a quarter of a century. However, the appointment is filled, and Dr. FARR has applied for superannuation. It now only remains to inquire what the Government intends to do to mark the signal services of Dr. FARR to public health and sanitary statistics, and their regret that circumstances prevented them carrying out their intention to appoint him Registrar-General in succession to Major GRAHAM. Lord BEACONSFIELD cannot be said to have been lavish in his acknowledgment of the value of Dr. FARR'S services, but if he meant half he said in that direction, it might have been thought that he would have hastened to remove the impression that Dr. FARR had been slighted, and to place it beyond doubt that his services are fully recognised by the present Government. It is undoubtedly a fact that Dr. FARR'S labours in office have been recognised and estimated at their true value by the public; but it is equally true that they have never been adequately rewarded by the State. On Monday next Dr. LYON PLAYFAIR will ask a question in the House of Commons, having for its object to ascertain the intention of the Government with regard to some public recognition of Dr. FARR'S services. The interest of the profession and the public in this matter is not likely to lessen by unreasonable delay in its settlement.

IT is satisfactory to find that Mr. Secretary CROSS perceives the need of medical knowledge as a qualification for the office of Coroner. We do not understand him to have declared distinctly in favour of medical coroners, but to have conceded that the function to be performed is medical, which substantially amounts to the same thing. This position, if it be assumed ministerially and resolutely maintained in Parliament, may enable the Government to pass a measure of reform satisfactory alike to the profession and the public. It is clearly indispensable that some provision should be made whereby such knowledge as only a fully educated medical man can possibly possess should be instantly brought to bear upon cases of mysterious or unexplained death. We are disposed to admit that special skill and legal training may be requisite to enable a coroner to hold his court and charge his jury. Now and again it certainly happens that the proceedings extend over so wide an area, and the evidence adduced is so voluminous and complicated, that a trained and judicial mind must needs hold the balance if justice is to be done. Nevertheless, it should not be forgotten that an "inquest" is purely and simply a search for the "cause of death." Unless this be kept steadily in view, it will scarcely be possible to avoid going astray.

The proposal made and consistently advocated in these columns seems to us, on the whole, the most practical, and generally desirable, of the schemes of reform propounded. It is briefly this—to require from the medical officers of health, who at present form a medical corps of the highest value and capable of further development, a special knowledge of State medicine, legal medicine, and lunacy; and, relieving these gentlemen wholly from private practice, to make them the guardians of local health, to entrust them with the duty of examining alleged lunatics, and to constitute them the medical assessors or "coroners," charged to search for the cause of death in all cases where the certificate of a private medical practitioner is not forthcoming. We have further proposed that these officers, while generally acting as at present, locally and independently, shall, upon the summons of a Judge of Assize, assemble to form a *jury of experts* in

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cases of special difficulty, or involving questions of life and death raised on medical issues.

We doubt whether this broad scheme has been adequately considered by the Government. It certainly seems to us to offer an effective solution of a daily growing difficulty. There would be no need to alter the mode of appointment or to interfere with the local work of these officials. The only change necessary would be to require from candidates, offering themselves for vacancies occurring after the passing of the new Act, proof of having bestowed special attention on the three subjects indicated—namely, sanitation and public health, legal medicine with toxicology, and so much of mental medicine as would enable a man to recognise the presence of insanity, and to watch the progress of a case at those periodic visits to the asylum which would be requisite to keep a patient certified insane under *personal* observation for, say, eighteen months.

No one need be under any apprehension as to the difficulty of obtaining the services of well-qualified candidates. Let it be once understood at the schools that the appointment of "officer of health" is to be made permanent and charged with these responsible public duties, and students will prepare, teachers train their pupils, and examiners gladly apply suitable tests of proficiency, so that within two or three years from the passing of such an Act as we have suggested, the applicants for local appointments will be men well up to their work. The chief change required would be a provision requiring the police or any other authority receiving information of an unexplained death to send at once to the local "officer of health," who, with the aid of his inspectors, would at once proceed to search out the "cause," adopting all necessary measures to that end. The report drawn up by this official might be returnable to the local justices, stipendiary magistrates, or to a coroner. In a case of lunacy the friends would send direct to the medical officer, or, if the patient were a pauper, the relieving officer would, as now, be the channel of communication.

We commend the matter to the serious consideration of the Secretary of State, in the full conviction that it offers the outline of a scheme at once practicable and likely to be effective.

THE frequent references to the famine of 1846-47 during the recent discussions on the existing distress in Ireland in both Houses of Parliament is ominous of an impending evil which even to the present may have been imperfectly apprehended. Of course it is eminently desirable, and indeed necessary, that the economic lessons to be derived from that unhappy period, particularly those of a pecuniary and, as ordinarily understood, social nature, should be turned to proper account when the nation is again called upon to stretch out its hand, with widely open palm, to the help of the sister island. But it is to be wished that some indication had been given, notwithstanding the immediate and pressing necessity of first finding food for the famished, that the health economics of the existing distress had not been lost sight of, particularly if we are to have recourse to the experiences of 1846-47 for guidance. And it must be said that some reason has been given to suspect a want of foresight on the part of the Government in this direction. In both Houses of Parliament, ministers, speaking of the distressed districts, have used the unfortunate phrase that there have not been as yet any deaths from "starvation." Long before fatal starvation occurred, there would be a state of health, arising from chronic starvation among the destitute population, pregnant with future evils, and demanding the most earnest attention of the responsible authorities. But the phrase, although used perhaps as a mere convenient form of expression at the moment, recalls so vividly the use of the like phrase by the Government of India during the earlier period of the late famine in Southern and Western India, as to cause a shudder. We know how that Government persisted in using this phrase when the famine-stricken populations were dying by hundreds of sheer starvation. We also know how it was used by them to veneer a policy of relief unparalleled in history, and of which the source appears to have been sought in the pages of "Joe Miller," where a story is told of a man who endeavoured to train his horse to live on a straw a day, but when he was about to achieve his end unfortunately the horse died. Happily there is no dread here of the destitute population in Ireland being made the subjects of hideous experiment as to how far a semblance of life can be maintained, irrespective of other considerations, as was lately the case with the destitute populations of Southern India. But the use of the phrase referred to by responsible ministers, after the Indian experience, may reasonably beget a doubt whether they are as sensitive as might be to the health-economics of the distress now existing in Ireland.

What were the lessons of the stupendous misery in 1846-47 in this matter? In the track of the famine there quickly followed fever—especially typhus and relapsing,—scurvy, and dysentery. And the two fevers named presently overran the famine districts, and, accompanied by scurvy and dysentery, penetrated, with the fugitives from them, into the great towns of England and Scotland, and the chief seaport towns of the United States and Canada. In each of these places were repeated among the fugitives the horrors which marked the prevalence of the several diseases in Ireland, while, in addition, the local populations, becoming infected, were involved in the miseries arising from the dissemination of typhus and relapsing fever. This question, then, of "fever" in the districts now suffering from famine is not simply a local one. It touches the health interests of every community which may be brought into communication with them. The typhus of 1846-47, and probably also relapsing fever, were no new growths in the famine-stricken districts. Both diseases, relics of former miseries, appear to have been present there before the famine, and they grew with the growth of the famine until they exceeded all means that could be devised for their restraint. There is scarcely a more painful picture presented in the histories of the famine of 1846-47 than the utter inadequacy of the measures which could be put in force with a view of ameliorating the evils arising from the spread of typhus and relapsing fever; and it is obvious that they were adopted *too late* to give reasonable hope of even partial success. Ireland stands in a very different position now, in respect to public health matters, than she did in 1846-47. The chronic state of destitution existing in the districts affected by famine in those years far exceeded that which exists in the districts

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now affected. Typhus was endemic among the famine-stricken populations, but this does not seem to be the case now. There was then no sanitary organisation worthy of the name, while at present a sanitary organisation with large powers exists throughout the country. The means, in fact, exist by which not only the medical and sanitary aspects of the existing famine may be carefully watched, and measures for dealing with such of them as should be provided for beforehand devised, but also for carrying into effect what may be required. Whilst the first care must be given to staving off starvation, the not less fatal morbid consequences apt to follow upon and accompany destitution must not be lost sight of, and should as far as possible be cared for in advance. And there are significant warnings that forethought in this latter respect is incumbent upon the Government. There have been scattered cases of typhus in England; and although we have little definite information as to typhus in Ireland, and especially in the districts where the distress prevails, an uncomfortable feeling is gaining ground that these scattered cases are derived from Ireland—are drops, indeed, of a shower of which the full flood may fall upon the populations where there is the distress. And it is to be remembered that when in 1846-47 famine and typhus coexisted in Ireland, they coexisted in several parts of the continent of Europe also, just as at the present time these evils are understood to coexist in several parts of Russia.

In dealing with the famine now existing in Ireland efforts should be made not only to obviate the results as manifested in actual privation of food, but also the results which may be manifested in diseases apt to arise from such privation, and which are prone to accompany it.

AMONGST the many researches that have been made in regard to the phenomena presented during the coagulation of the blood, comparatively few have been devoted to the precise determination of the time at which it occurs after removal from the vessels. THAKRAH, in his well-known work, estimates it at from five to ten minutes for the horse, two to ten minutes for the ox, one minute to one minute and a half for the sheep, half a minute to one minute for the bird, one minute to three minutes for the fish, and two to four minutes for the frog. NASSE found the order of rapidity of coagulation in domestic animals to be the horse, goat, dog, ox, pig, sheep, and rabbit; but K. SCHOENLEIN has recently shown, in an article contained in the *Zeitschrift für Biologie*, that many circumstances render these statements unreliable. No distinction was drawn between the first appearance of coagulation and the solidification of the entire mass. No control experiments were made with other and similar quantities of the blood, and many precautions were neglected which experience has shown are requisite that the time of the coagulation should be rightly estimated. He has himself adopted a plan originally suggested by VIERORDT, which consists in pricking the finger, and dipping into the drop of blood which escapes a capillary glass tube with thin walls, having a diameter of about one millimetre and a length of about half an inch. Into the other end of the tube, which is open at both ends, is inserted a white horsehair, thoroughly purified and cleansed by boiling in alcohol and ether. At first it will be found that on withdrawing the hair for a short distance no blood adheres to it, but as soon as coagulation has commenced, small red coagulated portions of blood adhere to it, and can be removed with it from the tube. The coagula are very often thicker than the lumen of the tube, and thus show that they adhere very firmly to the hair—much more firmly, indeed, than to a glass tube. A small quantity of uncoagulated blood usually remains in the tube, which, even if it be churned with the hair, refuses to solidify. In some salamanders and tritons the process of coagulation takes place with so much energy that serum is almost immediately squeezed out of the newly-formed clot. In most of the lower animals SCHOENLEIN snipped a small piece of skin from the back after the hair had been removed by shaving; but in frogs the heart was excised and the blood obtained from it; and in fishes the gills were used as the source of supply; whilst in birds a feather was pulled out. By practice he was able to obtain the blood in the glass tube with the horsehair inserted in the course of from ten to fifteen seconds, and the time was always taken from the moment when the blood escaped from the bloodvessels.

The valuable part of SCHOENLEIN'S paper is a series of tables in which he notes the name of the animal from which the blood was taken, its sex, and weight, the temperature of the air at the time of the observation, and approximative numbers in seconds of the time of commencement and termination of the act of coagulation. We extract some of the results at which he has arrived. In the barbel (Barbus fluviatilis) in one instance coagulation began in the blood in 185 seconds after it had escaped, and was completed at the expiration of 205 seconds, the whole period occupied being twenty seconds. In other instances the time of commencement was 125 and 95 seconds, and the duration of the act was 20 and 50 seconds. In the Triton cristatus the commencement of coagulation varied from 55 to 265 seconds after withdrawal, but in the former case it was completed in 20 seconds, and in the latter in 30 seconds. One of the slowest kinds of blood to coagulate was that of the Anguis fragilis, or blind worm, which did not begin to coagulate till after the lapse of 585 seconds, or nearly ten minutes, but even this was exceeded by a specimen from the Coluber natrix, or ordinary snake, which began to coagulate only after 1295 seconds, or more than twenty minutes, and was 410 seconds in becoming solid. This animal was, however, pregnant. A long list of birds is given, including the sparrow, starling, crow, woodpecker, pigeon, crane, swan, and others. In these the period of commencement of coagulation varied considerably, even for the same species—namely, from 75 to 495 seconds; in a large number the coagulation was completed in from 50 to 90 seconds, but in a few it lasted two minutes or more. In the mouse and rat the beginning varied from 85 to 245 seconds, and it was completed in from 50 to 180 seconds. Guinea-pigs presented similar variations. Ox blood varied from 37 to 555 seconds in beginning to coagulate, and from 90 to 210 seconds in complete coagulation. In man the commencement of coagulation varied from 145 seconds after withdrawal from the vessels, to 515 seconds, and the completion occurred at times varying from 3 to 10½ minutes. It will thus be seen that very remarkable differences are observable in the time of coagulation of the blood in different animals, the limits of

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variation differing frequently 10 to 20 per cent. for the commencement of coagulation, as well as for its termination, and in some instances very much more.

IT would seem that the various examining bodies in England are not over sanguine as to the rapid adoption of a Conjoint Scheme. A few weeks ago we referred to the changes which had either been suggested or carried into effect at the University of London and the Royal College of Surgeons. The Royal College of Physicians is now moving in the matter, and a new set of by-laws for the College licence was discussed and formally adopted at a meeting of the Fellows on the 16th inst. These regulations will make so many alterations in the conditions for this qualification that we must refer to them at some length. The most important change is one which we have long advocated, and which has our heartiest approval. Instead of two examinations, three are now introduced, and a complete rearrangement of the subjects is thereby necessitated. The *First Examination* is open to all candidates who have been registered as medical students by the General Medical Council, so that it may be passed at the earliest opportunity, that is, as soon after the student has joined a recognised medical school as he may think fit to present himself, or even whilst he is a pupil of a legally qualified practitioner or attending at a country hospital or infirmary. The subjects of this examination are Chemistry and Chemical Physics; Materia Medica, Medical Botany, and Pharmacy; and Osteology; and schedules will be drawn up indicating the range and extent of the knowledge that will be expected. Every pupil, therefore, who chooses to spend a certain time in the country before entering at a medical school, will have a great inducement to work at subjects which he can readily learn, and will be so far the better prepared for the earnest study of the more advanced and difficult parts of his curriculum. The certificates which are compulsory at this stage will merely state that he has received instruction in Chemistry and Chemical Physics, Practical Chemistry, Materia Medica, Botany, and Practical Pharmacy. The wording "received instruction" is very vague, and we venture to think that such certificates might have been dispensed with altogether. However, as it does not compel attendance on courses of lectures in subjects which the student can readily learn by private tuition, or even in some instances teach himself, if he sets about doing so with a good text-book and the necessary practical material, we must congratulate the College on being the first examining body which has really recorded its protest against the unnecessary number of lectures which the medical student is compelled to listen to. Those who benefit by lectures may attend them; those who can learn these preliminary subjects without so doing will be at liberty to dispense with them. Botany and Materia Medica can, as a rule, be much more thoroughly mastered in the country than by attendance on a routine course of lectures. The *Second Examination* includes Anatomy and Physiology, and the range of subjects in the latter science is also scheduled. Candidates for this examination must have passed eighteen months at a recognised school, and must furnish certificates of attendance on a course of Anatomy, Physiology, and Practical Physiology (which is thus definitely separated from the ordinary theoretical lectures), and of having performed dissections for not less than twelve months. The *Third Examination* cannot be entered for until the expiration of two years after the passing of the Second, and embraces Medicine, Surgery, and Midwifery especially, whilst questions on Therapeutics, Forensic Medicine, and Public Health will be included. Besides attendance on lectures, certificates will have to be produced by candidates of having undergone systematic practical instruction in Medicine, Surgery, and Obstetric Medicine, and the character and extent of such systematic instruction is explicitly laid down. In insisting on this practical instruction the College is well advised, and we are sure that a great reform in bedside teaching at most schools must inevitably follow this regulation. The candidate must also have discharged the duties of a medical clinical clerk during six months, and of a surgical dresser during other six months. The regulations, therefore, whilst sufficiently elastic in the early stages of the medical curriculum, are very stringent in the later and absolutely essential portions, and we agree with the authorities of the College in preferring this plan of education to any other which has been submitted to the profession. A further boon to the student is the exemption from re-examination in subjects in which he has passed at other examining boards, and in this respect also the College of Physicians has shown as much liberality as could reasonably be expected. A large number of candidates will be sure to present themselves for the licence as soon as the new by-laws have been circulated and clearly understood in our medical schools and by the profession generally, and a qualification, which is now too little appreciated when we consider its value and meaning, will soon attain the prominence and public favour which it so eminently deserves.

AT the competitive examination for the Army, Navy, and Indian Medical Services, held at Burlington House, fifty-three candidates came forward for the Indian Service, forty-two for the Army, and five for the Navy. This may be taken as a fair estimate of the opinion of the profession as to the relative advantages of the three services. The Indian still holds its ground as the most popular; the Army seems to have regained its position by the new Warrant, and, if we consider that it is only two months since seventy-two candidates were passed into it, we think that the number entered at the present examination is a satisfactory testimony to the prospects offered by the new conditions of service. But what shall we say of the Navy? It has been able to obtain only five candidates! and we regret that even this small number have been induced to offer their services before their new Warrant has been published. This result, however, cannot fail to show the Lords of the Admiralty that, until the Department is put upon a satisfactory footing, candidates will not be forthcoming in anything like adequate numbers. And this will react unfavourably upon the navy in general; sailors will not be content to enter a service in which, in the event of sickness, injury, or wounds in action, there will be either no medical officer at hand to care for them, or, if at hand, he will be of a very inferior stamp. We feel assured that, until justice is done to the Department, each returning half year will show a

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still further reduction in the already scanty number of candidates, until at length no qualified man will be found forthcoming. As the Admiralty must take the matter soon into their consideration, we would remind Mr. W. H. SMITH that, while the pay and retirement must be increased, even that will not secure good men, unless there is also a distinct understanding that in what may be termed social questions—as choice of cabins, for instance—definite rules shall be laid down and enforced, instead of it being, as at present, in the power of commanding officers to render the orders of the Lords of the Admiralty a dead letter.

Annotations.

"Ne quid nimis."

THE RISING SMALL-POX MORTALITY.

IT is very unsatisfactory to see that we are again threatened with a small-pox epidemic. It has been known for a few weeks to medical officers of health that this horrible disease—which nobody need have—was asserting itself. The reports of the Metropolitan Asylum Hospitals are unmistakable in their significance. The number of deaths in London the week before last was greater than in any week since the beginning of July, 1879. And the number of small-pox patients in the Metropolitan Asylum Hospitals was, on the 7th of February, 91, as against 80 and 84 in the two preceding weeks; and the admissions of new cases 36, against 8, 21, and 22 in the three previous weeks. Is it not possible for the various parishes and sanitary authorities immediately to meet and consider whether all is being done that can be done in arrest of the development of this epidemic? It may not yet be too late—though it certainly soon will be—to prevent a great outbreak of the disease. Islington, which has much to answer for in regard to the last epidemic, does not appear to great advantage in regard to this. At a meeting of the Islington guardians, a letter was read from the Asylums Board, complaining that from this parish five unvaccinated children had been admitted into hospital suffering from small-pox. Other parishes too, we believe, have to complain of importations of small-pox from this district of London. It will be lamentable indeed if the Local Government Board and the local authorities together do not make some special efforts promptly to isolate cases, and to vaccinate or revaccinate exposed persons. With so many other claims for accommodation in the Metropolitan Asylum Hospitals, the embarrassment may be very great if efficient means in this direction are not speedily used.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

A MEETING of the Fellows convened by requisition was held last Saturday, to deliberate and consult about the election of a representative of the College in the General Medical Council, as to whether it was vested in the Council of the College or in the Fellows. Mr. Jacob, who made the opening statement, contended that although the representative in the Medical Council had been elected by the Council for the past twenty years, yet the appointment lay with the Fellows at large, and gave various extracts from the charters to prove that the corporate body of the College consisted of the Fellows, and that elective rights were vested in them. It was, he stated, solely in view of the probable reconstruction of the Medical Council under the Bill now before Parliament that he brought the matter forward. Mr. Jacob concluded by moving a resolution, which was seconded by Mr. Robert McDonnell, that in the opinion of the College it was desirable that any doubt which might exist respecting the right of election of the representative of the College in the General Medical Council should be removed, and that the Council be recommended to take legal advice as to the rights of the Fellows in such election. The resolution was carried, sixteen voting for it and eleven against, but it may be added that many of its opponents had left the room some time previously. The matter will be brought under the notice of the Council this week, and the result will duly be made known and reported to the College, but it appears improbable that they will consent to the step proposed.

DEATHS OF ARMY MEDICAL OFFICERS.

WE regret to record this week the deaths of two more officers of the Army Medical Department, Surgeon-Major Augustus Robinson Hall, and Surgeon William Lysaght McCarthy. Mr. Hall entered the service in April, 1861, and was shortly after gazetted assistant-surgeon to the 52nd Light Infantry, with which regiment he served several years in India; he was subsequently appointed to the Royal Artillery, and was for some years in medical charge of a battery of the 16th Brigade in various stations in the Bengal Presidency. On his return to England he was stationed for some time at Woolwich, but volunteered again for India in 1876, and was appointed to a battery of artillery at Morar. On the commencement of the Afghan hostilities Mr. Hall was ordered to join the Division under Sir Donald Stewart, which force he accompanied to Kandahar, and where he remained till compelled by ill-health, brought on by exposure and climate, to appear before a medical board, who invalided him to England; he did not, however, live to reach home, but was landed at Malta in a critical condition, and died shortly afterwards from chronic dysentery. Mr. Hall was the author of numerous papers in THE LANCET, *Indian Medical Gazette*, and other journals, on cholera and tropical diseases. Cholera he had made his special study, and its treatment by the hypodermic injection of chloral and other sedatives may be said to have been first brought into general notice by him. Mr. Hall was a widower, but he leaves two orphan children to mourn his loss.

Surgeon W. L. McCarthy obtained his commission in the medical service of the army in August, 1877, and died at Jamaica on the 1st of January last, after a short illness.

THE POWER OF "GOOD SPIRITS."

ON a recent occasion we remarked on the disastrous effects of "depression" of the physico-mental being—as a whole—and showed how it left the organism exposed to the onslaught of disease. The corollary of that line of reflections is one to which it is equally worth while to direct attention—namely, the power of "good spirits." With the aid, or under the influence of "pluck," using that term in a modern sense and in relation to the daily heroism of life in the midst of difficulties, it is possible not only to surmount what appear to be insuperable obstructions, but to defy and repel the enmities of climate, adverse circumstance, and even disease. Many a life has been saved by the moral courage of a sufferer. It is not alone in bearing the pain of operations, or the misery of confinement in a sick room, this self-help becomes of vital moment; but in the monotonous tracking of a weary path, and the vigorous discharge of ordinary duty. How many a victim of incurable disease has lived on through years of suffering, patiently and resolutely, hoping against hope, or, what is better, living down despair, until the virulence of a threatening malady has died out, and it has ceased to be destructive, although its physical

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characteristics remained? This power of "good spirits" is a matter of high moment to the sick and weakly. To the former it may mean the ability to survive, to the latter the possibility of outliving, or living in spite of, a disease. It is therefore of the greatest importance to cultivate the highest and most buoyant frame of mind which the conditions will admit. The same *energy* which takes the form of mental activity is vital to the work of the organism. Mental influences affect the system, and a joyous spirit not only relieves pain, but increases the momentum of life in the body. The victims of disease do not commonly sufficiently appreciate the value and use of "good spirits." They too often settle down in despair when a professional judgment determines the existence of some latent or chronic malady. The fact that it is probable they will die of a particular disease casts so deep a gloom over their prospect that through fear of death they are all their lifetime subject to bondage. The multitude of healthy persons who wear out their strength by exhausting journeys and perpetual anxieties for health is very great, and the policy in which they indulge is exceedingly shortsighted. Most of the sorrowful and worried cripples who drag out miserable lives in this way would be less wretched and live longer if they were more hopeful. It is useless to expect that any one can be reasoned into a lighter frame of mind, but it is desirable that all should be taught to understand the sustaining, and often even curative, power of "good spirits."

DIPHTHERIA IN RUSSIA.

THE *Kiev Gazette* states that there are localities in that city in which all the children under ten years of age had been carried off by diphtheria; the general mortality from the disease throughout the city has been 50 per cent. of the attacked. M. Kapoustine, in a communication to the Sanitary Committee of St. Petersburg, calls attention to the fact (as he describes it) of the appearance of diphtheria in a locality being nearly always preceded by disease among cattle, and he suggests that all milk should be boiled before being consumed. Professor Bystrow has prepared for the Central Committee of the Red Cross Society a report on the prevalence of diphtheria in the Government of Poltava. It would appear that the disease first appeared in an epidemic form in this government three years ago. During the first twelve months of the outbreak it attacked 29,765 persons and killed 12,052 (40 per cent.). Since this period the epidemic has continued without any abatement, and the mortality has steadily increased, reaching 60 per cent. of the seized, and in some instances even 85 per cent. Any attempts to struggle successfully against the further spread of the malady must, according to the Professor, be made simultaneously over the whole area of its prevalence. He suggests that circulars giving a description of the disease and of the measures to be taken when it first shows itself in a district, should be prepared and issued to the local authorities. In preparing such a circular he points out that it is especially necessary that the measures advised should be simple, not costly, and such as peasants could carry out. The syndic and priest of the locality should be provided with chlorate of potash for gargles and local applications. A good cottage should be set apart for the treatment of sick children, who should be put under the charge of sisters of charity, aided, if thought fit, in nursing by the mothers, and in the domestic duties of the establishment by childless widows, who should be remunerated for their services. Except the mothers, no persons to be allowed to visit the sick children. The name of hospital should not be attached to the cottage, and autopsies ought to be strictly forbidden. "Science must reserve its work for towns where more enlightened populations are met with. A single autopsy would alienate the confidence of a village for ever." Provision must be made for the gratuitous care of the poorest of the sick children; burials should be performed without previous exposure of the corpses in the church; the priest and his assistants should protect their hands and hair with some preparation of carbolic acid; the clothing of the dead should either be burnt or disinfected with sulphur; and all cottages should be aired daily. Lastly, Professor Bystrow utters a caution to medical men against the performance of laryngotomy, without having first obtained the consent of the parents or guardians.

"BRUTAL SPECTACLES."

THE sports which enlivened the leisure and stirred the sympathies of our grandsires, such as cockfighting, bull-baiting, pugilistic encounters, and the like, have either died out of interest or been repressed, in obedience to the growing intellectuality of the age. There is no need to qualify the admission involved in this last remark. There may be, and probably is, a minimum of intense culture and the highest class of brain-work, as a result of the mental activity which characterises the period in which we live, but it must be conceded that never in the history of England, and probably never in the history of the world, has there been so much general enlightenment as now. There have been times when the light of knowledge has been incomparably more lustrous, but never before has it been so widely and equally diffused. Looking to the fact that we are a self-governing people, it must be obvious that, however the change may have been produced, the abandonment of the coarser forms of sport is to be regarded as the expression of that progressive enlightenment which has undoubtedly taken place. The disuse and dislike of "brutal spectacles" will follow in due course. The development of humane tastes is believed to require a little judicious encouragement. A certain section of the public still derive enjoyment from witnessing performances which jeopardise life. We have advanced so far as to prohibit the risk of infant life, but if any adult is willing to place his life in peril the multitude will crowd to see his performance. It is fair to assume that most of the on-lookers hope he will not be killed, but many are probably indifferent as to the result so that the show be worth the money; and some, it is to be feared, are ready to find their pleasurable excitement enhanced by any catastrophe so that they are not themselves the sufferers. It would be easy to indite a homily against the state of mind and feeling in which a thrill of horror can be undistinguishable in value, if not in kind, from a thrill of pleasure; but it would *not* be easy to show that the emotional effect was of a much higher order in the one case than in the other. The love of adventure which constitutes an important and most serviceable element in the character of man is essentially the same passion which sometimes takes the form of a longing for "sensational" and hazardous amusements. It would be a national calamity if a mawkish sentimentality—what is called "tenderness"—were to replace the instinctive daring of youth, but that passion needs to be refined. The same "feeling" impels the crowd on a shore watching breathlessly the gallant efforts of the crew of a lifeboat to rescue those on board a stranded vessel, and the audience assembled in a music-hall to witness some wondrous flight in the air or some feat that seemingly, or actually, imperils the life of the performer. Sympathy may be charitably supposed to stir the heart in one case and to ennoble that eager curiosity which constitutes the personal sensation in both cases; but the gloss of philanthropy thrown over the state of mind in one instance does not change its nature. No thought of lending assistance can reasonably possess the minds of the multitude of spectators which every now and again crowd the shore of a seaport town or watering-place to witness a shipwreck. It is simply a case of sightseeing

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with the majority. It would, we have said, be an evil if this feeling were wholly crushed out of the masses. If every one shrank from the spectacle of danger, there would be no incentive to exceptional deeds of valour such as the vicissitudes of life require. At the same time the appetite for "sensation" must be taught to rest satisfied with the food which the chapter of accidents affords. It cannot be tolerated that the love of perilous feats shall create its own opportunities, and seek gratification at the public expense. We are not disposed to join in the impulsive abuse of the many who "enjoy" performances of the class which has of late years found renewed favour at the music halls. The taste these persons exhibit is *not* essentially "depraved," and the spectacles it is desired to interdict are not "brutal" in any despicable sense. Meanwhile they are "brutish" in the way of being animal, and they need to be corrected and conformed to a higher and better order of intellectual activities; but nothing will be gained by calling persons and exploits by hard names. A plain survey of the facts, and a prudent resolve to prohibit performances of the "dangerous" class, will do more to influence the public mind in a healthy direction than any mere ebullition of "humane sentiment," which is a cheap and poor commodity that common sense has learnt to discount and a true spirit of manliness will not approve. We heartily condemn these performances, but we do so on the ground of expediency quite as much as "humanity." Even if it be thought persons should be at liberty to jeopardise their lives for gain, it is not desirable that the public taste should be pampered by such exhibitions as consist in running risks. Of course, if there be no peril, the whole performance is a sham and a cheat, and ought to be "put down" as a form of imposture.

SANITATION OF CANNES.

PROBABLY the recent visit of the Empress of Russia has attracted a number of correspondents to Cannes, and much has been said and written concerning the sanitary state of the town itself, and of the Villa des Dunes, where the Imperial invalid lay so many weeks. As usual, however, a great many errors have been committed, but none perhaps more important than the assertion that Cannes does not possess a good and sufficient water-supply. This is, on the contrary, the one point in which Cannes especially excels. The water-supply amounts to one cubic metre per second, or 86,400 per day, and it could be doubled if necessary. It is derived from the upper portion of the river Siagne, and by repeated analyses has been proved to furnish the third best water in France. Unfortunately the conduit, thirty-one miles in length, is open, and the water, therefore, collects a certain amount of sand; for this reason it should be filtered, though it is free from organic impurities. With regard to the Villa des Dunes, much has been said concerning an iron drain, from which foul odours are stated to issue. It appears, however, on inquiry, that this drain does not communicate with the Imperial residence, but with the porter's lodge, where, in obedience to an order from Her Majesty, a temporary kitchen had been constructed at the last moment. The Empress very wisely objected to cooking in the basement of the house, and the kitchen within the Villa des Dunes was never used for other purposes than that of keeping the dishes warm and supplying hot water. The drain from the porter's lodge also only contains water from the kitchen and no sewage matter. The latter is collected in a fosse, which is emptied in the summer, when there is no family resident at the Villa. The real defect of the Villa has not been properly denounced. No means were employed to insure the due ventilation of the apartments occupied by the Empress. This was left to chance, and the careful shutting of doors and the use of heavy draperies, reduced this chance to a minimum. The selection of the site also was not fortunate. The railway passes immediately behind, causing much noise, disturbance, and vibration; while in front there are the main road and the beach. If the exciting influence of the sea were not to be feared, there remained the evil odours and the organic particles arising from the refuse and filth which disfigure the beach. We cannot conceive why the authorities should allow this most pleasant walk to be used as the favourite spot for the shooting of dust, animal and vegetable refuse. Here are to be seen the remnants of poultices, egg-shells, cabbage-stumps, half-emptied tins of preserved meats and fish, rags; in fact, all the nondescript and dangerous refuse of neighbouring and even comparatively distant households. Are there no scavengers at Cannes, that this should be allowed? There is no tide to carry the dirt away, and if exceptionally rough weather should bring a wave down upon one of these dust heaps, it is but slender consolation to those who have to bathe in the water next day! While Cannes has many points to recommend it to the invalid, these are a few among the many objections on which correspondents dating from that town have not sufficiently insisted.

THE AFGHAN WAR: CABUL.

OUR latest date from the city of Cabul is Dec. 24th. Our correspondent sends us some particulars regarding the medical arrangements for the wounded, with details of the incessant and harassing nature of the fighting, which had continued with more or less severity since the 10th of that month. The weather he describes as very severe, snow falling almost every night, and the wind even in the day icy cold. The general health of the troops was good, the sick percentage being only 4·2. The hardships and constant exposure were, however, beginning to tell, and the admissions for pneumonia and other pulmonary complaints were daily increasing, the 72nd Highlanders having the largest sick list from chest complaints. The wounded were doing well, and arrangements were in progress for a convoy of invalids, and men able to travel, to start for India under the medical charge of Surgeon-Major Low. The food in Sherpur was plentiful, mutton of an excellent quality being abundant. By the thoughtful care of the Principal Medical Officer, Surgeon-Major Porter, the ration of meat had been increased to one pound and a quarter, while hot soup or cocoa was issued to every man at daylight before turning out for guard or other duty. The men were provided with four blankets each, and in the hospital there were extra blankets for those requiring them. Some delay in finishing the quarters had taken place, owing to the constant alarms and daily skirmishes with the enemy; the men were required to defend the long lines of the Sherpur cantonment, and could not be spared to work at barrack building. The water supply derived from the Cabul river had been temporarily cut off by the Afghans, but some wells were in existence inside Sherpur, and the water from these was sufficiently pure for drinking purposes. Some of the doolies, containing instruments and medical supplies, were abandoned during the retreat on the 16th and 17th, but there still remained a fair supply of surgical and medical stores; others were expected shortly from India. With the large increase of wounded, the hospital accommodation had been found deficient. Dr. Porter met the difficulty by pitching some large tents formerly belonging to Yakoob Khan, and also utilising the wide verandahs of the hospital building, enclosing these with tent walls and numdahs, forming very comfortable quarters. The strain upon the medical department had been very great, little rest day or night being obtainable, but all had worked with a will, and the sick and wounded, European and native, were placed in as comfortable surroundings as the circumstances of the temporary siege permitted.

The Indian papers of a later date than our correspondent's

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letter describe the situation in Sherpur after the arrival of General Gough's brigade. The city and bazaars were once more open, Surgeon Owen had re-established the dispensary in Cabul, and was daily distributing medicines and dressing the wounds of Cabulees, who had so recently been our bitterest foes.

CONTAGIOUS DISEASES ACTS.

ON the motion of Colonel Stanley a Select Committee of the House of Commons has been appointed to inquire into the administration, operation, and effect of these Acts. The Committee has power to receive evidence which may be tendered concerning similar systems in the British Colonies, and to report whether the Acts should be maintained, extended, amended, or repealed. It will thus be seen that the question of legislative action, in all its aspects, with respect to contagious diseases, will be re-investigated. The evidence in support of the advantage of the Acts as now worked is so sufficient, and the statistics are so convincing, that their repeal seems to us an impossibility. The question of extension is another matter, and we shall carefully weigh the evidence that will be adduced in favour of or against the procedure. The civilian population is so differently placed, and so many considerations have to be regarded, that the mere health-averages of the army and navy cannot be relied on to solve this part of the problem. The members of the Committee who have been appointed are Mr. Cavendish Bentinck, Mr. Stansfeld, Colonel Alexander, Sir Harcourt Johnstone, Viscount Crichton, Mr. Shaw Lefevre, General Shute, Mr. Burt, Mr. Bulwer, Mr. O'Shaughnessy, and five others. As five are to form a quorum, and the prominent opponents of the Acts are sure to attend, we hope that the other members of the Committee will not fail in giving every attention to a question of such great importance.

THE "PALL MALL GAZETTE" ON THE LUNACY LAWS.

THE tokens of strong but reasonable interest in the project of Lunacy Law Reform multiply. The *Pall Mall Gazette* has recently offered some sensible and suggestive remarks on the subject. Our contemporary is a little outspoken on the question of private asylums, and demands their total abolition. We have already more than once urged that reconstruction would be better, as well as more easily practicable, than wholesale effacement of the private asylum system. Our reasons for proposing to change the monetary relations of the proprietors with their patients, while retaining the institutions and the *personnel* of their administrative staffs, have been repeatedly stated. At the same time we are glad to find the *Pall Mall Gazette* agreeing with us in one important particular—viz., the expediency of committing the duty of certifying to "a public medical officer." Our contemporary says: "At present the law refuses to look behind the medical certificate. It regards neither the scientific nor the moral competence of the men who give it. They may be unfit to decide whether a patient is sane or mad, either for want of knowledge or from the pressure of personal interests. They may be comparatively ignorant of the symptoms of madness, or they may be perilously predisposed to discover them. The only way to remedy this is to insist in every case on an official certificate. Ordinarily speaking, no patient ought to be received into a lunatic asylum unless he has been examined and pronounced mad by a public officer. There is no need that these officers should be what are called experts in lunacy. Every county town would supply one or more medical men perfectly competent, without being of the not altogether desirable "expert" kind; and it might be provided that any doctor might give a provisional certificate, authorising confinement for a short period—say two or three days—in the event of the official doctor not being able to see the patient earlier. In this way the danger of unwarrantable confinement in the first instance would be reduced to a minimum. The other danger, that of confinement after cure had been completed, should be guarded against by similar machinery. The inspection of the patients should be frequent and regular, and be equally conducted by public medical officers." We entirely accept this view of the need and the remedy. The scheme indicated was specifically submitted to the Select Committee of 1877–8, the suggestion being that the Medical Officers of Health, whom it is most desirable to relieve of private practice, should be appointed to give certificates and to visit the cases certified at regular intervals. We have again and again enforced this recommendation in THE LANCET; and trust, with the powerful aid of those of our contemporaries who are beginning to see with us, the proposal will be accepted by the Government and the Legislature, with whom the question of reform now lies.

"NEPHRECTOMY."

THE subject of surgical interference in unilateral renal affections is daily coming more to the front. There are two distinct operative measures here involved—the one consisting in incision into the organ for the relief of pyelitic abscesses or the release of renal calculi; the other in the removal of the whole diseased organ for tumour, calculus, or suppuration. The former class of case is to be styled nephrotomy, the latter nephrectomy. Professor Czerny of Heidelberg has recently recorded in the *Centralblatt für Chirurgie* two operations of the latter kind—one successful, the other not so; and a reprint of his brief memoir is now before us. He admits that in certain cases there can be no question now as to the propriety of the operation of extirpation of the kidney, but that the matter is narrowed to the discussion as to which method should be followed—that of extra-peritoneal operation by incision in the loin, or that of intra-peritoneal by abdominal section, as for ovariotomy. He refers to the successful issue of a case by Professor Martin, where the organ was removed by laparotomy; and also to similar success obtained by Zweifel, who removed a healthy kidney in a case of uretro-uterine fistula. His own two cases were—one of renal carcinoma removed by modified abdominal section through the loin, and one of pyonephrosis by lumbar incision. The former case, which proved the more formidable, from the nature of the growth, was unsuccessful. Here is the record of it:—A wine merchant, fifty years of age, had suffered for two years from a slightly movable, but painful, tumour of large size, projecting from beneath the left costal arch, and occupying the left half of the abdomen. Its renal nature was verified by injecting the colon with water, and finding that the gut lay in front of the swelling. Having explained the gravity of the case to the patient, and informed him that the chances of recovery after operation were about 50 per cent., Professor Czerny was allowed to attempt the only measure that seemed to give any chance of prolonging life. Making the lumbar incision as for colotomy, he divided the outer layer of the mesocolon, and stripped its capsular investment from the tumour. The growth proved to be so soft as to break down under the attempts at removal, and it had further infiltrated the inner layer of the mesocolon. Most profuse hæmorrhage set in, which could only be controlled by pressure on the aorta, and before the operation could be completed a ligature had to be placed round that vessel to obviate death from hæmorrhage. Two hours later there was anæsthesia and paralysis of the lower limbs, and death took place ten hours after the operation. The post-mortem examination showed that the renal artery had been severed, and that the ligature on the aorta had

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been placed between the right and left renal arteries, controlling the flow through the latter, but not through the former. The second case was that of a woman, thirty-two years of age, who for four years had suffered from painful micturition. A month before coming under notice an abscess pointed beneath the eleventh rib on the right side. It was opened, and an intermittent discharge took place from it; and it was noticed that when the discharge from the abscess was free the urine was clear, but that much pain, some pyrexia, and pus in the urine ensued whenever the abscess ceased to discharge. A diagnosis of right pyonephrosis, with perinephritic suppuration, and some vesical catarrh, was made. On May 22nd, 1879, Prof. Czerny laid open the fistula parallel to the rib, and, enlarging the wound downwards, inserted his hand and felt a soft placenta-like mass. He then resected a portion of the eleventh rib subperiosteally, and fairly exposed the diseased kidney, which was enlarged to three times the normal size, and was embedded in old blood-clot. Before the organ could be removed it was found necessary to take away another portion of the rib—in all about nine centimetres. He next detached the upper part of the kidney, thereby exposing the cavity of an abscess which gave issue to much pus. A ligature was placed on the vessels on the hilus and the removal of the organ completed; the wound being washed with a five per cent. solution of chloride of zinc and dressed with thymol-gauze. No fever followed, the ligatures came away on the 14th of June, and the patient made a good recovery, although the wound had not quite healed when last seen on Sept. 14th.

From these two cases Czerny concludes that both methods of extirpation are justifiable, but that, *cæteris paribus*, the extra-peritoneal operation is the less severe one. It—i.e., lumbar nephrectomy—should be adopted when the organ is not too much enlarged and is fixed. If it be movable laparotomy may be preferred. In his second case the vertical incision was made along the anterior margin of the quadratus lumborum, and the resection of the rib was had recourse to in order to enlarge the wound sufficiently to permit the passage of the hand. He points out that all risk from the resection is obviated by its being made on the subperiosteal plan.

THE NEW INFIRMARY, EDINBURGH.

OUR Edinburgh correspondent writes:—For a short period during the latter part of the past year and beginning of the present, some of the surgical wards in the New Infirmary have been troubled with an outbreak of erysipelas, associated also with scarlatina. Most of the cases were removed to the special ward in the old hospital. It was worthy of note in relation to the value of antiseptic surgery that, while all the septic cases in one ward might take erysipelatous action, every aseptic case escaped and remained healthy.

A well-marked epithelioma of the lower lip and submaxillary lymphatic gland, occurring in a young man about twenty-five years of age, was removed lately by one of the surgeons. The rarity of this affection at such a time of life constitutes its main interest.

MEDICO-SANITARY NEWS FROM RUSSIA.

A SECOND detachment of sisters, numbering forty-two, had been sent from St. Petersburg into the Government of Poltava, before the 4th inst., to give help in combating diphtheria, and twenty-two medical men had also departed for a like purpose for the same destination. Diphtheria has broken out with great severity at Katherinoslav and Voronege, and has invaded Volhynia. Serious famine is impending in the Caucasus owing to dearth and the destruction of crops by locusts. The government of the province is making large provision for the distribution of articles of food in the localities affected. Owing to the excessive sickness in St. Petersburg, especially, it would appear, the preparation of typhus, the hospital accommodation has become insufficient, and arrangements are being made for the preparation of extemporised hospitals. The municipality has undertaken to provide 200 beds in a disused barrack. Professor Erckmann, reporting to the Sanitary Commission on the sickness and great mortality in the capital, comments on the frightful state of the basements in which the greater part of the poor of St. Petersburg live. He describes them as damp, wanting in ventilation and light, with the air heavy and fetid. Typhus, according to the *Rigasche Zeitung*, is extending frightfully at Wenden. The town never before contained so many sick persons. Professor Botkine resumed his lectures at the Academy of Medicine on the 6th inst. The lecture room was crowded with students and medical men to welcome him.

DR. FARQUHARSON FOR WEST ABERDEENSHIRE.

AT a full and enthusiastic meeting at Aberdeen on the 13th inst., Dr. Robert Farquharson was chosen as a candidate, in the Liberal interest, for the representation of West Aberdeenshire. Dr. Farquharson would be a much-needed acquisition to the House of Commons, which exhibits a sad lack of members capable of dealing wisely and effectively with large questions of public health. Sanitation, as a part of political economy, now holds a prominence which it has never before occupied in this or any other country. It is therefore essential that amongst our legislators there should be men fitted by education and experience to take a wide and statesmanlike grasp of sanitary subjects. Dr. Farquharson fulfils this indication in an eminent degree, and by his acquirements and personal qualities would be a credit to any constituency, and an ornament to our Senate. We should be glad to see him returned at the head of the poll.

MOSQUITOS, FILARIÆ, ELEPHANTIASIS, AND MALARIAL FEVERS.

AT the meeting of the Quekett Microscopical Club last week the President, Dr. Cobbold, exhibited several filariæ from a mosquito forwarded to him from China. At the same time it was mentioned that he had also received fresh communications, not only from Dr. Manson, but also from Drs. Somerville, Bancroft, and J. da Silva Lima. It seems that Dr. Manson has made a new and very important discovery, which probably not only explains the periodicity of malarial fevers, but also many other hitherto unexplained physiological phenomena. At the next meeting, to be held at University College on the 27th inst., Dr. Cobbold will call the attention of the Club to these and other important additions to our knowledge of the filariæ, and the diseases which they occasion.

THE DOVER HOSPITAL.

A COMPROMISE has, it seems, been effected whereby this hospital regains the services of four of its honorary medical officers. It will be remembered that these gentlemen resigned their appointments in consequence of the governors of the hospital having rescinded a rule which prevented a house-surgeon from engaging in private practice in the town until the expiration of two years after his retirement from the post. The compromise, according to the *Dover Telegraph*, is that every resident medical officer appointed to the hospital shall, before entering his office, sign an agreement binding him not to practise as physician, surgeon, or apothecary, or accept any public medical appointment in the borough of Dover, or within two miles thereof, unless he shall have previously served as resident medical

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officer for a period of not less than five years, to the satisfaction of the committee. In other words, he must not only serve an apprenticeship of five years in the hospital, but acquit himself to the satisfaction of the committee before he can obtain the right to engage in the practice of his profession in this borough, or its immediate neighbourhood.

MEDICAL LEGISLATION.

THE various Medical Bills have either been read a second time or are in a fair way of being so, and so referred to the Select Committee. We have already expressed our strong feeling against a change in the chairmanship of the committee, and we should be equally opposed to the introduction of new members, who have not heard the evidence already adduced. Our objection would be the stronger if, as is feared, members are to be added who have shown no other interest in medical reform than the utterance of a panegyric on the existing Medical Council and its President. It is not thus that any reform is to be reached or any satisfaction given to the profession. All fears to the contrary, we are disposed to believe that there is a fair prospect of the Committee meeting and reporting in time for practical legislation this year.

SLOUGHING OF THE PANCREAS.

DR. CHIARI showed recently at the Gesellschaft der Aerzte, Vienna, a very singular preparation—a human pancreas which had sloughed and come away by the anus during life. The patient was thirty-eight years old, and until six weeks previously was perfectly well. He then became ill with symptoms of severe colic and intestinal obstruction. The abdomen became enormously swollen and everywhere painful. Then a considerable evacuation of the bowels occurred, the necrosed pancreas was passed per anum, and the man quickly recovered. Rokitansky described a somewhat similar case in 1864, and Chiari recently visited this patient and found him still perfectly well.

ANIMAL VACCINATION.

DR. CAMERON has again brought forward his Bill in the House of Commons to encourage vaccination by providing facilities for the optional use of animal vaccine. The terms are unaltered from those of the Bill he introduced last year, and would give the choice to parents, or others having charge of an infant, as to whether the vaccination should be performed with humanised or animal vaccine lymph, at a public vaccine station, and render it incumbent upon the public vaccinator to use animal lymph, if required. The Bill would also empower the Local Government Board to take the necessary steps for giving effect to such provisions by securing for the public use a supply of animal lymph, and providing for its distribution not only to public vaccinators, but also to medical practitioners practising within the United Kingdom.

THE ARTISANS' DWELLINGS ACT.

A BILL has been introduced into the House of Commons by the Lord Advocate and Sir Matthew Ridley for the amendment of the Artisans and Labourers' Dwellings Improvement (Scotland) Act, 1875, the principal clauses of which are likely to have a very good effect in facilitating improvement schemes.

By Clause 3 it is proposed to enact that in the assessment of compensation for any property which is a nuisance within the meaning of the Act, the sum which would have been necessary for the removal or abatement of such a nuisance shall be deducted from the sum awarded as compensation.

Clause 4 relates to the provision of accommodation for displaced inhabitants; and it is proposed that such accommodation may, subject to the approval of the confirming authority, be provided upon an area other than that which it is sought to improve, and a local authority may, for the purpose of providing accommodation for persons of the working classes displaced by any improvement scheme, appropriate any lands for the time being belonging to them which are suitable for the purpose, or may purchase by agreement any such further lands as may be convenient. It is also suggested in the schedule of the Act that the local authority may, under certain conditions, take only a part of a house, or other building, when such can be done without causing material damage. In this case special facilities are given for appealing and submitting the facts to a jury.

THE NON-PAUPER HOSPITAL QUESTION.

THIS question arose in the Poplar District Board of Works, the Mile-end Vestry inquiring upon what terms the Board would receive non-pauper cases from the parish. The Hospital Committee, whose report was accepted, were clearly of opinion that it would be undesirable for the Board to furnish and open the hospital and receive patients from outside districts at so much per head, and would lead the Board into a preliminary expenditure, the right to maintain which may be doubtful. In answer to the suggestion that the hospital be transferred to the Metropolitan Asylums Board, the Hospital Committee was of opinion that it would be undesirable to open up any negotiations for the sale of the hospital to any authority whatever.

NOXIOUS GASES FROM FACTORIES.

THE important deputation which was introduced to Mr. Sclater-Booth by Lord Derby on the 12th inst. urged upon the Government the advisability of bringing in and pressing forward a Noxious Gases Bill substantially identical with that of last session. On the following day leave for the introduction of such a Bill was obtained, and no doubt it will be printed before many days have passed. We can only hope that it will prove satisfactory to the vast number who are now seeking relief from a great and increasing evil without provoking any serious resistance from manufacturers. We shall refer to the matter again as soon as the first draft of the Bill is in our hands.

THE MARQUIS OF SALISBURY.

THERE are many incorrect reports as to the health of the Marquis of Salisbury. We are able to say that his lordship is *not* suffering from typhoid, that he has had no relapse, and progresses steadily, if not very fast, towards recovery. He is able to do a considerable amount of work.

THE following is the syllabus of nine lectures which will be delivered by Professor Flower, LL.D., F.R.S., in the theatre of the Royal College of Surgeons, commencing on Monday, the 1st proximo, at 4 o'clock, viz.:—Additions to the Museum since the last Course; the Barnard Davis Collection; Baron von Hügel's collection of Crania from the Fiji Islands, presented by Mr. Erasmus Wilson, anatomical characters of the Fijians as derived from this series; the Races of America; Prevalence of artificial cranial deformity; Antiquity of Man in America—Unity or diversity of race; Native races of North, Central, and South America; the Races of Africa; Physical characters of the typical Negro; Modifications of the Negro type—Bantu or Kaffirs; Hottentots—Bushmen; Inhabitants of North Africa, Berbers, Guanches, Arabs, Egyptians, ancient and modern. The course will conclude on Friday, March 19th. It is not generally known that metropolitan hospital students are admitted to these lectures.

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DR. DICKINSON, Dr. T. L. BRUNTON, and Dr. FERRIER, have been appointed to report to the Royal College of Physicians on the essays—eighteen in number—which have been sent in for the prize of £100, for an essay on Hydrophobia: its Nature, Prevention, and Treatment, offered by V. F. Benett Stanford, Esq., M.P. The questions which were thought by the College specially to require investigation are:—(*a*) the origin and history of outbreaks of Rabies, particularly in the United Kingdom and its dependencies; (*b*) the best mode of prevention of Rabies; (*c*) the characteristics of Rabies during life, and the anatomical and chemical changes which are associated with the disease in its successive stages, particularly in its commencement; (*d*) the origin of Hydrophobia in man; (*e*) the chemical and anatomical morbid changes observed in the subjects of the disease, with special reference to those having their seat in the organs of the nervous system, and in the salivary glands; (*f*) the symptoms of the disease, particularly of its early stage, as illustrated in well-observed cases; (*g*) the diagnosis of the disease in doubtful cases, from conditions more or less resembling it; (*h*) the alleged prolonged latency of the malady; (*i*) the efficacy of the various remedies and modes of preventing the disease, which have been proposed, and what plan of treatment, whether prophylactic or curative, it would be most desirable to recommend for future trial. Some of the essays received are of considerable length, so that the award of the judges cannot be expected for some months to come.

AT an ordinary meeting of the Board of Conservators of the Severn Salmon Fishery District, held a few days since at Gloucester, there was presented the fourth report on the subject of the contemplated supply of water to Liverpool from the Verniew. In the Bill now before Parliament it is proposed to take 40,000,000 gallons of water per day from that stream, which forms one of the upper sources of the Severn. The scheme was heartily condemned at the meeting, and a resolution unanimously passed to the effect that, in the opinion of the Board, the Liverpool Water Bill should be strenuously opposed. It was stated that the Verniew is the key to the Severn salmon fisheries, and that if the Bill were allowed to pass these fisheries would be destroyed.

DR. LYON PLAYFAIR has the following question down on the papers of the House of Commons for Monday next:—To ask the President of the Local Government Board, whether the eminent and long-continued services of Dr. Farr, who, since 1838, has added so much to our knowledge of vital statistics and public health by his work in the Registrar-General's Office, have received, since his resignation, any public recognition from Her Majesty's Government either in the form of increased pension or otherwise.

THE Imperial Ottoman Government has just decorated Dr. H. Crookshank with the Order of the Osmanié as a further recognition of his services on the battlefields of the Lom when in charge of the ambulances of the Red Cross Society during the late Turko-Russian War. Dr. Crookshank received the military war medal and Order of the Medjidié (4th class) for his services in Bosnia during the Servian war.

MR. STEPHEN ALFORD'S paper, read at the Social Science Association, on the subject of Habitual Drunkards, including an account of a recent visit to the American Inebriate Homes, was interesting; but it and the discussion which followed confirm us in the belief that little impression will be made on habitual drunkards till the law is amended and strengthened.

THE Sultan of Turkey has been pleased to grant the Order of the Medjidie to Dr. George Owen Mead, of St. Bartholomew's Hospital, London, and Mentmore House, Newmarket, for distinguished services in the field. Dr. Mead is a surgeon of the National Aid Society, and served with the staff of Sulieman Pasha, Mehemet Ali, and Baker Pasha in the Russo-Turkish war during the campaign in Bulgaria 1877–8, and was present at Karahassan-Koi, Cherkovna, Yeni Vervoka, Kadikoi, and other hotly-contested engagements, being frequently engaged in dressing the wounded under fire. Dr. Mead obtained the Brackenbury Surgical Scholarship in 1877 at St. Bartholomew's Hospital, and the Turkish war medal, and is now *en route* from the Cape and Natal with troops from the late seat of war.

SURGEON-GENERAL THOMAS CRAWFORD, M.D., has been ordered to Bengal to relieve Surgeon-General H. Ker Innes, C.B., as Principal Medical Officer in the East Indies. Dr. Crawford will be succeeded in Madras by Deputy Surgeon-General Sir Anthony Dickson Home, V.C., K.C.B., who, since his return from Cyprus, has been in charge of the Northern District, York.

THE members of the Edinburgh University Club dined at St. James's Hall on Wednesday, February 18th. Dr. John Lowe of King's Lynn presided. The annual general meeting was held previous to the dinner, and showed the club to be in a prosperous condition.

SURGEON-MAJOR CORNISH, F.R.C.S., the Sanitary Commissioner for Madras, has had conferred upon him the honour of being made a Companion of the Order of the Indian Empire. We welcome even this tardy recognition of his distinguished services.

WE are informed that the Secretary of State for War has appointed a Committee to inquire into the whole subject of the grievances of the Medical Officers of the Guards, and to make recommendations thereon.

THE amount divided amongst the present Medical Staff of the Royal Victoria Dispensary, Northampton (three in number), for their services during the year 1879, was £1937. This is exclusive of the cost of drugs, &c.

BY the decease of Mr. O'Leary, F.R.C.S.I., M.P. for Drogheda, two vacancies have arisen—viz., that of Examiner in the Royal College of Surgeons in Ireland, and the Visiting Surgeoncy to St. Vincent's Hospital, Dublin.

AN extraordinary prize of 3000 francs has been awarded by the French Académie des Sciences to Mr. Crookes, F.R.S., in recognition of his recent discoveries in Molecular Physics and Radiant Matter.

THE Prince of Wales has consented to preside at a festival dinner in aid of the Westminster Hospital, to be held on March 13th, at Willis's Rooms.

ON the 12th inst. Dr. Mussen was elected, without opposition, coroner for the Belfast district, in room of Dr. Hume, deceased.

THE profession will hear with regret of the death of Richard Rainsford, M.B., F.R.C.S.I., of Dublin, which took place on Tuesday last, after a lingering illness.

THE Duke of Edinburgh has accepted the office of President of the Charing-cross Hospital, in succession to Lord Overstone, who has resigned.

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NAVAL MEDICAL REFORM WARRANT.

I.

WE are far from supposing that the Army Warrant is perfect, yet it has undeniably disparaged the Navy more than ever. We find indeed that the former, including the Indian service, boasts of ninety-four candidates at the February examinations, while the latter service has picked up only five.

The Admiralty, whose defective Medical Orders in Council have been of late years unusually numerous, may well desire breathing time before exploiting another, so that the voice of the profession may be heard from outside, to guide them in framing such a one as may give the department the repose it has not enjoyed of late. We therefore venture to suggest the principal points that, as we think, need alteration, and we do so with the conviction that our suggestions will represent the *minimum* of what is now due in the way of reform.

It must be borne in mind that the last inquiry by Committee into the state of the Naval Medical Department was held in 1866, and that on its recommendations the Admiralty placed on record, by acceptance, several essential principles that cannot be now departed from without exciting discontent in an aggravated degree with any new Order in Council.

Our intention is to review in succession the leading points of the Army Warrant which materially affect the Navy, and to suggest, in passing, ways to remedy them.

Full-pay will ever constitute a point of primary importance with professional men, and there is no need to discuss what is asserted by the logic of facts—viz., that medical men cannot be got to serve in the navy on the same rates of daily pay as they would receive in the army so long as they are forcibly exposed to losses by compulsory half-pay. Further, the Admiralty fully accepted this proposition in their Order in Council of the 6th July, 1866, by which the full-pay was raised throughout the branch to a higher scale than that existing in the army, in accordance with the views of their mixed Committee of Navy and Army officers with representatives deputed by the Colleges of Physicians and Surgeons.

Since then various Orders in Council have been manufactured for both army and navy, without infringement of that principle, until the recent Warrant for the army, which has advanced its pay above that of the navy. The Naval Medical Service now claims to have the balance restored in its favour, by raising its scale of pay above the new scale of the sister service, in ratios approaching to those that existed previously. The *means of full-pay* given to each service immediately preceding the issue of the recent army Warrant are shown in Table I. Presuming that these tables are worked out on the assumption that promotion is given to surgeons of twelve years' service in both Army and Navy, and from staff-surgeon to fleet-surgeon after twenty years of full-pay service, the periods of twelve, eight, and ten years are adopted to display the averages of yearly pay during each of these periods.

TABLE I.

	Twelve years.	Eight years.	Ten years.	Thirty years in all ranks.	New rank of Brigade-Surgeon.	
Navy	Surgeon.	Staff-Surgeon.	Fleet-Surgeon.		On Promotion:	After five years:
Army	Surgeon.	Surgeon-Major.			Minimum.	Maximum.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Navy, at present	228 2 6	367 5 6	509 3 6	358 18 4		
Army, before Warrant ..	216 14 6	347 17 6	465 7 6	334 11 8	547 10 0	602 5 0
Difference	11 8 0	19 8 0	43 16 0	24 6 8	—	—
Percentage in favour of Navy	5½	5½	9½	7½	—	—

TABLE II.

	Twelve years.	Eight years.	Ten years.	Thirty years in all ranks.	After twenty years' service. New rank: Brigade-Surgeon.	
Navy	Surgeon.	Staff-Surgeon.	Fleet-Surgeon.			
Army	Surgeon.	Surgeon-Major.				
Army, New Scale of Pay ..	£233 2 6	£393 10 0	£479 0 0	£357 17 6	£547 10 0	£602 5 0
Percentage increase to Navy ..	5½	5½	9½	7½	—	—
Value of Percentages	£12 5 5	£21 19 0	£45 1 7	£26 1 9	—	—
Navy, relative increase ..	£245 7 11	£415 8 0	£524 1 7	£383 19 3	£547 10 0	£602 5 0

TABLE III.

Number of years	Twelve years.	Eight years.	Ten years.	Thirty years.	Twenty to thirty-three years.	
In rank of	Surgeon.	Staff-Surgeon.	Fleet-Surgeon.	All grades.	Brigade-Surgs., not yet established in the Navy.	
Mean yearly pay:	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Minimum.	Maximum.
New Scale of Army Pay ..	233 2 6	393 10 0	479 0 0	357 17 6	£ s. d.	£ s. d.
Navy — Calculated increase to ..	245 8 0	415 8 0	524 2 0	383 19 3	547 10 0	602 0 0
Navy — By Scheme A, for increase	235 14 6	410 12 6	520 2 6	377 2 6	—	—
Navy — By Scheme B, for increase	234 2 6	410 11 0	511 0 0	373 10 0	—	—

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In Table I. we have the elements of the problem that has to be worked out in justice to naval medical officers of the executive grades, inclusive of all ranks of surgeons—viz., the restoration approximately of the higher percentages existing by Orders in Council and by Admiralty and War Office Circulars previous to the late Army Order in Council of 27th November, 1879, and the establishment of a still higher but contingent scale of emoluments equivalent to what has been fixed for the new rank of "Brigade Surgeon" of the army, attached to that of Surgeon-Major, which is equal to that of Fleet Surgeon of the navy.

The next step will be to construct a scale of full-pay for the naval service, which shall, as nearly as possible, have regard to the principle of compensation for loss of time on compulsory half-pay; taking, as before, the ordinary periods of service in each grade of rank, and adding to the army new scale of pay the same percentages in favour of the navy as existed previous to the recent Army Warrant, which are shown in Table II.

These relative advantages in full-pay being now due to the naval surgeons, there are two courses by which those results may be achieved, of which the first (A) is in accordance with the existing scale of pay, with yearly increments of 1s. a day to staff and fleet surgeons; and the second (B) is a proposal more in accordance with the periods adopted by Order in Council of 6th July, 1866, so as to bring the periods more parallel with those adhered to for the army. (Table III.)

It happens that either of these principles is capable of being worked so as to evolve a scheme that shall bring the full pay of the navy not far from the higher percentages that existed in its favour prior to the late Army Warrant. In offering these for consideration, A represents the changes required in the present rates of pay, and B those in case of the principle of four- for five-yearly periods of service, justly adopted in 1866, being reapplied.

In Table I. are shown the percentages of increase, and under Table II. the means of periods required to restore to each grade of surgeons the percentages shown in Table I.; and Table III. gives the results of calculations carefully made in concurrence with the present and previous systems of payment organised for the use of the navy.

Having commenced with an intention to offer what we consider to be *the minimum of pay* due to the navy, with regard to its specialty of loss of time, we now appeal to these proposals in proof of moderation, but with the hope that the Admiralty will go beyond them in its new Warrant. The results, after thirty years' service, which very few fleet surgeons can reach, are below the calculated percentages, and it is so likewise with service in each grade of rank, but greatest in the grade of fleet surgeons, where it had grown since the Warrant of 1866 to nine per cent. in advance of the relative rank in the army. As the emoluments of army surgeons have progressed, so it should be with those of the navy, and at such a juncture as the present it would be well to settle them on a basis pervaded by a similar principle, which, in this scheme, is generally that of 2*s.* 6*d.* a day increase every four years, with greater benefit on promotion to staff surgeons' rank.

With regard to the new rank of Brigade Surgeon, the Admiralty may be slow to institute it; but there can be no doubt of the increase in pay due to it being a just claim on the part of Fleet Surgeons, who can but rarely exceed thirty years of full-pay service, while their brethren of the army readily reach thirty-three years. This difference is open to equalisation by a general increase in the pay of the former after the twenty-sixth year, when it is now at its maximum, or by giving to those serving in dockyards and marine divisions the same allowances as when employed in naval hospitals. Of these alternatives the former would perhaps be generally preferred, as it would be equally beneficial to all, whether serving ashore or afloat, whereas the latter would be suspected of keeping the door more widely open to favouritism than ever. The system of a second examination, exacted to a fair standard, before promotion to staff surgeon rank, is, at least, on the *primâ facie* presumption that those who press it are competent, professionally, to undertake any functions of their future rank; and, so long as they continue to serve, it must be a source of more general satisfaction to have full-pay regulated solely by length of service.

Concerning the future full-pay of the inspectorial ranks we imagine that there is no room for suggestion, in view of Art. III. of the Army Warrant, fixing to each of the grades its uniform rate of pay irrespective of length of service, so that the Admiralty will scarcely be free to fix any other rates than these in their unavoidable new Warrant.

The points of retirement and retired pay must be left for future examination.

HEALTH OF LARGE ENGLISH TOWNS.

SIXTH WEEK OF 1880.

THE effect of the recent cold and foggy weather does not seem to have yet fully expended itself on the rate of urban mortality, which again last week showed a marked excess, notwithstanding the much higher temperature that prevailed. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5303 births and 4323 deaths were registered last week. The births were 118, and the deaths so many as 1048, above the average weekly numbers during 1879. The deaths, however, showed a decline of 989 from the exceptionally high number in the previous week. The annual death-rate in the twenty towns, which had been equal to 28·0, 29·7, and 37·0 per 1000 in the three preceding weeks, declined again last week to 30·1. The lowest death-rates in the twenty towns last week were 19·3 in Leeds, 19·7 in Leicester, 19·9 in Brighton, 20·2 in Portsmouth, and 21·4 in Sheffield. The rates in the other towns ranged upwards to 28·6 in Newcastle-upon-Tyne, 29·8 in Liverpool, 30·6 in Plymouth, 31·2 in Nottingham, and 35·5 in London. The rate in London again showed a relatively large excess; the average rate in the nineteen large provincial towns did not exceed 24·9 per 1000, against 35·5 in London.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had steadily increased from 519 to 637 in the four preceding weeks, declined again last week to 589; they included 279 from whooping-cough, 110 from scarlet fever, 84 from measles, and 52 from fever, principally enteric. Whooping-cough showed the largest proportional fatality in Salford, Newcastle-upon-Tyne, and London; measles in Nottingham, Hull, and Plymouth; and scarlet fever in Sunderland, Bristol, and Bradford. Enteric fever shows fatal prevalence in Sheffield, where 10 deaths from that disease were recorded, including 7 in the workhouse. Twenty deaths were referred to diphtheria in the twenty towns, of which 13 occurred in London and 4 in Liverpool. Small-pox caused 12 more deaths in London, but not one in any of the nineteen large provincial towns. The prevalence of small-pox shows a considerable further increase in London. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 80 and 91 at the end of the two preceding weeks, further rose to 126 on Saturday last. The number of new cases of small-pox admitted to these hospitals during the week was 57, against numbers increasing from 8 to 36 in the four preceding weeks. This was a higher number of admissions than in any week since March last.

The fatality of lung diseases again showed a marked excess in London last week. The deaths referred to diseases of the respiratory organs within registration London, which had been 569, 759, and 1557 in the three preceding weeks, declined again last week to 1020, but showed an excess of 551 upon the corrected weekly average; of these 1020 deaths, 760 resulted from bronchitis, 171 from pneumonia, and 29 from asthma. The annual death-rate from lung diseases in London during the past six weeks of this year has averaged 11·5 per 1000. In Liverpool, which is the only other of the twenty large towns from which this information is available, the death-rate from lung diseases during the same period has not exceeded 9·2 per 1000.

ABERDEEN DISPENSARY.—At a meeting of the directors of the Aberdeen Dispensary, held last week—Lord Provost Jamieson presiding—it was resolved, on the recommendation of the Standing Committee, to change the system of retirement of the medical officers of the Board, so that in future, instead of one doctor retiring every year, the retirement should take place once in two years. The effect of this will be that the staff will hold office for twelve years instead of six years, as at present.

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Correspondence.

"Audi alteram partem."

IS INSANITY CAUSED BY "DRINK"?

To the Editor of THE LANCET.

SIR,—A leading article in your last issue discusses the question of "assigned causes" of death. Will you allow me to draw attention to the important fact that the "assigned causes" of disease are, as a rule, no better than the so-called "causes" of mortality to which your remarks principally apply. The method pursued in compiling or collecting evidences of causation is to ask leading questions of ignorant or prejudiced sufferers and their friends. What, for example, can be more insufficiently supported than the conclusion that drink is a considerable "cause" of insanity? The insane persons brought to asylums are not on admission in a state to form *any* judgment as to the causes of their derangement, and the reflections to which they are instigated after convalescence are manifestly worthless. By far the commonest cause of insanity is, I am persuaded, one which few men or women would be disposed to admit—namely, mental enfeeblement produced by mental debauchery, associated with, culminating in, and often seeming to be relieved by, physical abuse, which engenders first a recourse to restoratives, and then a longing and love for drink, either for its own sake or the passing sense of vigour it inspires. In this case the craving is a symptom or an effect, not a *cause*.

There is manifestly this fatal objection to guesses about the subjective experiences of a lunatic, not less than those of a "hypochondriac," or *malade imaginaire* of any class—namely, that it is almost impossible for a sufferer to discriminate between early symptoms and causes.

The crucial tests which must be applied to the question whether drink is a considerable "cause" of insanity are first practical and then pathological. How many instances does the average general practitioner, with a fairly-long experience, remember, or can he adduce, of habitual drunkards who have become insane? They have died of liver or kidney disease, they have had delirium tremens—a totally different matter from becoming insane—and they have been attacked by apoplexy, but they have *not* in any considerable proportion gone mad. This is a notable and significant fact.

The bulk of the evidence, on which the hypothesis that "drink" is a large factor in the causation of insanity rests, comes from the asylums, where obviously the least facilities exist for forming a judgment. If the facts were as they are represented to be, I venture to think that the general practitioners of the country would be the witnesses to this issue of intemperance rather than the medical officers of asylums!

This point is worthy of discussion by those competent to throw light on the fact—that is to say, general practitioners with extensive fields of observation. And it should be discussed on the basis of *records of practice*, without prejudice or a preconceived opinion.

Again, how *can* drink produce insanity? It is difficult to imagine that it is possible it should do so, otherwise than by producing degeneration of brain or nerve structure, which would set up special and recognisable forms of disease, or by inducing some variety of cerebritis which also would give rise to distinctive results. The proliferation of connective tissue is one of the prominent pathological changes produced by alcohol in the structure of numerous organs where its effects have been most carefully studied. The brain and nerve-centres of lunatics should present a corresponding condition if the cause of insanity were drink. Is it not, however, the fact that in those special forms of brain and nerve disease accompanied by "mind symptoms" which are commonly attributed to drink—e.g., general paralysis of the insane,—any abnormal increase of connective tissue found is rather *compensatory* than *causal*, as evidenced by the presence of interspaces between the atrophied corpuscles, or nerve elements, and the proliferated tissue?

It is not enough to say "drink is a common and increasing cause of insanity." We require to be told the particular physical changes it induces, and by what pathological process the result is reached. And if such a cause can be shown to exist, it will of course be possible to find cases in the various stages of decadence to the level of lunacy, so that the question of "causation" shall not, as now, be left in scientific obscurity glossed over by a fashionable conjecture which places everything in doubt.

The subject is one of pressing interest, because a graver mischief than any which can be caused by drink is veiled. If a real advance is to be made in the elucidation of etiology this must be accomplished by more precise methods of inquiry, and better and more responsible "returns" than those whereby the data now at the disposal of the profession are obtained. It is of high moment that results of all classes should be traced to their true sources, but it is better not to speak of "causes" unless we are quite sure that those "assigned" are something more than *suspected*. It is with the *positive* in causation, as in every other phase of development, science must deal.

Yours obediently,

Scientific Club, Savile-row. J. MORTIMER-GRANVILLE.

DEATH FROM CHLOROFORM.

To the Editor of THE LANCET.

SIR,—The report of the death from chloroform at the Lynn Hospital, as detailed in a letter in your last issue, prompts me to make a few remarks upon the treatment of these cases, especially as they have been somewhat numerous of late.

I do not think that many who administer chloroform appreciate the importance of *immediate*, systematic artificial respiration being adopted at the first appearance of the natural cessation or failure of these functions, and often the valuable *seconds*, which may make the difference between the life or death of the patient, are wasted by watching to see if breathing has returned, or is likely to return, by dashing cold water on the face and other efforts, which, though indirectly of some service perhaps, cannot cope with the real danger. Engaged in considerable ophthalmic and general surgical practice, I must have administered or caused to be administered, some form of anæsthetics (chiefly chloroform) several thousands of times within the last fifteen years, and it affords me great pleasure to say that I have never witnessed a death from any of these agents. I have notes of five cases in which death seemed imminent, but was averted. The plan which I always adopt is to commence at the first appearance of danger Silvester's method of artificial respiration, and continue it until natural respiration is completely established. If plenty of assistants are at hand they may apply other adjuvants, such as cold applications, galvanism, enemata, &c., but the person who *has commenced artificial respiration* should *continue uninterruptedly*, and without a moment's cessation, his efforts, nor should they be discontinued, under any pretext whatever, until life returns, or the patient is unmistakably beyond the reach of medical aid.

I am, Sir, yours, &c.,

CHRISTOPHER S. JEAFFRESON, F.R.C.S.

Newcastle-on-Tyne, Feb. 16th, 1880.

ABSORBENT AND MEDICATED SURGICAL DRESSINGS.

To the Editor of THE LANCET.

SIR,—Since you favoured me by publishing my article under the above heading (THE LANCET, Jan. 24th, p. 127), many cases in the practice of other surgeons, as well as in my own, have proved the perfect comfort, and great therapeutic value, of the absorbent cotton-wool and gauze pads, with and without antiseptic and styptic medication.

I beg leave through your columns to express regret for sending such scanty specimens to those gentlemen who have applied to me for the materials. The fact is, such has been the demand that it has been impossible to meet it. This difficulty cannot recur, as the matter has been taken in hand by the well-known manufacturing chemists of this town, Messrs. Southall Brothers and Barclay.

Amongst many other cases, I have lately employed the pads after two operations for strangulated hernia. In the first (aged seventy-five, five days' strangulation, femoral, sac opened), cicatrix solid, and the patient left her bed the eleventh day, after three dressings. In another (aged thirty-four, large bubonocele, acute strangulation, sac

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opened), the temperature was normal, the cicatrix firm, and the man out of bed the eighth day.

The suggestion to use the pads in childbed, instead of napkins, has been acted on by several accoucheurs, who speak of their comfort and purity with approval.

I am, Sir, faithfully yours,

Birmingham, Feb. 15th, 1880. SAMPSON GAMGEE.

TREATMENT OF ACUTE RHEUMATISM.

To the Editor of THE LANCET.

SIR,—Will you kindly grant me a small space to correct an error into which Dr. Sinclair has fallen in referring to some cases of rheumatism published by me a year or two ago?

Dr. Sinclair says: "The results show..... three fatal cases in a total of sixteen." Sir, the *total* number of cases was *not* sixteen; those were only the selected cases out of some sixty or seventy, amongst which I naturally recorded *all* the fatal ones. We have had, as may be supposed, many more cases since, but without another death from any cause.

I care not whether this or that drug is beneficial in rheumatism, but in judging of their respective merits, let us give each one fair play.

I am, Sir, your obedient servant,

Harley-street, W., Feb. 17th, 1880. JULIUS POLLOCK.

PREGNANCY AFTER OVARIOTOMY.

To the Editor of THE LANCET.

SIR,—The replies to "Beta" in to-day's issue fully set at rest the question whether the sex of the child is determined by the ovary from which it is generated. In my patient the right ovary was removed. Dr. T. J. Walker, who operated, writes me: "Another of my patients had a child after ovariotomy, but I have not noted which ovary was removed, nor do I know the sex of her child. A third has, I believe, had children, but I have lost sight of her."

I am, Sir, yours, &c.,

Henrietta-street, Feb. 14th, 1880. C. F. HARDING, M.D.

PARLIAMENTARY PROCEEDINGS.

HOUSE OF COMMONS.

Thursday, Feb. 12th.

WATER-SUPPLY OF LONDON.

MR. FAWCETT asked the Home Secretary when the Bill relating to the water-supply of London would be introduced.

Mr. SCLATER-BOOTH, on behalf of his right hon. friend (Mr. Cross), stated that the Bill in question was in a forward state of preparation; but he was not at that moment in a position to say on what day it would be introduced.

Obituary.

JAMES CASKIE, L.F.P.S. GLAS.

MR. CASKIE, whose death took place on Feb. 5th, at the age of seventy-nine, was a native of Stewarton. After attending at the University of Glasgow, he settled at Largs, where he practised for the long period of fifty-four years, and of which town he was medical officer of health. Long before his appointment to this post, however, he was engaged, with others, in the promotion of sanitary improvements in the town, and in 1856, after the first appearance of cholera in this district, he published an address on the importance of cleanliness, ventilation, and other hygienic arrangements. Many people believed that the pamphlet assisted in inaugurating the excellent system of drainage in use at Largs, whereby every street and lane in the town is flushed with the waters of the Gogo, thus lessening the virulence of the epidemics of typhus, which had formerly been frequent and fatal. In January, 1878, a number of his friends presented Mr. Caskie with a silver tea and coffee service in recognition of his worth as a citizen, and of his skill and kindness as a medical practitioner; and at the time of his death a large sum had been subscribed for the purpose of presenting him with a life-sized marble bust of himself, which will now probably revert as a welcome memento to his bereaved family.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Licentiates of the College on Feb. 16th:—

Baker, William James, Millbrook, Southampton.
Paddle, James Isaac, University College Hospital.
Shears, Chas. Hartley Bedwell, St. Bartholomew's Hospital.
Stokes, Henry Fraser, Compton-terrace.
Weed, Theodore Arthur, M.D. Wooster, Strand.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Feb. 12th:—

Battiss, William Sullivan, London Hospital.
Ensor, Theodore Francis, Milbourne Port, Somerset.
Finch, Alfred, Blackheath.
Jones, Robert, Easteddefa, North Wales.
Knight, George Henry, Wimbledon.
Rygate, David John, Cannon-street-road.
Walker, William Frederic, Saltoun-road, Brixton.
Wall, George Braithwaite, Bockerstaffe, Ormskirk.

The following gentleman on the same day passed the Primary Professional Examination:—

York, Thomas Hutton, Queen's Hospital, Birmingham.

UNIVERSITY OF DUBLIN.—The following degrees were conferred last week:—

BACHELOR IN SURGERY.—Abraham Cohen, John Singleton Darling, Malcolm Henry Moore, Alexander Silcock, David Chadwick Smith.
BACHELOR IN MEDICINE.—Charles Hampden Dixon, Richard Charles Coleman Hickson, John Seymour Kane, Thomas John Rashleigh Lucas, Alfred Mason, E. Erskine Moore, Francis Albert Mouillot, William Johnstone Patton, Alexander Silcock, David C. Smith, Richard Charles Studdert.
DOCTOR IN MEDICINE.—Henry Nathaniel Dudley, Richard Charles Coleman Hickson, Jonas Sealy Poole.

THE Lurgan Guardians have increased the salary of the medical officer of the workhouse by £50 yearly.

SEVERAL fines have been imposed at Brighton for infringement of the Compulsory Vaccination Act.

DR. JOHN T. BANKS has been appointed Governor of the House of Industry Government Hospitals, Dublin, *vice* Sir D. Corrigan, Bart., M.D., deceased.

OWING to the prevalence of measles, the Bangor Local Board of Health have found it necessary to recommend the closing of elementary schools in the town for a month.

MR. J. D. JEFFERY, late medical officer of the Worcester Workhouse, has received a superannuation allowance of £40 per annum.

AT the meeting of the supporters of the Birmingham Hospital Saturday movement last week, it was announced that the amount of the last collection was £3422, as against £3188 in the preceding year.

IT has been decided that the unhealthy Monderaggio, or Seven Dials of Malta, shall cease to exist, and dwellings constructed on sanitary principles be provided for its densely-crowded, poverty-stricken inhabitants. This reform comes not before it is needed.

DR. J. G. M'KENDRICK has brought to a conclusion his course of lectures on the Brain and the Senses, which have been delivered during the past six weeks in the Free Church College, Aberdeen. From the first lecture to the last the attendance has been exceedingly large, the College Hall being filled on every occasion.

THE managers of the Women's Hospital in Birmingham have, we are informed, made arrangements to connect by telephone the in-door and out-door departments, and these with the doctors' residences. This arrangement will save time and trouble, and enable the managers to control the out-patient department in the county as easily as the in-patient department in the town.

THE HOSPITAL FOR SICK CHILDREN.—The annual festival will be held on Thursday, April 8th, 1880, at Willis's Rooms, King-street, St. James's. Sir James Paget, Bart., F.R.S., has consented to take the chair.

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VACCINATION GRANTS.—The following gentlemen have obtained a Government gratuity for successful vaccination in their respective districts:—Mr. William Arrowsmith, Darlington (fourth time), £63 7*s.*; H. de M. Pentland, Leeminster, £17 18*s.* (third time); Dr. A. F. A. Fairweather, of the Pocklington Union, £5 12*s.*

CARDIFF MEDICAL SOCIETY.—The annual meeting of the members was held at the Infirmary, Cardiff, on 15th January, when the following officers were elected:—President, Dr. A. P. Fiddian; Vice-President, Dr. Thos. Wallace; Committee, Mr. C. E. Hardyman, Mr. John Evans, Dr. F. W. Evans, and Dr Campbell. Hon. Sec. and Treasurer, Mr. Thos. Garrett Horder.

SMALL-POX IN DUBLIN, 1879.—During the past year small-pox caused 520 deaths in the Dublin Registration District, being a decrease of 30 as compared with 1878. The number of patients suffering from the disease admitted to the Dublin Hospitals was 1797, there being actually in hospital at the end of the year 77 cases. Of the 520 deaths recorded, 405 took place in hospitals; and estimating the number of cases outside hospitals by the rate of mortality within these institutions, it is probable that there were altogether not less than 2200 cases of small-pox in the Dublin Registration District during 1879.

ST. JOHN'S AMBULANCE ASSOCIATION.—In connexion with the above association a course of lectures has just been concluded at the Mission Hall, Prince's-street, Wapping. The subject of the course, which was delivered by Dr. William Collingridge, was the General Structure and Functions of the Human Body, the Recognition and Immediate Treatment of Injuries of all kinds, Fits, Cases of Drunkenness, Insensibility, &c., until proper medical attendance can be procured. A final lecture was given by Mr. John Furley, of the association, on "Transport of Sick and Wounded." The class consisted chiefly of superintendents and overseers of docks, &c.

LONDON FEVER HOSPITAL.—Lord Devon presided at the annual meeting of the governors of this hospital, held this week at the Freemasons' Hall. The medical officer's report stated that 817 patients were admitted during the year, and, with 91 who remained from the previous year, a total of 908 were treated during the twelvemonth. Of these, 7 were cases of typhus, 82 of typhoid, 666 of scarlet fever, 74 of measles, 10 of diphtheria, and 68 of other diseases. A large number of these cases, though of the class above paupers (who are provided for in other institutions), were admitted without payment. Of the cases 123 came from other institutions. The President expressed his deep regret at finding that the committee of management had again to call attention to the fact that the annual expenditure much exceeded the income of the charity (owing to old subscribers having died off). He added that the affairs of the hospital were economically conducted, and he was astonished that the public should allow the funds to fall to a low ebb, especially considering its important work.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.
A Movable Atlas of the Human Body. By Professor G. J. Wilkowski, M.D. Translated into English by Dr. R. H. Semple. Parts I. to IV.
Aids to Materia Medica. By Armand Semple.
Aids to Physiology. By Thompson Lowne.
Observations on Fatty Heart. By H. Kennedy.
Chirurgie Antiseptique. By Dr. J. Lucas-Championnière.
Contributions to Cardiac Pathology. By John Cockle, M.D.

J. & A. CHURCHILL, London.
An Atlas of Human Anatomy. By R. J. Godlee. Part XI.
The Student's Guide to Surgical Anatomy. By E. Bellamy.
Student's Primer on the Urine. By Dr. J. T. Whittaker.
Post-mortem Examinations. By Professor R. Virchow.
Headaches. By Dr. W. H. Day.
The Spectroscope in Medicine. By Dr. E. A. Macmunn.
Pseudo-Hypertrophic Muscular Paralysis. By Dr. Gowers.
Manual of Minor Surgery and Bandaging. By C. Heath.
Cancer of the Rectum. By Mr. Harrison Cripps.

HODDER & STOUGHTON, London.
Studies in Life. By Dr. H. S. Paterson.

H. K. LEWIS, London.
A Note-book of Solubilities. By J. Eagle.
Handbook of Therapeutics. By Dr. S. Ringer.

J. B. LIPPINCOTT & Co., London.
Paracentesis of the Pericardium. By Dr. J. B. Roberts.

LONGMANS, GREEN, & Co., London.
Economic Studies. By the late Walter Bagehot. Edited by R. H. Hutton.

MACMILLAN & Co., London.
Pharmacology and Therapeutics, or Medicine Past and Present. By T. L. Brunton.
Hints to Housewives. By Mrs. Frederick.

SMITH, ELDER, & Co., London.
A Manual of Skin Diseases. By Malcolm Morris.
A Rule of Proportion for the Human Figure. By John Marshall.

J. VAN VOORST, London.
The Micrographic Dictionary. By Messrs. Griffith and Henfrey.

Die Messung des Pulse und des Blutdrucks am Menschen. Von Dr. L. Waldenburg. (M. A. Hirschwald, Berlin.)—Conférences Pratique de Médecine Légale. Par E. Elément. (Baillière et Fils, Paris.)—Letts's Popular Atlas. Part I. (Letts & Son, London.)—The Girl's Own Paper; February. The Sunday at Home; February. The Leisure Hour; February. The Boy's Own Paper; February. (The Religious Tract Society.)—Good Words; February. The Sunday Magazine; February. (Isbister & Co.)—Fraser's Magazine; February. (Longmans, Green, & Co.)—Annals of the Anatomical and Surgical Society. (G. P. Putnam & Sons, New York.)—Time; February.—The Contemporary Review; February. (Strahan & Co.)—Atlas of Histology. By Dr. E. Klein and E. N. Smith. Part X. (Smith, Elder, & Co.)—Notes to accompany Mr. Wyld's Map of Central Asia and Afghanistan. (Mr. Wyld.)—Whitaker's Almanack for 1880. (J. Whitaker.)—Influence des Corps Gras sur l'Absorption de l'Arsenic. Par le Docteur A. Chapuis. (Baillière et Fils, Paris.)—The Relationship of Anatomy to the Fine Arts. By S. Messenger Bradley. (J. Heywood, Manchester.)—Nagra ord, om mina nyuppfunna metoder att göra fartyg helsosamma och omöjliggöra farsoters uppkomst och utbredning om skeppsbord jemte förslag till tidsenliga och högst nödvändiga hygieniska förbattringar a fartyg. By Dr. Fredrik Eklund. (A. L. Normans, Stockholm.)—Vierteljahresschrift für Dermatologie und Syphilis. (Wilhelm Braumüller, Wien.)—Bentley and Trimen's Medicinal Plants. (J. & A. Churchill.)—The Waters of Kreuznach. By Dr. Engelmann. (J. & A. Churchill.)—Climate and Health of South Africa. By Mr. J. Bonwick. (S. W. Silver & Co.)—On Common Lodging-house Accommodation. By F. Vacher. (T. Richards.)—On some Substitutes for Alcohol in the Treatment of Fevers. By F. Vacher. (National Temperance Publication Depôt.)—The Victorian Review. (The Victorian Review Publishing Company, Melbourne.)—Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States for 1878 and 1879. (Government Printing Office, Washington.)—A Detached Left Occipital Lobe and other Abnormalities in the Brain of a Hydrocephalic Imbecile. By A. C. Clark, M.B. (Alex. Rivington, Lewes.)

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ARMITAGE, W. H., L.R.C.P.Ed., L.F.P.S.G., has been reappointed Medical Officer of Health for the Over Darwen Urban Sanitary District, Lancashire, at £120 per annum, until the 29th September, 1881.

BIRDWOOD, R. A., B.A., M.R.C.S.E., has been appointed House-Surgeon to the Gravesend Dispensary and Infirmary, vice Flight, resigned.

BOWLBY, Mr. A. A., of St. Bartholomew's Hospital, has been appointed Registrar and Chloroformist to the Evelina Hospital, Southwark-bridge-road, vice Burgess, resigned.

BROOM, C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Wednesfield District of the Wolverhampton Union.

COGAN, L. F., L.R.C.P.Ed., M.R.C.S.E., has been appointed an additional Medical Officer to the Royal Victoria Dispensary, Northampton.

CROOKSHANK, H. M., L.K.Q.C.P.I., M.R.C.S.E., has been appointed a Medical Officer to the North Kensington and Kensal-town Provident Dispensary, vice Gell, resigned.

CULLIMORE, D. H., M.K.Q.C.P.I., F.R.C.S.I., has been appointed a Physician to the North-West London Hospital.

DE LA HUNT, J. J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Attendant to the Royal Irish Constabulary, Lawrencetown, co. Galway, vice Brodie, resigned.

DIXON, H., M.D., L.R.C.P.Ed., has been elected a Physician to the Sunderland Infirmary, vice Bowman, resigned.

EASTALL, H. F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Halford District of the Shipston-on-Stour Union, vice Sherrard, resigned.

EWART, W., M.B., M.R.C.P.L., has been appointed an Assistant-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, vice Thompson.

FISHER, F. C., M.R.C.S.E., L.S.A.L., has been appointed Assistant House-Surgeon to St. George's Hospital, vice Shefld, appointed House-Surgeon.

FORSYTH, R., M.D., C.M., has been appointed Medical Officer for the Fourth District of the North Bierley Union, vice Hunter, deceased.

GOULD, A. P., M.Ch., F.R.C.S., has been elected Surgeon to the British Equitable Assurance Company, vice E. Carr Jackson, deceased.

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GRIFFITH, G. R., M.B., C.M., has been appointed Medical Officer for the First Carnarvon District of the Carnarvon Union.

GRIMSHAW, T. W., M.D., has been appointed a Consulting Physician to Steevens's Hospital, Dublin, vice Burke, deceased.

HALL, F. de H., M.D., M.R.C.P.L., has been elected Honorary Physician to St. Mark's Hospital, City-road, vice Dr. Arthur Leared, deceased.

HAYES, R. A., M.D., has been appointed a Physician to Steevens's Hospital, Dublin.

JACOB, J. B., M.B., L.R.C.S.I., has been appointed Medical Officer, Medical Officer of Health, and Public Vaccinator to the Fifth District of Plympton St. Mary Union, vice Govett, resigned.

JOY, F. W., L.R.C.P.Ed. & L.M., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Thetford Urban Sanitary District, at £20 for one year.

LETTIS, T., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer to the Great Yarmouth Hospital.

LILLEY, G. H., M.D., M.R.C.P.Ed., has been appointed Medical Officer for the Ogley Hay District of the Lichfield Union.

LUCAS, H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of the Workhouse of the Huntingdon Union.

MCHARDY, M. Macdonald, F.R.C.S., has been appointed Professor of Ophthalmology to King's College, London, and Ophthalmic Surgeon to King's College Hospital, vice Wells, deceased.

MAYO, A. C., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer to the Great Yarmouth Hospital.

MILSOME, J. R., M.D., L.R.C.P.L., has been appointed Certifying Factory Surgeon for the District of Chertsey, Surrey.

MOORE, J. N., M.R.C.S.E. & L.M., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Moreton-in-Marsh, Gloucestershire.

PARISH, F., M.R.C.S., L.R.C.P., L.M., has been appointed House-Surgeon to the West Kent General Hospital, Maidstone, vice Knowles, resigned.

PHILPOT, B. P., L.R.C.S.I., L.A.H.D., has been appointed an Assistant House-Surgeon to the Liverpool Dispensaries.

POLLARD, W., F.R.C.S.E., has been appointed a Consulting Surgeon to the Torbay Hospital and Provident Dispensary, Torquay, on resigning as Surgeon.

ROBINSON, M. K., M.D., has been reappointed Medical Officer of Health for the Broadstairs Urban Sanitary District, at £90 per annum, until the 25th December, 1884.

ROSSITER, G. F., M.B., has been appointed an Honorary Assistant Medical Officer to the Weston-super-Mare Hospital and Dispensary.

SPURGIN, T., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Blackmore District of the Ongar Union.

TWEEDY, H. J. C., M.D., has been appointed a Physician to Steevens's Hospital, Dublin.

WADE, J. J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer, Public Vaccinator, &c., for the Lettermore Dispensary District of the Oughterard Union, co. Galway, at £110 per annum and fees, and £12 per annum as Medical Officer of Health, vice Greely, deceased.

WALLIS, F. M., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Third District of the Battle Union.

WATSON, C. S., M.B., C.M., M.R.C.S., has been elected House-Physician to the Bristol Royal Infirmary, vice Scott, resigned.

WILLIAMS, P. H., L.R.C.P.L., M.R.C.S.E., has been appointed Certifying Factory Surgeon for the District of Windsor.

WOTHERSPOON, T. A., M.D., C.M., has been appointed Certifying Factory Surgeon for the District of Brampton, Cumberland, vice Thom, deceased.

Births, Marriages, and Deaths.

BIRTHS.

BERRY.—On the 2nd inst., at Appleton Cottage, Great George-street, Wigan, the wife of William Berry, M.R.C.S.E., L.R.C.P.Ed., L.R.C.S.Ed., of a son.

CAMERON.—On the 12th inst., at 2, Charlton Villas, Harlesden, N.W., the wife of H. H. Cameron, L.R.C.P.L., M.R.C.S.E., of a daughter.

COLINGRIDGE.—On the 31st ult., at Selwood, Forest-hill, the wife of William Colingridge, M.B., of a daughter.

COLLINS.—On the 17th inst., the wife of H. A. Collins, Esq., The Chantry, Saxmundham, Suffolk, of a son.

DAVEY.—On the 3rd ult., at Beaufort West, Cape of Good Hope, the wife of Charles James Davey, M.B. (late of Colchester, Essex), of a son.

PARNELL.—On the 15th inst., at St. Norman's, London-road, Forest-hill, S.E., the wife of Gerald Crécy Parnell, M.R.C.S.E., L.S.A.L., of a son.

MARRIAGES.

COLENSO—KERR.—On the 7th ult., at St. Giles's, Oxford, Robert John Colenso, M.B., to Emily Anne, daughter of the late T. C. Kerr, Esq.

GARBETT—SOULBY.—On the 10th inst., at Holy Trinity Church, Hull, Edward Henry Garbett to Henrietta Louisa Ann, only child of Henry Soulby, M.D., and granddaughter of J. P. Bell, M.D., J.P.

DEATHS.

ALLEN.—On the 9th inst., at Welbourn Hall, Grantham, Lincolnshire, Caroline, the wife of Robert Marshall Allen, M.D., Deputy Inspector-General of Hospitals H.M. Army.

CLOUTING.—On the 12th ult., at Thetford, Grace Rebecca, the infant daughter of J. R. Clouting, M.R.C.S.E., aged 6 weeks.

HALL.—On the 4th inst., at Malta, Surgeon-Major A. R. Hall, of dysentery contracted when serving in Afghanistan.

WILLETT.—On the 12th inst., at Brandon, Edith, the wife of Charles V. Willett.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Feb. 19th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Feb. 13	30·22	W.	38	36	..	48	35	..	Fine
,, 14	29·89	S.	44	41	..	45	35	..	Cloudy
,, 15	29·50	S.E.	45	43	..	47	42	0·05	Raining
,, 16	29·20	S.E.	47	46	..	54	41	0·17	Raining
,, 17	28·91	N.W.	43	42	..	50	42	0·27	Raining
,, 18	29·31	S.W.	47	45	..	55	40	0·03	Raining
,, 19	29·34	S.W.	51	50	..	55	45	0·07	Raining

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE MEDICAL PROFESSION AS A CALLING.

IT is strictly true that the medical profession is overcrowded, and cannot be regarded as an eligible "calling" for needy men, or indeed for men who are not practically independent of their work as a means of livelihood. The labourer is worthy of his hire, and it is in the last degree desirable that a full and fair tariff of fees should be maintained; but we cannot recommend young men without sufficient private resources to enter the profession. It is because a serious mistake has been too often made in this matter there are in our ranks many hundreds of able but distressed practitioners who contend with eagerness among themselves for appointments of almost any class which seem to offer the means of bare sustenance. The profession labours under great disadvantages resulting from its crowded state and the impecuniosity of its members. One, though not the only, reason why the scale of payments for public services—for example, attendance on the sick poor—is so low will be found in the number of eager applicants for any vacant post, let the emolument be small as it may. Parents and young men of narrow means will do wisely to be warned, and look elsewhere for a vocation which brings adequate rewards. There is not a word of exaggeration in the statements which have been recently made on the subject, and we trust they will have a detesent effect.

Mr. Harry W. Houss.—Some of the colonies have Medical Acts; some have not.

R. M. O.—It is not necessary to insert the letter sent us.

A MEDICAL POST-CARD.

To the Editor of THE LANCET.

SIR,—I have received a post-card from the British Medical Temperance Association, announcing that at a meeting shortly to be held one of their members will read a paper "On the Use of Alcohol during the Menstrual Period." It seems to me that it is most objectionable to send announcements such as the following on post-cards:—

"*British Medical Temperance Association.*

"The next quarterly meeting of the Association will be held in the Rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, London, W., on Thursday, February 12th, 1880, at 4 P.M., when a paper will be read by Dr. C. J. Russell 'On the Medical Profession and Total Abstinence,' and Dr. Norman Kerr will present a communication 'On the Use of Alcohol during the Menstrual Period.'

"Enfield, Middx., Feb. 3rd, 1880." "J. JAMES RIDGE, Hon. Sec.

Surely the Association can afford to pay for envelopes and stamps. If they cannot, then members had better subscribe a shilling each to help to pay for the twelve monthly announcements.—Yours &c.,

London, Feb. 12th, 1880. M.R.C.S.

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COMPULSORY MEDICAL ATTENDANCE.

IN our impression for the 7th inst., a correspondent asked us if there were any Act of Parliament to compel a medical man to attend professionally any case which he might be called to. To this question we answered "No; but he must exercise judgment in refusing to attend," adding certain reasons why he should do so. A correspondent, under the signature "Advanced Student," writing from Belfast, takes exception to this answer, and says if it (the exercise of judgment, to wit) were "made a rule of practice," it would be "sufficient to disquiet all medical students with the profession either as a means of earning their bread or accumulating wealth, and cause them to pause before assuming the fatal *licence* to practise, which seems rather a command to practise for the remainder of their natural life without the slightest choice of patients," with many other direful things in prospect. Nevertheless, the exercise of judgment in the matter in question has not worked badly hitherto on both sides the Irish Channel, and, as a matter of experience, we should urge its exercise upon our correspondent in his own interest.

Old Salt.—We are unable to supply our correspondent with the information he asks for. Write to the Secretaries of the Companies named.

Mr. George H. Knight.—Registered medical practitioner.

INDIAN MEDICAL SERVICE PENSION RULES.

To the Editor of THE LANCET.

SIR,—I shall feel obliged if you kindly allow me, through the medium of THE LANCET, to direct attention to the Indian Medical Service Pension Rules, and to contrast the rates of pension granted under them with those granted to the Army Medical Department.

It may seem incredible, but it is a fact, that it takes an Indian officer twenty-four years to earn a pension of £1 a day, or £365 a year, which an officer in the Army Medical Department, with the advantages of home service, can earn in twenty years. The anomaly of requiring an officer to serve four years longer, to earn a pension in an exhausting tropical climate, than he would have to serve in the home service to earn the same pension, is self-evident; but when I explain how in practice the conditions of Indian service in many cases postpone indefinitely the time when pensions can be obtained, the illiberality and harshness of the Indian Pension Rules will be understood.

The following tables show the rates of pension and the periods after which pensions are obtainable in both services:—

Army Medical Department.

Surgeon-Major after	20 years' service ..	£365	0	0	a year.
,,	,, 25 ,, ..	410	12	6	,,
,,	,, 30 ,, ..	456	5	0	,,
Brigade Surgeon ,,	20 ,, ..	501	17	6	,,
,,	,, 30 ,, ..	547	10	0	,,
Deputy Surgeon-General		638	0	0	,,
Surgeon-General		730	0	0	,,

Indian Medical Service.

Surgeon-Major after	17 years' service	£220	a year.
,,	,, 21 ,, ...	292	,,
,,	,, 24 ,, ...	365	,,
Brigade Surgeon ,,	27 ,, ...	456	,,
,,	,, 30 ,, ...	550	,,

From the above it will be seen that, in the Indian Service, pensions are calculated by length of service only, and not in any way with reference to rank. The first period for pension in the Indian Service is shorter than in the Army Medical Department; but the service required from an Indian officer to entitle him to £365 a year, the lowest rate of pension in the A.M.D.'s scale, is twenty-four years, twenty-two of which must be spent on duty in India. An Indian officer is entitled to four years' furlough in twenty years' service, and generally requires that amount to recruit his health; yet, strange to say, leave of all kinds in excess of two years in twenty-four, even sick leave granted on account of illness contracted on duty, is not allowed to count as service for pension. As few constitutions can pass for twenty-four years through the ordeals of a tropical climate without requiring change of air to a greater extent than is allowed by this rule, it virtually is, to many, prohibitive of all pensions except the lowest, as every day's leave taken in excess of the sanctioned two years prolongs to the same extent service in India—a serious matter to a declining constitution. As an illustration in point, I may quote a case, not a very exceptional one, in which an officer lost his health on service during the mutiny, and was invalided to England. On his return to India, he found that his health had been so much undermined he was obliged to take more leave during his further service than he had anticipated, and that when he had determined from the broken state of his health to retire, he could not do so, as after over twenty-two years' service, almost nineteen of which had been passed in India, he was only entitled to a pension of £220 a year. He struggled to complete the next period of service, which would have given him a slightly higher pension, one not equal to the lowest in the A.M.D. scale, but he died in the attempt. He held at the time the rank of surgeon-major (senior grade), and his wife received the pension of a lieutenant-colonel's widow, or £225 a year, or £5 more than her husband's services had earned for him in twenty-two and a half years in a climate which caused his death. His widow also received £40 a year for each of her sons, so that the death of her unfortunate husband was, from a pecuniary point of view, an absolute gain to his family of £85 a year. It may, I think, be assumed that in no other service in the world could Pension Rules be found so framed as to make it possible that the death of a husband would be a benefit to his widow and family.

The existing Pension Rules are certainly out of date now, and require revision, not only of the rates of pensions, but of the conditions under which pensions are granted. The former should be calculated with reference to rank as well as length of service, and the latter should be hampered by no such illiberal restrictions as at present place out of reach of most men all but the lowest rates of pension. There is no reason why the Indian Medical Service Rules should be calculated on principles different from those of the A.M.D., or why the disadvantage of exile in a tropical climate should not tend to lessen instead of to increase, as it does at present, the amount of service required for an Indian pension.

Service on the coast of Africa counts double for members of the A.M.D., and for each year's service on the coast a year's leave at home is granted. Why should not consideration somewhat similar, but modified according to circumstances, be shown to officers of the Indian Service, whose service is altogether tropical?

Memorials, frequently addressed to Government on the subject of pensions, have invariably been treated with callous indifference, so much so that they have seldom elicited even a reply. Last year such restrictive orders were issued with reference to memorials as virtually to prohibit their submission. There is, therefore, no other course left to the service but to seek aid from external sources, and it is with the object of doing so that I solicit the favour of your enabling me to give publicity to the facts I have referred to in this letter.

I remain, Sir,

Jan. 1880. ONE IN THE SERVICE.

A NEW MALADY.

ACCORDING to a correspondent of the Russian journal, the *Molva*, a previously unknown and very fatal malady has appeared at Kozlov, in the government of Minsk. The symptoms are described as shivering, succeeded by a violent migraine, accompanied with fever, delirium, and an abundant perspiration. Death follows inevitably. The first symptoms of the malady differ so little from those of an ordinary cold in the head that a fatal issue is not suspected. He describes the case of a boy, sixteen years old, returning home from school at one o'clock P.M., feeling slightly indisposed. He lay down in consequence of a headache from which he suffered becoming insupportable. At the same time he became feverish, and about five o'clock violent delirium supervened. A quarter of an hour afterwards he died. Children and youths have alone as yet been attacked with this disorder.

Mr. W. F. Bennett, (Bath.)—Thanks. The announcement appeared in our journal for Jan. 17th, page 112.

O. W.—Yes.

TOBACCO-SMOKING.

To the Editor of THE LANCET.

SIR,—Possibly my personal experience in the tobacco question may possess some interest.

I was taught to take snuff when at school, at the age of fourteen, by a young South American, a direct descendant of the Incas. I continued the habit for forty-six years, during which time I took about an ounce of snuff daily. During this time I only smoked occasionally. About ten years since the mucous membrane of my nose got tired, and my nostrils were constantly stuffed up; so I gave up snuff, and devoted myself to my pipe, smoking (of a mild mixture) eight ounces in ten days. I prefer shag or returns; but certain remonstrances from my head compelled me to forego them. I never smoke before breakfast, and avoid cigars. I never passed through any introductory period of intolerance in either snuffing or smoking.

Now for my hygienic history. I inherited struma from my father, and deafness from my maternal grandfather. As a boy I had glandular enlargements and general feebleness. At nineteen I went for health sake to South Africa, got well, but was nearly killed by a fall from my horse. I broke a tooth, and the gum grew over it, but it was forgotten. At twenty-six I had neuralgia, which turned out to be an abscess in the left antrum, the whole floor of which necrosed and came away, leaving a free gangway from the antrum to the mouth. While this went on, I had an attack of pneumonia, which ended in sphacelus of the left lung, leaving a large cavity. Then I passed six years in Madeira, and returned to England in fair health. Ten years ago I had pleurisy, with effusion (serous) in the right pleura, and was nearly finished. I have had, I suppose, from first to last, 100 attacks of hæmoptysis, varying in quantity from one drachm to a pint. I have had no teeth for fifteen years of my own, and only artificial ones in the lower jaw for the sake of articulation; but my digestion is perfect, and I can eat anything save boiled mutton! I became deaf at the same age as my grandfather, who abhorred tobacco. Of course a man is no judge of his own mental powers; but I do a great amount of work as a county magistrate, and at sixty-eight (I am now seventy) seeking to force my mind to occupation, after very many trials, I began to learn German, and I believe I am now a competent German scholar. For two years I have entirely abstained from all forms of alcohol, and am more comfortable without it. I never used it except moderately.

Yours faithfully,

January, 1880. M.R.C.P. Lond.

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MEDICAL MISSIONS IN CENTRAL AFRICA.

THE following extract from the journal of Dr. Southon, stationed about thirty miles south of Unyanyembe, at a place named Simbo, is of some interest:—"Dr. Baxter told me that King Mirambo had a tumour on his left arm, which he was very anxious to have removed, so I was prepared to hear about it. I found it, on examination, a tumour, about the size of a walnut, on the forearm, and in a line with the median nerve, about its middle third. Being superficial, I diagnosed a sebaceous cyst, and accordingly did a very simple operation in taking it out; but the elaborate antiseptic precautions, the spray and the gauze, &c., made the whole thing *appear* very wonderful. Mirambo would not take chloroform, and I must say he excited my warmest admiration by the stoical way he endured the dissecting out. He did not flinch a bit, but conversed all the while, as if he were an onlooker, and not the subject under the knife. He was pleased to find that he suffered little or no pain, after the first soreness had passed away, and attributed it to the strong 'dowa'—i.e., medicine,—which he called the spray."

F.R.C.S.—We understand that the decision of the Jacksonian Committee for the collegial triennial prize will be made known next week. Only one essay was sent in. The subject for the Jacksonian prize is not yet decided on.

O'D.—Address G. Brown, Esq., Colebrooke-row, Islington, N.

OXYURIS VERMICULARIS.

To the Editor of THE LANCET.

SIR,—Your correspondent "Helminta" has possibly failed in curing the case referred to by acting on the supposition which is conveyed in many text-books, that ascarides inhabit only the rectum and quite the lower part of the colon, and can easily be washed out by any injection strong enough to kill them, and as they are easily killed, if these facts were correct, it would be very easy to get rid of them. But I think it is certain that if fully-developed ascarides only exist near the rectum, they are often generated higher up; for I have seen daily copious injections carried well up the colon with an elastic catheter, and bringing away, dead, all the worms probably that were in the lower part of the bowel, and yet this has been followed by daily recurrence of fresh quantities of worms in great numbers. I believe in such cases the whole of the large intestine, and perhaps even part of the small, must be infested with worms. I have found the following plan successful in obstinate cases:—Having interdicted absolutely all raw or partially cooked fruit and vegetables of every description, as well as sweets and preserves, such as figs, raisins, &c., let the patient have daily as large an injection as can be comfortably retained; a good injection being a quart or more of infusion of quassia, lukewarm, and to which one drachm of carbolic acid may be added with advantage. At the same time to take three or four drachms of powdered charcoal every day, and five or six grains of santonin dissolved in half an ounce of castor oil every night; after a few days substituting for this treatment a glass of Freidrichshall water every morning fasting, and a mixture containing tincture of iron, tincture of nux vomica, and infusion of quassia three times a day. This will improve the condition of the intestine, and diminish the mucus, which is generally present in these cases, and, if raw fruit is avoided, the worms will probably not return. A drachm of carbolic acid to a pint of tepid water is a convenient and efficient injection, which may be used daily with advantage for some little time. I may mention that one obstinate case I knew of only yielded to turpentine in large doses.

Yours &c.,

Feb. 14th, 1880. R. H. C.

To the Editor of THE LANCET.

SIR,—I would suggest to "Helmints" (in case it has not formed part of his treatment) the old plan of the internal administration of chloride of sodium, either the amount consumed at meals to be augmented, or, what is preferable, given in half-drachm doses three times a day, disguised by some colouring agent. I have seen it tried in many cases with satisfactory results. It probably induces a healthier state of the intestinal mucous membrane. Yours faithfully,

Hull, Feb. 16th, 1880. ARTHUR MAGNERS, M.R.C.S.

To the Editor of THE LANCET.

SIR,—If "Helmints" has not already tried santonin in his case of oxyuris vermicularis, he will find that his patient will derive great benefit from the use of suppositories of this drug. The santonin in this form of administration is in immediate contact with the worm, and rarely fails to destroy it. A suppository made of cocoa-butter, and containing three grains of santonin, should be introduced nightly at bed-time. Yours &c.,

Feb. 16th, 1880. E. R.

R. H. M.—Arsenical wall-papers are always to some extent a source of danger, and should be avoided. Some papers, however, are very much worse than others, both as to the quantity of arsenic they contain and the way in which the colour is applied. It is believed that paper hung on damp walls is liable to give out arsenical fumes; but friction is probably the most common cause of mischief. We have known the green paper of a nursery to be actually rubbed white by the friction against it of a child's crib!

Dr. Hunt, (Brooklyn.)—We must decline.

METHODS OF LECTURING.

THERE are various ways of conveying instruction to student minds, and one of them is by means of lectures. There are, however, different modes of lecturing, yet all, to be successful, must be arranged on some intelligible system. In other words, there must be a plan, the simpler the better, so long as it be logical. The most extraordinary method perhaps ever followed was that adopted by Professor Thomas D. Mitchell, at Jefferson Medical College, "who for several years after the loss of Professor Huston taught Therapeutics and Materia Medica in alphabetical order; certainly an unphilosophical arrangement, because it admitted of but little therapeutic classification of remedies, and gave no clue to the student as to the choice of an article from a group of similar therapeutic efficacy." The writer of an article in the "College and Clinical Record" (from which we quote) well remembers listening to a lecture delivered by Professor Mitchell, which included the following diversified programme: Ferrum, Fennel, Fish, and Flannel.

Emigrant.—We cannot advise in the matter.

QUARANTINE.

To the Editor of THE LANCET.

SIR,—I have had so many applications, particularly from members of the medical profession, for copies of the "International Rules of Quarantine," which I drafted and submitted to the Association for the Reform and Codification of the Law of Nations, last August, that I should feel obliged if you would allow me to mention through your columns that I have distributed all the copies I had printed. I am contemplating a new edition, but in the meantime a reprint of these Rules will be found in the last October number of *Colburn's New Magazine*.

I am, Sir, yours faithfully,

Middle Temple-lane, London, Feb. 10th, 1880. SHERSTON BAKER.

BLIND AND DEAF-MUTE CHILDREN.

MR. WHEELHOUSE has introduced a Bill into Parliament to provide more effectual means for the education of blind and deaf-mute children. This Bill would authorise boards of guardians, on the application of parents not having the means for special training of children so afflicted, or in the case of deaf-mutes or the blind deserted or orphans, to send them to school. It would also give justices power to provide suitable schools out of the county rate.

Mrs. Heygate may obtain the information desired from a standard work on Skin Diseases, such as that of Dr. Tilbury Fox.

CHILBLAINS.

To the Editor of THE LANCET.

SIR,—In your number of Dec. 6th there is an inquiry as to a good remedy for chilblains, and, in reply, you mention oil of cajeput, and refer to receipts given in THE LANCET of 1875. I have not this year's volumes with me, and so may seem guilty of plagiarism in giving the following formula as new:—Oil of cajeput, strong liquor ammoniæ, of each one drachm; compound soap liniment, three ounces. This, if not a perfect cure, has at least so kept the enemy at bay that discomfort is minimised. At this Himalayan station these minor worries are very common. Yours &c.,

Dalhousie, Jan. 5th, 1880. G. C. G.

J. P. V., (Bruxelles.)—Dr. Wallich's application of the microphone is not, we believe, yet completed, but the inquiry might be addressed to him personally.

J. M'K. (Greenock) would find it the wisest course to consult a qualified medical practitioner.

Mr. W. H. Harris.—Humphry on the Human Skeleton, or Morris on the Anatomy of the Joints.

J. M.—Essays must be sent in on or before June 30th, 1880. The Society's rooms are in King's College, London.

L.R.C.P.—The charge is most reasonable, and we should say that the father is liable.

HELMINTHOLOGY.

To the Editor of THE LANCET.

SIR,—Has any observer ever measured on the body of the nematoid itself, and so as to be able to state with millimetric exactness the varying lengths of any one filaria sanguinis hominis, as it is seen, according to Lewis, occupying alternately, one moment, the whole, and the next only a part, say, less than one-half of its enclosing sheath? If no such variations in the length of the filaria have been or are to be observed, then I submit that, from the very nature of the case, the appearance spoken of as a sheath cannot, in reality, be a sheath.

Yours &c.,

Bahia, Brazil, Jan. 17th, 1880. JOHN L. PATERSON, M.D.

Mr. Julius Cæsar.—There is nothing remarkable in the vomiting of a "round worm." The point of interest lies in the vomiting of ascarides, which have been commonly supposed to inhabit the large intestine.

F.R.C.P., (Liverpool.)—Yes. Professor James Aitken Meigs died of pyæmia at his residence in Philadelphia on the 9th November, 1879, aged fifty.

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ERRATUM.—In the concluding part of Dr. Maclaren's paper on "The Advances in Surgery during the past Twenty Years" (p. 240), the amputations in the Cumberland Infirmary during 1877-78 were stated as 76 in number, whereas they should have been given as 49. Apparently the mistake arose from including the amputations among the out-patients with those among the in-patients.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Barnes, London; Mr. H. Smith, London; Dr. Julius Pollock, London; Mr. Teevan, London; Dr. Squire, London; Mr. Gamgee, Birmingham; Dr. Fairweather, Pocklington; Mr. George, Dorchester; Dr. Caskie, London; Mr. Horder, Crickherbtown; Mr. A. L. Fernandez, London; Mr. Vacher, Birkenhead; Mr. Silke, Edinburgh; Dr. Gordon, Dublin; Mr. Egan, Fulham; Mrs. Heygate, Leominster; Dr. Tatham, Salford; Dr. G. de F. Morris, Eastham; Mr. Leared, London; Dr. Haddon, Manchester; Dr. Braidwood, Liverpool; Mr. Weekes, Melksham; Mr. Harris, London; Mr. Clarke, London; Mr. Woodhouse, Fulham; Mr. Thomas, Plymouth; Mr. Denham, Southsea; Mr. Trenerry, Bristol; Dr. Bacot, Dorset; Dr. Charles, Cork; Mr. Innes, Brighton; Mr. Knight, Courthope; Dr. Plowright, King's Lynn; Mr. Newstead, London; Mr. Croxton, London; Mr. North, Tewkesbury; Mr. Ouvry, Leighton; Mr. Chapman, London; Mr. Mercier, London; Mr. Palmer, London; Mr. Finn, London; Mr. Jeaffreson, Newcastle-on-Tyne; Dr. Harding; Dr. Sinclair, Dundee; Dr. Farquharson, Aboyne; Mr. Hall, Liverpool; Mr. Spry, Callington; Mr. Abraham, Liverpool; Mr. Settle, Stockton; Dr. Gamgee, Manchester; Mr. Wood, London; Mr. Lownds, Hatfield Broad Oak; Mr. Rundle, Crediton; Mr. Reeves, Birmingham; Mr. Nursey, Sunderland; Mr. J. B. Jacob; Mr. Beck, Northampton; Mr. Delamotte, Staines; Mr. Parr, Clapham; Mr. Bridges, London; Mr. Bennett, Bath; Mrs. Swinney, Bournemouth; Mr. Grundy, Royston; Mr. Lilly; Mr. Phillips, London; Mr. Barnard, Edinburgh; Mr. Ingpen, Putney; Dr. Shorthouse, Croydon; Mr. Taylor, Newbury; Mr. Cullimore, London; Mr. E. Lopez; Mr. Ketts, Sunderland; Mr. Rossiter, Weston-super-Mare; Dr. G. Budd, jun.; Dr. Bell, Glasgow; Dr. D. Powell, London; Mr. Osborn, London; Mr. J. M'Cormac, Mourne View; Mr. Manners, Hull; Mr. Holmes, Maidstone; Mr. Andrews, Southport; Dr. Creighton, Cambridge; Surgeon-Major Evatt; Mr. Julius Cæsar; Mr. Stock, Folkestone; Sir A. H. Elton, Bart., Clevedon; Mr. Wilson; Mr. Stokes, London; Dr. Arlidge, Stoke-upon-Trent; Mr. Prideaux, Wellington; Mr. Beer, Southampton; Dr. Cheadle, London; Mr. Turner, Rutland; Mr. A. Clarke, Longton; Mr. Dalrymple, Leicester; Mr. Whitford, London; Mr. M'Kenzie, London; Mr. Johnson, Nottingham; Mr. R. Freeman, London; Messrs. Sampson and Co., Liverpool; Mr. Vatchell, Cardiff; Mr. Burgess, Bristol; Messrs. Anderson and Co., Glasgow; Dr. Jerrity, Bristol; Mr. Chilcot, Bristol; Dr. Foster, Birmingham; Messrs. Parsons and Co., Manchester; Mr. Quennell; L. C., Leigh; W. W. E., Llanfair; J. M'K., Greenock; Malar; A Constant Subscriber; &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Buzzard, London; Dr. M'Lintock, Church Stretton; Mr. Blount; Mr. Bolton, Horncastle; Dr. Cameron, Harlsden; Mr. Williamson, Lincoln; Mr. Legge, Aberdeen; Dr. Warner, Peterborough; Mr. Kemp, Castleford; Messrs. J. and H. Grace, Bristol; Mr. Whitely, Scorrier; Mr. Jenkyns, Wansford; Mr. Sargeant, London; Mr. Le Fraine, Aylesbury; Messrs. Swan and Procter, Newcastle-on-Tyne; Dr. O'Reilly; Mr. Gray, Rugeley; Dr. Rae, Blackburn; Mr. Simpson, Oldham; Mr. Clouting, Thetford; Mr. Allan, Belper; Mr. Kessen, Hull; Mr. White, Wigan; Mr. Trubshaw, Mold; Mr. Davenport, London; Dr. Dowse, London; Mr. Atkey, Chichester; Mr. Allan, Alfreton; Dr. Wallace, Cleckheaton; M.D., Sheffield; K.; Veritas, Brecon; Alpha, Sheffield; C. N.; F. G., Manchester; W. G., Stratford; S. W., Birmingham; D. K.; A. B., York; J. C.; Gamma, Dublin; H. S.; Barts; M.D.; R. and S., Stratford; M.R.C.S.; W. M. S., Tunbridge Wells; L. M. N.; Surgeon; Anthrax, Brighton; Gamma, Manchester; Perseverance; Camillo; S. M., Stow-on-the-Wold; P.; Delta, Manchester; Doctor, Eastham; Spes, Spennymoor; Chirurgus; &c.

Manchester Guardian, Liverpool Daily Post, Glasgow Herald, Leeds Mercury, Bristol Mercury, Madras Mail, Times of India, Chelmsford Chronicle, Surrey County Aderrtiser, Largs Mirror, North Staffordshire Christian Journal, &c., have been received.

TERMS FOR ADVERTISING IN THE LANCET.

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Front Page per Line	0	1	0
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Half a Page	2	15	0
An entire Page	5	5	0
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Terms for Serial Insertions may be obtained on application to the Publisher.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

Agent for the Advertising Department in France—

M. BERTHIER, 104, Boulevard St. Germain, Paris.

Medical Diary for the ensuing Week.

Monday, Feb. 23.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Structure and Functions of the Vertebrate Skeleton."
MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. Thorowgood, "On Suppressed Gout."—Mr. Corfield: "Leaves from a Sanitary Note-book." Mr. Dewar, "On a Case of Jaundice."

Tuesday, Feb. 24.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Schäfer, "On the Physiology of Muscle."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY. — 8½ P.M. Dr. Vandyke Carter: "Experimental Pathology of Spirillum Fever."—Dr. Alfred Sangster: "Non-glandular Theory of Origin of Molluscum Contagiosum."

Wednesday, Feb. 25.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Structure and Functions of the Vertebrate Skeleton."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Gulstonian Lectures: Dr. Gowers, "On Epilepsy."
HUNTERIAN SOCIETY.—8 P.M. Dr. Stephen Mackenzie will show a Case of Urticaria Pigmentosa (living subject), and read a paper "On Annular Stricture of the Intestine."

Thursday, Feb. 26.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Dewar, "On recent Chemical Progress."

Friday, Feb. 27.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Parker, "On the Structure and Functions of the Vertebrate Skeleton."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Gulstonian Lectures: Dr. Gowers, "On Epilepsy."
QUEKETT MICROSCOPICAL CLUB. — 8 P.M. Dr. T. Spencer Cobbold, "On Human and Canine Filariæ."—Dr. Sylvester Marsh, jun., "On Bleaching and Washing Microscopical Sections."
ROYAL INSTITUTION. — 8 P.M. Evening Meeting. — 9 P.M. Mr. F. J. Bramwell: "Sequel to the *Thunderer* Gun Explosion."
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Teevan, "On a Case of Retention of Urine from Impacted Urethral Calculus, relieved by pushing the Stone back into the Bladder, and Crushing it."—Dr. Buzzard, "On a Case of Paraplegia from Pott's Disease, treated by Sayre's Splint; Intestinal Obstruction; Death from a Kink in the Duodenum." "On a Case of rapid and almost universal Paralysis, involving the four Extremities, both sides of the Face, Respiration, and Deglutition; Recovery."—Dr. Sangster, "On a Case of Molluscum Fibrosum."—Dr. Greenhow, "On a Case of Typhoid Fever with Acute Nephritis and Profuse Hæmaturia."

Saturday, Feb. 28.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Mr. Saintsbury, "On Dryden and his Period."

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THE

Gulstonian Lectures

ON

EPILEPSY.

Delivered before the Royal College of Physicians,

BY W. R. GOWERS, M.D., F.R.C.P.,

ASSISTANT PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

LECTURE I.—PART I.

MR. PRESIDENT AND GENTLEMEN,—The founder of the lectures, the delivery of which for the present year I have the honour of commencing to-day, left certain directions regarding their method and scope, doubtless well known to you. The progress of medical science has, however, rendered strict adherence to those directions scarcely practicable. Two or more diseases were to be discussed, and a body if possible dissected in illustration of them. But the time is long past since the demonstration of a chance "subject" could afford instruction to the Fellows and Members of this College, while our study of disease has become so elaborate that, in the space of three hours, it is impossible to consider more than a few points regarding any one disease.

May we not read "between the lines" of the founder's direction the anticipation that the progress of pathological anatomy would speedily reveal the organic basis of all diseases? Such an anticipation may, when the words were written, have been not unreasonable. Yet, vast as is the progress of pathology—aided as the scalpel is by sciences which, two and a half centuries ago, were undreamed of—the changes which underlie the so-called functional diseases seem almost as far as ever from discovery. The anatomist may search in vain for any evidence of their existence. Even the microscope reveals but traces of their effects, and can detect no indication of their nature. Our knowledge of them has still to be gained chiefly by inductions based on clinical study. In this, as in anatomy, modern science has given us the assistance of fresh methods, for which, if far feebler than those supplied by the microscope or the retort, we may still be grateful. More precise methods of observation and of record, more exact modes of reasoning, have added much to the power and scope of clinical observation. Foremost among these methods is to be placed that of numerical analysis.

These remarks are strictly true of the functional diseases of the nervous system, and of none more so than of those characterised by convulsion, to epilepsy and its congeners. Pathological anatomy and experiment have taught us something of the coarser pathology of convulsion, but for most of our knowledge we are still dependent almost wholly upon clinical observation. How successfully numerical analysis may be applied to the study of convulsive diseases, we have learned from Dr. Reynolds, Dr. Sieveking, and others; and we have all learned, and are glad to be still learning, from Dr. Hughlings Jackson, how much a minute analysis of individual cases may teach.

I trust, then, that I shall not be departing from the spirit of the founder's directions in taking this class of diseases as the subject of these lectures, and applying to them the methods of numerical analysis on a somewhat larger scale than has been hitherto attempted, and under conditions which may be considered as, at least approximately, those essential for the successful use of this method. I propose to ask your attention to some of the facts presented by a series of cases which have been under my care during the last ten years, mainly at the National Hospital for the Paralysed and Epileptic. The cases have been taken consecutively, without selection; the facts compared have, with few exceptions, been ascertained on a uniform system, and they are, I hope, sufficiently numerous to yield trustworthy results.

On some points the conclusions to be mentioned are the same as have been reached by previous investigators from small numbers of cases; on other points they are somewhat different. It is scarcely possible for me to refer, except in a few instances, to the results obtained by other workers in the same field. My excuse for the omission of such reference must be the brief time at my disposal, and the fact that the conclusions I have now to offer are the result of an entirely independent investigation.

The cases, then, which constitute the subject of these lectures are those of which the symptoms consisted in chronic convulsive attacks, not due to organic brain disease. All cases have been excluded from analysis in which there was any reason to suspect tumour, chronic meningitis, coarse syphilitic or other organic disease, and all cases of convulsions succeeding hemiplegia. All cases of simple hysterical attacks, unattended by distinct loss of consciousness, have also been excluded. The series includes, then, epilepsy proper, epileptiform seizures in which there is no evidence of organic brain disease, and cases such as it has been of late the custom to designate hystero-epilepsy, which present, with loss of consciousness, convulsive movements consisting of more or less co-ordinated spasm—spasmodic movements of quasi-purposive character, opisthotonos, emprosthotonos, &c. These latter cases form a series from simple hysteria to true epilepsy. The co-ordinated spasm may exist alone, or may be combined with epileptoid phenomena, or with true epileptic symptoms. Hence it is neither practicable nor wise to attempt to separate these cases entirely from pure epilepsy, and I am satisfied that in almost all published statistics of epilepsy many of them have been included. But I shall endeavour to ascertain how far each conclusion, with regard to the whole series, applies also to each of the two classes taken separately—the epileptic, and those presenting hystero-epileptic or co-ordinated phenomena, and subsequently to consider what is the relation between the two.

We may at the outset ask, What is the proportion between the cases presenting these two classes of symptoms? Of 1000 cases, in which an opinion reasonably exact could be formed of the nature of the attacks, they were purely epileptic in 815, while hystero-epileptic symptoms were present in 185, or 18½ per cent.

In the present lecture I propose to deal solely with the subject of the causation of these diseases: the influences to which they can be ascribed, and the proportion of cases in which the action of those causes can be traced.

What, in the first place, is the influence of sex? In the total number of cases analysed, 1450, females preponderate over males, nearly in the proportion of 6 to 5. More exactly, the percentage of females is 53·4; of males 46·6; that is, to every hundred males there were 114 females. This is not due to accidental circumstances, for at the hospital in which most of these observations were made, in the cases which do not present convulsion, males preponderate. It may be thought that this excess of females is due to the inclusion of cases of hystero-epilepsy. But this is true only to a small extent. In the cases of pure epilepsy the females are still in excess, amounting to 52 per cent., the males constituting 48 per cent. In the cases presenting hystero-epileptic symptoms, females preponderate to a much larger extent, and are to the males as 2 to 1, 66 per cent. being females, 33 per cent. males.

In most statistics of epilepsy hitherto collected in this country males have preponderated. This is probably due to the inclusion of cases of syphilitic brain disease, which we have only lately learned to separate.

There are few diseases in which heredity is a more important etiological condition. The difficulties of the investigation of heredity among the poor are well-known. Of all diseases, it is probably true that the results obtained fall short of the actual facts, but the discrepancy is probably less in these affections than in almost any others. The occurrence of fits, or insanity, in any member of a family is generally well known, and there is not the same tendency to conceal the existence of these diseases among the poor as among the rich. The facts ascertained in this inquiry relate to the occurrence, in ancestors or collaterals, of epilepsy, insanity, hysteria, chorea, and certain forms of paralysis—viz., paraplegia and infantile paralysis. Ordinary hemiplegia was not included, because primarily due to disease of vessels, &c., and not of the nerve-tissues. Habitual drunkenness, however distinctly allied in some cases to neuroses, is too frequent among the poor to make it possible to attribute any significance to its occurrence as an antecedent of epilepsy.

The proportion of cases in which evidence of inheritance

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is to be traced was found by Echeverria in 300 cases to be 28 per cent., by Dr. Reynolds, from a smaller number, to be 31 per cent. In my own cases the proportion is rather higher. Of 1250 in which the point was carefully investigated, 452, or 36 per cent., presented evidence of neurotic inheritance. There is no difference in the frequency of inheritance in the two varieties: in each it is nearly 36 per cent—that is, roughly speaking, of every eight cases of epilepsy, or of hystero-epilepsy, on an average three will present evidence of neurotic heredity and five will not. Inheritance does not affect the two sexes equally. In the cases in which there was no inheritance the males amounted to 48 and the females to 52 per cent., but among those in which the disease was inherited the females constituted 57 and the males only 43 per cent. It seems, therefore, that when there is an inherited taint the females of a family are more likely to suffer than the males. The same fact has been noted by other observers. In examining the mode of inheritance we obtain some light on the origin of this excess.

Of the 450 cases with inheritance the disease came from the mother's side rather more frequently than from the father's, the difference amounting to 4 per cent.—from the father's side in 35 per cent. (146 cases), and from the mother's side in 39 per cent. (175 cases), while it was from both sides in about 5 per cent. (25 cases). The side from which the disease is inherited is not unimportant, for it has a distinct influence on the occurrence of the affection in the two sexes. In the cases in which the disease was inherited from the father's side, males were in excess of the females by about 8 per cent. (76 males to 70 females), which is an excess of 14 per cent. above the average for the whole number (46 per cent. males). Whereas, in the cases in which the disease is inherited from the mother's side, females were in excess by about 14 per cent. (107 to 82). Thus the percentage of the males affected is 22 per cent. greater when the disease is inherited from the father's than when from the mother's side.

The affection of brothers or sisters must be regarded as an indication of an inherited taint, although we may be unable to trace antecedent instances. In these cases, 89 in number, the females are in very large excess—53 females to 36 males; but the total number is probably too small to permit safe generalisation.

We may now see, in part at least, why females preponderate so much more in the cases of inherited disease than when there is no inheritance. First, the inheritance is more frequently from the mother's side than from the father's; and, secondly, when the inheritance is from the mother's side, girls suffer in a much larger proportion than boys.

Of the relatives who suffer, the mother is herself diseased in a much smaller proportion of cases than the father. The father himself was the subject of neurotic disease in 45 per cent. of the cases in which the inheritance was paternal; the mother, in only 35 per cent. of the cases in which the inheritance was maternal.

Of the neurotic diseases which can be traced in the antecedents of epileptics, epilepsy is incomparably the most frequent. A history of epilepsy was obtained in nearly three-quarters of the inherited cases. In rather more than half (240) it existed alone; in 54 it was combined with insanity, in 5 cases with chorea, and in 3 with both insanity and chorea. Insanity occurred in the relatives of about one-third (157) of the inherited cases, and of these it existed alone in two-thirds. Chorea occurred in other relatives in 35 cases, in 24 of which it existed alone; in 5 it was associated with epilepsy, and in 3 with insanity. The forms of paralysis, paraplegia and infantile palsy, included in the investigation, were not more frequent in the families with other evidence of neurotic tendency than in those who presented no such history. The cases in which an antecedent family history of hysteria was obtained were very few.

Although the mother was herself less frequently affected than the father, the two suffered from epilepsy with equal frequency, and the difference in the frequency of their affection depended upon the fact that the mother suffered from insanity much less frequently than the father. Of 394 cases of inherited epilepsy, the father was epileptic in 45, and the mother in 46 cases; the father was insane in 21 cases, the mother in only 11.

In some cases the family tendency, as evidenced by the number affected, was very strong. In one case no less than fourteen members of the family suffered from epilepsy—the patient's mother and maternal grandmother; her mother's sister and mother's brother's son; four of her own sisters, and five of her sister's children.

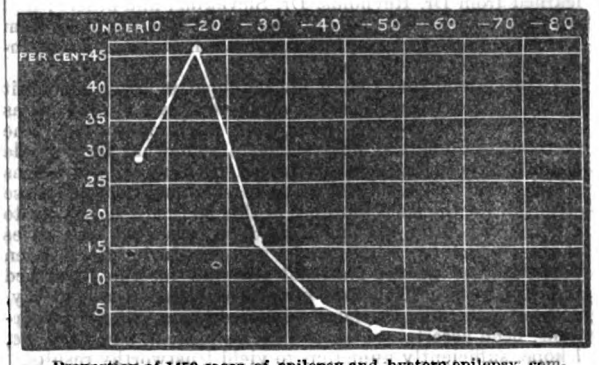
Is epilepsy predisposed to by any other morbid heredity than that indicated by the occurrence of its own allies? Rheumatism and phthisis have both been supposed to favour the occurrence of epilepsy. Regarding rheumatism, apart from the heart disease which it may cause, I have been able to obtain no evidence in support of the view. The effect of phthisis is very difficult to ascertain. It is certain that the family history of epileptics presents a large proportion of cases of phthisis, but in the opinion of some writers, as Nothnagel, the frequent coincidence is accounted for by the commonness of lung disease. Others, as Echeverria, believe that the frequent association supports the view that there is a causal relation between the two diseases, and Dr. Savage has expressed a similar opinion with regard to insanity. That there is a relationship between the two is suggested strongly by individual cases, as, for instance, one of my patients, who, presenting no evidence of neurotic inheritance, had lost father, mother, and six brothers and sisters from phthisis, she herself, the sole survivor, being epileptic. The statistics which I can offer on this point are unfortunately not very extensive; as far as they go they do not give support to the opinion that there is a relationship between the two diseases. Phthisis was inquired for in 300 cases, and a history of it in parents, grandparents, brothers or sisters, uncles or aunts, was obtained in 108, or 39 per cent. Considering the commonness of phthisis, this does not seem a larger proportion than might have been expected, although I am not aware that there are any statistics which can be taken as the standard of comparison. Moreover, if phthisis has any influence in causing epilepsy, we should expect to find it traceable more frequently in the cases without than in those with neurotic inheritance; but it is not so. Of 214 cases without, and 86 cases with, neurotic inheritance, the proportion of phthisis is just the same—39 per cent. Further, if phthisis exerted any causal influence, we should expect to find the proportion in which a neurotic heredity is traceable smaller when there was a tendency to phthisis than when there was not. This also is not the case. The proportion of inherited cases was rather less in these 300 cases than in the whole 1250, being 28 per cent. The proportion was about the same in the cases with and those without a family history of phthisis, 28 per cent. in the former and 29 per cent. in the latter. These facts suggest that the association of phthisis and epilepsy is wholly accidental.

In 8 cases the patients were the subjects of well-marked inherited syphilis. In all of these cases the attacks had the aspect of idiopathic epilepsy, cases in which there were symptoms suggestive of local brain disease being excluded. In only two of these cases did the attacks begin in infancy. In all the others they commenced towards the end of or after childhood.

Inquiries were made in a considerable number of cases for consanguinity of parents, but in no instance was it met with.

We may consider next the influence of age on the occurrence of epilepsy as evidenced by the date at which the first fit occurred in the series of 1450 cases. If we take, first, decennial periods, we find that, under ten years of age more than one quarter of the cases commenced, 29 per cent. Between ten and twenty nearly one-half of the total number,

FIG. 1.



Proportion of 1450 cases of epilepsy and hystero-epilepsy, commencing in each decennial period.

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46 per cent., began. In the next decennial period, twenty to thirty, the number falls to a seventh, 15·7 per cent. Between thirty and forty only 6 per cent. began, between forty and fifty only 2 per cent., between fifty and sixty only 1 per cent., and over sixty only one-third per cent. of the total number. Thus just three-quarters (75 per cent.) of the cases commenced under twenty years.

The relation of the cases to age is shown in greater detail in the following table, which presents the annual number of cases commencing in each year :—

Age.	Cases.	Age.	Cases.
Under 1	78	15	84
1	66	16	84
2	36	17	67
3	36	18	53
4	28	19	44
5	25	20	40
6	31	21	31
7	43	22—29	14—26
8	34	30—39	3—15
9	48	40—49	1— 6
10	54	50—59	1— 3
11	52	62	2
12	71	64	2
13	74	71	1
14	82		

A large number of cases, no less than 12½ per cent. of the whole, commenced during the first three years of life. In this group no cases of simple infantile convulsions are included, only such as, beginning in infancy, continued as chronic epilepsy. There is a difficulty in ascertaining the exact date of commencement in all cases. Of about one-third, all that could be learned was that they began in infancy. In the table these have been distributed through the first three years of life in the same proportion as presented by the two-thirds in which the exact date of commencement could be ascertained. The number of cases is largest in the first year (5½ per cent. of the whole), and falls rapidly to three years of age, and then more slowly until five, when the minimum for the early period of life occurs, only 1·7 per cent. commencing. From this there is a considerable rise at seven, the commencement of the second dentition, then a fall at eight, and from this the numbers increase slowly at nine and ten, rapidly at twelve, until the maximum is reached at fifteen and sixteen, at each of which 84 cases commenced, 5¾ per cent. of the total number. From this period we have a rapid fall to twenty-one, when only 2 per cent. of the whole commenced. During the next eight years the number of cases commencing in each year varied from 26 to 14. Between thirty and forty years the annual number varied between 15 and 3, and between forty and fifty it varied from 1 to 6. Between fifty and sixty the annual number of cases was from 1 to 3. Over sixty, the cases were—2 at sixty-two, 2 at sixty-four, and 1 at seventy-one.

The proportion in which the two sexes suffer varies considerably in the different periods of life. We may compare, first, their affection in the several decennial periods. In the cases commencing under ten years the females exceed the males by 6 per cent. In the second decennium, between ten and twenty, the excess of females amounts to 18 per cent. In the third, between twenty and thirty, there is a great fall, but the excess of females amounts to 12 per cent. Between thirty and forty, the numbers being still smaller, the relation is reversed; the males exceed the females by 16 per cent. Between forty and fifty, with a continued fall in numbers, the excess of males is still greater, amounting to 36 per cent. Between fifty and sixty it reaches 40 per cent, and over sixty males only suffer.

If we examine the several periods of life more minutely, we find that in the cases which commence in the first year of life the females are almost twice as numerous as the males (51 and 27). In the second year the number of females falls considerably, while that of males rises slightly, so that the difference between them is less. During the two following years the numbers fall, until a minimum of each is reached at five years, the females being still in slight excess. At six and seven years a rise occurs, and the number of cases in each sex is, in the latter, nearly the same. From seven to thirteen the earlier relation is reversed; the males are in excess of or equal to the females, with the perhaps accidental exception of the cases commencing at eleven. At twelve—that is, in the thirteenth year of life—the maximum for males is reached, and from this until sixteen there is a slight fall. The maximum for females occurs later than for males. The numbers increase at twelve and thirteen, and then more slowly, until at sixteen the maximum for any year is attained (50 cases), and they are in that year one-third more numerous than the males. During the next five years, the numbers in each sex fall rapidly, the females being still in excess, but the two are nearly equal at twenty-one. The females continue, however, in slight excess until twenty-nine, when the two sexes are affected equally. After this the relation between them is reversed—in almost every year the males are more numerous. The females present no increase at the climacteric period, and they cease much sooner than do the males. The latest age at which epilepsy commenced in a woman was fifty-five, whereas in men cases commenced at fifty-eight, fifty-nine, sixty-two, sixty-four, and seventy-one. Thus at each of the maximum periods, at infancy and puberty, the excess of females is very great. During the later period of childhood the numbers are nearly equal. The excess of females lessens after puberty, and ceases by middle life.

How far does an inherited tendency influence the age at which the disease commences? It is often stated that when there is heredity, the disease begins before twenty. We shall, however, see that, so far from this being true, the influence of heredity continues until a late period of life, and, although absolutely greatest in youth, it is relatively only a little less during adult than during early life.

Particulars as to heredity and age at commencement were noted in 1120 cases, of which heredity existed in 408. The distribution of these through life was nearly the same as that of the non-hereditary cases. About 5 per cent. began in the first year of life, and the annual number fell to a minimum in late childhood, to rise to a maximum at puberty. This maximum, however, occurred at fourteen years of age—a year earlier than the maximum for non-hereditary cases, which was at fifteen and sixteen. The cases with heredity lessen gradually during life, but continue to occur to the last. The latest case of the entire series was a man who suffered from what was apparently idiopathic epilepsy commencing at the age of seventy-one years, and in him the disease was inherited, his father having suffered from fits, clearly epileptic, for many years.

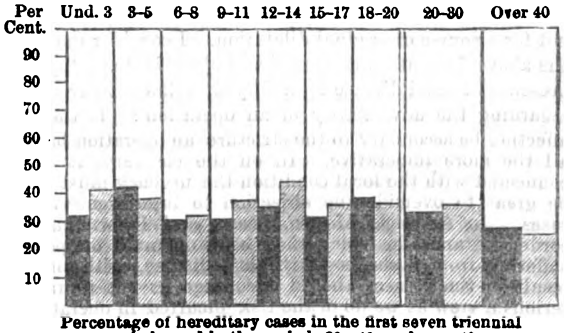
The relative frequency of heredity is shown by the proportion which the heredity cases bear to the total number commencing at each period of life. The relative frequency, in periods of twenty years, is shown in the following table:—

Age.	Total cases.	Heredity.
Under 20	844	319, or 38 per cent.
20 to 39	235	80, or 34 ,,
40 and over	34	9, or 27 ,,

The average for the whole of life is 36 per cent. This is exceeded by 2 per cent. in the first twenty years; in the second twenty years the percentage is only 2 below the average; while in the cases commencing over forty it is only 7 per cent. below the average.

Since the first twenty years include the two maxima at infancy and puberty, it is desirable to examine the influence of heredity during this period in greater detail, and we may, at the same time, consider how far the two sexes exhibit its effects.

FIG. 2.



Percentage of hereditary cases in the first seven triennial periods, and in the periods 20—40, and over 40.

During the first three years of life the disease is inherited by a larger proportion of females than of males (females 41, males 33 per cent.) During the next three years the proportion of heredity in females is nearly the

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same, that in males rises. The third triennial period, six to eight, presents a lower percentage of hereditary cases than any similar period under twenty, but the minimum proportion in males occurs in the next triennial period, nine to eleven. In females, however, there is in this period a rise, and the maximum proportion for this sex is attained in the period twelve to fourteen; it falls slightly in the next two periods. The proportion in males rises after the minimum in the period nine to eleven, but never quite attains the proportion presented by the second triennial period of life. In the first twenty years as a whole, the excess of heredity in females over males amounts to 7 per cent. (males 34, females 41 per cent.). Between twenty and forty the proportion is reversed, the percentage heredity is greater in males than in females (males 36, females 31 per cent.) Over forty, of 24 males, there was heredity in 6; of 7 females there was heredity in 3.

Lettsomian Lectures

ON

THE TREATMENT OF STRICTURE OF THE URETHRA, ENLARGED PROSTATE, AND STONE IN THE BLADDER,

WITH SPECIAL REFERENCE TO RECENT PROGRESS.

Delivered at the Medical Society of London, January, 1880.

By W. F. TEEVAN, B.A., F.R.C.S.,

SURGEON TO THE WEST LONDON AND ST. PETER'S HOSPITALS.

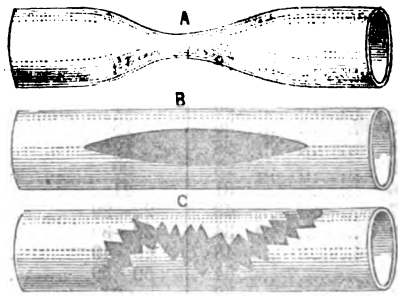
LECTURE II.

MR. PRESIDENT AND GENTLEMEN,—I now proceed to the operative treatment of stricture of the urethra. Under what circumstances is an operation justifiable? I consider no operation called for until it can be proved that the manipulative treatment has been tried and found wanting. I am indeed unable to conceive what conditions can justify us in exposing a patient to the risk of an operation, however slight, unless we have previously given other means a fair trial. But there are circumstances which may demand an operation: (1) the stricture may be non-dilatable, and resist all means to enlarge it; (2) it may, on the contrary, rapidly dilate, but as rapidly contract again, so that the patient has so frequently to pass a bougie to keep the passage open that the complaint becomes an intolerable nuisance to him; (3) there are some men of peculiar idiosyncrasy, especially those who have resided in the tropics, in whom the introduction of any instrument is followed by urethral fever, which greatly prostrates them, and interrupts the treatment; (4) a patient may be ordered abroad, and have only a short time to devote to his treatment, long enough, however, for the performance of an operation, but not for a course of gradual dilatation. I consider that in all the above instances an operation is justifiable. Ought the presence of renal disease to modify or influence our opinion regarding the advisability of an operation? If the renal affection be secondary to the stricture an operation becomes all the more imperative. If, on the contrary, it be not connected with the local condition the urgency must indeed be great to override the objection to interference in such cases. In America, Mastin, Pease, and Brown have recorded instances in which they have operated on patients suffering from diabetes or Bright's disease, with the best results. Such cases should encourage us not to take so serious a view as we do of the risk incurred in operating on subjects affected with those complaints. If now an operation be required which ought we to select?

All operations on passable strictures may be arranged under one or other of the following heads:—1. *Incision*, which includes internal, external, and subcutaneous urethrotomy, and also scarification. 2. *Laceration*, which embraces the so-called immediate treatment,[1] splitting, rupture, divulsion, and over-distension when carried beyond the stage of true dilatation.

Before proceeding to a selection, the ground will be cleared, and an answer rendered easier, by asking what it is we really require when about to undertake an operation for the relief of a passable stricture. If reference be made to the diagram A, Fig. 5, it will be seen that the urethra has been so altered by

FIG. 5.



disease that at one spot it is very much contracted and shrunken. The state is one of *atrophy* (Mercier), and not hypertrophy, as imagined. Now, what we want is to enlarge the calibre of the urethra where narrowed, so that it shall be equal to, or, at all events, not much less than that of, the healthy portion. This is to be effected much in the same way as a tailor lets out a pair of trousers. If he finds there is no material for the purpose, he makes a clean cut and inserts a new piece of stuff as much like that of which the trousers are made as it is possible to procure. When the urethra is wasted and narrowed, it cannot be enlarged to its normal calibre by letting out a piece of redundant tissue, for there is none to spare, and we must therefore insert a piece. Where is it to come from? If only the contraction be completely cut or torn through, and the edges of the wound kept apart, nature will fill up the gap with a strip of new tissue. The French and American surgeons have very clear ideas as to the requirements an operation must fulfil. The former term the necessary gusset the "*pièce d'allongement*," and the latter happily call it the "cicatricial splice." We want a splice which shall as much as possible resemble the normal tissue. It may be made either by cutting or laceration. Pathology teaches that cicatrices tend to contract in varying degrees, those, for instance, which result from burns or lacerations being endowed with a greater amount of contraction than those which follow clean cuts. If a stricture be divided with a knife, a soft supple cicatrix will be obtained, as shown at B, Fig. 5, oval in shape, and having its axis parallel to that of the urethra. If, on the other hand, the contraction be torn through, an irregular cicatrix will be formed, tending to stretch obliquely across the urinary canal, and not having its axis parallel to that of the urethra, as seen at C, Fig. 5. The post-mortem examinations made in France and America on patients who died after being operated on by the so-called immediate treatment showed that the laceration very often extended obliquely across the canal. Now, any cut or laceration which is not in the axis of the urinary tube, is always followed by the worst of all strictures—the traumatic. Inasmuch, therefore, as the cicatrix at C will be followed by more contraction than that at B, it is the less desirable of the two. Then, again, when a surgeon cuts a stricture, he can choose what place he likes for operation, and he knows the length, depth, and extent of his incision; whereas the operator who tears open a contraction cannot select the spot, and is entirely ignorant of the length, depth, and extent of his laceration. If only a portion of the circumference of the urethra be invaded by the contractile deposit, the healthy portion will be torn, leaving the strong indurated part untouched. But it may be said, how can a surgeon find out whether the roof, side, or floor of the urethra be affected? By using the *bougie-à-demiboule*, which will tell him whether the deposit involves the entire circumference of the canal, or only a portion. The most important fact which should influence us in selecting a cutting operation rather than a lacerating one is that the mortality attending the so-

[1] The term "immediate treatment" is objectionable, because misleading; as the operation is useless, unless supplemented by the regular use of the bougie; and invidious, because internal urethrotomy is, as Stokes has pertinently pointed out, equally immediate in execution.

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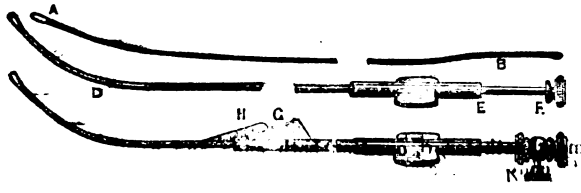
called immediate treatment is much greater than that which attaches to internal urethrotomy. A large number of deaths have occurred in this country after the former method which have never been published, and no surgeon has as yet gathered the statistics of even 300 cases. From inquiries I have made into the statistics of upwards of 1000 cases of internal urethrotomy, I find that the mortality attached to it may be reckoned at from 1 to 3 per cent. in skilful hands. Mastin of Mobile has performed the operation 333 times without a death. In Paris, Guyon has operated on 250 patients with 7 deaths. Mallez has had 182 cases with 2 deaths. I have performed the operation 53 times in all, and have never had a death. The relative risks attached to cutting and laceration were well seen at the Roosevelt Hospital, New York, where the so-called immediate treatment proved doubly as fatal as internal urethrotomy. Therefore, from all that I have indicated, it is clear that a cutting operation ought to be selected for stricture.

Which one shall we choose? Scarification was once extensively practised in France, but abandoned, as the results obtained were of the most ephemeral character. It is of no use making a number of small notches into a stricture with a many-bladed instrument. The experience of all surgeons who have had much practice in treating the complaint proves that "a stricture must either be cut through or torn through" (Otis). External urethrotomy is only required for certain exceptional cases complicated by perineal abscess and fistula. The subcutaneous operation has a very limited field of usefulness. Internal urethrotomy therefore remains as the stock operation for stricture. Shall we divide the stricture from before backwards or in the opposite direction? The advocates of the former plan were represented by Maisonneuve's operation, and the latter by Civiale's. There were numerous objections to the division from behind forwards]—(1) It presupposed considerable dilatation of the stricture to enable the instrument to be passed through it, and as some strictures could not be dilated it was inapplicable. (2) Although the surgeon knew where to commence his cut, he did not know where to finish it. Hence it was that Civiale's operation was never popular in France, like Maisonneuve's. There were several objections to the urethrotome as invented by Maisonneuve, some of which were removed by modifications effected by Voillemier and Sédillot. The most serious one, which was that the instrument when introduced gave no evidence of where it had gone to, still remained. This difficulty was overcome by me. I utilised the slot which extended from end to end in the instrument by filling it with a closely fitting stylet, so as to prevent its being closed by blood or mucus. By this arrangement the surgeon can absolutely determine whether the urethrotome be in the bladder or not, for urine will escape when the stylet is withdrawn if the instrument be not in a false passage. I also considerably curtailed the length of the slot, which was unnecessarily long, and thereby shortened the possible path the knife could travel, thus rendering the instrument safer to use by inexperienced hands. Sédillot placed the sheath *inside* the staff of the urethrotome, thereby necessitating a considerable increase in its thickness, which was objectionable. I put the sheath and its stem *outside* the staff, and thus greatly strengthened the latter without increasing its bulk. If the stricture be very tight or crooked, the slender olivary bougie, A B (Fig. 6), is wriggled through

FIG. 6.



it into the bladder. The staff, D E, filled with a stylet, E F, is then screwed on to the bougie and made to follow it: the latter coiling up in the bladder. The stylet is now withdrawn, when urine will escape by flowing out of the open slot where it emerges from the penis. The knife, H, covered by the sheath, G, is then placed inside the slot, the latter being outside the staff. The sheath not only protects the healthy urethra, but it also represents the finger in the urethra, and tells the surgeon where to begin to cut and where to leave off. The urethrotome, as modified by me, meets, I believe, all requirements.

Some years ago I wrote an article in THE LANCET advocating the division of strictures from before backwards in preference to the opposite direction. Mr. Berkeley Hill, in his critique on my article, stated that the principle of division of a stricture from before backwards, which I advocated, "had been proved over and over again to be quite unsatisfactory." (See THE LANCET, vol. i. 1874, p. 830.) I am glad to say that Mr. Hill has now come round to my way of thinking, and practises what he formerly condemned. At a period not very remote the principle of dividing strictures from behind forwards was the one in vogue at the special department for urinary diseases at the Necker Hospital, at University College Hospital, and at St. Peter's Hospital. Now all is changed, and at each of those institutions strictures are incised from before backwards. Ought the contracted urethra to be divided at the roof, side, or floor? The roof is the safest spot for incision, as the bulb is thereby avoided, and no troublesome bleeding occurs. Then, again, as the upper wall of the urethra is not so long as the lower one, a shorter cut suffices if it be made in the roof rather than the floor. If, however, the deposit is very thick and mainly affect the floor, it is better to divide it there, which can be done by simply reversing the urethrotome when in the bladder just as one does a lithotrite.

Up to what calibre ought the stricture of urethra to be enlarged? Inasmuch as men require their urinary canals for the purpose of micturition and not for the passage of large calculi or bougies, some regard, I think, ought to be paid to the satisfaction of physiological requirements. If they are completely fulfilled and we have restored to the patient his normal powers of micturition, it seems to me a work of supererogation to do much more. It is well also to ascertain the normal calibre of the healthy portion of the urethra, for we have then a reliable standard to go by in deciding as to what point dilatation is to be carried. Usually we may be well satisfied if No. 25 bougie slips with ease into the bladder. The great advantage of inserting a large cicatricial splice is that the patient will be able to go for a longer period without requiring the introduction of an instrument than if only a small gusset had been put in.

Ought a catheter to be tied in the bladder after operation? Until recently it was the practice for all surgeons in every country to leave in a catheter after every form of urethrotomy, the operator being threatened with "disastrous results" if he omitted to do so. Reybard was the first to dispense with "sonde à demeure," which he said irritated the parts and prevented the formation of a soft supple cicatrix. No surgeon was then bold enough to follow his practice. It was reserved for Gouley of New York to prove, clinically, that the retention of a catheter after operation favoured the very occurrences it was supposed to prevent. In this country I believe I was the first to dispense with the catheter. I have seen perineal abscess caused by retaining an instrument, but I never observed any such annoyance where it was not used. No one has as yet been able to explain the occurrence of rigors after internal urethrotomy. They are said to be produced by the passage of the urine over the wound. This, however, is incorrect. After the operation of lithotomy all the urine flows over the wound, and yet rigors, unless pyæmic, are unknown. The same may be said of external urethrotomy. It appears to me that the rigors are due to the distension exercised by the urine when it is ejected much in the same way as a large bougie may sometimes cause them. After every form of urethrotomy I commence to pass a large metal "bougie olivaire à ventre" about the fifth day from the operation, and repeat the introduction every third day. Metal instruments are indicated, as they tend to straighten the urethra, often crooked before operation.

External urethrotomy is an admirable operation for those exceptional cases of stricture complicated by the presence of abscesses or numerous fistulæ or massive chronic induration. The operation was popularised in America by Jameson at Philadelphia, and later on by Syme in Great Britain. At one period it was extensively practised, but it is now very properly reserved for exceptional cases. There were two serious objections to the operation as performed on a "Syme's staff." 1. There was no evidence that the staff when apparently introduced into the bladder was really there. Hence humiliating accidents occurred to surgeons through the instrument having gone into a false passage which was mistaken for the urethra. 2. Although the operator knew where to commence to cut, he did not

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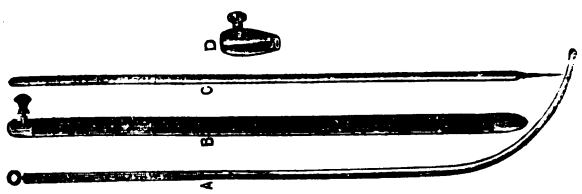
know where to cease, so it often happened that when the stricture had apparently been divided, it was impossible to pass the catheter, owing to some fibres having escaped cutting. The latter objection was removed by Mr. John Marshall, who employed a slender, solid metal staff, over which he slid a flexible catheter which could be moved up and down at will, and passed over the staff into the bladder if the stricture were thoroughly divided. The former objection was done away with by me. With Syme's or Marshall's staff there was no certainty as to the instrument being in the bladder, or not. I replaced the catheter by a catheter staff, which when introduced into the bladder permits the urine to escape, and so demonstrates its position. The drawing A, Fig. 7, represents a catheter with an olive

FIG. 7.



point and a slit in the convexity, along which the knife can be run to divide the stricture. When the instrument is passed into the bladder, the stylet is withdrawn, and urine escapes. A long slender staff, C, is then screwed on to the catheter, and the elastic tube, B, passed over it till arrested by the stricture. By means of a screw at the end of the tube the latter is fixed in its position and the movable handle, D, attached. When the surgeon thinks he has divided the stricture, all he has to do is to advance the elastic tube, when it will pass into the bladder if all constricting bands are divided.

Subcutaneous urethrotomy was apparently suggested by Syme, but put into practical operation by Dr. Henry Dick. It is admirably adapted for the division of those very thick ring-like strictures often met with in the penile urethra. The operation, however, requires more skill for its performance than either internal or external urethrotomy.

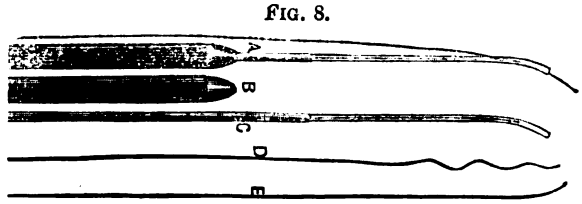
The treatment of impassable stricture is one of the most difficult and important subjects which can engage a surgeon's attention, and demands from him much skill, care, and patience. Professor Syme laid it down as a rule that if urine could escape a catheter could be got through the stricture. His own practice, however, afforded evidence that his dictum was not absolute. The difficulty often depends not so much on the extreme tightness of the stricture, as on the deviation of the canal, causing the entrance to be placed very excentrically. Consequently filiform bougies are invaluable for the reduction of impassable stricture. If only one of them can be introduced, a fine silver catheter open at both ends can be slid over it into the bladder, or a fine silver catheter may be screwed on to the "bougie conductrice," and made to follow it into that viscus. Olivary whalebone bougies, with coudée or corkscrew ends, are most useful for tough tight strictures. Catgut bougies are of no value, for when they have been in the urethra for a few minutes they become soddened and unravel. Before attempting to introduce any instrument the canal ought to be well injected with oil, as recommended by Perrève. A patient with an impassable stricture should be kept to bed and well purged, for rest, warmth, and castor oil are invaluable in converting an impassable contraction into a passable one. Confinement to bed very often makes all the difference between failure and success.

One of the most useful manœuvres to effect an entry is that of Mercier's. A straight metal tube, open at each end, and as large as the urethra will admit, is passed down the canal till it is arrested by the stricture, against which it is kept firmly pressed so as to render the face of the contraction as tight as a drum. An olivary whalebone bougie, with coudée end, is then introduced, and the face of the stricture methodically explored till the entrance is found. If this does not succeed, bougie after bougie is to be passed till the tube is filled. An attempt is then made with each bougie separately to see if it can be wriggled through. I have in many cases employed the "bougie armée" successfully, opened up the mouth of the stricture, slipped a bougie into the bladder, and ultimately cured the patient.

If retention from impassable stricture should set in, it is well to remember that it is not necessary, as I have proved, to introdnce a catheter to relieve the stoppage. This fact is important, for as the smallest bougie is more slender than the smallest catheter, the former may pass where the latter cannot. The ultimate cause of retention in tight strictures is in all probability owing to the blocking up of the narrowed canal with a plug of inspissated mucus; hence, if this be pushed back by a bougie, urine will flow. The practice of filling the rectum with ice, whilst the surgeon is attempting to introduce an instrument, was introduced by Cazenave of Bordeaux, and I can myself speak very highly of the practice.

If an operation be required, which shall we select? Tapping the bladder through the rectum is a favourite one in this country, founded on the theory that if the urine be diverted from its ordinary channel for a few weeks the congestion and irritation will subside and the stricture become permeable. It is, however, a very disagreeable procedure, as it necessitates the patient's confinement to bed with a tube up his rectum; and if the operation should fail in its intention, a second one becomes necessary. Then there is an operation invented by Dittel, which consists in passing a catheter, through a puncture made above the pubes, into the bladder through the prostatic urethra till it meets the obstruction, against the front of which a catheter has been passed down the penile urethra. The canal is then opened on the point of the latter instrument, and a dissection made till the point of the other catheter is struck. I consider this operation unnecessarily severe; all that it accomplishes can be achieved by Mr. Furneaux Jordan's operation, without the special risks incidental to Dittel's procedure. Inasmuch as the prostate is not the seat of stricture, the urethra can be opened in its membranous portion from the rectum, as practised by Mr. Jordan. Then there is the method known as Cock's operation, which I consider ought only to be performed for retention or for those cases of impassable stricture where the patient is too weak to undergo a prolonged operation, which the Boutonnière sometimes is. I hold that the Boutonnière is the right and proper operation to be performed for all cases of impassable stricture, for the constriction is opened at its front and divided, thereby remedying cause and effect, if retention be added to the impassable condition. It is no doubt the most difficult in all surgery, but it has been greatly simplified through the labours of Avery, Wheelhouse, Gouley, and myself. The operation, as performed by Wheelhouse, consisted in opening the urethra half an inch above the stricture, and insinuating a probe through it into the bladder. Gouley substituted an olive-tipped bougie for the probe; and as the stricture is often very tortuous it is clear the flexible bougie may pass where the inflexible metal probe cannot. Gouley uses the bougie as a guide to cut along, and slips his tunnelled catheter over it into the bladder. The great defect in the operation, as performed by Wheelhouse and Gouley, is that the position of the probe or bougie is not proved before cutting; hence either may have gone into a false passage instead of the true channel, without the operator being made aware of his mistake. Now I prove the position of the bougie, E (Fig. 8), by sliding over it a fine

FIG. 8.



metal catheter, C, open at both ends, and having a slit in its convexity, along which the tenotome can be pushed. If the bougie be in the bladder urine will escape from the catheter when the former is withdrawn. I then divide the stricture *subcutaneously*, and to ascertain that this is completely effected I slide over the silver tube, C, a large elastic one, B, four inches long, which will slip into the bladder if the road is clear. By the means I have related the surgeon is spared the mortification of mistaking a false passage for the urethra. Mastin of Mobile, after dividing the stricture, subcutaneously, passes a catheter which he ties in, and then brings the edges of the wound together over the instrument in order to obtain union by the first intention; thus treating the case like rupture of the perineum.

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CLINICAL REMARKS ON THE TREATMENT OF CHRONIC DYSENTERY.

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(Concluded from page 242.)

A MIXTURE of hæmatoxylon, in addition to the castor-oil treatment, was employed in eleven cases, seven of whom were cured and four relieved. The average duration of treatment in the cases cured was 23·1 days, and in the cases relieved 47·5 days. (See Table III.)

In four cases capsules of turpentine were used as a supplement to the oil; two of these cases were discharged cured, and two were relieved. Average duration of the treatment in the cases cured, 59·3 days. (See Table IV.)

These results may be considered fairly satisfactory, especially when, on reference to the appended tables, it is found that a considerable number of the cases that were relieved were discharged at their own request, some of them before the treatment could reasonably be expected to effect permanent benefit. Thus Cases 1, 4, 5, 16, 18, 29, and 38 were in hospital eight, thirteen, ten, seven, thirteen, eleven, and twelve days respectively. It is often difficult to induce sailors suffering from chronic diseases to make a sufficiently long stay in hospital so as to effect a cure. As soon as the more urgent symptoms have subsided, and they think they can pass muster before the shipping agent, they engage for another voyage. As may be expected, there is a speedy return of urgent symptoms, and the men become incapable of performing the duties for which they engaged. The ship is thus rendered short-handed, and is often brought in great peril in consequence. It is much to be regretted that Government does not prevent this practice of shipping

TABLE III.—CASES TREATED WITH CASTOR OIL AND HÆMATOXYLON.

Case.	Age.	Duration of disease.	Stay in hospital.	Result.	Remarks.
24	50	2 months	18 days	Relieved	Admitted August 29th; passing about seven stools daily, with blood and slime. Half an ounce of castor oil twice a week, one ounce of hæmatoxylon mixture three times a day. Stools reduced and improved in character till Sept. 3rd, when there was a relapse. Ordered twenty grains of ipecacuanha powder immediately, which was vomited. Stools continued frequent till Sept. 7th; the ipecacuanha was repeated and also vomited. Stools after this date fell to one a day, loose, but improved in character. Discharged much relieved.
25	20	20 months	60 days	Cured	Admitted Oct. 24th; passing an average of four stools a day, containing a very little blood and slime. Under castor-oil treatment the character of the stools improved, and from Dec. 1st to date of discharge the stools only averaged one a day. Hæmatoxylon mixture from Nov. 12th, in addition to oil.
26	38	4 weeks	70 days	Relieved	Admitted Nov. 13th; passing eight stools daily. Half an ounce of castor oil twice a week. In first week stools fell to an average of four daily, in second week to an average of three daily, and from then till the end of stay in hospital to two daily. Discharged relieved; character of stools improved. Hæmatoxylon used during last month.
27	36	4 months	11 days	Cured	Admitted Jan. 20th; passing three and four stools in 24 hours; no blood, slime, or lumps. Half an ounce of castor oil twice a week, hæmatoxylon mixture. Stools became solid, and patient discharged cured Jan. 31st.
28	41	4 years	27 days	Cured	Admitted Jan. 1st; passing four stools in 24 hours. Half an ounce of castor oil twice a week, one ounce of hæmatoxylon mixture three times a day. Steady and continuous improvement till discharged. The last week the stools were one a day, normal.
29	42	—	11 days	Relieved	Admitted Feb. 19th; passing five stools daily; no slime, no blood. Half an ounce of castor oil twice a week, one ounce of hæmatoxylon mixture three times a day.—Feb. 24th. Two stools.—Feb. 27th. One stool with little slime, but no blood. Discharged March 3rd, at own request.
30	19	12 months	17 days	Cured	Admitted March 31st; passing nine stools daily, with blood and slime. Half an ounce of castor oil twice a week, one ounce of hæmatoxylon mixture three times a day. Stools fell to two and one daily on April 5th and following days, with no blood or slime. Discharged cured, April 16th.
31	27	3 months	14 days	Cured	Admitted May 16th; passing seven stools daily. Half an ounce of castor oil twice a week, one ounce of hæmatoxylon mixture three times a day. Stools fell gradually to five a day till May 23rd, when there was a bad relapse—twelve stools, with much pain in colon. Twelve grains of ipecacuanha powder immediately. Next day stools fell to four, and then to three. Steady improvement till discharge, May 30th.
32	60	5 months	91 days	Relieved?	Admitted April 13th; passing six and seven stools daily. Half an ounce of castor oil twice a week, one ounce of hæmatoxylon mixture three times a day. At first made improvement, but then had frequent relapses. These were treated with twelve grains of ipecacuanha powder, with the effect of diminishing the number of stools and improving their character. After three months' stay in hospital was discharged only slightly improved.
33	30	1 month	26 days	Cured	Admitted May 14th; passing eight stools daily, with blood and slime, and much straining. Half an ounce of castor oil twice a week, one ounce of hæmatoxylon mixture three times a day.—May 21st. Stools increased to nine; much pain in colon. Ordered fifteen grains of ipecacuanha powder immediately. Stools fell next day to six, and the day after to two; continued to improve steadily till discharge, June 9th. Only one stool a day, of good character.
34	32	5 months	22 days	Cured	Admitted June 14th; passing five stools, with blood. Half an ounce of castor oil twice a week, one ounce of hæmatoxylon mixture three times a day. Stools rapidly diminished—last five days in hospital only one a day. Discharged cured, June 26th.

TABLE IV.—CASES TREATED WITH CASTOR OIL AND TURPENTINE.

Case.	Age.	Duration of disease.	Stay in hospital.	Result.	Remarks.
35	24	8 months	76 days	Cured	Admitted Jan. 13th; passing on first two days seven and sixteen stools, containing slime and lumps, but no blood. Two drachms of castor oil on alternate nights.—Jan. 15th. Passed five stools; no lumps, but very offensive. Ordered two drachms of dry powdered charcoal every morning.—Feb. 7th. Stools more formed, not offensive.—Feb. 28th. Relapse; twelve stools.—March 1st. Ordered one turpentine capsule three times a day, in addition to the castor oil.—March 22nd. Has steadily improved since last note, now has about two stools daily, firm. Discharged cured, March 29th.
36	26	—	43 days	Cured	Admitted March 11th; passing eight, nine, and seven stools on first three days; slime and blood. Treated with one turpentine capsule three times a day, and two drachms of castor oil on alternate nights. Made slow progress up to March 27th; slight relapse April 7th to 10th. Discharged April 24th; motions firm and natural.
37	40	5 years	26 days	Relieved	Admitted April 4th; passing eight and six stools on first two days, light yellowish in colour, no blood or lumps. Two drachms of castor oil on alternate nights, one turpentine capsule three times a day. Gradually improved. Last week in hospital stools averaged three a day, and were firmer. Discharged May 1st, at own request.
38	31	18 months	12 days	Relieved	Admitted April 13th; passing fourteen, seventeen, and twenty stools on first three days, with much blood, lumps, and slime. Castor oil on alternate nights, one turpentine capsule three times a day. No improvement till April 21st, then stools fell to five, four, and three daily, with no blood. Discharged April 25th, at own request.

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"unseaworthy" sailors by insisting on the medical inspection of all crews before leaving port.

The castor-oil treatment may be advantageously employed in all stages of the disease—either at an early period, when the disease is subacute and the ulceration still extending, or when the process of repair is going on, and we are dealing merely with an ulcerated condition of the bowel; or when the ulcers have healed, and there remains a thickened and contracted condition of bowel, caused by cicatrisation, with a mucous surface extremely liable to catarrh. It is apparently beneficial by causing a soft non-irritating flux from the small intestines, which sweeps before it scybala, decomposing shreds of mucous membrane, or food, and offensive discharges accumulated in the lower bowel. It is not improbable, in addition to this mechanical action, that the flux from the small intestine may have some remedial action on the ulcerating surface analogous to that said to be produced on the inflamed mucous membrane of the bladder by the injection of normal urine. In the later stages of the disease, when cicatrisation is completed, or nearly so, castor oil relieves the constipation, the consequence of the thickened coat and diminished calibre of the bowel, and it also appears to diminish the tendency to catarrhal relapses. With respect to the dose, in twenty-one cases two drachms of the oil were administered every alternate night. Of these, six were discharged cured. In the remaining seventeen cases the oil was given twice a week in half-ounce doses, and the number of cases discharged cured amounted to eleven. Each dose of castor oil was guarded by the addition of eight drops of laudanum. The administration of castor oil does not usually lead to an immediate diminution of the number of stools, its first effect being to improve their character. By the end of the first or second week the stools become more feculent and less offensive, and the tormina and tenesmus are less urgent. The stools then gradually fall in number, preserving often a regular gradation, interrupted, however, by repeated relapses, each relapse, if treated promptly with ipecacuanha, being more manageable and of shorter duration.

When castor oil alone was relied on the results were not so satisfactory as when either a mixture of bismuth or hæmatoxylon was given at the same time, or at some period during treatment. Indeed, the most satisfactory results were obtained with half an ounce of castor oil administered twice a week, and a mixture of hæmatoxylon given three times a day. I cannot, however, at present come to any decision with regard to the respective merits of bismuth and hæmatoxylon. In the majority of the cases treated with bismuth the castor oil was administered in two-drachm doses, repeated every other night, and the cases treated with hæmatoxylon with half-ounce doses of oil only twice a week. The more favourable result obtained with the latter treatment may be due to the larger but less frequent dose of oil. Both have a different action, bismuth diminishing the catarrh of the mucous membranes in the neighbourhood of the ulceration; hæmatoxylon[1] by restraining undue peristaltic action throughout the intestinal canal, allowing digestion to be more completely performed, and in this way improving the general nutrition, and diminishing the irritation of the ulcerated surfaces by lessening the passage over them of undigested matters. In four cases turpentine was administered in conjunction with the oil. Turpentine seems to be indicated where we have a large ulcerated surface, and the discharge is offensive. A considerable number of cases treated solely with turpentine were collected for me by my friend, Dr. Andrew Duncan, when house-physician at Greenwich, the notes of which I have unfortunately mislaid, or I would have appended them to this paper. The results obtained were encouraging, but, as the turpentine was sometimes uncertain in its action, I have not continued its use, except occasionally as a supplement to castor oil.

With regard to the topical application of substances to the ulcerated surface by means of injections, in only one of the cases quoted (Case 22) was this tried, the administration of the oil being stopped during the case. The injection, which consisted of bismuth, was given twice with the effect of at once increasing the number of stools, and adding greatly to the patient's distress. The enemata were at once discontinued, and the castor-oil treatment resumed, and the patient made a good recovery. In other cases where I have tried bismuth injection, and injections of other substances, the results have not been encouraging. In some cases where ulceration was low down in the bowel the injections sometimes seemed to do good.

Ipecacuanha powder was given in large doses in seven cases, six for relapses during castor-oil treatment (Cases 9, 12, 22, 24, 32, 33), and in one case (19), on admission. The dose ranged from twelve to twenty grains of the powder. In two cases in which the larger dose was given vomiting was produced; but with fifteen grains nothing beyond a feeling of nausea was complained of. Ipecacuanha is indicated whenever in the course of treatment the stools that had become feculent begin to lose that character, accompanied or preceded by abdominal pain and tenderness, with an increase of blood and slime in the stools and a return of tenesmus. A very sudden diminution in the number of stools passed daily is often a premonitory indication that a relapse is about to occur. As each relapse adds to the already existing debility and protracts the disease, it is of the utmost importance either to prevent their occurrence or cut them short if they have occurred. Therefore, at the first indication, a full dose of ipecacuanha powder should at once be given. If administered sufficiently early the urgent symptoms will be found to pass away, and the character of the stools improve, generally at the end of twenty-four hours; but if delayed till the relapse is well established it will be days before the patient will recover lost ground. Too much importance, therefore, cannot be laid on the *necessity of watching for the earliest indication of a relapse*, for on its early recognition and prompt arrest depends the ultimate success of all treatment of chronic dysentery.

All cases complicated with constitutional conditions, such as syphilis, ague, anæmia, scurvy, and the like, call for appropriate treatment in addition to that required for the dysentery. With reference to the use of iron, the solution of the pernitrate agrees very well with most patients. Some, however, are very intolerant of iron in any form administered by the mouth. In these cases it may be advisable to try the subcutaneous injection of the dialysed solution.

Rest and strict attention to diet are essential to the cure of chronic dysentery. So long as there is tenesmus and much straining, and the stools contain blood and slime, the patient should be confined to bed, or at least remain in the horizontal position. When the stools become feculent he may be permitted to sit up for a few hours daily, but till the stools have become consistent he should not be permitted to go out of doors; even then only in dry, warm weather. Exposure to cold and damp almost invariably causes a relapse. Nourishment should be given only in small quantities at a time. When the symptoms are subacute, beef-tea must be chiefly relied on, and if the exhaustion is great fluid extract of meat, or juice of raw beef, must be freely administered. As the more urgent symptoms subside, boiled fish may be given, and then minced meat (made from fresh, not cooked meat). The effect, however, of the change to a more solid diet should be carefully watched, for if given too soon, or in too large quantities, it will provoke a relapse. The best way is to begin with a very small ration, and increase it daily. Farinaceous food should be given in very small quantities, if at all. The digestive powers being usually enfeebled in chronic dysentery, some portion of the starchy matter may escape conversion into sugar, and, by decomposition in the large intestine, the unconverted starchy material will give rise to flatulence, and to the formation of lactic acid. The same caution is necessary with regard to milk, which if not speedily absorbed, rapidly undergoes lactic acid fermentation. Coffee and alcohol in any form are injurious, and should be abstained from. Fresh fruits in small quantities and lime-juice are beneficial, especially if there is a scorbutic taint, which is very common.

[1] Hæmatoxylon, according to Pereira, though classed as an astringent, does not constipate or disorder the digestive functions.

AMYLOID DEGENERATION.

By GEORGE BUDD, JUN.

THE commoner lesions furnish frequent opportunity for their study and examination, and, although our knowledge concerning them is often of a vague and indefinite kind, there are never wanting theories to explain their etiology and causation. To this rule, however, the lesion known as amyloid, or waxy degeneration, offers a singular exception. Common though the disease is, only one theory (save the present) has, I believe, been hitherto advanced for its eluci-

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dation. Nor can it be said that Dr. Dickinson's views have met with any marked degree of favour.

I propose, in the first place, to devote a short space to their analysis.

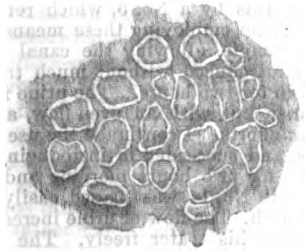
Waxy substance presents three distinct peculiarities, and the most peculiar of them all is its faculty for wholly resisting the action of ordinary digestive fluids. This, indeed, is its most specific characteristic. It exhibits a mahogany hue when treated with iodine, and is coloured dark-blue by the joint action of iodine and sulphuric acid; but the latter peculiarities (seeing that they are possessed by other substances also) are only specific in degree. Syntonin and dextrin give a similar mahogany reaction with iodine; cellulose is tinged blue by iodine and sulphuric acid combined.

Dr. Dickinson's theory explains only one of these phenomena, and that, be it noted, a comparatively unimportant one; I allude to the brown colouration with iodine. He supposes that, by the prolonged suppurations which often precede the lesion, large quantities of alkali are withdrawn from the blood, and that waxy substance is dealkalised fibrin—acid-albumen, in fact.[1]

Let us turn our attention for a few moments to gastric digestion. Albuminous food, when received into the stomach, is first acted upon by the hydrochloric acid secreted by that organ, and is thereby converted into acid-albumen (syntonin), which, under the influence of pepsin ferment, is presently transformed into peptone. Syntonin, then, is semi-digested albumen, and to reconcile ourselves to Dr. Dickinson's theory we must believe that waxy material—that most indigestible of substances—is a partly digested proteid. Nor does the theory bear scrutiny from other aspects; cases of waxy degeneration in which no preceding suppuration (and, therefore, presumably no accountable drain of alkali from the blood) has taken place, are by no means rare.

I will now attempt to set forth a theory which, while it explains the three specific characteristics of lardacein, is also in perfect harmony with the method of formation and localisation of that substance throughout the body.

Waxy degeneration is essentially a morbid infiltration which usually affects many organs of the body synchronously. The cells of an organ affected may be seen to become gradually distended with a translucent deposit, and soon an accumulation of a similar deposit takes place in the intercellular spaces also. Two factors, therefore, claim our attention in this process—the cell and the deposit. With the cell we are already familiar; as to the nature of the deposit we can only speculate. I repeat (somewhat tautologically perhaps) the cell becomes distended with the deposit, and presently the cell-wall becomes surrounded by the deposit, so that the cell-wall and cell-remains are at last covered both within and without by the deposit, and are therefore essentially *within* the deposit.



Of one fact, then, we are certain, that until we remove the deposit the imprisoned cell-remains will take no part in the external phenomena which the mass will present; and we are further able to prophesy that, whether the deposit is a proteid or not, the mass will, when subjected to destructive analysis, yield nitrogen because of the cell-remains incarcerated therein. It will be seen, too, that the nitrogenous cell-remains have been gradually condensed, both within and without, by the deposit, so that the amount of nitrogen obtained upon ultimate analysis may be considerable. The part which these cell-remains must play in the composition of waxy substance has been hitherto entirely overlooked, and because the complex mass has yielded nitrogen it has been somewhat hastily concluded that the deposit is albuminous. Let us attempt to remove the deposit from the cell element. Efforts at mechanical separation will be manifestly ineffectual, for, grind the substance ever so finely, a minute fragment will still consist of an aggregation of numberless cells, each covered within and without by deposit. The deposit is insoluble, and we next endeavour to act upon it, chemically, by subjecting it to the action of digestive fluids. Saliva, gastric and pancreatic juices, prove successively inoperative, and we are now able to assert positively that the deposit, whatever it may be, is a substance which resists altogether digestive fluids of the ordinary kind.

And now to search for some substance in the body whose deterioration might produce such a deposit. And in doing so we are not tied down to a proteid or a carbohydrate, for the deposit may be either, but our attention will be especially directed to nutrient substances normally present in solution in the blood. For the infiltration first appears in and around the small nutrient arteries, and this would seem to guarantee the suspicion that some alimentary substance normally concerned in the nutrition of the part has become in some way altered—degenerated, if you will,—and that its assimilation has on this account failed. And then we find that there is a substance usually present in the blood in quantity—a substance which agrees with lardacein in its most specific characteristic—a substance which wholly resists the action of ordinary digestive fluids: that substance is a dextrin—a carbohydrate, and the iodine reactions which lardacein exhibits are no longer inexplicable. That substance—the dystropodextrin of Seegen—is produced in large quantities wherever the amylolytic metamorphosis of glycogen takes place. It is then commonly in solution in the blood, and to account for waxy infiltration we have merely to suppose that under certain conditions its solubility becomes impaired, and that its precipitation and deposition in the tissues result. Nor is this by any means improbable, for we see in other cases commonly enough how the solubility of substances varies with the quality of the fluid in which they float, and how a rise in temperature is sufficient to render albumen permanently insoluble. Dystropodextrin is first set free in the liver; that organ is perhaps the commonest seat of waxy degeneration. The degree of distension of the hepatic artery regulates the conversion of glycogen into sugar, and therefore the formation of dystropodextrin. Hence it may be presumed that the zone of the liver-lobule supplied by that bloodvessel is the one most intimately concerned in glycogenic metabola. This is the zone which is always primarily, and often exclusively, involved in lardaceous degeneration.

I will not endeavour to specify whether the solubility of dystropodextrin may become impaired by deterioration of the substance itself, by alterations in the blood-composition, or by some morbid influence which the cell may exercise over it; but I would point out that from its stubborn qualities it is a body whose assimilation would be likely to sometimes prove a matter of difficulty.

I do not mean positively to imply that the deposit consists absolutely of altered dystropodextrin and nothing else: indeed, it would seem to me possible that it may be a mixture of perverted dextrins,—dystropodextrin however predominating and lending to the compound its stubborn characteristics.

In making the following experiments, I have carefully conjoined chemical and microscopical investigation. The first series are devoted to the examination of a group of phenomena which Dr. Dickinson has adduced as leading arguments in support of his theory. Lardacein is stained dark-brown by iodine, but upon the addition of an alkali the colour vanishes. It may, however, be restored by the super-addition of acid. Dr. Dickinson believes these facts to be full of practical suggestion. He argues that the brown colouration is due to the acidity of waxy substance (which he regards as acid-albumen), and infers that the acidity is neutralised by the alkali, but may be again renewed by the subsequent addition of acid. This, I repeat, is his view of matters, but others have suggested that the facts admit of a far simpler interpretation. The colouration is due to the presence of iodine as such, but upon the addition of a free alkali a colourless iodide is formed, and the stain vanishes. The after-addition of acid will, by turning out the iodine from the salt, restore the colour. It will be seen that by

[1] Dr. Dickinson advises us to imitate the process by treating fibrin with a solution of hydrochloric acid.

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one hypothesis the changes are due to the action of alkali upon lardacein; by the other, to the action of alkali upon iodine. The following experiments prove, I think, conclusively that the latter is the case:—

EXPERIMENT 1.—A few drops of liquor potassæ were added to a blue solution of iodide of starch:—the colour vanished but presently returned upon the addition of an acid. Free alkali then has the property (in virtue of its faculty for combining with iodine) of annulling colourations produced by the latter element. Free acid restores the colour by destroying the combination and setting the iodine free.

EXP. 2.—A thin microscopical section, taken from an advanced waxy spleen, was steeped in a solution of potash for four hours. Dr. Dickinson would have us believe that the neutralisation of the "acid-albumen" is the work of a few moments; after four hours the process must be indeed complete. The section was now withdrawn and was immersed for a few seconds in pure water, in order that any free alkali might be removed. It was then placed upon a slide and treated with iodine, when it at once exhibited the usual mahogany-red reaction. This conclusively proves that free alkali[2] has no action upon lardacein which in any way interferes with the iodine colouration.

EXP. 3.—The same section, which had been already stained by iodine, was treated with a few drops of the alkaline solution in which it had floated for such a lengthened period: the colouration vanished. Its disappearance, then, is due to action of the alkali upon the iodine.

I do not think it is too much to say that the foregoing experiments are fatal to an argument to which Dr. Dickinson has attached considerable importance.

In the following experiments I have endeavoured to investigate the nature of the reputed reaction produced by treating lardacein with iodine and strong sulphuric acid. Virchow has stated that a blue colouration may be thus induced, but English pathologists have usually succeeded in obtaining little more than a dirty-black stain.

EXP. 4.—A microscopic slide was stained with blue iodide of starch, and another with a solution of iodine. The one was then placed upon the other, and when viewed together the colours presented a dirty-black appearance, for it must be remembered that they are in a degree complementary. It occurred to me that this fact might account for the difficulty which so many have experienced in detecting any blue colouration in Virchow's reaction, for the presence of the slightest excess of solution of iodine, or of unimplicated tissue stained thereby, would mask the colour effectually.

EXP. 5.—The remains of a digested section of waxy spleen were treated with iodine solution. The excess was removed, and a drop of concentrated sulphuric acid added. A dirty-black colour made its appearance, nor was any suspicion of blue anywhere discernible. But after some time bluish spots began to appear here and there, and I at first thought that I had succeeded in obtaining the result which Virchow has described. In operating, however, upon a section of healthy spleen in a like manner similar blue spots made their appearance. They are to be accounted for, I think, in the following way:—Concentrated sulphuric acid, when added to wet iodine, not only abstracts water therefrom, but likewise raises the temperature thereof in a marked degree; both these actions favour volatilisation, and the colour is, I believe, due to the formation of violet iodine vapour.

It will be seen that these experiments, while they do not absolutely negative Virchow's reaction, throw, nevertheless, a certain amount of suspicion upon its character, a result which, while it does not advance my theory in any way, does not, on the other hand, retard it, as I will endeavour to show later on.

Dr. Dickinson has stated that waxy substance has been subjected to analysis, and that some deficiency in the minute amount of potash salts usually present in healthy tissue has been ascertained. I am at a loss to understand how any trustworthy results can have been obtained in this direction, for if an affected organ were examined *en masse*, the results would, I think, be of little value, for even in an organ in which the disease is far advanced, there is always a large percentage of unimplicated tissue; while, on the other hand, if an effort were made to isolate the lardacein, the digestive fluids used for that purpose would vitiate and render worthless the results.

[2] Caustic alkalies, of course, dissolve and decompose lardacein.

In conclusion, I would state that all the experiments recorded above have been performed several times under varying conditions, and their accuracy thus guaranteed. I am greatly indebted to Dr. Waller for his kindness, and for the facilities he has afforded me for making the preceding experiments.

(To be continued.)

OBSERVATIONS ON A CASE OF URINARY FISTULA.

BY DR. DE LABORDETTE,

SURGEON-IN-CHIEF OF THE ASYLUM FOR SCROFULOUS CHILDREN AT NICE; LATE SURGEON OF THE HOSPITAL OF LISIUNG; VICE-LAURÉAT DE L'ACADÉMIE DES SCIENCES; OFFICIER DE L'INSTRUCTION PUBLIQUE, ETC.

M—— had six years ago constriction of the canal of the urethra. The flow of urine was very slight, and was only expelled after considerable efforts. In the month of October, 1878, great pain was felt in the perineum. A rupture of the canal of the urethra had occurred. Some hours afterwards this pain extended to the sinuses and inguinal folds. M—— had to take to his bed. At each time of passing water the pain increased; the urine, which entered the scrotum and filtered through the tissues, occasioned acute pain in the sacs and lower part of the stomach. Abscesses were formed, and were opened one after another. The scrotum became the seat of a hard and uneven tumour, through which the urine passed each time the patient made water. The urine passed both through this fistula, open at the lower part of the scrotum, and by the canal. The patient whenever he micturated made tremendous efforts, which caused the expulsion of fæcal matter. His sufferings were terrible. Such was his condition when he applied to me on the 4th of June, 1878.

After examining the affected parts, and forming a clear opinion as to their state, I decided to advise the patient to submit to the following treatment:—In the first place, the dilatation of the contraction, in order to be able to penetrate into the canal, and judge of its condition as respected the fistula; to determine its exact position, and afterwards proceed to remove it. With this object I proposed to him to accompany me to the Chartreuse, Italy, where I was about to spend the summer. He agreed to my proposal, and in the following week the treatment was begun.

I endeavoured to overcome the contraction with olivary bougies. After attempting during five days to introduce three filiform bougies, by alternately pressing very gently on one of them, I succeeded in passing the obstruction, and in entering the bladder. I left the bougie (an olivary one, No. 4) in position, and the patient kept it in all night, passing his urine through it.

Next day I introduced a No. 3, and leaving it in withdrew No. 4, replacing this by a No. 5, which remained the following night. After employing these means for three days I removed the bougie, allowing the canal to rest for ten hours. I then introduced without much trouble a No. 5, which was left in for two hours. The urine issued forth in a filiform manner, but with an even flow, and without the previous violent efforts. I continued the use of the catheter for fifteen days, and succeeded in introducing Nos. 8 and 9, which I left in for two hours morning and evening. At the end of a month No. 14 was passed easily. The patient could sound himself. The flow of urine increased in volume, and M—— passed his water freely. The passage of the urine through the sinuses had greatly diminished.

I then attempted the introduction of full Béniqué bougies. I passed No. 12 easily, and succeeded in passing No. 15 on the same occasion. I withdrew the metallic catheters as soon as they were introduced; they caused a rather sharp pain. No. 20 was reached in eight days. The patient was then requested to micturate through a No. 17 metallic catheter, which he himself introduced without difficulty. After fifteen days of this treatment I tried to get the patient to pass his water naturally, which he did without feeling the least pain in the locality of the fistula. The tumour in the scrotum had almost disappeared, and was no longer painful when touched.

From that time M—— has passed his urine without

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trouble. He sounded himself morning and evening with a full No. 17 india-rubber bougie. After eight days he only sounded himself in the morning, then every three days, and now only every eight days. He has been entirely cured, and the fistula healed for three months.

I may be permitted to add a few reflections to my notes on this case. The considerable difficulty met with in the first instance in overcoming the obstruction made me consider the possibility of performing urethrotomy after the introduction of the first catheters. But the sufficiently easy graduation of catheters which I was able to introduce made me renounce this idea. There were severe spasms in the navicular fossa, which had to be contended against; but I ought to state that in this case, as in other cases occurring in my practice, the canal having grown accustomed to a gentle use of the catheter, I have found little difficulty in increasing the size of the bougie. One precaution I never neglected; I commenced with a number lower than that used on the previous evening.

The india-rubber bougies were changed for metallic ones because I wished to use metallic catheters repeatedly, as they empty the bladder much better. I have always had reason to congratulate myself on this proceeding.

I was also fortunate in having neither fever nor hæmorrhage in the slightest degree to contend against in the whole course of this treatment. At the end of eight days M—— could get up and walk about, and during the two months the treatment lasted he was able to live like the other boarders at the hotel.

The inconvenience of the treatment by progressive dilatation has been much exaggerated. When the patience and the gentleness of hand of the surgeon have somewhat overcome the spasms met with in the first instance, the urethra becomes very yielding, and permits the gradual increasing of the size of the bougie. At length you find not the slightest trace of stricture, and the urethra has become completely manageable. The introduction of the bougie must be continued for a long while after recovery, but only at intervals of fifteen days to a month. I conclude in affirming that there exists no stricture which a persevering patient and able surgeon may not successfully overcome without division or the use of force.

Nice, Alpes Maritimes.

CASE OF HYPERTROPHY OF THE MEDIAN PORTION OF THE CERVIX UTERI.

BY D. LOWSON, M.D.

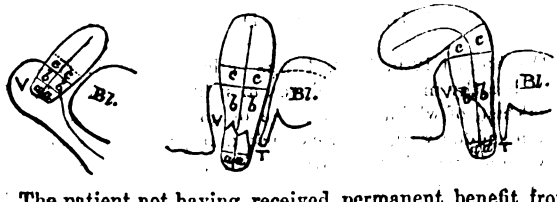
I SAW Mrs. W—— for the first time on April 8th, 1876. She then complained of pain in the back; weight and swelling in the lower part of the abdomen; painful, copious, and very frequent menstruation, and profuse leucorrhœa. She was forty-seven years of age; and had been married seventeen years, but had borne no children. On making a digital examination, the cervix uteri was found in its normal position, the os being somewhat more patent than natural. The anterior vaginal cul-de-sac presented nothing unusual, but the posterior was roofed by a dense globular mass; whilst, by bimanual palpation, the fundus was found to be absent from its natural situation, and through the speculum a thick glairy mucus could be seen issuing copiously from the os.

Having reduced the retroflexion, which was easily accomplished, a sound was introduced, and the uterine canal was found to measure rather more than normal—namely, three inches. Rest for several weeks in bed, small doses of ergot, the application of astringents to the cervical mucous membrane, and the subsequent introduction of Hodge's pessary, so far improved the patient's condition that she was able to resume her ordinary occupation and to walk about with comfort.

On January 6th, 1877, she called at the surgery with a return of her former symptoms. She had removed the pessary. The metrorrhagia had become more frequent and more severe; the leucorrhœa was very profuse; and, on examination, I found the cervix low down, about an inch within the vaginal opening, and the fundus occupying its former position in Douglas's space. The same treatment was resorted to as before, with the addition of frequent astringent vaginal douches; and again very great improvement took place, but, as formerly, only for a time.

On October 24th, 1877, I was sent for, and found that after lifting a heavy weight patient felt something give way internally, was attacked with severe sickness and violent pain over the sacrum, and had to be carried to bed. The pessary had dropped out a fortnight before. The cervix was protruding an inch beyond the vulva, presented the cutaneous appearance of chronic prolapse, a shallow ulcer surrounded the os, and a thick mucous discharge tinged with blood issued from it, while the inner aspect of the thighs was red and excoriated from the friction of the projecting cervix and the irritation of the discharge. For some time she had been in a very miserable state, walking with difficulty from the dragging pains in the back, the feeling of weight in the pelvis, and the soreness of the thighs; and not sitting comfortably on account of the pressure of the chair against the tender and ulcerated os. A very large globular tumour occupied Douglas's space, and formed the roof of the posterior cul-de-sac (which retained its normal relations), whilst the anterior cul-de-sac had disappeared, so that the finger could not be passed up behind the pubis. With some difficulty the mass in front of the sacrum was pushed up into the abdominal cavity, and after getting it beyond the sacral promontory (the patient being on her hands and knees), it was felt to fall heavily forwards towards the anterior abdominal wall. The pain and sickness now passed off, and next day she felt comparatively easy; the flexion not having recurred, but the cervix protruding as before. On introducing Simpson's sound it passed easily, and was not arrested till it marked six inches and a half. Slight hæmorrhage took place when it was withdrawn, the mucous membrane being soft and granular. A scale sound was then introduced into the bladder, and directing its beak downwards it could be carried along the front of the cervix in a downward direction, till it stopped about an inch above the os, showing that the lower part of the bladder had become prolapsed along with the front wall of the vagina. From this examination little room for doubt remained that the case was one of uterine hypertrophy, prolapse being excluded because of the great increase in length of the uterine canal, whilst the normal relations of the posterior, together with the obliteration of the anterior cul-de-sac limited the diagnosis to what Schroeder calls median hypertrophy of the cervix. This authority describes three varieties of cervical hypertrophy. Fig. 1 from Schroeder shows the normal cervix divided into three regions effected by the uterine insertions of the vaginal walls, the posterior being inserted considerably higher than the anterior; *a a*, or infra-vaginal portion, being situated below the insertion of the anterior wall, *c c*, or supra-vaginal, extending upwards from the posterior insertion, and *b b* placed between the two insertions. Looking now at Fig. 3, which is a sketch of the relative position of vagina, uterus, and bladder in Mrs. W——'s case, it is plain that while the supra and infra-vaginal portions (*a a* and *c c*) are nearly of normal dimensions, the median (*b b*) is very much elongated. No doubt the hypertrophic process was not entirely confined to this portion, for the body and fundus were very much increased in bulk, partly on account of engorgement due to retroflexion, and partly from increased growth of uterine structure, but still the middle part of the cervix was the chief, and, in all probability, the primary seat of the disease.

FIG 1. FIG. 2. FIG. 3.



The patient not having received permanent benefit from internal remedies or local applications, I proposed amputation of part of the cervix, hoping that subsequent involution would considerably diminish the volume of the rest of the uterus, and, having received her consent, the operation was performed on October 31st, 1877. The plan adopted was essentially the same as that recommended by Schroeder. As described by him his operation consists in bilateral incision of the cervix, so as to divide it into an anterior and posterior flap, the posterior being next cut off transversely,

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and the anterior in an oblique direction downwards and forwards to a little below the lowest point of the prolapsed bladder, a male catheter being introduced, beak downwards, so as to guard against wounding the bladder.

Fig. 2, V, T, represents the line of incision, and the wedge-like excision of the flap; the mucous membrane lining the interior of the cervix being then stitched to that covering its external or vaginal surface. In this way the profuse hæmorrhage which usually accompanies the operation is arrested, and early healing promoted.

In Mrs. W——'s case the plan adopted was somewhat different. The patient being laid on her left side and Sims' speculum placed behind the cervix in the posterior cul-de-sac, a grooved director was introduced well into the cervix, and by a curved bistoury the posterior wall was incised high up as far as V, Fig. 3, in the median line; the front wall was then divided up to T, and the lateral flaps cut off in an oblique direction from V to T, and in the wedge-shaped manner recommended by Schroeder. Catgut sutures were then introduced, a roll of bandage was placed behind the stump, and a perineal bandage firmly applied. No hæmorrhage having occurred during the night, ordinary glycerine was subsequently applied, and the incisions healed by first intention, except at the highest point behind, where a granulating surface made its appearance, but this gave very little trouble, and also healed in a few weeks. Involution took place rapidly as far as the remainder of the cervix was concerned, but the rest of the uterus continued to increase in size; a copious discharge from the interior of the uterus persisted, but the metrorrhagia disappeared.

Three weeks after the operation I allowed the patient to get up, and making an examination a week afterwards, on account of a complaint of backache, I found that retroflexion had again taken place, or rather retroversion, for there was now no cervix to speak of. This condition required reduction, and the introduction of a pessary.

Six months after the operation I found that the body of the uterus had grown to a great size, so that the fundus could be very distinctly felt by simple abdominal palpation; that although the pessary had been removed, a recurrence of the retroversion had not taken place, probably on account of the great size of the uterus; that she suffered little inconvenience from the discharge, and none at all from hæmorrhage, and that she could walk about and do her housework without any of her former symptoms.

On May 20th, 1879, I again examined Mrs. W——. The vagina was healthy, and there was no discharge from the os. Along the front of the vagina was a prominent ridge, firm, of the consistence of uterine structure, continuous with the body of the uterus above, and terminating below in a blunted point, being, in fact, the remainder of the elongated cervix. The fundus was retroverted, but, being now very much reduced in size, gave rise to no symptoms, unless after an unusually long walk or other severe exertion, when she suffers a little from sacral pain and weight in the pelvis.

The formation of lateral instead of antero-posterior flaps, gives, I think, more facility for the introduction of stitches, and certainly allows of more extensive removal of cervix.

Huddersfield.

INTUSSUSCEPTION; INFLATION WITH AIR; RECOVERY.

BY T. D. RANSFORD, F.R.C.S. ENG.

ON August 12th, 1879, I was called to see A. H——, a fine, healthy male child, eleven months old. After a hearty breakfast, of which fish was one of the ingredients, he was taken suddenly ill, was very sick and pale, and seemed to have much pain in the bowels. He was taken to a chemist, who administered a powder of rhubarb and mercury, after which the child began to pass blood per anum, was collapsed and in much pain. When I saw the child he was in the above condition, passing much blood and mucus. On examining the abdomen, a sausage-shaped tumour, about two and a half inches in length, was felt in the right hypochondriac and right lumbar regions; the rectum was dilated, but contained nothing but blood and mucus, which came away in large quantities on withdrawing the finger from the anus. Ordered half a minim of tincture of opium every two hours. My friend Dr. Campbell, surgeon to the Northern Hospital, Liverpool, saw the child with me in the evening, and agreed with me as to the nature of the case and the treatment. We injected by means of Higginson's syringe a pint of olive oil, which soon came back mixed with blood and mucus. As the child still continued to be very sick and in much pain, we ordered a grain of compound ipecacuanha powder every second hour.

On August 13th I found the child had passed a very restless night, vomiting not quite so frequent, and had passed less blood; so, after fastening the end of the enema to a pair of common house bellows, I proceeded to inflate it per anum. On withdrawing the tube it was covered with blood and mucus; no fæcal matter; no noticeable result. Called in the afternoon, about five or six hours after first visit, and again inflated the child; this time, on withdrawing the tube, the end was covered with fluid fæces, some had also been sucked up into the bellows. To continue the compound ipecacuanha powder. On the 14th the child had passed a good night, seemed quite free from pain; sickness had stopped; no tumour could now be felt through the abdominal walls; bowels had not been opened; seemed weak and flabby, but otherwise well.

16th.—The little patient has continued to improve in appearance and gradually gained strength. This morning passed a copious but normal stool. Dover's powder discontinued, and child pronounced quite well.

Remarks.—The sudden onset of pain and sickness in a previously healthy child, followed by the passage of blood and mucus, with the presence of a sausage-shaped tumour felt through the abdominal walls, left no doubt in my mind as to the nature of the case, and I asked Dr. Campbell to see it, partly to satisfy the parents, partly because it was an interesting case and one I thought he would like to see, and partly because it is only little more than two years ago since I published a very similar case in THE LANCET.

Liverpool.

A NEW PLASTER SPLINT FOR GENU VALGUM AND INFANTILE PARALYSIS AFFECTING THE EXTREMITIES.

BY BERNARD ROTH, F.R.C.S. ENG.

I HAVE treated several cases of moderate genu valgum very successfully by means of the following splint:—The limb, surrounded with cotton-wool, is covered with a layer of plaster-of-Paris bandage (as used for Sayre's jacket); a thin wooden splint of the right length is then applied to the outer aspect of the limb, and held firmly by an assistant, who endeavours to make the limb as straight as possible, while another layer of plaster-of-Paris bandage is wound round as tightly as possible. Generally three ordinary prepared plaster-roller bandages are sufficient. The patient may either keep this bandage on permanently for two or three months, or it may be opened when quite dry next day by a longitudinal incision along its inner aspect. The plaster is first carefully divided by an ordinary pair of vine-dresser's shears, and then the cotton-wool by scissors. The whole plaster splint may now be taken from off the limb, and its inside lined with chamois leather, to keep the cotton-wool in place, and the outside covered with stouter leather, into which a series of boot-hooks are to be fixed along each edge. Any bootmaker is able to do this. A very light leg splint is thus obtained, weighing from one to two pounds, which is readily put on and fixed by an ordinary leather lace by means of the hooks.

This splint is not only far better than any leg-iron with straps, from its fitting the limb accurately, but also much more economical, as the materials used are inexpensive, costing three or four shillings, exclusive of the bootmaker's work, which may even be dispensed with, and the splint covered at home. I have used a similarly constructed splint in many cases of infantile paralysis, where the knees could not be kept extended without support; for these cases the piece of wood was applied to the back of the leg and the bandage cut open in front. In several cases where both legs were affected, and where they were constantly cold and

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bluish from defective circulation, these splints have been worn daily for many months with much benefit, enabling patients to walk about who were previously quite helpless, and with the great additional advantage of keeping the limbs comfortably warm by means of the cotton-wool with which they are lined. Even when tightly laced, the pressure is so equably distributed that hardly any marks are found on the skin when the splints are removed at night, or for allowing the limbs to be rubbed or otherwise acted upon.

Brighton.

STRANGULATED FEMORAL HERNIA OF FIVE DAYS' DURATION; OPERATION; RECOVERY.

By W. A. ROSS, M.R.C.S., &c.

THE chief features of this case seem to me to be the length of time—five days—that the hernia had been strangulated, also the age and weakly and emaciated condition of the patient at the time of operation, which I only performed as a last resource. She was for two hours under the influence of chloroform.

About 9 P.M. on Feb. 12th, 1879, I was called to see Mrs. S——, aged seventy. In answer to my inquiries I learnt that for more than twenty years she had been the subject of femoral hernia, which, for some reasons or other, she had never mentioned either to her husband or daughters. From time to time she had had attacks of colicky pains in the abdomen and constipation, which generally passed off in a few days, leaving her very weak. Sometimes she had been obliged to call in a medical man. When I saw her she had been suffering for four days previously with severe abdominal pain, and obstinate vomiting and constipation. She was somewhat emaciated, with pinched features and a hard and wiry pulse.

On examination I found a strangulated femoral hernia in the left groin, about the size of an egg, very painful, tense, and hard. I tried taxis and the warm bath with opium, but could not effect reduction. As the symptoms were not extremely urgent I administered a dose of morphia and left her.

The following morning, with the assistance of Messrs. Dustan and Seymour, A.M.D., the patient was put under the influence of chloroform, and all our efforts at reduction proving unavailing, I cut down on the sac in the usual way, and divided the stricture, and at the same time broke down some adhesions which had formed between the sac and the femoral ring. The contents of the sac, consisting of omentum in which was concealed a small knuckle of intestine, being in a tolerably healthy condition, were returned into the abdomen, and the wound closed with four sutures, and dressed with carbolic oil.

The further progress of the case was very satisfactory. In three weeks the wound was perfectly healed, with the exception of two small granulations where the sutures had been.

Alderney.

NOTE ON THE DANGER ATTENDING THE USE OF SALICYLIC ACID IN ACUTE RHEUMATISM.

By T. J. MACLAGAN, M.D.

1. IN acute rheumatism the heart is apt to be inflamed. Attention is usually concentrated on the membranes; but the muscular substance also suffers. When severe, myocarditis is apt to be fatal, and is frequently recognised in the post-mortem room. In a mild form it is, I believe, much more common than is usually supposed. It may exist independently of inflammation of the membranes. In all forms it produces softening and weakness of the muscular substance.

2. Salicylic acid, no matter whether given alone or in combination with soda, exercises a depressing action on the heart. This action is by no means general, and is probably due to some idiosyncrasy of the affected individuals.

3. If this depressing action be produced in one in whom the heart is physically sound, no great harm will be done. With the omission of the drug the depression will soon pass off.

4. But if it be produced in one who is already the subject of rheumatic myocarditis (an ailment which is not easily recognised during life), and in whom therefore there exist softening and enfeeblement of the ventricular walls (for the left ventricle is the chief seat of such inflammation) the depression is likely to be alarming, and may be fatal.

To form an adequate estimate of the nature and extent of the dangers attendant on the administration of salicylic acid in acute rheumatism, we must recognise—first, the tendency of the rheumatic poison to produce inflammatory softening and weakness of the muscles of the heart; and, secondly, the tendency of salicylic acid to depress that organ. It is in the combination of these two that lies the danger of the drug.

It is in the absence of the tendency to produce such depression that lies the superiority of salicin over salicylic acid.

Cadogan-place.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

SURGICAL CASES ILLUSTRATING WOUND TREATMENT AND REPAIR.

(Under the care of Mr. BRYANT.)

Cancer of the Breast; Excision; Primary Union of Wound. (From notes by Mr. Dashwood.)—Mary Ann W——, aged fifty, was admitted into Lydia ward on July 16th, 1879. She was a married woman, but had had no children. Her menses had always been regular. About a month before she noticed a little milky discharge from the left nipple. She had occasional shooting pains, and in a week or two she noticed the nipple was retracted, and that there was a small swelling at the lower part of the left breast. The swelling slightly increased in size.

On admission she was a healthy-looking woman. She had two scars on the upper part of the left breast caused by a burn in childhood. At the lower part of the left breast, behind the nipple, was a hard, nodulated, movable tumour, about the size of a pigeon's egg. The skin was normal, and movable over the tumour. There were no enlarged glands, and no pain. The case was supposed to be one of cancer.

On July 22nd, while under chloroform, an exploratory cut was made, but no pus escaped. Two semicircular incisions were then made, enclosing the nipple, and directed obliquely downwards and inwards. The whole breast was removed. Several arteries were twisted, but there was not much hæmorrhage. The wound was washed with iodine and water, and the edges brought together with silk sutures and waterproof strapping; it was dressed with oil of turpentine. The wound healed by primary union, and she left on Aug. 14th.

Temperature Chart.—On July 22nd the temperature was 97·8°; after 8 P.M., 100·2°. 23rd: Morning, 99·8°; evening, 98·4°. 24th: Morning, 97·8°; evening, 100·2°. 25th: Morning, 100·6°; evening, 98°. From this time the temperature never rose more than one degree above normal.

Adenoma of Breast; Excision; Repair by Primary Union. (From notes taken by Mr. Dashwood.)—Leah S——, aged twenty-six, was admitted into Lydia ward on July 16th, 1879. She was a single woman, and had always enjoyed good health. About a year before she noticed a hard swelling upon the upper part of the right breast. Though it had not apparently increased in size, the skin over it turned blue, which caused her to apply at the hospital. The menses had been regular.

On admission there was a hard tumour, about the size of a hazel nut. The surface was flat, but the margins were nodular. The tumour was freely movable, and the skin

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over the tumour was normal and movable. There was no enlargement of glands.

On July 22nd, under chloroform, an incision was made about an inch and a quarter long, radiating from the nipple at the upper part. The tumour was removed by enucleation and a few small arteries were twisted. The edges were brought together with strapping, after the wound had been washed with iodine water.

On the 27th the wound was healed by primary union, there having been no elevation of temperature in the meantime.

Carcinoma attacking Breast, which had been the seat of Suppuration; Excision; Primary Union of Wound. (The following notes are by Mr. Palmer.)—Eleanor W——, aged forty-seven, was admitted into Lydia ward on Nov. 5th, 1879. She was a widow, and mother of four children. Two years ago the patient had an abscess in the left breast. After about six weeks it broke, and continued to discharge. Six months before admission the patient noticed a hard lump at the seat of an old abscess (sixteen years before), which caused shooting pain, and the lump increased in size.

On admission patient was a healthy-looking woman with a large tumour involving the whole of the breast. It was of stony hardness, and appeared attached to the muscles beneath. The skin over tumour was tense, and seemingly adherent to the growth. The nipple was much retracted, and was sore on the surface. There were no enlarged glands in the axilla. Catamenia regular. No pain except upon great pressure on the breast.

On Nov. 7th, under chloroform, after an exploratory puncture to ascertain that the growth was not a chronic abscess, the breast was removed. Two curved incisions were made, and the whole tumour was removed. It was attached to the pectoralis muscle. The wound was washed with iodine and water, and hot sponges applied to stop the bleeding. The parts were brought together with four silk sutures, and the whole covered with lint soaked in terebine and oil. A drainage tube was put in.

On Nov. 10th the wound was dressed. Primary union had taken place. The wound was washed with iodide lotion. Stitches and tube were removed. No bad symptoms appeared, and the patient went out on Dec. 8th with the wound not quite healed.

Temperature Chart.—Nov. 8th, 101·6°; 9th, 100·2°, 100°; 10th, 98·4°; 11th, 98·4°.

(This series will be continued in a future number.)

LEEDS GENERAL INFIRMARY.

CASES OF NERVOUS DISEASE, PRESENTING OPHTHALMOSCOPIC PHENOMENA.

FOR the following notes, continued from page 207, we are indebted to Dr. E. H. Jacob, late resident physician.

CASE 5. *Phthisis; Tubercular Meningitis; Optic Neuritis; Death.*—J. P——, aged eleven, was admitted Nov. 22nd, 1878, under the care of Dr. Heaton. Both parents were dead. The patient was brought up at an orphanage, and though she had had better health since she was there, she had never been strong. Four months before admission she began to have aching pains in the left side, and a hard cough, worse after meals. A week before she began to have aching pains all over, and to feel dizzy and to vomit. She had never spat any blood, but had been losing flesh.

On admission she was thin, complexion clear and transparent, lips red, flushed cheeks. She complained of an aching pain in the left side. Had a slight cough, but did not expectorate; sweated much at night. Appetite was poor; bowels irregular. There was dulness, with bronchial breathing and fine crepitation at the left apex. Temperature 98° in morning, 100° in evening.

On the 25th the moist sounds at the apex had disappeared. There were occasional dry râles. The first sound at heart's apex was rough, and occasionally with a short murmur. Appetite good.

On Jan. 7th, 1879, she was worse. The dulness at the left apex was more marked. On the 20th she complained of constant headache, referred mostly to the left temple. She occasionally started and screamed at night. On the 24th the head was better after a small blister to the temples. She complained of the light hurting her eyes, and of double vision. There was no difference of pupils, but there was right strabismus. She vomited in the morning. Temperature still normal in morning; 100° to 101° P.M. On the 27th there was considerable effusion round the left optic disc, and the retinal veins were much enlarged. On Feb. 9th she had paroxysms of very severe pain, lasting about five minutes, about twice a day. She felt blind when the pain was severe. On March 4th there was rather less pain and intolerance of light. The diplopia was unchanged. On the 11th she vomited food frequently. Took some koumiss, but it made her feel sick. Evening temperature averaged 102°. On the 16th she had taken nothing but a little milk for some days; she was unconscious, but uttered shrill cries occasionally. On the 18th she had lain quiet for a few days, only taking a little milk. Tâche cérébrale well marked. Opened her eyes this morning. On the 19th she died quietly at nine A.M.

The treatment consisted of acid and bark in the early period and iodide of potassium, and counter-irritation to the scalp later. For a considerable time iodoform collodion was applied to the head, with no apparent result.

Necropsy, twenty-seven hours after death.—Body much emaciated. Membranes of brain slightly adherent at base. The surface of the convolutions was flattened. The tissues at the base were considerably matted together with some fibrous lymphy deposit, apparently of old standing, amid which some tubercular points were visible. The sella turcica was occupied by a hard cheesy mass, adherent to the base of the brain. Lateral ventricles distended with serum, especially the right, which was much distended, especially in the anterior part. There was no softening of the walls. There were firm, old adhesions in both pleuræ, especially the left. The upper part of the left lung was completely solid, the seat of extensive caseous change; the substance was in several places broken down into large cavities, but these were filled with thick creamy matter, apparently encapsuled. The upper part of the right lung showed several scattered caseous patches. There was no peritonitis or intestinal ulceration. The other organs were healthy.

CASE 6. *Syphilitic Hemiplegia; Optic Neuritis.*—C. M——, aged twenty-seven, was admitted September 12th, 1877, under the care of Dr. Allbutt. He had served in the army. Six years before he had a chancre, followed by secondary symptoms. He had also been intemperate. For the six months prior to admission he had suffered from severe frontal pain with frequent vomiting. His sight had been getting worse for the same period. He had had for some years aching pain in the legs. Six weeks previously his right arm began to lose power, and soon after the right leg began to drag a little; this got worse. He had dull frontal pain, with vertigo on getting out of bed and sometimes when he walked. He had lost flesh.

On admission he was fairly nourished. There was some right facial palsy, but the orbicularis palpebrarum acted well. Tongue (coated and fissured) protruded to right. There was loss of power in the right arm and leg. Reflex action and sensation good. There were numerous periosteal thickenings on the left tibia. He spoke slowly and with slight hesitation. His sight was good, but he had some vertigo if he looked down. The optic discs were normal. The urine contained a little albumen, sp. gr. 1010. He was ordered iodide of potassium and perchloride of mercury.

On Sept. 19th he could use the hand better. On the 26th the right arm felt nearly well, but the foot was still weak. Faradaism ordered. On the 28th he was much improved by the faradaism. He could move his right foot well, and did not catch it as he used to do in walking. On Oct. 1st he was discharged and made an out-patient.

On Dec. 10th he was readmitted. He stated that he went on taking the medicine ordered him till a month ago. A week after discontinuing it he became worse. He then noticed he had a gleet, which continued for five weeks. His power of walking grew less, and about five weeks ago he had to lie up. His headaches also became severe.

On admission he was in a peculiar, sleepy condition; spoke slowly and with hesitation. There was great loss of power over the right side. He could hold light things, but could not grasp well. Could walk by himself. There was slight right facial palsy; tongue moved to the right. There was slight ptosis of left eye. His memory was impaired, and he had frequent vertigo. The sight of his left eye was impaired, and the edges of both optic discs were badly defined, but there was no well-marked effusion. Urine clear, sp. gr. 1010; no albumen. He was ordered the same medi-

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cine as before. On the 22nd he had improved considerably, could speak more plainly, and could walk without assistance. With the dynamometer there was a difference of 15 lb. in favour of the left hand. On the 27th the right hand could squeeze 38 lb.; left 45 lb. He was made an out-patient on the 29th.

He was again admitted on Jan. 27th, 1879. He reported that after leaving the infirmary (thirteen months since), he continued at his work for four months. He then suddenly lost the use of his left side, which was afterwards gradually regained. In three months after the last attack he suddenly lost the use of his right side, both arm and leg. Six months ago his sight began to grow dim; his speech got more hesitating. He had on admission considerable loss of power in both arms, especially the right. With the dynamometer the right registered 18 lb., left 30 lb. He could barely lift the right arm. He could not walk without assistance, and there was great loss of power in both legs; the right dragged the most. He said his sight was dim, but he could read ordinary type. The tongue was protruded to the right. There was slight internal strabismus of the left eye. The discs were white and the vessels very small. Urine 1013, with a moderate amount of albumen. He was ordered eight grains of iodide of potassium three times a day. On Feb. 4th he felt rather stronger. On the 6th mercurial inunction was ordered. He said he had more use in his limbs than on admission. When he clasped the left hand the right involuntarily contracted. He could not keep the right extended while the left was grasping anything.

He improved but very slightly, and was made an out-patient by his own request on March 1st. He has not appeared at the infirmary since.

COVENTRY AND WARWICKSHIRE HOSPITAL.

OVARIOTOMY; ABSCESS OPENING INTO INTESTINE.

(Under the care of Mr. MILNER MOORE.)

IN the subjoined case convalescence was retarded by a complication which removes it from that class ovariotomists are naturally so fond of describing, namely, "ovariotomy, recovery without a bad symptom, patient discharged in a fortnight."

F. G——, aged sixteen, a sallow-complexioned but not unhealthy girl, was admitted with a tumour in abdomen on May 10th, 1879. She had suffered from aching in the right side of abdomen for seven years, especially after the exertion of pumping. She began to menstruate at fourteen, and catamenia continued regular until September, 1878, after which there was no discharge until August, 1879. Coincident with cessation of menstruation she noticed swelling in the right side of abdomen.

On admission there was found a firm spherical tumour occupying nearly the whole abdomen, and protruding forward, inclining to, and evidently growing from the right side. It was very hard, dull on percussion, not distinctly fluctuating, and movable; transmitting aortic pulsation, which caused a sound extremely like the placental murmur when the stethoscope was applied. The os uteri could only just be made out by the finger, the uterus being compressed against the pubes, so that the cervix could scarcely be defined. The measurement at umbilicus around abdomen was thirty-two inches.

On May 24th a small aspirator needle was passed, and eighty ounces of dark-coloured glutinous fluid drawn off. This was found to contain cholesterine only when examined microscopically.

The girl left the hospital, and the cyst soon refilled. She was readmitted on August 20th, having begun to menstruate four days before.

On August 28th ovariotomy was performed under strict antiseptic conditions. Chloroform having been administered, an incision, three and a half inches long, was made. Some sanguineous-looking serum welled up from the peritoneal cavity; the cyst grew from the right ovary, was firmly adherent to a fold of small intestine on the right side, and also deeply attached in the pelvis. By gentle traction the latter attachment gave way, but that on the right side was apparently a part of the pedicle itself, which, being so close to the intestine, could not be clamped. A threaded needle was therefore passed, and the pedicle tied in two portions, and returned into the abdomen.

The patient complained only of pain in the back and shoulders for a few days, and on the seventh day of tenderness at the upper angle of the incision. The deep sutures were then removed, and the upper one was found "kinked."

The temperature remained at over 101°, and on the fifteenth day a painless swelling was detected in the right iliac region. On the eighteenth day the temperature was 103·2°; then four copious evacuations of pus came away per rectum, the tumour in the iliac region disappeared, and the patient rapidly became convalescent.

The cyst was unilocular, and contained a ragged bony growth at its most dependent spot.

BOURNEMOUTH COTTAGE HOSPITAL.

FRACTURE OF FEMUR; LACERATED WOUND OF THE PERINEUM CAUSING TEMPORARY PARALYSIS OF THE BOWEL.

(Under the care of Dr. JUSTYN G. D. DOUGLAS.)

W. E——, a boy aged ten years, was admitted on June 7th, having fallen while climbing a tree a few hours previously. On examination the right femur was found to be fractured obliquely about its middle third, and this was also further complicated by an extensive lacerated wound on the left side of the perineum. The wound, measuring nearly three inches in length, extended deeply into the ischio-rectal fossa from close to the scrotum to a point on a level with the tuber ischii, and exposed the gut to the extent of an inch and a half above the anus. The urethra, bladder, and rectum were all fortunately found to be intact.

The edges of the wound having been brought together by a few sutures, carbolised oil dressing was applied. The fractured thigh was put up by the extension method, the weight being attached to the foot and leg, thus obviating the necessity of any perineal band, which, of course, in this case could not have been applied.

The accident was followed by complete loss of power over the lower bowel, fæces being constantly passed in the bed, requiring great cleanliness on the part of the nurse, and frequent disinfecting injections into the wound to keep it free from the discharge. Under treatment it quickly granulated from the bottom, and at the end of three weeks there only remained a superficial raw surface, which, however, proved obstinate in healing, owing to thickened, uneven edges of hard white skin. The incontinence of fæces still continuing, these edges were snipped off with scissors, under chloroform, and nitrate of silver was freely applied over the surface. The fracture was at this time also put up in starch after the usual method.

Cicatricial action spreading from the margins of the wound soon appeared, and healing went on rapidly, so that within a week of cutting the edges the bowel slowly but steadily began to regain its power and the patient to have proper control over the sphincter.

The patient was discharged on July 21st with no perceptible shortening of the limb, the perineal wound healed, and the proper action of the bowel completely restored.

Remarks by Dr. DOUGLAS.—The above case may be of interest as an example of absolute paralysis of sphincter produced by the sympathetic irritation of a perineal wound. It would lead us to give a favourable prognosis when such accidents occur.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Experimental Pathology of Spirillum Fever. The Non-Glandular Theory of Molluscum Contagiosum.

THE ordinary meeting of this Society was held on the 24th inst., J. E. Erichsen, F.R.S., Esq., President, in the chair. A paper was read containing details of the successful inoculation in the monkey of the contagium of spirillum fever (Bombay), by Dr. Vandyke Carter. The question as to the constant presence of spirillum in the blood in this fever was raised by Sir Joseph Fayrer, and Dr. John Harley believed that in the specimens forwarded the "spirillar" filaments were portions of fungus-growth. In a

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very lucid and excellently illustrated paper, Dr. Sangster supported the view adopted by Virchow, Boeck, Lukomsky, and others, that the primary essential change in molluscum contagiosum is epidermal, and in no way related to the sebaceous glands, as generally believed in this country. An interesting discussion, shared in by Mr. Hutchinson, Drs. Thin and Duckworth, followed.

A case of True Leprosy was shown to the Fellows by Mr. STARTIN.

The following is an abstract of the paper, entitled "Contributions to the Experimental Pathology of Spirillum Fever. Its Communicability by Inoculation to the Monkey." By Dr. H. VANDYKE CARTER. The author's experiments were made by injecting the blood of fever patients beneath the skin of the common Indian monkey (*Macacus radiatus*). Forty-four trials were made upon 51 of these animals. Of thirty-one inoculations made with spirillar blood twenty-two were successful, and nine failed; all nine inoculations of non-spirillar blood, and seven of desiccated blood (mostly infective when fresh), gave negative results; four injections made with saliva of fever patients and a healthy man, produced serious but non-specific results. These experiments are described in the first part of the present communication, and in the second they are analysed and discussed. The instances of failure with infected blood were those of inoculation at a period prior to the onset of fever, at the beginning of high fever, at the acme of attack with high temperature, and at the end also, when other blood-poisons coexisted with the spirillar. As to discordant results, it is stated that the balance of evidence is against the likelihood of infection during the non-febrile incubation period; and as to contagion being a disturbing influence, it was never proved during these experiments, though its possibility is admissible. Adverting to the positive series, it is first pointed out that the normal temperature of the monkey is about 3° F. higher than that of man; the minor perturbations of body-heat after apparent failure of inoculation are alluded to as possibly indicating quasi-abortive infection. As to general conditions, experiment was made from man to the animal, and from one animal to another, without any selection of cases. The pyrexia artificially induced corresponds with the first or invasion attack of man, and differs only in its more varied form and briefer duration; relapses were so rare and irregular in the monkey as to be plainly more incidental than in the human subject. It is especially pointed out that the sole febrile event may consist of a short and comparatively trivial rise of temperature, such as might be overlooked; this occurs only in the secondary attacks of man. The particular features of the pyrexia are next described in its beginning, course, and end; the maximum temperature attained (about 107° F.) is the same in both man and animal, and so the form assumed of continued, remittent, or paroxysmal type; the abrupt onset and prompt termination of the attack are also alike, only the fall is not quite so marked in the lower creature. Rebounds of temperature or secondary fever were observed here as sometimes in man, and death may occur during this sequelar phenomenon. The post-mortem appearances noted in the bodies of animals at different stages of the fever are mentioned, the chief being inflammation of the stomach and small intestines throughout, with petechial extravasations beneath the serous and mucous surfaces. Then follows a summary of microscopical observations of the blood; it is pointed out that the usual delineation of the spirillum as a rigid spiral filament does not represent the aspect of the active organism, but rather its quiescent state, for immediately on withdrawal the parasite is usually seen to be highly flexible and to assume the forms of curved, knotted, or twisted filaments, or even of rings, such as neither the spirilla proper nor the spirochæte (of Ehrenberg) were ever seen to imitate. The abundant swarming and clustering of the filaments are here at least as striking as in the relapsing fever of man, and the organism is apparently the same. Multiplication by mid-fission and the growth from small round particles were clearly indicated. Special inquiries were made regarding the state of the blood issuing from the spleen, liver, lungs, kidneys, &c. during fever, and it would seem that in splenic venous blood the parasite most abounds, being probably developed within the endothelial and white blood-cells. Another point of interest determined is the constant presence of the blood spirillum during the latter part of the incubative period of fever. This has been established for man as well (for the first relapse), and hence the proposed division of all pre-febrile periods (or apyretic intervals) into a non-spirillar and a preliminary infective stage. Symptoms (premonitory of febrile exacerbation) may or may not be detected at the latter stage. The author finds that the severity of the comparative attacks is not indicated by the length of incubative period. Intensity of infection increases by repetition. Even in man the blood at invasion-attacks is not so active as that of relapses, and the monkey's blood at second remove from man was found to produce a fatal result in the two instances it was made use of. Lastly, a note is appended on the connexion between the results of inoculation and of artificial culture of the blood, it being pointed out that the infective quality of the blood, as represented by the parasite it contains, corresponds in some degree to the readiness of this organism to grow and multiply outside the body. The spirillum may be readily induced to develop into a myceloid form of great luxuriance and beauty. The main conclusions arrived at are:—(1) That the spirillum fever (relapsing fever) of man is directly transmissible to a quadrumanous animal; (2) That there occurs a non-febrile infection of the blood prior to "fever;" (3) That though the blood spirillum was never seen in the monkey without fever ensuing, sooner or later, yet the pyrexia is secondary in time, and is susceptible of highly varied manifestation; and the spirillum disease might be defined as essentially a *mycosis sanguinis prope cum febre*. Charts and specimens of blood accompany this paper, and it is mentioned that the inoculation experiments have been repeated in Germany with success. (*Vide* the *Deutsche Medicinische Wochenschrift*, Berlin, No. 25, dated 21st June, 1879, p. 327.)—The PRESIDENT said that the thanks of the Society were owing to Dr. Carter for his valuable contribution to medical science.—Sir JOSEPH FAYRER said that they were much indebted to Dr. Carter, whose skill as a pathologist and observer was so well known. These experiments were, he believed, the first to show that this fever—the "famine fever" of Bombay—is inoculable. About two years ago Dr. Lewis investigated this fever with Dr. Carter, and concluded that the occurrence of the spirillum in the blood was not essential (any more than famine was) to the fever. Nor did there seem any evidence from the experiments to show that the spirillum was the cause of the affection. But he had too much confidence in Dr. Carter's skill and knowledge to do other than suspend his judgment in the matter.—Dr. ANDREW reminded the Society that in the Transactions for 1878 there is a paper by Dr. Carter establishing the identity of the relapsing or famine fever of Bombay with the disease known as such in Europe, and he there shows that the spirillum is present in the blood during the febrile paroxysms, but absent in the apyrexial periods; nor was it found in the blood in the ordinary malarial fevers of Bombay.—Sir JOSEPH FAYRER added that Dr. Lewis found the spirillum in some cases, but not in others; and had found it where there was no exacerbation of fever.—Dr. JOHN HARLEY had carefully examined microscopically the specimens of dried blood forwarded by Dr. Carter, and had found on the slides luxuriant development of fungus, mycelium, and spores. Under higher powers he had seen numerous coiled filaments—some free, others attached to spore-like bodies, and presenting a mycelium-like character. These being of a fungoid nature should not be termed spirillum, which is a vibrio. The author had not said how the specimens had been prepared.—Dr. ANDREW said they could not judge of Dr. Carter's observations from these specimens, for he described moving filaments in fresh blood, and the development of fungi was to be expected in dried specimens.—Sir JOSEPH FAYRER knew that Dr. Carter would have taken every precaution in the preparation of his specimen.

A paper was then read, entitled "A Contribution to the Non-glandular Theory of Molluscum Contagiosum," by ALFRED SANGSTER, M.B. The author observed that molluscum contagiosum is still looked upon in the country as a disease of the sebaceous glands. The disease is a well-marked one, and from description it is clear that authors who have treated of its pathology have been perfectly familiar with its appearances; hence an additional difficulty in accounting for discrepancies in opinion, as error in diagnosis is almost impossible. As long ago as 1865 Virchow stated his belief that the disease had nothing to do with the sebaceous

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glands, that it was due to hyperplasia of the cells of the rete, at the mouth of hair follicles; he called it "Epithelioma molluscum." C. Boeck in 1875 turned his attention chiefly to the notice of the molluscum bodies; he arrived at no definite conclusion, but showed them to be due to degenerative changes (affecting the nucleus first) in cells which are identical with rete cells, the change being neither fatty nor amyloid. Lukomsky (1875) showed the epidermal nature of the disease, and believed the molluscum bodies to result from degenerative changes in wandering cells in the rete. An attempt is made by the author to support the theory advanced by the Continental observers; moreover it is shown that the peculiar degenerative change (molluscum bodies) has to do with the superficial layers (granular and corneous) of the epidermis. Reference is made to specimens prepared from the earliest molluscum lesion obtainable by a vertical section through a small molluscum tumour traversing the umbilication or central depression. The rete is seen in direct continuity with the longitudinally divided lobular expansions of the new growths. That part which has undergone molluscous change (molluscum bodies) is clearly demonstrable by its different behaviour to logwood. Lobular masses of new growths, having a deceptive gland-like character, appear isolated, being in fact outlying expansions from the main body of the growth transversely divided. The next specimen referred to is a vertical section through a minute molluscum, the section being made remote from the "umbilicator" or central depression. No communication of the new growths with the surface are seen. Three distinct regions of the growths are recognisable—(1) peripheral rete-like cells, those marginally placed being elongated and vertical; (2) nearer the surface are seen translucent, vitreous-looking molluscum bodies, lying in the meshes of a granular reticulum; this in places becomes continuous with groups of diamond-shaped granular cells, exactly similar to those of the granular layer seen in the normal epidermis; (3) more superficially placed are transparent structureless molluscum bodies lying in apposition. Other specimens are figured, and from appearances the conclusion is drawn, that molluscum contagiosum is a disease of the epidermis, in which three layers take part. The cells of the rete go to form the peripheral portions of a molluscum growth; the changes affecting them are probably simply hyperplasic, and consequent upon the peculiar molluscous change (molluscum bodies). The cells of the granular layer degenerate, and form the deep molluscum bodies, those more superficially placed being associated with the corneous layer. If the peculiar changes of molluscum contagiosum take place in the granular and corneous layers, it is argued that the disease can have nothing to do with the sebaceous glands, in which structures these layers are not represented. Molluscum bodies are shown lying amongst prickle cells, another proof of their epidermal origin.—Mr. HUTCHINSON felt much indebted to Dr. Sangster for the clear manner in which he had showed that molluscum contagiosum was not a disease of sebaceous glands; but although his facts and arguments appeared very strong, it must be borne in mind that at the Pathological Society last year Drs. Tilbury and T. C. Fox arrived at very opposite conclusions. There were one or two questions that he should like to put to the author which seemed only explicable on the old view. There was the universal existence of the umbilication of the nodule, an appearance which has led so many to believe in the glandular view. There was a distinct orifice, through which sebum-like material could be expressed. How was the formation of this orifice accounted for on the new view; was it formed by rupture of the tumour, or by involution of the epidermis? Then were not the contents fatty in nature? They look very like sebum, but it would require chemical tests to prove their fatty nature. Nor are these growths met with ever on the soles or palms, regions destitute of sebaceous glands. Dr. Sangster had not—perhaps with proper caution—suggested any cause for the formation of these little bodies, and their assumption of a gland-like form, without parallel in pathology, if developed apart from glands. Although somewhat shaken in his notions of their glandular origin, still he was not convinced.—Dr. THIN thought that both Dr. Sangster's specimens and those shown by the Drs. Fox last year proved the same point—viz., that the disease was one which did *not* take its origin in the sebaceous glands, but in the rete Malpighii, the apparent discontinuity between some parts of the bodies and the epidermis in some sections being due to their in-growth below the neighbouring epidermis. The occurrence of small localised growths projecting downwards, displacing but not invading the corium, was of great pathological interest. So was its assumption of quasi-glandular form, and knowing that all cutaneous glands arise from involuted epidermis, one could not avoid speculating whether this peculiar growth be not an abortive attempt at gland-formation. He did not think the particular layer of epidermis involved in the production of the "molluscous bodies" of much importance, for the epidermis was one structure, and needed not to be artificially divided into different layers. The peculiar change of the central cells in the growth was, no doubt, degenerative, and due to the fact of their distance from the bloodvessels on the one side, and their not being exposed to the air on the other, so that they do not desiccate like the upper epidermic cells. It must be left for the future to find what is the cause of this peculiar growth—possibly some external influence, bacterial or other. They were indebted to Dr. Sangster for these investigations, which were much wanted in England, corroborating as they did the results of Continental observers.—Dr. DYCE DUCKWORTH was not prepared to abandon the sebaceous theory without full consideration, although he was quite willing to be convinced if it were proved to be untenable. But it had been shown that the sebaceous glands in the vicinity of these growths were enlarged and altered. Then, if the molluscous bodies do not correspond with the contents of sebaceous glands, neither do they with any growth in the human body. His impression was that they were of fatty nature, and were acted on by alkalies. The preparations exhibited required careful study, but he was not yet prepared to abandon the view he had hitherto cherished.—Dr. SANGSTER, in reply, showed how in vertical section appearances of isolated outbuds detached from the epidermis were produced, whereas they were all connected centrally beneath the site of umbilication. This depression could be accounted for on Virchow's view, that the growth takes place primarily around a hair-follicle. Indeed Virchow, and, in this country, Henderson and Patterson, have noticed a hair in the centre of a molluscous nodule, but he (Dr. Sangster) had never seen this. If they started in the hair-follicle, that would account for their absence from the palms and soles. He could not speak certainly as to the nature of the contents; microscopically they did not seem to be fatty. The granular layer of the epidermis is a definite layer, and it was the occurrence in the growths of these granule cells (which do not occur in the sebaceous gland) that first suggested the epidermal theory. He had never seen sebaceous glands in any connexion with this new growth; they occur in the neighbourhood, and from the accompanying inflammation of the skin they might conceivably be enlarged and irritated.

The Society then adjourned.

PATHOLOGICAL SOCIETY OF LONDON.

Congenital Occlusion of Duodenum.—Gangrene of Colon.—Dislocation of Semilunar Cartilage of Knee.—Diaphragmatic Hernia.—Cicatrices in Air-passages.—Ulcer of Stomach and Duodenum.—Locomotor Ataxy.—Epithelioma of Pharynx and Larynx.—Sarcoma of Spermatic Cord.—Blood Casts of Bronchi.

THE ordinary meeting of the Pathological Society was held on Tuesday, the 17th instant, the President, J. Hutchinson, Esq., in the chair. A large number of specimens was exhibited.

The PRESIDENT brought forward a patient—a woman—suffering from a peculiar eruption on the face and neck, as to the nature and correct name of which he was in doubt; he intended to report upon the case at a future meeting.

Dr. GOODHART showed a specimen of Congenital Occlusion of the Duodenum, which had been sent to him by Dr. G. Eastes. The infant was well nourished and healthy-looking when born, but an hour afterwards vomited about half an ounce of mucus; the vomiting continued, became more frequent, and on the fourth day the vomited matter had a black colour; rapid emaciation occurred, epileptiform convulsions set in, and the child died 126 hours after birth. A small quantity of meconium-like fluid was passed per anum three or four times. The specimen showed complete obliteration of the intestine at the lower part of the duodenum;

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the most careful search failed to show any communication between the gut above and below the obliteration. This malformation is very rare, only seven or eight cases being on record, and one described by Mr. Davies-Colley is the only one previously reported in this country.

Dr. GOODHART also showed a specimen of Gangrene of the Colon associated with Cancer of the Sigmoid Flexure. It was taken from a woman, aged fifty-four, who had been under Dr. Wilks's care in Guy's Hospital. She had suffered from recurring attacks of constipation, with severe abdominal pain. For one of these attacks an enema was administered without relief, and peritonitis with collapse came on, with which she was admitted into the hospital, and shortly afterwards died. There was no marked abdominal distension, nor was there a history of such having existed before. At the autopsy a few gangrenous patches of mucous membrane were found in the transverse colon; these gradually increased in size and thickness lower down, until about one inch above a cancerous tumour of the sigmoid flexure the whole gut was gangrenous. There was no evidence of a twist having occurred, nor was there plugging of the intestinal vessels. There was no great distension of any part of the gut. He brought this case forward in connexion with others which had been shown, where the gangrene was looked upon as the result of great distension. Was it in this instance the result of an acute enteritis produced by the lodging of some irritant food, which in a healthy bowel would have set up, and been discharged with, diarrhœa?

Mr. GODLEE exhibited a specimen of Dislocation of the External Semilunar Fibro-cartilage of the Knee-joint. It was found accidentally in a joint that had been kept for some years at University College for anatomical purposes. On opening the joint the external cartilage was found separated from the capsule, and lying vertically between the condyles of the femur. It had evidently not been produced artificially, because the cartilage was rigid, and could not be replaced, while the part of the capsule from which it had been detached was quite smooth, and the femur was eroded just where it would not be were the cartilage in its proper place. He was not aware that there was a similar specimen in any of the London museums, although the condition was thought to be common; but as all the cases end in recovery, with a useful limb, this was not to be wondered at. This affection was first mentioned by Hey, who gives a very indistinct account of what he calls "internal derangement of the knee;" the best account is given in Cooper's Surgical Dictionary. The only deformity it is stated to occasion is a little fulness on one side of the ligamentum patellæ —usually on the inner side. *A priori* we should suppose that the outer cartilage would be the more often displaced, for its shape and the position of the popliteus tendon cause it to be far less securely attached to the capsule than the inner; as a matter of fact, however, the inner cartilage is the one usually displaced. Mr. Clement Lucas has described an instance in which the fulness produced was on the outer side of the patellar ligament. Mr. Godlee asked for information as to the way in which these displacements were produced.—The PRESIDENT had never seen a similar specimen; probably many such treasures were hidden away unknown in our museums.

Dr. EWART showed by card a specimen of Diaphragmatic Hernia.—Dr. N. MOORE remarked that it was a very interesting specimen, for the absence of adhesions and of a peritoneal covering clearly showed that it was an instance of arrested development, the pleuro-peritoneal cavity being only imperfectly divided. Dr. EWART showed another card specimen of syphilitic cicatrices in the larynx, trachea, and bronchi, with stricture of bronchi, leading to chronic disease of the lungs.—Dr. GOODHART asked if any member of the Society knew of any case of scars in the trachea not due to syphilitic ulceration.—Dr. N. MOORE replied that probably many had seen scars and strictures of the trachea after "cut-throat."—Dr. PAYNE exhibited some years ago a specimen of ulceration of the air-passages where there was no history of syphilis, and in which the ulcers did not present the naked-eye or microscopic characters of syphilitic ulcers.—Dr. BARLOW thought that tubercular ulcers of the air-passages might cicatrise.—Dr. GOODHART was not sure that tubercular ulcers ever healed; apart from traumatic causes, he knew of none but syphilis leading to these scars.—Dr. EWART had only been able to find in the Transactions of the Society two examples of non-syphilitic ulceration in this situation.

Dr. N. MOORE showed specimens of Ulcer of the Stomach and Duodenum. The first was situated on the posterior and lesser curvature of the stomach, about one inch and a half across, edges thick; floor irregular, partly formed by the pancreas; it was cicatrised, except at two small spots, where there were two blood-clots, marking the seat of erosions into the pancreatic artery. The cicatrisation had led to circular constriction of the stomach, which was divided into two sacs, each filled with blood. The specimen was taken from the body of a woman, aged seventeen, who had suffered from pain for four months, with vomiting, and, later on, hæmatemesis. The day before her death she suddenly became faint, and died. The next case was an ulcer on the anterior wall of the stomach, with thickened edges, and two small perforations into the peritoneal cavity. There was another small healed ulcer near the pylorus, and the stomach was adherent to the pancreas. The patient, a man aged fifty-four, was suddenly seized with severe pain, and died. Just before this a third case was seen in St. Bartholomew's Hospital. A man, aged thirty-five, died of chronic peritonitis, and on the posterior wall of the stomach a firmly-adherent cicatrised ulcer was found. This case was of interest, as chronic peritonitis was not generally regarded as a frequent result of gastric ulcer. The next specimen was a small oval ulcer in the anterior wall of the duodenum, with a large perforation in the base, which caused death. The man, aged twenty-eight, had suffered for weeks from pain about two hours after food. He died fourteen hours after a meal of pickled salmon. The last specimen was of ulceration of the duodenum from gall-stones. Many gall-stones were found in a thickened gall-bladder, and above one of them was a perforation; a small calculus had passed through into the duodenum.—Dr. COUPLAND asked whether surgeons still hold that there is any association of ulcer of the duodenum and burns. He had made a large number of autopsies, and had been surprised not to meet with a single instance of it.—Dr. IRVINE thought the constriction of the stomach depended upon the position of the ulcer; if it adheres to the pancreas and then cicatrises it necessarily causes constriction of the viscus. He had recently seen, at Charing-cross Hospital, a stomach showing a completely healed ulcer with a small aneurism of an artery running across the cicatrix; this had ruptured and caused fatal hæmorrhage.—Dr. GILBART SMITH had recently seen, at the London Hospital, an autopsy on a man who died from sudden hæmatemesis; a small healed ulcer of the stomach was found, with a minute aneurism in the scar, which had burst. The cases of extensive superficial burns were those most likely to be attended with ulceration.—The PRESIDENT remarked that the association of ulcers in the duodenum with burns was first pointed out by Mr. Curling at the London Hospital. He had seen several instances of it, quite enough to assure him of the fact. He mentioned that a man whose tongue he removed with the actual cautery died ten days after with a perforating ulcer of the duodenum.—Mr. GODLEE stated that he had seen one case of such an ulcer in a patient killed by a burn.—Dr. PAYNE quoted one more instance he had himself seen.—Dr. GOODHART had seen two ulcers in the pyloric end of the stomach in cases of burns. Lebert states they never occur in the stomach.—Dr. N. MOORE said there was a specimen of this kind of ulcer in the St. Bartholomew's Museum.—Mr. CRIPPS had seen two cases of death from hæmorrhage from these ulcers: one was remarkable, for the patient, a woman, was taken with severe arterial hæmorrhage from the rectum, and after death the source of the blood was found to be a small ulcer in the stomach opening into the coronary artery. —Dr. COUPLAND could not help thinking too much stress had been laid on the association of burns and duodenal ulcers; it was in his experience quite unusual.

Dr. HADDON showed by card the End of a Femur, and a United Fracture of the Ulna from a case of locomotor ataxy lately under the care of M. Charcot.

Dr. GILBART SMITH showed a specimen of Epithelioma of the Pharynx invading the Larynx and Œsophagus. The patient, a woman, had for eight or nine years complained of pain in the throat, which latterly increased; her voice became hoarse; there was cough, with expectoration and dysphagia. For a time she improved under treatment, but then she became worse, and in October, 1879, an enlarged gland was felt under the left sterno-mastoid muscle. The dysphagia increased, and a bloody secretion flowed from the mouth. Laryngoscopic examination revealed a growth in pharynx, and reaching over into the larynx. On Oct. 14th tracheotomy was performed by Mr. Walsham, which gave

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considerable relief. Mr. Pugin Thornton then saw her, and reported on her condition. Death occurred on Dec. 12th. *Post-mortem.*—At the lower end of the pharynx was a large ulcerated cavity, extending to the arytenoid cartilages; the ary-epiglottic fold was much ulcerated, and the thyroid and arytenoid cartilages on the left side were necrosed. There was almost complete stenosis of the œsophagus from the new growth below this large ulcer. The ulcer had opened into the larynx at the sacculus, and into the upper end of the trachea, by two very small apertures. The growth was epithelioma. From the history it was probable that there was some chronic disease, which suddenly became malignant, and then the malignant growth very rapidly broke down. The case illustrates the dislike of the disease to enter the larynx. The pharynx is believed to be a better soil for the cancerous growth, and it was interesting therefore to notice that it had spread into the air-passages just where glandular tissue was most abundant. — Mr. WALSHAM stated that in all the specimens in the Hunterian and St. Bartholomew's Museums the growth was limited to the pharyngeal side of the ary-epiglottic fold; in one case, at St. Bartholomew's, the new growth had dipped over into the larynx, without, however, involving it. This was probably due to the change in the kind of epithelium. A similar fact was noticed in the rectum, where cancer does not spread down quite to the anus, nor does epithelioma spread up beyond the limit of the part formed by the infolding of the epiblast.—Dr. SÉMON stated that extirpation of the larynx had been performed in all nineteen times—sixteen times for carcinoma, twice for sarcoma, and once for perichondritis. One of the sixteen cases had lived already four years and was well, while another, recently done, was still alive; one case of sarcoma had lived a year. This result showed the operation to be quite justifiable; probably it ought to be performed at an earlier date than it hitherto had been in cases of carcinoma. It is a well observed fact that diphtheritic inflammation of the larynx is attended with less constitutional disturbance than the same affection in the pharynx, the explanation being that the lymphatics of the larynx, after forming a network of their own, enter four small glands, two in the trachea and two between the cornua of hyoid bone and thyroid cartilage. The lymphatics of the pharynx, on the contrary, anastomose very freely, and enter numerous glands. For the same reason, we find that laryngeal carcinoma will remain a long time stationary and limited, and Ziemssen has shown that the glands are long unaffected. Carcinoma of the pharynx, on the other hand, soon implicates the glands. This should guide us in advising the operation; when the disease is entirely laryngeal it is legitimate, but when pharyngeal an early recurrence may be looked for. The terms primary and secondary carcinoma, as applied to the larynx, are inaccurate, for true secondary cancer has never been known to occur; they should be replaced by the terms endo-laryngeal carcinoma and carcinoma of the larynx per contiguitatem.—Dr. MAHOMED thought that the fact that cancerous disease of the pharynx was being constantly irritated by food, while that of the larynx was not, accounted for the difference in the glandular affection in the two diseases.—Dr. N. MOORE mentioned a specimen in St. Bartholomew's Hospital Museum of epithelioma of the left side of the larynx pushing up the left vocal cord; there was no pharyngeal or glandular affection, and he regretted laryngotomy had not been performed.

Mr. WALSHAM showed a Tumour removed by Mr. Anderson of Nottingham from a child aged thirteen months. It had been noticed six months, and was the size of a large orange, circumscribed, very movable, adherent to the spermatic cord. It was removed with the testicle attached to it, the cord being adherent to the back of the growth. The child made a rapid recovery. The tumour was composed of mucous tissue, with round and spindle-shaped sarcoma elements, and in places a reticular stroma. Growths from the cord are rare. There are only three in the Hunterian Museum; and Curling refers to two of these, and one other removed by Spence. Another was shown at the Pathological Society; it was a sarcoma which recurred after the removal of a fatty tumour. Another specimen had just been sent to him from Nottingham. He did not consider that the tumour arose from a duct, the organ of Giraldès, or any fœtal structure, but from the cellular tissue of the cord.—Dr. GOODHART showed a specimen like Mr. Walsham's that was removed by Mr. Gay and sent to the College of Surgeons; in structure a fibro-myxoma.—Mr. CRIPPS mentioned a case lately operated on by Mr. Willett. The child, five months old, had had the tumour for four months. It was the size of a walnut, not very hard. The testis was found quite free and healthy. The cord was spread out in front of the growth. It seemed to him to be growing in one of the lymphatic ducts. It was a mixed round and spindle-cell sarcoma.

Dr. S. WEST showed some Blood-casts from the Bronchi of a man, aged forty-three, who is still alive. The patient complained of dyspnœa and cough, and there were found slight induration and softening of the apex of the left lung. After two months there was profuse hæmoptysis, which recurred two months later, and shortly afterwards he had great dyspnœa and expectorated the casts exhibited. He recovered, and has been free from hæmoptysis for six months. The clots are real blood-clots, and not stained croupous clots. They are very rare, no case being recorded in the Society's Transactions, and their occurrence being denied by Dr. Peacock; they have generally been the precursor of fatal hæmoptysis.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Mitral Stenosis and Sudden Death.—Suppressed Gout.—Sanitary Jottings.

AT the meeting on the 23rd inst. the chair was occupied by the President, Dr. COCKLE, who exhibited a Heart, weighing sixteen ounces and a half, taken from a lad, aged nineteen, the subject of old mitral disease. One morning he turned, in a moment, of a deep livid colour, and fell back dead. The mitral valve was of a funnel-shaped form, with a central chink, capable of admitting a crow's quill. Left auricle and ventricle nearly empty, both a little thickened. The right auricle and ventricle enormously dilated and distended with dark-clotted blood, formed, as it were, one continuous chamber. The usual form of sudden death in mitral disease is syncopal. In this case, however, it manifestly resulted from sudden over-distension and paralysis of the right chamber causing instantaneous apnœa.—Dr. D. POWELL referred to a series of five similar cases he had published about seven years ago in THE LANCET. In two of these death occurred suddenly; in one the mitral orifice was only a chink, and death took place after a meal. The right ventricle was enormously distended, and in a similar case he should bleed the patient. He asked whether the condition of the valve in Dr. Cockle's case were due to rheumatism or to a congenital defect.—The PRESIDENT, in reply, thought the changes due to disease.

Dr. THOROWGOOD read a paper on Suppressed Gout. He commenced by drawing attention to the dyspeptic ailments, palpitations, vertiginous sensations, and anomalous pains in the muscles and joints, which often disturb the comfort of people in middle life, who are well off, live luxuriously, and take but little exercise. Some of these thus affected get great relief when gout appears in the joint of one or both great toes; and examples were given of heart palpitation of very troublesome kind, and also of attacks of angina pectoris being at once relieved by an attack of gout in the foot. To check the outbreak of articular gout suddenly by leeches or cold lotions was a dangerous practice, and it was shown that at the time when Heberden wrote his "Commentaries" a common popular belief was that gout must not be cured. Gout, in its suppressed or visceral form, was more common now than formerly; and those who usually had the disease in this form were persons of middle age who lived regularly, partook freely of animal food and of wine or spirits in no excess, but with regular daily precision. Such habits of life were conducive to a gradual development of the lithæmic state. Excrementitious products slowly collected in the blood, and so gradual was the process that the system learned by habit to tolerate their presence; just as by habit it could be got to tolerate poisons, such as arsenic or opium when introduced by slow degrees. This slowly formed state of lithæmia resulted in circulatory disturbances, hæmoptysis, piles, and eventually in atheromatous changes in the blood-vessels. With regard to the dietetic management of visceral gout, it was

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proved that total abstinence from all forms of fermented liquor and from meat would not insure an individual against a return of the gout. Temporary suspension of every form of alcohol was most beneficial, but persistence in total abstinence caused in some persons a good deal of nervous depression and weakness of the digestion. The crowding too many meals of animal food into too short a space of time was a fertile cause of acidity and flatulent dyspepsia. This was often much better treated by the diluted hydrochloric acid or fresh lemon-juice than by alkalies, and, indeed, a long-continued use of alkaline medicines or alkaline waters often led to impoverishment of blood and a weakened state of the vital power.—The PRESIDENT thought it would be interesting to know whether gout in middle life, caused by excesses in youth, could be cured by abstinence in after life.—Dr. SEMPLE believed that the humbler classes did not suffer from gout unless they followed the pursuits of brewer's men, cellarmen, &c.—Dr. HALL referred to a case of gout in one who has always been a total abstainer as well as most temperate in diet. But there is a strong hereditary tendency to the disease in this case. Much of the present increase of gout was owing to the introduction of cheap light wines.—Dr. CRISP said that in France, where claret is drunk, gout is almost unknown; and so it was in Scotland, where whisky was the favourite drink, but where people take more exercise than we do and live on simpler fare. He had tried unsuccessfully to bring on an attack of gout in cases of "suppressed gout." He agreed as to the rarity of gout among the poor.—Dr. SYMES THOMPSON considered an intermittent pulse to be a sign of the disease, and believed excess in animal food would as readily produce gout as excess in stimulants.—Dr. FOWLER during the last three years had been medical officer to one of the largest breweries in London, and had seen more cases of gout there among the employés than in the whole twenty-five years preceding his appointment. He found that many ailments in these men were due to gout, and that colchicum was a most useful remedy.—Dr. ROUTH said that gout in teetotallers was due to their large consumption of animal food. A fish diet retards its development. The active life and simple diet of the Scotch protect them; and cheap, bad wines were no doubt the cause of much of this disease.

Professor CORFIELD, in a paper entitled "Leaves from a Sanitary Note-book," described some of the most common defects in house-drainage arrangements, giving illustrative cases. The following were some of the more remarkable examples, and every instance had come under his own notice. Defective brick or tile-drains are often a nuisance, but sometimes the owner cures the nuisance as far as his own house is concerned, and creates one in his neighbour's at the same time. This is done by cementing the basement of the house with defective drains, so that the rats cannot get into that house, and are induced to find their way under the foundations of the walls into the next house. In one instance where this occurred diphtheria appeared twice and scarlet fever once in two years, and of course in such cases the mischief usually goes on for a long time without the cause being suspected. Rats are always to be looked on with suspicion; wherever they go foul air can follow them, and, besides, they carry about on their coats filth often containing specific poisons. Pipe-drains are often badly jointed or the connexions with soil-pipes are not made, and sewage leaks into the soil under the house, the solid matters sometimes completely filling the drain. Often direct connexion with the main sewer is permitted to exist, and then, with any defect in the internal sanitary arrangement, the street sewer is ventilated into the house. In one instance of this kind, in which Dr. Corfield certified that the house was unfit for habitation, the tenants left the house, which had been taken for the season, and refused to pay the rent. A prosecution was the result, but Mr. Justice Quain decided that a furnished house let for the season (1) must be fit to be inhabited, and (2) must be so on the day it was taken, and these points were upheld by the Court of Appeal. Drains and soil-pipes are often not ventilated at all, or ventilated wrongly, and some extraordinary instances of this were given. Often the overflow pipe of the drinking-water cistern was the only ventilator of the drain, and this form of contamination of water was the most frequent cause of enteric fever—in London, at any rate. In one case Dr. Corfield found the drain deliberately ventilated into the wine cellar; in another the ventilator, by an accident, ended wide open in the scullery; in another it opened quite close to the window of the landing on the nursery floor. Diarrhœa and sore throats prevailed in houses where either the pipes were not ventilated, and so the foul air escaped through badly-made joints, or through water traps or holes made in the lead itself. An instance was given of an outbreak of diarrhœa in a house in which the iron containers of the pan W.C.'S (very bad contrivances at best) had holes for ventilatfng pipes, but had no such pipes attached, so that they ventilated themselves into the house. The mischief of D traps were pointed out, and a very remarkable specimen shown of one of those traps made entirely of *zinc* (instead of lead), with zinc safe, zinc soil-pipe, and zinc waste of a sink. It was thoroughly eaten through at its upper part in various places by the air from an unventilated cesspool, into which the drain led; and it caused an epidemic of sore-throats in the house before it was found out. Diphtheria is very frequently associated with sinks, the waste-pipes of which are not disconnected from the drains; and Dr. Corfield has frequently traced it to sleeping in a bedroom the window of which is close to the head of a drain-water pipe connected with the drains, whether trapped or not. As a good sign of the times, he mentioned that a few years ago no one thought of troubling himself about the sanitary arrangements of the house until after an illness had occurred; whereas now people have their houses set to rights upon the least suspicion of anything being wrong; and it is the commonest thing for a person about to take or to buy a house to have it examined and reported on as to its sanitary condition.

CAMBRIDGE MEDICAL SOCIETY.

Leucocytosis in Pregnancy.—Pernicious Anæmia.—Blood-cyst in a Diverticulum of the Ileum.—So-called Senile Changes.

AT the meeting on the 6th inst., the PRESIDENT (Professor Paget, M.D., F.R.S.), disclaiming the intention of making a formal address, observed that the Society had been founded with the object of providing for the exhibition of specimens of morbid anatomy, and to receive communications relating to the various branches of practice, medical, surgical, obstetrical, and others. The work of the Society might be expected to fall chiefly to the junior members, and the seniors among them would bear in mind the aphorism of Harvey, that they are the best philosophers who are never too old to learn new things. They would have to contend against the disadvantages of a comparatively small town, and of drawing their material from a limited area. But they would not be without some compensating advantages. Observations in medical practice—in such matters, for example, as the etiology of typhoid fever—could often be made more satisfactorily in the less crowded than in the denser centres of population. In like manner, among their patients, they could follow more closely the element of heredity in disease. They would have the further advantage of meeting in a university town, and in the work of the Society they might reasonably look for something of the spirit which had pervaded the University from the time of Newton and before it, the mathematical spirit or the spirit of accuracy.

Dr. INGLE read notes of a case of Leucocytosis of Pregnancy, with severe anæmic symptoms, which, from the absence of any obvious cause for the anæmia, might have been set down as an example of the idiopathic form of the disease. The patient, aged thirty-three, and near her confinement, showed extreme pallor and weakness; after a natural labour, with very small loss of blood, the symptoms continued, with the addition of fainting fits. The patient had been in a similar state of health before her last confinement, and had been well in the interval. She recovered under treatment with iron.—Dr. BRADBURY, who had been called in to see the case, had examined the blood, and had found that it did not contain any of the abnormally large or abnormally small or otherwise malformed red corpuscles that were characteristic of pernicious anæmia. On the

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other hand, the colourless corpuscles were in great excess, being in the proportion of about 50 to 1000 red. The patient had probably been suffering to an excessive degree from the leucocytosis of pregnancy.

Dr. CREIGHTON showed a microscopic section of Lymphatic Gland from a woman aged sixty, who had died of Pernicious Anæmia. The organs after death were remarkably bloodless, and the chain of lymphatic glands on the left side of the aorta near its bifurcation were mottled with a brownish-red colour, as if they had contained pigment. The brownish-red colour was due to the presence of dense columns of red blood-corpuscles in the lymph-sinuses of the glands; the blood lay exactly within the limits of the sinuses, and was extravasated into the follicular or trabecular tissue. The blood had evidently been taken up by the rootlets of lymphatic vessels, and had so passed into the lymphatic circulation. The source of it might perhaps have been ecchymoses, such as are apt to occur in various situations in cases of pernicious anæmia, or it might have been derived from what was admitted to be in this disease an active seat of blood formation—the marrow of bones. He exhibited also a drawing from a section of lymphatic gland situated behind a sero-sanguineous cyst of the neck; the sinuses of the gland, as in the former case, were crowded with red blood-corpuscles.

Dr. HUMPHRY exhibited and gave an account of a Blood-cyst depending from the Ileum at a point about two feet above the ileo-cæcal valve. At the same point there were three string-like fibrous bands forming loops over the bowel, and having their attached ends in the mesentery. The bowel was much narrowed for the space of about half an inch on the proximal side of the dependent cyst; the constriction was probably congenital. The cyst was suspended by a short transverse piece of gut, which appeared to be the congenital diverticulum sometimes found at that part of the ileum. Fibrous bands, such as occurred in this case, are generally admitted to be remnants of the omphalo-mesenteric vessels, and the diverticulum is taken to be a survival from the umbilical vesicle and duct. The cavity of the cyst was about four inches in diameter, and was filled with fluid blood. On the side of the intestine, and at the bottom of the short tube of diverticulum, the wall of the cyst formed a discoid mass of considerable thickness at its centre, the structure of which was that of a cavernous blood tumour. The short transverse piece of gut suspending the cyst showed no unusual vascularity. The patient, middle-aged, died from obstruction of the bowels, having been admitted into the hospital with stercoraceous vomiting. There was a swelling in the right iliac region, and after death the cystic tumour was found filling the pelvis.

Dr. HUMPHRY, in illustration of the subject of so-called Senile Changes, showed a specimen of fractured neck of the femur, taken six weeks after the injury, from a woman aged seventy-six. A longitudinal section showed the bone to be well and firmly united, a result owing partly to impaction. He doubted whether the reparative process was enfeebled by old age apart from other causes. He showed also the other femur, which did not bear out the prevalent view that the angle of the neck becomes less in old age. No doubt the angle of the jaw altered as the teeth disappeared, and the curve of the back yielded as the back muscles became weaker; but he knew of no evidence that any of the long bones altered. He had lately, with the help of Dr. Anningson, made a number of measurements of the angle at the neck of the femur at different ages, and he found that, in a series of bones from middle-aged subjects, the angle varied from 125° to 133°, and in a series from aged subjects, it varied within the same degrees. In the femur of a woman aged 103, the neck had as wide an angle as that of a young person. Dr. Humphry showed also, from the same case, the cartilages of the ribs, which were soft to the knife and uncalcified. He considered calcification of the rib cartilages to be a morbid phenomenon, and not incidental to old age as such. In the case of old Parr, who died at the age of 153, Harvey observed the costal cartilages were quite soft to the knife; and it is probable that in every very old person they remain uncalcified. The significance of calcified costal cartilages is rather that the individual will *not* live to a very advanced age. In very old people there are not many appearances of disease of any kind—very few, in fact, of what are called "senile changes." The heart and aorta from the same case showed only slight traces of atheroma; and he would include atheroma of arteries as another so-called senile change which was not proper to old age as such.

Reviews and Notices of Books.

On the Influence of Colloids upon Crystalline Forms and Cohesion, with Observations on the Structure and Mode of Formation of Urinary and other Calculi. By W. MILLER ORD, M.D., F.R.C.P. Lond., Physician and Lecturer on Medicine, St. Thomas's Hospital. London: Edward Stanford. 1879.

DR. ORD has acted wisely in embodying in the form of a systematic treatise the important observations that have engaged his attention during the last twelve years, and which he has brought under notice from time to time in various communications to the Societies and scientific journals. As now placed before the profession, these observations appear in a connected form, and we are thus better able to appreciate their scope and force. The story which they tell is both instructive and suggestive; for we gather from them a number of facts concerning histogenesis with which we believe the majority of physiologists are but slightly acquainted, and the generalisations which the ascertained facts permit us to make suggest further extension of the inquiries. Dr. Ord has followed up the researches originally instituted by Mr. Rainey, and published by him in a short treatise entitled "The Mode of Formation of Shells of Animals, of Bones, and several other Structures, by a Process of Molecular Coalescence." This work appeared in 1858, and, though received with respect, did not exercise the influence in physiology, either as regards the interpretation of phenomena, or as illustrating microscopical technics, that the subject or the merits of the work deserved. Mr. Rainey contended "that the rounded forms of organised bodies depend upon physical and not on vital agencies." The experiments upon which this conclusion was based have been fully described by Dr. Ord, and we will briefly quote the modification of Rainey's process which he employs. Glass tubes about three-quarters of an inch in diameter, of six to eight inches in length, open at both ends, are plugged at one end, to a thickness varying from three-quarters of an inch to one inch and a half, with clear jelly melted into it, or with albumen coagulated in it, or with albumen, gum, vitreous humour, or soap solution, retained by a muslin cap. The tube is filled with one solution—for example, sodium carbonate—and the plugged end plunged into another solution, say of calcium chloride. These two solutions diffuse through the gelatin, and, mixing together in it, mutually decompose each other. The resulting calcium carbonate is deposited in the colloid medium, either in a crystalline or spherical form, in various parts of the plug, according to the preponderance of one or other of the solutions and their relative strengths; the best spheres being found when the solutions balance each other, and when they are so diluted as to favour gradual decomposition. Several circumstances influence the "spheroidal modification," such as the *nascent condition*, or the state of substances in the act of separating from solution, as, for instance, the state of sulphate of soda in the well-known experiment in which a saturated hot solution kept in a corked bottle fails to crystallise till the bottle is uncorked. *Hydration* thus Professor Guthrie suggests, that the forms of sulphate of copper found in an evaporated gelatin solution of that salt may be produced by a partial dehydration. *Crystalline form*, too, might be expected to have some influence on the tendency to sphericity, but hitherto Dr. Ord has failed to distinguish any difference attributable to substances belonging to one or other group of crystalline systems. *Relative solubility.*—The best spheres were obtained in Dr. Ord's experiments when substances of little or no solubility were deposited by double decomposition. But by decomposition from hot concentrated solutions very soluble matters could be made spheroidal. The *nature of the*

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colloid into which the crystalloids diffuse plays, as one may naturally suppose, an all-important part in the production of spheroidal bodies. Mr. Rainey and Professor Harting insist that the phenomenon is due to a "combination" between the colloid and the crystalloid, but Dr. Ord considers that, if by this is meant chemical combination, the idea is not well founded. He prefers to consider the influence of the colloid on the production of spheroidal bodies as a result of intestinal molecular movement inherent to the constitution of the colloid.

The practical application of these views to pathology has been fully entered into by Dr. Ord in the volume before us, and the microscopic modifications of urinary crystals, and the formation of calculi therefrom, have furnished an admirable text for their illustration. Our space will not permit us to dwell on this part of the subject, but we can assure our readers that Dr. Ord's remarks upon the modifications of crystalline form observed in the most familiar kinds of urinary bodies, as produced by a variety of causes, are deserving of careful study, and few will rise from the perusal of this part of the volume without finding their ideas, especially as regards the etiology of many urinary affections, considerably enlarged. The entire treatise forms an important contribution to medical and scientific literature, and an almost indispensable addition to the library of every practising physician.

Cancer of the Rectum, its Pathology, Diagnosis, and Treatment. Including a portion of the Jacksonian Prize Essay for 1876. By W. HARRISON CRIPPS, F.R.C.S., Surgeon to the Great Northern Hospital, &c. London: J. & A. Churchill. 1880.

THIS is not by any means a complete treatise on cancer of the rectum. The minute anatomy of the affection is considered and described at some length, and illustrated by several good engravings. According to the author cancer of the rectum is some form of cylindrical epithelioma, and he does not appear to recognise the occurrence of either scirrhus or sarcoma in that portion of the gut. The appearances of the specimens examined by Mr. Cripps—and they were numerous—are described with a good deal of care, but we think he must be mistaken in supposing malignant growths of the rectum to be so uniform as he leads his readers to infer. He considers the evidence of the heredity of cancer to be unsound, and his chapter on this subject is interesting, and contains important statistics. He does not appear to have met with any precancerous conditions of the rectum analogous to those seen in the tongue and breast, which have attracted so much attention of late. The practical interest of the work centres in the treatment of this disease by excision. Mr. Cripps has had a good deal of experience in the operation, and speaks favourably of it, and he is certainly entitled to do so from the facts adduced. He has collected all the reliable statistics of this operation, and gives the broad general facts deducible therefrom. But it is certainly surprising to find that in a work by its title professing to deal fully with cancer of the rectum no reference is made to the natural course of the disease, the complications met with, the modes of diagnosis when situated beyond the reach of the finger introduced per anum, and especially surprising that no mention is made of colotomy, an operation which has been so widely practised for the relief of patients suffering from the affection. Surgeons who have been accustomed to perform colotomy for cancer of the rectum want to be assured that the operation of excision of the rectum, when possible, is a safer operation, and holds out a better prospect of prolonging life. Should the author be called upon to bring out another edition of this work, we hope he will either alter its title or widen the scope of the work; he would also do well to correct several clerical errors that have crept into the text.

TESTIMONIAL TO DR. FARR.

WE are glad to state that steps are being taken to form an influential committee to raise a fund for presenting to Dr. Farr some mark of the high appreciation of his long and valuable services entertained by the medical profession, by actuaries, by other scientific bodies, and by that large and increasing public which is interested in sanitary progress. The retirement of Dr. Farr after forty-two years of laborious service, which may be said almost to have created the science of vital statistics, seems a fitting opportunity to recognise the value of such service. The circumstances, moreover, of his retirement, together with his failure of health, seem still further to commend the project to the support of all who are directly or indirectly interested in the subjects to which Dr. Farr has especially devoted his life. We have reason to believe that the proposition is meeting with hearty support among the leading members of the profession, as well as of those various scientific associations with which Dr. Farr's name has so long and usefully been associated. We shall next week be in a position to publish a preliminary list of the committee which is now being formed to carry out the object in view.

ARMY MEDICAL DEPARTMENT.

THE *London Gazette* of February 24th contains the names of the following Surgeons-Major who have been promoted to the new rank of Brigade Surgeon (dated Nov. 27th, 1879):—

Herbert Taylor Reade, V.C.; John Lyster Jameson; John Phillips, Cunningham, M.D.; John O'Nial; Thomas William Fox, M.B.; Joseph Coleman Hornsby Wright, M.D.; Johnston Ferguson; John Ogilvy, M.D.; William Stewart, M.D.; James Arthur Haubury, M.B.; Duncan Alexander Campbell Fraser, M.D.; Frederick William Moore; William Marshall Webb; John By Cole Reade; Edward Malcolm Sinclair, M.D.; William Cattell; James Ekin, M.B.; James Hannan; Edward Louis Lundy; Thomas John Murphy, M.D.; Alexander Guthrie, M.D.; Edward Young Kellett; Robert Augustus Chapple; Adam Graham Young; Robert Wyatt Meadows; Richard Hungerford; Leonard Kidd, M.B.; John Tulloch, M.D.; Wallace Haward; Thomas Tarrant, M.D.; Exham Long Hiffernan; Alexander Dudgeon Gulland, M.D.; Thomas Teevan; John Sparrow; Richard Chapman Lofthouse, M.D.; Joseph John Thompson; Rowland Wimburn Carter; Richard Wolseley, M.D.; William Ramsay Steuart; John Low Erskine, M.D.; William Macnamara, M.D.; Augustus Patrick Meyers Corbett, M.D.; Thomas Smith Hollingsworth; Jeffery Allen Marston, M.D.; Andrew Semple, M.D.; William Carden Roe; George Morlas Slaughter; John Wild Hulseberg; Sampson Rock.—*Brevet:* Surgeon-Major Thomas Knox Birnie, half-pay, Medical Department, to have the honorary rank of Deputy Surgeon-General. (Dated 1st February, 1880).

DREADNOUGHT SEAMEN'S HOSPITAL SOCIETY.—The fifty-ninth annual court of the Seamen's Hospital Society, Greenwich, was held at Willis's Rooms on Wednesday, Mr. W. H. Smith, M.P., in the chair. From the report it appeared that the income of the Society, which at the same time provided a hospital, a convalescent institution, and a home for sick and destitute seamen of all nations, amounted to £13,574 11s. 3d. during the past year. It is to be regretted that the annual subscriptions for 1879 showed a net diminution of £200 as compared with the previous year. The committee, therefore, were making a strenuous effort to increase these subscriptions from £3000 to £5000. On the other hand, continued the report, the collections from passengers, crews, &c., of merchant vessels had increased from £974 in 1878 to £1055 in 1879. The report stated that 213,502 seamen, English or foreign, had been relieved by the Society since its formation in 1821. During the past year 1740 had been received into the hospital, while 159 had been under care and convalescent on the first day of that year. Of the 1749 there had been discharged 523 cured, 617 convalescent, 288 relieved, 48 not cured, while 131 had died.

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THE LANCET.

LONDON: SATURDAY, FEBRUARY 28, 1880.

IT is to be feared that the heavy demands made by Parliamentary debates on the columns of *The Times* have prematurely closed a very important discussion on Chemists' Charges. We say very important, for our estimate of the value of drugs and of the art of pharmacy only grows with our knowledge of disease and of the means by which it is to be pleasantly and effectively cured. It is all very well to extol the part of nature and of hygiene in the treatment of disease, and to say that in relying on these we are reverting to the views of HIPPOCRATES. But, thanks partly to pharmaceutical chemistry, we have remedies of which HIPPOCRATES knew nothing, and exquisite preparations of remedies which make the taking of medicine a pleasure. It is not too much to say that drugs were never more indispensable in the best treatment of disease; and that in this state they often bear very much the same relation to the body which food bears to it in a state of health. Clearly, then, we are justified in believing that the discussion which has been closed is very important, more so than that of many of the subjects which will occupy columns of the daily press. The subject is of great interest to medical men, whether in consulting or in general practice. There is a general feeling in the medical profession that the time has come when the work of dispensing should be relegated to chemists and pharmacists, so as to leave the practitioners of medicine more ample time for seeing patients and studying disease. It is a dreary thing for a medical man, in town or country, to come in from a long round of visits and feel that he has to devote an hour or two to dispensing for the patients he has seen. In this age of division of labour, it is discreditable that no means have been discovered of entirely separating these kinds of labour, the more so as the study of disease requires entire devotion by every medical man who would keep up with the knowledge of the day.

It is probably in the entire separation of these duties that the best chance lies of seeing the complaints of the public against chemists' charges removed. Such a separation would throw a very much larger amount of dispensing work on to the chemist's hands, and would enable him to subsist on profits more proportionate to the price of the articles in which he deals; though it is obvious—as Mr. SANDFORD, the President of the Pharmaceutical Society, shows—that the chemist can never be remunerated for the special knowledge and special responsibility of his calling by a mere reference to the cost of the drugs he dispenses. He must be paid for special knowledge, not in himself alone, but also in his assistants, for whose services he often has to pay highly. Still, it is desirable that the charges of chemists should not be so entirely beyond the cost of drugs as in those instances quoted in *The Times*. Besides the advantage of throwing a great deal more dispensing work on the chemist, and enabling him to live on a system of large returns and moderate profits, there would be, as we have shown, great relief and advantage to medical men, to whom the dispensing, or the responsibility of dispensing, in their own houses, is a drudgery.

Who is to blame for the fact that medical and pharmaceutical duties are not separated? We have generally assumed that chemists were to blame. Perhaps this has been too readily assumed. It is certain that many medical men in general practice find chemists reasonable enough in their charges, and ready enough to take dispensing duties off their hands without showing any particular eagerness to use bits of medical knowledge, so gained, for purposes of a semi-medical character. In this arrangement the medical man is responsible to the patient for medicines, but he devolves the duty upon the chemist, who is paid by the medical man, and who acts as his dispenser. Why should not this arrangement be more extensively applied? It has several advantages. It relieves the medical man of duties which he has done hitherto, and done well, but which it is now fit should be done by others; it gives the patient the security of a certain amount of supervision of the chemists' work by the medical man, who can judge of the drugs supplied, and has a right and power of effective complaint if they are not satisfactory; and, thirdly, it tends to promote a good understanding between the chemist and the medical practitioner. While admitting that it may have been too readily assumed that chemists are to be blamed in the matter, we are not able to acquit chemists of all blame. They have not realised so deeply as medical men have the peculiar importance of drugs and their indispensableness. They have greatly improved in their scientific knowledge, and in their dispensing arts, but they have not acquired, and they have but poor means of acquiring, that impression which medical men have of the need of good suitable drugs. They have been apt to regard drugs rather as a luxury to be well paid for, than as a necessary of life to be supplied abundantly on bases of moderate profit. The hard necessities of life compel medical men to adapt their charges to the means of their patients. This adaptation has been carried too far in our profession, but scarcely far enough in that of the chemist, and with the result, doubtless, that many cases are but "slightly healed" or driven to medical charities, that would have got quite well, or retained their independence, had it been more easy to procure supplies of medicine that would have been as food to weak tissues and to faulty blood. The chemists of England only want time to see that the very importance of their calling necessitates its adaptation to the means of the bulk of the people, and that in this adaptation lies the secret of the further development and prosperity of pharmacy.

The particular question raised in *The Times* as to the charges of chemists for dispensing the prescriptions of consultants, is a somewhat separate one, that will have to be settled between the public and the chemists on general commercial principles. It must be to the public a matter of great importance to be able to command careful and neat dispensing of first-rate drugs, at any hour night or day, at their own door; and it must be a matter of interest to the chemist to do this work on terms that will not alienate his neighbours and his customers.

A COMMUNICATION having an important bearing on pathology has, we learn from the *Revue Scientifique*, been

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made within the last month by M. PASTEUR to the Académie des Sciences of Paris. It relates to the etiology of the disease known as the "choléra des poules," or diarrhœa of chickens. This disease, he has ascertained, is caused by a microscopic organism, the existence of which was first suspected by M. MORITZ, a veterinary surgeon in Alsace. It was also recognised by M. PERONCITO, a veterinary surgeon of Turin, but the credit of showing, by the culture of the little organism in neutralised urine, that it is the cause of the virulence of the blood in the animals affected, belongs to M. TOUSSAINT, a professor in the Veterinary School of Toulouse.

In his introductory observations M. PASTEUR remarked that the first and most important condition for the successful investigation of an infective organism is the discovery of some medium in which it can be cultivated. Now for the microbion which causes the "choléra des poules" the best medium is not neutralised urine, but chicken broth, neutralised by means of potash, and rendered sterile by exposure to a temperature above that of boiling water. The facility with which the organism grows and multiplies in this medium is extraordinary. In the course of a few hours the most limpid and transparent broth begins to be cloudy, and is found to be filled with a multitude of minute particles, which do not possess any movements proper to themselves, and which form members of a group that is quite distinct from the vibrios. M. PASTEUR considers that at some future period they will be placed in a distinct category of virus the nature of which is at present unknown. The microbia of the chicken cholera present some peculiarities; amongst others, they are quite incapable of maintaining life in a decoction of yeast in water, rendered clear by filtration and sterile by exposure to steam heat, though this constitutes an excellent medium for the cultivation of many other minute organisms. In fact, when placed in this they die in the course of forty-eight hours. Decoction of yeast, therefore, prepared in the manner above stated, constitutes a means by which the purity of the breed of organisms in the chicken broth may be ascertained. If pure, the organisms when sown in decoction of yeast cease to undergo any further development, the fluid remaining transparent. If, however, other organisms be present, the decoction rapidly becomes cloudy. Another peculiarity is, that if guinea-pigs be inoculated with this microbion, fatal effects are much less likely to occur than in the case of chickens. This is especially observed in guinea-pigs that have attained a certain age, such animals only presenting a local lesion at the point of inoculation, which may terminate in the formation of a large or small abscess. If the abscess be opened spontaneously, the cavity fills up and recovery takes place, without any loss of appetite or other symptom of disease being observed. The life of the microbion induces the formation of the abscess, which forms an hermetically sealed vessel for it, and from which it may be withdrawn without damaging the animal. The microbion is preserved in the abscess, mingled with pus, in a state of great purity, and without losing its vitality. It may hence happen that chickens and rabbits, which live in company with guinea-pigs suffering from this form of abscess, may suddenly be attacked with cholera, and die without any evidence that the guinea-pigs are diseased. It is only necessary that some of the fluid from these abscesses should contaminate their food.

The virulence of the microbion seems to be extraordinarily great, and it is not at all diminished by its cultivation in chicken broth, the introduction of the most minute portion either of the natural or of the cultivated organism being sufficient to kill every fowl inoculated in the course of two or three days, the majority dying within twenty-four hours.

But M. PASTEUR adds some particulars which have an interesting bearing on the relations of the vaccine virus with variola. By a change in the mode of culture the virulence of the microbion may be diminished. The diminution is evidenced by a certain retardation in the process of cultivation, and whilst the ordinary virus proves fatal in every case the retarded virus only causes serious disease, but not death. If the animals after recovery be again inoculated with the active lethal virus, it is found that they are no longer capable of being killed by it. The conclusion is obvious: the disease is one that is self-protective; it resembles virulent maladies; it does not relapse. M. PASTEUR states that the real point of novelty in his observations is that a disease has been ascertained to exist the virulent agent of which is a microscopic parasite in the blood, a living being which can be cultivated outside of the economy. The nature of the virus in other cases is unknown, that of the chicken cholera is an animated organism, and the disease it induces presents this hitherto unknown point of contact with virulent disease, properly so called, that it is not liable to relapses. Its occurrence throws a kind of bridge between the territory proper to those virulent diseases which proceed from a living virus and that of diseases the life of which, so to speak, has never been established.

In comparing these results with the relations that vaccinia bears to variola, it would appear that the modified microbion, that is to say, the microbion which has developed in the body of the guinea-pig, behaves like the vaccine virus, and that it assumes a new and definite form, rendering it unnecessary to revert to its original source.

WE appear to be drifting into a state of legislation as to infectious diseases very similar to that which characterised the legislation as to quarantine at the beginning of the century, and we are witnessing the steady development anew of a condition of public feeling of which the legislation last referred to was the consequence. At the commencement of the present century, when sanitary science as now understood had not emerged from its rudimentary state, the limitation of the spread of communicable diseases had a pre-eminence in such public health administration as existed not easy to be understood in the present day. And the means which were adopted to compass this limitation were largely, if not wholly, founded upon practices and notions which had grown up during the long period of time when plague was present in Europe, and particularly during the briefer period when plague was confined to the Levant, and which had been formulated in the system of quarantine. This system, partly the result of the imperfect medical knowledge of the subject at the time, partly (and more largely) the result of the general traditional fears as to plague, presented a curious spectacle as witnessed in operation on the littoral of the Mediterranean and in the Levant,

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at the beginning of the century, and it forms a hardly less curious subject for study as it is set forth in the Quarantine Act of this country passed in the sixth year of GEORGE IV. As with the progressive decline of plague in the Levant the danger from the disease became more and more remote, and the actual knowledge of it less and less common, it would seem as if the imagination of medical men and administrators, unballasted by experience, went utterly astray in devising possibilities of contagion, and in framing regulations to meet them. The mischief of this consisted less in the elaboration of a monstrous system of quarantine, of which so much as rested upon observed fact was almost infinitesimal as compared with that which rested upon the mere exercise of fancy, as in that it served to rivet, as it were, upon the popular mind, and perpetuate, those exaggerated notions of the contagious qualities of spreading diseases generally which have made populations so unmanageable, and have often frustrated the best and most reasonable efforts of administration in face of epidemics. How difficult it is to eradicate or even control these notions, even among the educated in the governments of Europe addicted to quarantine, we have had abundant illustration during the recent alarm of plague on the Continent. In England during the last quarter of a century we have been slowly learning to discriminate the huge fallacies of quarantine from the modicum of truth which lies beneath its doctrines, and have been endeavouring to substitute for the irrational fancies which form the bulk of the system of quarantine, a scheme of sanitary administration as to infectious diseases consistent with our actual knowledge of them, having a just regard to practicability, and while seeking to obviate a danger to health and to life, shall not necessarily involve the loss of the means by which health and life can alone be maintained. The Public Health Law as it relates to infectious diseases has been conceived in this sense, and while it gives large powers to local authorities for controlling their spread, and for preventing wilful or ignorant actions likely to contribute to such spread, leaves much, clearly in view of a presumed or presumable growing intelligence of the people in the matter, to their co-operation. There are probably, as medical officers of health will tell us, not a few things in which the law may be amended in order to strengthen their hands in dealing with infectious diseases, but if we are to give regard to history it is highly necessary that in so strengthening them the Legislature should not at the same time foster that wild fear of contagion that has been the bane of administrative efforts in all great epidemics. Yet there is reason to fear that the evil here referred to is being brought about amongst us. The Government itself, notwithstanding the importance of this subject, has not thought fit to make any motion as yet for the amendment of the provisions of the Public Health Act of 1875 in this respect; but municipal authorities are being encouraged by the Legislature to include in local Acts provisions for the so-called better restraint of infectious diseases, some of which are of a nature to beget grave misgivings, and such as could not have had the serious attention of the Legislature. In local Bills now before Parliament there are provisions for giving the local authority power to restrain the movements and actions of persons living in houses where infectious disease may be present, which, if at all practicable, would bring not a few industries to a dead-lock, and would give a power of interference with the ordinary affairs of life which would need some much stronger ground of justification than we are aware of. One of these Bills (Huddersfield) actually proposes to give the local authority power in neighbourhoods threatened or affected by infectious disease to close, among other places, surgeries (and so deprive the victims of slight accident of immediate relief), and public vaccination stations (and so, in order to obviate a possibility of one infectious disease, encourage a very definite risk of another); to prohibit persons living under the same roof where a case of infectious disease may be from working at any other place, or in the same room with healthy persons, "without written permission of the medical officer of health, and after disinfection of the person and clothing"! and to prohibit persons who may have been in "contact with" a case of infectious disease entering a public conveyance. This is a near approach to the extravagances of the old quarantine rules, yet there is no guarantee that the Bill will not pass through Parliament unmodified. The strangest thing is that the Acts which were passed in the two previous sessions, and Bills now before Parliament, come for the most part from authorities who have not even enforced the, as they appear to hold, limited provisions of the Public Health Act. We are justified, therefore, in thinking that the further provisions sought are no certain indication of a desire on the part of the authorities to strengthen their hands against the evil of infectious diseases; but rather that they are mere fanciful exercitations, of the same quality as those which distinguish old quarantine regulations, and which will be valueless from their impracticability, or from their being suffered to remain unused. In either case the result would be detrimental to public health administration, tending to bring into contempt both the law and its administrators, while not the less wrong by teaching the people that infection was limitless and uncontrollable.

The President of the Local Government Board told a deputation of the British Medical Association the other day, that he was watching these municipal proceedings for information to guide him as to dealing with the question of registration of infectious diseases as a general measure. Let us hope also that he is watching the vagaries of legislation that municipalities are indulging in with reference to infectious diseases, and with the assent of Parliament. Certainly the time has come when he ought to take some step to bring this subject before the House, and endeavour to secure a more rational treatment of it in Committee of private Bills there than now obtains.

THE connexion between sickness and pauperism is not generally recognised by us with that acuteness of perception which should characterise a clear-sighted people. Hereditary indolence with dependence, the poverty which arises from accidental losses, or failure of trade and criminal negligence are duly enumerated among the staple causes of pauperism, but sickness is either not reckoned, or the part it plays as a factor of indigence is recognised only in the individual and his immediate relations, not in the family, much less in the race. Nevertheless it is probable that the

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increase of pauperism, besides much of the casual poverty which goes to maintain what we have come to regard as the natural proportion of the class of paupers to the population, is chiefly due to the want of energy and physical incapacity which spring from *uncured*, and, therefore, hereditary disease. This is a matter of very great interest, as viewed from a variety of standpoints, but for the moment we are anxious to examine it from one only, and that the simply and obviously prudential. It is a shortsighted and unbusinesslike policy to stint money for *thoroughly* curing the maladies of the poor, and carrying them safely through the period of convalescence.

"Medical relief"—or "sick-relief"—is an economic blunder, against which "indiscriminate almsgiving," which Dr. GUY, of King's College and the Statistical Society, has so long and ably and usefully waged remorseless war, sinks into insignificance. That clear thinker has contended, in and out of season, and through good and evil report, that doling out what are in charity called "mites" to street beggars is not helping the poor, but encouraging parasites. At length, and after many misconstructions, public opinion is beginning to see with him. We wish there were any reasonable hope that the public could be brought to perceive that doling out medical relief to the sick poor will never stamp out the pauperism that grows out of disease and the indigence that springs from weakness. The inheritance of disability for bread-winning is entailed, and no system of small advances by way of aid in moments of especial weakness will release the poor from the grip of ancestral disease. It *may* be impracticable to eradicate the transmitted tendency to physical and mental weakness which underlies much, if not most, of the persistent poverty of families, though a great deal may be accomplished by rearing the children of the poor away from the depressing influence of pauper surroundings; but it is plainly possible to arrest the spread of pauper-breeding sickness by adopting the most prompt and effectual measures to cure occurring cases of disease among the poor quickly and completely. To let a convalescent pauper loose on society is to propagate poverty. Our public administrators do not see this. They argue that the more rapidly a patient can be patched up and sent back to work the better. They do not wish him to apply for "relief" until he is quite unable to live without it, and they strive to get rid of him at the earliest practicable moment. Can anything be more preposterous in an economic sense than the policy which finds favour with the great body of our legislators, and even with professed political economists? Would any moderately sagacious gentleman conduct his stable or kennel, or a farmer his stock, on the same principle?

It was warmly, but, as the event has abundantly proved, vainly hoped that the creation of what are called workhouse infirmaries for the sick poor would help to mend this evil. These institutions have been appropriated to special uses, or are now, like the sick wards attached to workhouses, crowded with chronic, to the exclusion of recent and acute, cases. The hospital charities do excellent service, but it is not among the lowermost classes of the population their help is felt. Practically the *very* poor—the pauper class—have no systematic treatment, only what is called "medical relief"! This is the evil, the crass and unpardonable blunder, we desire to see exposed. Public opinion often takes a wondrous deal of convincing to be impressed with a fact which appears to be perfectly obvious in the conscience of every individual observer. Ask any intelligent member of the legislating classes whether he thinks it is business-like—we use this phrase advisedly, because we are at heart a nation of shopkeepers, and this is a matter of business,—ask any man of business if it is soundly prudent—to squander a vast sum of money annually on patching and tinkering, when thorough repairs are necessary? He will unhesitatingly answer "*No.*" Propose the precisely same question to any public body of men composed of able and independent thinkers, and the answer will be "*Yes.*" Individually we all desire to see a thorough and effective reform of the Poor-law system, more particularly in its relation to the ministry of health among the sick poor. From the President of the Local Government Board down to the most parsimonious of ratepayers, all see and feel alike on this point so long as the standpoint is personal, but the instant two philanthropists put their heads together for any public purpose in connexion with the relief of the sick poor, they fall back on the policy of doing as little as possible, and that little with the least energy and at the smallest cost. It would seem as though those who "kept the bag" must always prove traitors to truth and common-sense. This is a grave view of the case, but it is one from which we cannot wisely shrink. In plain truth the huge burden borne by the people as a whole "for the poor," is needlessly heavy and perversely useless. The dead-weight will not be less to-morrow because we bear it patiently to-day. It is not the seed of good we carry, but a sterile load which adds nothing to the fertility of the land on which we cast it, and produces nothing but a new and ever-increasing crop of thicket and briers. When will a statesman arise who shall know something of the first principles of public health, and inaugurate an honest and sensible effort to eradicate an evil worse than any short-lived pestilence however severe, a root of bitterness and misery which never ceases to strike deeper into the subsoil, and ever grows? The "cure" of the sick poor is an enterprise which, so far as the pauper classes are concerned, has never yet been seriously attempted, and unless the policy of the whole system of Poor-law administration is reversed, never will be. Nevertheless, this uncured sickness with which we are trifling, which we seek only to *relieve*, is one of the principal causes of pauperism, if not the only spring of that social evil with which the policy of repression is unable to deal.

Annotations.

"Ne quid nimis."

MR. DILLWYN'S LUNACY SCHEME.

THE following is an outline of Mr. Dillwyn's proposal "to amend the laws relating to lunatics." The Bill was issued on Thursday last.

Clause 1 provides, that the powers now held by justices of counties and boroughs under 16 & 17 Vic., c. 97, s. 46–52, shall be extended, so as to enable them to raise money for the accommodation of lunatics, "other than paupers," and to purchase private asylums "if they see fit."

Clause 2 would enact that owners of licensed houses should be compensated for the value of their property and the good-

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will of their business on the basis of the average of profits for the previous three years.

By Clause 3 private asylums and licensed houses in the metropolitan districts, now under the immediate jurisdiction of the Commissioners in Lunacy, will, after January 1st, 1881, be transferred to the jurisdiction of the justices in the respective districts.

Clause 4. Within three years after Jan. 1, 1881, one asylum at least is to be provided in the metropolis for private patients.

Clause 5. All receipts from asylums are to be merged in a common fund, and after payment of expenses any surplus may be applied to reduce the rates for maintenance of pauper patients.

Clause 6. Private asylums bought by the justices under this Act are to become public asylums in law and fact.

Clause 7 provides that the medical visitor for the justices is to act as visitor for all asylums in the district, and is *not* to be medical superintendent of any.

Clause 8 empowers justices to provide accommodation suitable to the circumstances of the several classes of patients admitted.

Clause 9 enables the Lord Chancellor to appoint a paid chairman and deputy chairman to the Board of Commissioners in Lunacy, and to add to the members of the Commission one physician and one barrister.

Clause 10 would enact that no lunatic shall be admitted to an asylum except on the order of a justice. The order to be granted on application either from a near blood relation of the insane person, the clergyman of the parish in which he resides or is found, or the relieving officer of the union. Two medical certificates will be required from practitioners who are not related to the lunatic or interested in the asylum to which he is to be sent. Any alleged lunatic may, however, be received at any asylum and detained for forty-eight hours on a single certificate specifying emergency.

Clause 11 is strangely worded, and while seemingly intended to provide for the expiring of any order made by a justice at the end of each year after the admission of a patient, really allows an order made on the 2nd of January in any year to run for two years all but one day, and so on.

Clause 12 provides for the reception of voluntary patients with the assent in writing of two Commissioners in Lunacy. Such boarders are not to be detained more than three days after giving notice to leave.

Clause 13 empowers any person to obtain an order from the Commissioners in Lunacy to send two registered medical practitioners to examine an inmate of an asylum, and after two such examinations, at intervals of at least seven days, a report that such inmate is sane shall oblige the Commissioners to order his discharge.

Clause 14 makes it incumbent upon the Commissioners to visit every asylum, whether public or converted from private, *twice* a year, instead of once, as at present.

Clause 15 provides for the transfer of any patient, at his own desire or that of a relative, with the consent of the Commissioners, from a private to a public asylum, at the cost of the person making the application, so far as any extra expense may be concerned.

Clause 16 relates to the licensing of attendants, giving the Commissioners power to cancel the said licence, in case of misconduct.

It would be premature to do more than note the salient points of the Bill. The permissive element is the weak point that first strikes us. "If they see fit" is a phrase which has not proved of much value in the Lunacy Acts of past years—for example, 8 & 9 Vic., c. 126, s. 27, &c., which empower Justices to appropriate old workhouses and to build cheap edifices for the accommodation of chronic cases and imbeciles; but the provision was a dead letter, and wholly failed.

The cost of buying up private asylums will be great, perhaps too great for working, and the addition proposed to the Commissioners will be costly. We cannot approve the transfer of jurisdiction to the Justices. The powers of the Commissioners ought to be extended rather than restricted. The proposal that the Justices of a district shall open asylums for private patients, which will in effect be an opposition enterprise to that of private asylum keepers, is so novel and grave that it needs to be fully discussed.

THE GOVERNMENT AND DR. FARR'S SERVICES.

AFTER an unaccountably long suspense, the Government has at last announced, in reply to Dr. Lyon Playfair's question in the House of Commons, that they have awarded Dr. Farr a pension of £800 a year. This pension is less by £300 than the amount which Dr. Farr received during the last few years of his service. Considering the failing condition of Dr. Farr's health, his age, his disappointment at not succeeding to the Registrar-Generalship, and the Premier's declaration that he well knew how to appreciate the value of Dr. Farr's services, it is very difficult to avoid the conclusion that he has been shabbily treated. The Chancellor of the Exchequer, in replying to Dr. Playfair's question whether the Government had in any special way recognised Dr. Farr's services, explained that the pension awarded was "the salary attaching to his present office, with the exception of that part of the salary which he had actually received, which was personal to Dr. Farr himself, and would not be paid to another person holding the same office." It was stated, with a view perhaps of accounting for the delay that had been caused, that "a difficulty had arisen owing to a clause in the Superannuation Act." What the nature of the difficulty was, and whether it was due to this difficulty that Dr. Farr's special allowance of £300 a year was not allowed to count for pension, was not explained. It seems incomprehensible that this special allowance, which Sir Stafford Northcote described as strictly personal to Dr. Farr, should be ignored in the calculation of his superannuation. This decision, however, appears to be in strict accordance with the spirit which has influenced the Government in their treatment of Dr. Farr since he became a candidate for the post of Registrar-General, then about to become vacant. Special services such as Dr. Farr's undoubtedly called for special recognition, whereas, in fixing his pension at £800, it will but slightly exceed two-thirds of his full salary, to which the most ordinary of Government clerks are entitled after forty years' service.

Dr. Farr's long and useful career in the General Register Office, which has conferred so much benefit on the nation by the promotion of sanitary progress, of the science of statistics, and of actuarial knowledge, has not yet been fully recognised by the Government, the Premier's assertion notwithstanding. We are unwilling to believe that no honorary distinction is to be conferred to mark the Government's appreciation of services which have been very inadequately paid by salary, and which are certainly not fully recognised in the pension which has been allotted. If the Government are intending to confer some such mark of their favour upon Dr. Farr, and we should be sorry to doubt that they have such intention, it is as well they should bear in mind that the disappointment and excitement of the past two months have told much upon his failing health, which is now the cause of considerable anxiety to his friends. Without any desire to rob any intended action on the part of Government of the appearance of spontaneity, we have the best grounds for urging that any longer delay in carrying out such intention may defeat its object. It will be difficult now to

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remove the natural impression that Dr. Farr has been slighted, not so much by his not being appointed Registrar-General as by the discourteous way he was ignored in the matter, and by the suspense in which he was kept for more than two months before even the amount of his retiring pension was fixed. Now that the pension is allotted, it only remains to be hoped that some mark of distinction and of appreciation of the value of his services will be conferred upon Dr. Farr without further delay.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY AND THE HARVEY MEMORIAL.

AT the forthcoming annual meeting of the Royal Medical and Chirurgical Society, on Monday next, March 1st, the Fellows will be invited by the Council to reconsider the decision arrived at at the last annual meeting, with reference to the grant of fifty guineas then voted towards the above fund. Legal difficulties have arisen with regard to the disposal of the Society's property in this manner, and the question may involve an alteration in the bye-laws, if the Society wish to abide by the vote of last year. It is to be presumed that the question is as to the right with which moneys may be disbursed for other objects than those for which the Society was founded. Is the contribution to a memorial of one whom all honour fitly included amongst these objects? Is it competent for a Society maintained by subscription from its Fellows to vote away its funds for such a purpose? The question was asked at the last annual meeting, but it was certainly not discussed; and although, if our memory serves us, there was a large majority in favour of the grant, yet many abstained from voting, not, we imagine, from lack of sympathy with the object, but from a sense of uncertainty as to its propriety. When it was asked what precedent there was for such a step, the answer came from the chair, that "there was no precedent for a Harvey," and, it may be added, that there never will be. Whichever way the final decision may go, it is not to be regretted that it has come up for reconsideration. The sum voted could without difficulty be raised amongst those Fellows who urge the Society in its collective capacity to make the grant; but the principle of such a body making grants to the support of memorials, however great the object of them, is one which involves much more than is manifest. Should the Society decline to endorse last year's vote, the gain to the memorial may be greater than if the decision goes the other way; for it will serve to direct attention once again to the existence of this fund, and may lead to a more extended support being given to it than has yet been shown; whereas, if the grant be voted, individuals may feel that no further claim should be made upon them for contributions.

THE CONTAGIOUS DISEASES ACTS.

IN view of the recent appointment of the Select Committee to investigate the working of these Acts, some statistics, published by the *Western Morning News*, are of the utmost significance in relation to their operation in the Plymouth district, and most clearly demonstrate their value in the Three Towns and neighbourhood. The present area of inspection includes about 200,000 inhabitants, with 431 women under surveillance; whilst in 1865, when the Acts were first put in force here, there were 1770 persons liable to registration out of a population of 125,000. In 1865 more than 120 of these were under fifteen years of age; on the present register there are none under seventeen years of age, and only one under eighteen. Before 1866 the proportion of cases in which disease existed was 70 per cent., whilst the present average is only 25 per cent., and there has been but little deviation from this standard during the past seven years. The same large number of 70 per cent. of the women, who were known to have arrived in the district during the past year from unprotected places in Devon and Cornwall, were found, on examination, to be diseased, so that the maladies have not greatly abated in unprotected districts also, as is so generally urged by the opponents of these measures. Of those who dwelt in places where the Acts are enforced only 25 per cent. were affected, although the total number who had subjected themselves to police surveillance was greater in the latter than in the former case. As collateral evidence of their benefits, it is mentioned that whereas there were nearly 900 cases in the workhouses of the Three Towns during the three years before 1865, in the past three years less than forty have been found. The preventive and reclamatory effects of the Acts are quite as striking, for amongst other interesting data 252 names are stated to have been removed from the police-list during the past year, and of these twelve-thirteenths were restored to the position in life which their conduct had apparently altogether forfeited, and in attaining such a beneficent result a committee of charitable ladies, whose labours are willingly facilitated by the police, has been largely instrumental. The Select Committee would be greatly strengthened if one or more of the medical Members of Parliament and Mr. John Tremayne, the member for East Cornwall, were added to those at present named.

THE HEALTH-"CURE" FOR ADVERSITY.

THE adversity which so often attends the fortunes of successive members of a family, seeming to defy the most resolute efforts to deserve, as well as to achieve, success, is not uncommonly an unrecognised, because veiled, consequence of ill-health. We call it "ill-luck," "fatality," "bad fortune," and sometimes it seems to cling to a house like "a curse." A curse it is—of the sort that carries down the consequences of sin and failure on the part of one generation to another. A "habit" of failing is formed in some families, and the bane is transmitted as surely as the traits of family likeness of body or mind. The mind is, as we know, the expression, or formulated outcome, of an energy which not only—in a sense—springs, but takes its shape, from the physical organism. So far from its being strange that failure or success should "run in families," it would be inexplicable and contrary to every natural law and precedent if it did not do so! The force of character, strength of will, clearness of mental vision, and qualities of vigour, patience, and perseverance, which constitute the *secrets* of success in life, are the several properties of the physical organism, compounded as it is of body and mind. It follows that the remedy for adversity must be essentially a health-*cure*. It may not be practicable to eradicate the physical causes of failure in a single generation, but by training and treatment much may nearly always be achieved. Public opinion is beginning to recognise the principle of "improvement" as applied to the criminal classes and to the race of paupers; further enlightenment will enable the community to perceive that the same principle governs development in every grade of the population. Instead of plaintive lamentations on the score of ill-luck, the unsuccessful in life should set to work to discover the physical cause of failure. It may be lack of energy, torpidity of the mental system, deficiency of nerve and brain force, or, perhaps, a peevish temperament, which quarrels with Fortune instead of cheerfully accepting the gage she so often throws down, as though to try the mettle of the man who dares to essay the struggle for fame or even competency. If those who get a fall would rise and search for the weak points in their natures and equipments for the battle of life, instead of piteously and fruitlessly bemoaning their reverses, or even seeking to escape "the ills that flesh is heir to" by some foul and cowardly artifice, the number of miserable and tottering folk in the world would be less, and the sum o

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social prosperity and personal happiness greater, than they now are. The health-*cure* is first personal and then hereditary in its aim, aspects, and bearing. Medical men might think more than they do of this matter, and the lay public take it to heart as involving issues important to both the present and the future of a life which is too little studied, and, therefore, commonly misunderstood.

THE SELECT COMMITTEE ON MEDICAL BILLS.

ON the 20th inst. the Select Committee on the Medical Act Amendment Bills was reappointed, and ordered to consist of the seventeen members:—Mr. William Edward Forster, Dr. Cameron, Mr. Dalrymple, Mr. Errington, Mr. Goldney, Mr. Heygate, Lord George Hamilton, Sir Trevor Laurence, Dr. Lush, Mr. Mitchell Henry, Mr. Arthur Mills, Dr. Lyon Playfair, Mr. Serjeant Simon, Mr. David Plunket, Mr. Wheelhouse, Mr. John Maitland, and Mr. Lowe. On the same evening the different medical Acts were referred to this committee. No arrangements for the committee meeting are yet announced.

SCIENCE TEACHING IN EPSOM COLLEGE.

THE Council of Epsom College must be congratulated on the great success which has crowned their attempts to introduce high scientific teaching into the College curriculum. The number of science scholarships gained in open competition, both at Oxford and Cambridge, during the last few years, is really quite extraordinary, and affords ample proof of the soundness of the system which has been adopted. There have, indeed, been hardly any failures. But the latest College triumph is the most remarkable of all. On the 21st inst., two junior studentships in Natural Science, at Christchurch, Oxford, of the annual value of £100, and tenable for five years, were awarded to Epsom scholars. Mr. T. H. Walker and Mr. H. J. Mackinder, the fortunate winners of these honourable and valuable distinctions, went straight from school to college, and competed with some fifteen others from various celebrated schools in an examination which seems to have been of great severity. That the two Epsomians should have gained the only science studentships awarded is just cause for pride to all who are interested in the prosperity of the College.

We may add that old Epsomians are constantly showing the benefit of their early training. Mr. Baylis, who gained the Christchurch science studentship in 1876, has recently gained first-class honours in the final mathematical examination; Mr. Cutfield, lately science scholar of Christ's College, Cambridge, has just passed in the first class in the Natural Science Tripos; and many others might be mentioned who have recently added in various ways to the reputation of their former school.

THE CABUL EXPEDITION.

A CORRESPONDENT, writing from Sherpur on Jan. 10th, sends us a copy of the order issued by Sir F. Roberts on the decease of Dr. Porter:—"Extract from division orders by Lieutenant-General Sir Frederick S. Roberts, V.C., K.C.B., Commanding Cabul, Jan. 10th, 1879.—The Lieutenant-General Commanding announces with deep sorrow the death, yesterday, of Officiating Deputy Surgeon-General J. H. Porter, Principal Medical Officer of the division. Dr. Porter served in the Crimea, Ashantee, and late Afghan campaigns with distinction, and had gained experience from them which has been invaluable in the important office he has lately held. By his death, Her Majesty's service is deprived of an officer of great merit, while the Lieutenant-General Commanding, in common with all officers and men of the force, lose a friend whose professional skill was always at the service of the sick and the suffering, and whose kindness of disposition had endeared him to all." Dr. Porter was buried in the cemetery outside the Sherpur cantonment on the 12th January. His funeral was attended by General Sir F. Roberts, General Hills, V.C., General Macpherson, V.C., General Vaughan, and eighty officers of every corps and department in Cabul. The firing party was composed of 300 men of the 67th Regiment, the service being read by the Rev. C. Adams, chaplain of the division. Our correspondent adds that he has seldom seen a more solemn or impressive scene. The day was warm and sunny, although snow lay deep on the surrounding hills. Expressions of deep regret and sorrow at the loss they had sustained were heard on all sides, from men as well as from officers. The Cabul army feel that in Dr. Porter's death they have indeed lost a staunch and valued friend.

Deputy Surgeon-General Henry B. Hassard has been ordered to Cabul to succeed to Dr. Porter's vacancy as Principal Medical Officer of the expedition; Deputy Surgeon-General J. A. Hanbury, who had lately been gazetted to the Reserve Division at Peshawur, has been transferred to General Bright's division at Jellalabad, *vice* Hassard. The field hospital, which reached Cabul with General Gough's relieving brigade, under the charge of Surgeon-Major Evatt, is now located in Mahomed Sharif Khan's house in the ruins of the Bala Hissar. General Gough's troops are for the present to be encamped in the Bala Hissar. Pneumonia is still very prevalent, the natives suffering from it more severely than the Europeans; they are not accustomed, as a rule, to such severe cold, and their clothing, bedding, and tent accommodation are inferior to those provided for the British soldier; the authorities, however, do all they possibly can to meet and overcome the difficulties connected with the equipment, rations, and clothing of the Sepoys and large number of native followers.

OPEN SPACES.

IT has been proposed that the gardens of "Lincoln's-inn-fields," as the square is still called, shall be thrown open for the use of children in the neighbourhood. It is not, of course, reasonable to ask the owners of private property to sacrifice everything to the public convenience, but it certainly would seem that, considering the fact that the adjacent houses are principally used as offices, and the garden is so large that little if any annoyance could be feared from noise, this boon might be granted. If Lincoln's-inn-fields is not a suitable place for public use, it would be difficult to find any locality more available. By a very little management it might be placed at the disposal of the public, during certain hours at least and under proper regulations, without either inconvenience or pecuniary loss. The Kyrle Society has, we understand, offered to defray the cost of supervision. The trustees should reconsider their decision, which is now somewhat strangely excused by a plea of want of power. The present owners of the surrounding houses might be consulted, especially as the garden was purchased—and, we presume, is maintained—by a rate levied on the house property!

THE DISTRESS IN IRELAND.

THE return of the Registrar-General for Ireland for the last quarter of the past year shows an excessive death-rate, and attributes this to a considerable extent to the suffering caused by an extremely bad harvest and the depression of trade. He notes, as "a new element of importance," the appearance in this return, in the notes of the local registrars, of references to prevailing or impending distress; but the notes containing these references refer to comparatively few registration districts, and it is remarked of the mortality from fever, diarrhœa, and simple cholera, these diseases forming "an important element in estimating the effect of distress

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consequent on the bad harvest ..... that there was not any increase in the prevalence of fever." We fear that this will not be the case in the return for the current quarter. It is remarked, moreover, that none of the local Registrars in their notes for the quarter refer to deaths attributable to starvation, although some admit that want may have led to increased sickness and liability.

The return gives the impression throughout that, however slightly in appearance the effects of the distress are to be traced in the mortality of the past quarter, marked indications of its influence may be looked for in the mortality returns of the present quarter.

ARMY MEDICAL DEPARTMENT.

THE *Gazette* of Tuesday last contains the promotion of fifty surgeons-major to the new rank of brigade surgeon. In connexion with this we are gratified to record the liberal manner in which the Secretary of State for War has acted. The commissions of the officers promoted are dated 27th November, 1879, the day on which the Warrant creating the new grade was signed, and they are thus relieved from the loss they would otherwise have sustained from the delay which has been found necessary in carrying out the new arrangements.

THE LATE DR. O'LEARY, M.P.

A SUBSCRIPTION for the widow and nine children of this well-known member of the profession is absolutely needed, and a committee, including the following gentlemen, has been formed:—President of the College of Surgeons of Ireland (Dr. Mapother), Right Hon. L. Playfair, Mr. Porter, Mr. Butcher, Drs. Kidd, Cruise, Smyly, Tufnell, Mason, Hayden, Cryan, F. A. Nixon, Sir W. Carroll, Davys, Gogarty, J. J. Murphy, Swan, Kilgariff, Quinlan, Thornley Stoker, and Dr. R. D. Lyons, 8, Merrion-square West, Dublin, any of whom will receive and acknowledge subscriptions.

LOWER THAMES VALLEY MAIN SEWERAGE BOARD.

AN inquiry was opened at Kingston on the 24th inst., before Mr. J. T. Harrison, C.E., of the Local Government Board, with Captain Hildyard, R.E., as assessor, into the merits of the scheme promoted by the Joint Sewerage Board, formed under two Acts of Parliament passed in 1877-78, for combining in one drainage area the districts of Ham, Hampton Wick, East Moulsey, Kingston-on-Thames, New Maldon, Richmond, Surbiton, Teddington, Hampton, Hook, Esher, Long Ditton, West Mousley, Barnes, Kew, Mortlake, Petersham, Heston and Isleworth, and Kingston Union.

THE INDIAN MEDICAL SERVICE.

IN the House of Commons on Thursday Mr. E. Stanhope, replying to Dr. Lyon Playfair, said it had been decided, on and from March 31st, 1880, to abolish the double administrative staff of the Army Medical Department hitherto maintained in India. By that change six deputy Surgeon-Generals would be retired, with a step in rank and increased pensions.

SMALL-POX AT BATH.

THE Local Government Board has directed an inquiry into the action of the local authorities of Bath, both Sanitary and Poor-law, during the recent (and continuing, we fear) prevalence of small-pox in the town. Dr. Mouat has been in communication with both authorities, and the perversity of action displayed by the sanitary authority would appear to have been greater than our information led us at first to believe. The failure to deal frankly with the public as to the state of infectious disease in the place, and the neglect of the energetic measures required for arresting the progress of a disease like small-pox, has brought upon the town an official inquiry, and the much increased publicity thence arising. This short-sighted policy will, however, carry its own retribution.

NEPHRECTOMY.

THE left kidney of a man aged thirty-six was extirpated in Guy's Hospital, on Feb. 17th, by Mr. Clement Lucas. The operation was undertaken for scrofulous disease discharging through the loin. The kidney was removed by lumbar incision, under antiseptic precautions. It is satisfactory to learn that the patient is progressing favourably, and that, unless secondary hæmorrhage should occur when the pedicle separates, he may be considered free from danger.

AT a meeting of the Council of the Statistical Society, Sir Rawson W. Rawson, C.B., Vice-President, in the chair, it was resolved unanimously, "That the Council of the Statistical Society of London being informed of the retirement of Dr. William Farr, F.R.S., from the position of the Statistical Department in the General Register Office, desire to express on behalf of the Society their high appreciation of the eminent services which he has rendered during more than forty years past to the progress of statistical science. A rare combination of mathematical, medical, and general scientific powers has been brought to bear with unflagging energy upon the advancement of inquiries essential to the happiness and progress of mankind. They may point, moreover, to the important part which he took in the conduct of the census inquiries of 1851, 1861, and 1871, as alone sufficient to entitle him to the lasting gratitude of his countrymen. Of this gratitude the Council feel that Dr. Farr may rest assured; and they also hope that the services of so eminent a public servant will not pass unhonoured by the State."

ON Friday last the first of a series of demonstrations of ophthalmic cases was given by Mr. Cowell and Mr. C. Macnamara at the Royal Westminster Ophthalmic Hospital. Typical examples of detachment of the retina, atrophy of the optic disc, retinitis pigmentosa, albuminuric retinitis, and others, were examined by those present. These demonstrations will doubtless be very welcome to a large number of practitioners. It is intended to hold them on the third Friday in each of the winter months from 7.30 to 9 P.M.

SURG.-GEN. THOMAS LONGMORE, C.B., Professor of Military Surgery at the Army Medical School, Netley, has received the Royal licence and authority to accept and wear the insignia of an officer of the Order of the Legion of Honour, conferred upon him by the President of the French Republic as a promotion from the Fifth Class of that Order, which he received in 1856, when surgeon of the 19th Regt., for his services in the Crimean war.

THE yellow-fever epidemic in Brazil has, it is stated, increased in severity, the deaths in Rio de Janeiro numbering from eight to ten daily. Much sickness also prevails among the crews of the shipping in the port, so that it has been deemed advisable to remove the vessels from the shore, and disperse them about the harbour. The quarantine precautions in Peru have been made more stringent, owing to the epidemic in Rio.

A COMMITTEE of Irish members of the House of Commons representing all political parties has been formed for the purpose of co-operating with the medical and other committees in Dublin in furthering a public testimonial to the family of the late Dr. O'Leary, M.P.

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AT a meeting of the Glasgow University Court on Monday a petition was presented by Professor J. B. Cowan, M.D., praying the Court to report to Her Majesty in Council in favour of his application to be allowed to retire from the chair of Materia Medica, in consequence of the state of his health; and the Court agreed to do so. We understand that Dr. Matthew Charteris is a candidate for the post about to become vacant.

TWO of the Metropolitan Medical Societies hold their annual general meetings on Monday next, March 1st—the Royal Medical and Chirurgical, and the Medical. It is customary at the former Society for the President to embody in his address the leading features in the lives of Fellows deceased during the past year. The roll of 1879 is a long and sad one, and the melancholy duty devolves this year upon Mr. Erichsen, F.R.S.

WHILE on his way from Windsor to Cumberland Lodge on Thursday morning Dr. Fairbank, her Majesty's surgeon, was seized with a sudden fit of illness when driving near the top of the Long Walk. Dr. Fairbank was assisted to a lodge close at hand, and Dr. Ellison, one of the Royal surgeons, was summoned from Windsor to his assistance.

MR. BUTTERFIELD, medical officer of health for Bradford, reports measles and scarlet fever to be very prevalent in the borough. The former disease, he says, is unusually rife in the houses of the wealthier classes. There have also been several cases of diphtheritic sore-throat, which, he remarks, "has spread from house to house through the mistaken kindness of neighbours visiting where there is sickness."

THE ceremony of laying the foundation of a permanent hospital for sick children in Brighton last week was carried out with full masonic honours by Sir Walter Burrell, M.P. for Shoreham, and the P.G.M. of Sussex, assisted by representatives of all the lodges in the county. A sum of £250 was realised at the public luncheon which followed.

A MEETING of the council of the St. Andrew's Graduates Association was held on the 20th inst., when it was unanimously resolved that it was outside the duty of the Association to take official part in the coming election of Member of Parliament for the conjoined Universities of Edinburgh and St. Andrews.

BY permission of the Duke of Edinburgh, a concert will be given by the Amateur Orchestral Society, at the Royal Albert Hall, in aid of the funds of the National Hospital for the Paralysed and Epileptic, on Saturday, the 6th of March next, at 8.30 P.M.

THE Birmingham Philosophical Society has unanimously offered its honorary membership to Dr. Darwin, on the occasion of his seventy-first birthday. The resolution was moved and seconded by clergymen! *Tempora mutantur.*

SCARLET FEVER is reported to be prevailing extensively in the parishes of Llangendeirne and Llanstephen. The medical officer of health has advised the closing of the schools in the district for the next two months.

THE district medical officer has reported that the recent serious outbreak of scarlet fever at the St. Ann's Home, Cale-street, Chelsea, appears to have entirely ceased, as there had been no cases since Feb. 3rd.

AT the meeting of the Election Committee of the Middlesex Hospital, Mr. J. K. Fowler, M.B., M.R.C.P., was elected Assistant-Physician to the hospital.

THE draft charter of the proposed Victoria University of Manchester has now been issued in the form of a parliamentary paper. We shall refer to this document in our next impression.

WE regret to announce the death of Dr. Edward Copeman, of Norwich, which occurred suddenly from heart disease on February 25th.

THE *Deccan Herald* reports an abatement of cholera at Poona. The deaths can now be reckoned in units.

HEALTH OF LARGE ENGLISH TOWNS.

SEVENTH WEEK OF 1880.

NOTWITHSTANDING a further decline the rate of mortality in our urban population again showed a marked excess last week. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5372 births and 3740 deaths were registered last week. The births exceeded by 187, and the deaths by no less than 465, the average weekly numbers during 1879. The deaths, however, showed a further decline of 583 from the high numbers returned in the two previous weeks. The annual death-rate in the twenty towns, which had been equal to 37·0 and 30·1 in the two preceding weeks, further fell last week to 26·0. During the past seven weeks the death-rate in those towns averaged 28·1 per 1000, against 26·0 and 27·2 in the corresponding periods of 1878 and 1879. The lowest death-rate in the twenty towns last week were—12·2 in Brighton, 18·3 in Portsmouth, 19·7 in Leicester, and 19·9 both in Oldham and in Wolverhampton. The rate in the other towns ranged upwards to 27·5 in Hull, 28·7 in London, 30·6 in Nottingham, 35·3 in Norwich, and 37·6 in Plymouth. The average rate in the nineteen provincial towns last week did not exceed 23·5 per 1000, against 28·7 in London.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 637 and 589 in the two preceding weeks, further declined to 557 last week; they included 239 from whooping-cough, 120 from scarlet fever, 72 from measles, and 51 from fever, principally enteric. Whooping-cough showed the largest proportional fatality in Salford, Hull, London, and Newcastle-upon-Tyne; measles in Plymouth, Nottingham, and Hull; and scarlet fever in Sunderland and Bradford. Eleven more deaths were referred to enteric fever in Sheffield, of which some were recorded in the Union workhouse. Of the 18 deaths from diphtheria, 11 occurred in London, 2 in Liverpool, and 2 in Manchester. Small-pox caused 13 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 91 and 126 at the end of the two preceding weeks, further rose to 139 on Saturday last; and 58 new cases of the disease were admitted to these hospitals during the week, against 8, 36, and 57 in the three preceding weeks. Judged by the number of admissions to these hospitals, small-pox is just now more prevalent in London than it has been since March last.

The fatality of lung diseases continues to show a marked excess, notwithstanding a further decline. The deaths referred to diseases of the respiratory organs in London, which had been no less than 1557 and 1020 in the two preceding weeks, declined to 693 last week, but exceeded the corrected weekly average by no less than 213; 479 resulted from bronchitis, and 148 from pneumonia. The annual death-rate from lung diseases in London last week was equal to 9·9 per 1000 of the population; in Liverpool the death-rate from the same diseases last week did not exceed 7·5 per 1000.

THE Axbridge Guardians and Rural Sanitary Authority, Somersetshire, have decided to reduce the salaries of the medical officers of health from £100 to £50 per annum each.

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Correspondence.

"Audi alteram partem."

TREATMENT OF ACUTE RHEUMATISM.

To the Editor of THE LANCET.

SIR,—In his interesting article on the "Alkaline, Salicin, and Salicylate of Soda Treatment of Acute Rheumatism," published in THE LANCET of Feb. 14th, 1880, Dr. Robert Sinclair alludes to a paper in the St. George's Hospital Reports, vol. viii. He states that in Case 9 (p. 178) "some cardiac affection, the nature and termination of which are not at all clear from the report, was developed under treatment of salicin." I regret that, owing to the brevity of the account of the case, any such misapprehension should have occurred. It is stated in the report of the case that there was "no cardiac lesion," though during the attack the first sound of the heart was reduplicated, the pulse occasionally intermitted, and the second sound was very short and sharp. I should feel grateful if you would allow me to make this correction, as the error may tend to cast discredit on the apparent value of this drug in the treatment of rheumatism.

I am, Sir, yours faithfully,

Green-street, Feb. 20th, 1880. THOMAS WHIPHAM, M.B.

IS INSANITY CAUSED BY "DRINK"?

To the Editor of THE LANCET.

SIR,—A country practitioner of course has no right to form opinions for himself, but to be humbly taught by those at a distance; for we all know that the intelligence of a practitioner is in proportion to the population of the place in which he resides.

The letter of Dr. Mortimer-Granville, questioning the alleged relation of drink to insanity, has been a real pleasure to me; because I have for years maintained that drink is not the real, though it may be the assigned, cause in certain cases of insanity—the drink, in fact, not being a *cause*, but a *first symptom*, of the incipient insanity; the brain condition producing the insanity at the same time producing the faint craving feeling which induces the drinking.

1. The cases which in my practice have terminated fatally as the result of drinking have not been accompanied with insanity.

2. In two cases of insanity in which drink was the assigned cause I have denied drink as the cause, but have maintained it was a first symptom.

A, a person in good social position, who had previously been in a lunatic asylum and had returned to his family and society, was noticed one day to be out of sorts. Next morning early he left home in his slippers and walked some miles to a village public-house, and partook of a variety of drinks. In the evening I found him insane, and he was subsequently consigned to an asylum as a dangerous lunatic. One day before his removal he said, "Eh, doctor, I sent to you for an attack of drink." "Yes, but I have attended you for an attack of insanity."

B, a steady, sober shopman, whose mother died insane and whose sister died of phthisis, was noticed one day to be moody. The next day he absented himself from business, and drank two bottles of wine; and next morning I found him acutely insane, and he was removed to a lunatic asylum, where he still remains, having drifted into an apathetic condition.

Yours faithfully,

Framlingham, Feb. 23rd, 1880. GEO. E. JEAFFRESON.

DEATH FROM CHLOROFORM.

To the Editor of THE LANCET.

SIR,—In case Mr. Jeaffreson's letter in your issue of the 21st inst. should suggest the idea that artificial respiration by Silvester's method was not the first and chief means relied on for restoring animation in the recent case of death from chloroform in this hospital, allow me to state again what I had hoped was prominently brought forward in my first letter, that artificial respiration was *persistently* and *uninterruptedly* kept up for fully one hour. I mentioned that cold applications, galvanism, and enemata were tried simply because we had plenty of assistants at hand, and not with the idea of laying any stress on their importance, or even, may I add, value. I fully endorse Mr. Jeaffreson's remarks that artificial respiration, *immediately* begun at the first sign of danger, and uninterruptedly continued as long as thought desirable, is *the thing* upon which we should depend. In the case I recorded we fully recognised and acted upon this principle from the first.

I am, Sir, your obedient servant,

ARTHUR GEORGE BLOMFIELD, M.B.

Lynn Hospital, Feb. 24th, 1880.

OPIUM-SMOKING.

To the Editor of THE LANCET.

SIR,—In the report of the proceedings of the Medical Society of London, which appeared in THE LANCET of last week, I am quoted as saying that opium cigarettes containing *one-sixth of a grain* of the drug have been used at Brompton Hospital with considerable success. My remark was that my colleague, Dr. R. Thompson, had employed cigarettes containing *one-sixtieth* of a grain of extract of opium, and had published his results in the *Practitioner* (August, 1879). I did not venture to quote my own experience on this method of employing the drug.

I am, Sir, your obedient servant,

Feb. 25th, 1880. R. DOUGLAS POWELL.

THE PENDLEBURY HOSPITAL.

To the Editor of THE LANCET.

SIR,—I beg to draw the attention of your readers to the fact that the Dispensary for Children, Gartside-street, Manchester, for which a visiting medical officer is now being advertised for, is simply the out-patient department of the Pendlebury Hospital, and is under the same management. The present medical officer is believed to have resigned owing to the method of administration carried on there, and THE LANCET and other medical journals have united in stating that no member of the profession, who respects his calling, can accept an appointment there until the existing management is thoroughly investigated.

I am, Sir, yours faithfully,

BETA.

PARIS.

(*From our own Correspondent.*)

A LEGISLATIVE measure of the greatest importance to the medical profession is now under consideration. It is proposed that the State should make provision, when necessary, for the families of those who may have died from a contagious disease contracted in the exercise of their duties. The Commission appointed by the Chamber of Deputies to examine this question has reported in its favour; and the vote of the House, a second step in the right direction, leaves the scheme for the present with the Ministers of Public Instruction and the Interior.

The recent deaths of several *internes* from diphtheria contracted in the wards has developed a strong feeling of sympathy for the profession, even in the public mind. Experience, however, teaches but too plainly the ephemeral nature of popular gratitude; and the medical Senators and Deputies would do well to strike as hard and as often as they can whilst the iron is still hot.

At the last meeting of the Société de Chirurgie M. Lannelongue made a communication on the "Etiology and Treatment of Chronic Abscess," which gave rise to a discussion on Antiseptic Surgery. M. Lannelongue uses Lister's method in the treatment of these cases; and this practice was warmly endorsed by M. Lucas-Championnière. MM. Verneuil and Despres thought that temporisation was the best plan, and that surgical interference should be withheld until the skin is on the point of perforation.

M. Broca's election to the Senate, which occurred a few weeks since, was celebrated by a banquet, organised by his friends, colleagues, and pupils, and held at the Continental Hotel last Thursday. M. Broca's health was proposed by

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M. Henri Martin, the historian; and after the guest of the evening had responded, several other speeches were made, those of Professors Trélat and Pozzi being especially happy. It is but right to add that the dinner itself was bad, and the wine still worse.

At the Asile Ste. Anne they are trying a treatment for general paralysis devised by Professor Kjellberg, of the Upsala Central Lunatic Asylum. According to this gentleman, general paralysis is of syphilitic nature, and specifics are necessary to combat it. Mercurial inunction is practised for four consecutive days, one limb and a quarter of the body being subjected to the operation on each occasion. The fifth day a warm bath is given. These inunctions, followed every fifth day by a bath, are repeated until salivation occurs, when a week's rest is allowed. Iodide of potassium, three grammes daily, is then administered for eight or ten days, after which all treatment, with the exception of baths, is suspended for three months. The most satisfactory results have been obtained in Sweden by this method. As yet they have been less successful at Ste. Anne. The patients under treatment seem depressed; but perhaps it takes some time to get accustomed to the remedy.

Paris, Feb. 25th, 1880.

Obituary.

RICHARD RAINSFORD, M.B., F.R.C.S.I.

MR. RAINSFORD, as we announced last week, succumbed on the 17th inst., at his residence, Merrion-square, Dublin, from pulmonary disease and from an affection of the spine. For the past seven months he was unable to attend to the speciality he had selected, that of ophthalmic surgery. Educated at the University of Dublin, he graduated in arts and medicine, and in 1874 obtained the Fellowship of the Royal College of Surgeons in Ireland. He also spent a considerable time in Vienna. On his return to Dublin was appointed junior surgeon to St. Mark's Ophthalmic Hospital, and, on the death of the late Mr. Henry Wilson, senior surgeon to that institution. He also held the posts of ophthalmic surgeon to the Adelaide Hospital, and lecturer on ophthalmic and aural surgery in the Ledwich School of Medicine. Mr. Rainsford was of a kind and genial disposition, he made many friends, and but few, if any, enemies, and his death is regretted by all who had an intimate acquaintance with him.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the required examination and received their diplomas in Dental Surgery at a meeting of the Board of Examiners on the 23rd inst.:—

Cooksey, Edward Thomas, Southampton.
Cooksey, George, Southampton.
Davis, Marcus, Maida-hill West.
Gould, Fredk. Walter, Kingston-on-Thames.
Howarth, Ambrose, Bradford, Yorkshire.

The Preliminary Examination for the diploma of Member and Fellow of the College will commence on Tuesday next, at the University of London, Burlington-gardens, at 9 A.M. The number of entries (420) is quite as large as, if not larger than on any previous occasion.

The annual election of Fellows into the Council of the College will take place, as usual, on the first Thursday in July, when three absolute vacancies will be declared, caused by Messrs. Busk and Curling declining to be put in nomination for re-election, and by the death of Mr. Hancock. Sir James Paget has consented to take the chair at the "Fellows' Festival" the same evening.

Professor Parker, F.R.S., will deliver his last lecture on the "Structure and Functions of the Vertebrate Skeleton," in the theatre of the College, this day (Friday). Professor Flower, F.R.S., will commence his course of nine lectures on the "Comparative Anatomy of Man" on Monday, the 1st proximo.

MR. LARMOUR, of Belfast, who was Senior Wrangler at Cambridge this year, has been appointed Professor of Natural Philosophy in the Queen's College, Galway.

BRITISH MEDICAL SERVICE.—The following is a list of candidates who were successful for appointments in this Service at the competitive examination held in London on the 9th inst.:—

	Marks.		Marks.
Sylvester, G. H.	1925	Langdon, J. S.	1350
Macnamara, W. J.	1900	Heffernan, W. F.	1345
O'Sullivan, D.	1725	Nicholson, R. W. E. H.	1345
Milward, E. O.	1710	Crofts, J. G. W.	1330
Conolly, P. B.	1660	Dugdale, W.	1325
Woods, C. R.	1600	Irvine, D. L.	1325
Babington, H. F.	1585	Ronayne, J.	1320
Milward, W. C.	1575	Clabburn, C. H.	1290
Bracken, W. H.	1565	Cree, E. R.	1275
Macnamara, M. F.	1490	Drury, M. O'C.	1260
Sandiford, J. O.	1480	Deane-Freeman, W.	1245
Love, R. L.	1455	Nicholas, J. H.	1200
Murray, H. W.	1455	Franklin, D. F.	1175
Kerin, M. W.	1420	Curtin, J. L.	1160
Peterkin, A.	1420	Saunders, H.	1155
Harran, J.	1405	Battersby, J.	1150
Leckey, W. S.	1395	Lane, A. V.	1135
Maunsell, E. L.	1375		

INDIAN MEDICAL SERVICE.—The following is a list of candidates who were successful at the competitive examination held at Burlington House on the 9th inst. and following days. Fifty-two candidates competed for twenty-three appointments; forty-eight were reported qualified:—

	Marks.		Marks.
Simpson, J.	2470	Mulroney, T. R.	1950
Whitwell, R. R. H.	2395	Browning, W. B.	1945
Lukis, C. P.	2385	Divecha, F. R.	1920
Waddell, L. A.	2250	Canna, R. H.	1907
Dimmock, H. P.	2172	Henderson, C.	1905
Shawan, G.	2060	Dymott, D. F.	1900
Maitland, C. B.	2040	Thompson, C. M.	1870
Vaid, C. C.	2040	Adams, A. P.	1865
Macdonald, T. R.	1981	Evans, J. W.	1845
Clarke, J.	1980	Leonard, J.	1810
Spencer, D. B.	1975	Rundle, C. S.	1785
Park, P. D.	1965		

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Feb. 19th:—

Beevor, Charles Edward, Harley-street.
Biden, Edw. James, The Terrace, Kilburn.
Sequeira, Henry James, Jewry-street, Aldgate.
Stephen, John Alex. Lewis, Church-road, W.

The following gentleman on the same day passed the Primary Professional Examination:—

Holton, Francis W. Parke, St. George's Hospital.

COLLEGE OF PHYSICIANS IN IRELAND.—At the February examinations the following obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—Robert Allman, George Edward Fisher, John Joseph Hayes, Robert Charles Lyle, Michael Joseph M'Coy, Benjamin Geo. M'Dowel, Jeremiah O'Donovan, Mary Adamson Marshall, John Alex. Miller, Walter Stephen Palmer, Thos. Cathcart Taylor.
MIDWIFERY.—Robert Allman, Nicolas Santana Alvares, George E. Fisher, John Joseph Hayes, Michael J. M'Coy, Mary Adamson Marshall, Jeremiah O'Donovan, Alexander Sharpe, Thos. Cathcart Taylor, John Almericus de Courcy Williams.

DEPUTY INSPECTOR-GENERAL OF HOSPITALS AND FLEETS S. S. D. WELLS has been appointed to Haslar; Fleet-Surgeon W. Telfer to the *Royal Adelaide*.

THE salary of Dr. Yarrow, medical officer of St. Luke's Workhouse, has been increased from £150 to £250 per annum.

THE Exmouth and District Water Bill has complied with the Standing Orders of the House of Commons without opposition.

JEPSON'S HOSPITAL, at Ripon, was on the 18th instant re-opened to the public, after undergoing thorough restoration. A bazaar was held on the occasion.

ON last Saturday, in the Theatre of the Meath Hospital, Dublin, an illuminated address and massive gold ring were presented to Mr. Ormsby, by the students past and present, on the occasion of his resignation of the honorary secretaryship of the Medical Board of the hospital, which he had held for the past eight years, to express their regret at his retiring from that office and to testify their satisfaction at the way he had discharged the duties.

AT the meeting of the friends and supporters of the Hertfordshire Seaside Convalescent Home a few days ago, at the Corn Exchange, Watford, the secretary reported that 227 persons had benefited by the charity during the past year, a considerably larger number than in the previous twelvemonth. In consequence of the limited accommodation

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afforded by the present premises, land has been procured on lease at St. Leonards, on which a building is in course of erection capable of receiving forty-five patients, male and female. Funds, however, are needed, and we trust will be forthcoming for so useful and commendable an object.

TESTIMONIAL.—An enthusiastic meeting assembled at St. James's Hall, Leeds, on the 18th inst., to do honour to Mr. Edwin Foster, L.R.C.P. Lond., who had been professionally connected with a large number of the benefit lodges in the town and neighbourhood for nearly half a century. A solid silver epergne, a black marble clock, with vases to match, and a handsome illuminated address, were presented to Mr. Foster on the occasion, which was one of a highly gratifying character to all concerned.

BEQUESTS ETC. TO MEDICAL CHARITIES. — Mr. Richard Newsham has given £1000 towards the endowment fund of the Preston and County of Lancaster Royal Infirmary. The Kent County Hospital, Maidstone, has received £218 5*s.* under the will of Mr. John Crowhurst. The Hull General Infirmary has received £100 under the will of Mr. Robert Charles Metcalfe, of Patrington. The General Hospital, Birmingham, has received £100 under the will of Mr. Henry Symonds. The Dawlish Dispensary has become entitled to £100 under the will of Mrs. White. The Marquis of Bristol has given £50, and become an annual subscriber of £3 3*s.* to the Mildenhall Cottage Hospital. "T. D. E." has given (in addition to several previous amounts) £152 17*s.* to the Chelsea Hospital for Women. Mr. Blundle Maple has given £105 to University College Hospital. The Trustees of Prison Charities have given £105 to the Royal National Hospital for Consumption and Diseases of the Chest at Ventnor, and a third fifty guineas to the Convalescent Branch of the Victoria Hospital for Sick Children. Mrs. Sidney Hayward has given £105 to the Victoria Hospital for Sick Children, in memory of her late husband, Dr. Sidney Hayward. Mr. S. Seal has given £105 to the Sussex County Hospital at Brighton. The Kent and Canterbury Hospital has received £100 under the will of Miss Catt, of Faversham.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ALFORD, G. E., M.R.C.S.E., L.R.C.P.E., has been appointed a Honorary Assistant Medical Officer to the Weston-super-Mare Hospital and Dispensary.

BALLANCE, C. A., L.R.C.P., M.R.C.S.E., L.S.A.L., has been appointed Resident Accoucheur to St. Thomas's Hospital.

BROADBENT, W. H., M.D., F.R.C.P.L., has been appointed Consulting Physician to the London Fever Hospital.

BRODIE, E. F., L.K.Q.C.P.I., M.R.C.S.E., has been appointed Physician to the London Medical Mission, vice Green.

BROWN, R., L.D.S., has been appointed Honorary Surgeon-Dentist to the Launceston Infirmary and Rowe Dispensary.

BUCHANAN, G., M.D., F.R.C.P.L., has been appointed Consulting Physician to the London Fever Hospital.

BURMAN, J. W., M.D., has been appointed Medical Officer and Public Vaccinator to the No. 3 District of the Hungerford Union.

CALLUM, D. B., M.B., C.M., has been appointed House-Surgeon to the Leith Hospital.

CHAPMAN, P. M., M.B., has been appointed Honorary Physician to the Marylebone General Dispensary.

COBBOLD, C. S. W., M.D., M.R.C.S.E., L.R.C.P.Ed., has been appointed an Assistant Medical Officer at the Middlesex County Lunatic Asylum, Colney Hatch (Female Department), vice Dyer, appointed Medical Superintendent of Darenth Asylum.

DE CHATEAUNEUF, E., M.B., C.M., has been appointed Assistant House-Surgeon to the Leith Hospital.

DELAHOYDE, Dr. O'Connell, has been elected Medical Officer for Coleraine-street Dispensary, North Dublin Union, vice Kenny, resigned.

FERRIER, D., M.D., F.R.C.P.L., F.R.S., has been appointed a Physician for Out-patients to the National Hospital for the Paralysed and Epileptic.

GAIRDNER, J., M.D., has been appointed Medical Officer of Health for Cruff, N.B.

GEORGE, W. H., L.R.C.P.Ed., L.F.P.S.G., has been appointed an Assistant Medical Officer to the Middlesex County Lunatic Asylum, Colney Hatch (Female Department), vice Seward, transferred to Male Department.

GOWERS, W. R., M.D., F.R.C.P.L., has been appointed a Physician for Out-patients to the National Hospital for the Paralysed and Epileptic.

HALTON, G. S., M.R.C.S.E., L.S.A.L., has been appointed an Assistant House-Physician to St. Thomas's Hospital.

HENDERSON, G. C., M.B., M.R.C.P.L., has been appointed Physician to the London Fever Hospital, vice Mahomed, resigned.

HININGS, J. W., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of the Second District of the Bromyard Union, vice Etheridge, deceased.

HORROCKS, P., M.D., has been appointed an Assistant-Physician to the National Hospital for the Paralysed and Epileptic, vice Gowers, promoted.

JONES, R. T., L.F.P.S.G., L.M., L.S.A.L., has been appointed Medical Officer to the Llanfihangel-y-Traethau District of the Festiniog Union, vice Parry, resigned.

LAMBERT, J., jun., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Thirteenth District of the North Brierley Union.

LIPSCOMB, J. T. N., M.D., F.R.C.S.E., has been appointed Honorary Consulting Physician to the St. Albans Hospital and Dispensary.

LUNN, J. R., L.R.C.P., M.R.C.S.E., L.S.A.L., has been appointed an Assistant House-Surgeon to St. Thomas's Hospital.

MCHARDIE, M. M., F.R.C.S.Ed., M.R.C.S.E., has been appointed Ophthalmic Surgeon to King's College Hospital.

MAHOMED, F. A., M.D., M.R.C.P.L., has been appointed Physician to the London Fever Hospital, vice Broadbent, resigned.

MARTIN, E. F., M.B. & M.R.C.S.E., has been appointed a Honorary Assistant Medical Officer to the Weston-super-Mare Hospital and Dispensary.

NEWSHOLME, A., M.R.C.S.E., L.S.A.L., has been appointed a House-Physician to St. Thomas's Hospital.

ORMEROD, J. A., M.A., M.B., M.R.C.P.L., has been appointed an Assistant-Physician to the National Hospital for the Paralysed and Epileptic, vice Maclure, deceased.

PLOWMAN, Dr. C. M., Med. Grad. Qu. Univ. Irel., has been appointed Assistant-Physician to the Home and Infirmary for Sick Children, Sydenham-park.

PRIOR, R. H., M.D., M.R.C.S.E., L.R.C.P.L., has been appointed Honorary Medical Officer to the St. Albans Hospital and Dispensary.

RENDLE, C. B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Sixth District of the Liskeard Union, vice Eastall.

RISDON, G. O., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Second District of the Wells Union, vice Purnell, resigned.

ROSSITER, G. F., M.B. & M.R.C.S.E., has been appointed a Honorary Assistant Medical Officer to the Weston-super-Mare Hospital and Dispensary.

RYLEY, H., L.R.C.P.L., L.R.C.P.Ed., has been appointed Medical Officer for the Porlock District of the Williton Union, vice Hay, deceased.

SHAW, J., M.R.C.S.E., L.S.A.L., has been appointed a House-Physician to St. Thomas's Hospital.

SHEPPARD, C. E., M.B., M.R.C.S.E., L.R.C.P., L.S.A.L., has been appointed a House-Surgeon to St. Thomas's Hospital.

SMITH, R. P., M.B., M.R.C.S.E., L.R.C.P., L.S.A.L., has been appointed a House-Surgeon to St. Thomas's Hospital.

SPENCER, H. E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the No. 2 District of the York Union, vice Hood, resigned.

WALLER, Augustus, M.B., has been appointed Honorary Physician to the Marylebone General Dispensary.

WILLIAMSON, R. J., M.A., M.B., M.R.C.S.E., L.R.C.P., has been appointed an Assistant House-Physician to St. Thomas's Hospital.

Births, Marriages, and Deaths.

BIRTHS.

CARVER.—On the 18th inst., at Fairlawn, Fulham, the wife of E. Carver, of a son.

COWARD.—On the 21st inst., at 22, Queen-street, Huddersfield, the wife of Frank Augustus Coward, L.R.C.P.Ed., L.R.C.S.Ed., of a daughter.

DAVISON.—On the 19th inst., at Langton House, Battle, Sussex, the wife of Rashell Davison, M.B., M.R.C.S.E., of a daughter.

HANNAY.—On the 23rd inst., at Dudley House, Weobley, Herefordshire, the wife of John Hannay, L.R.C.P.Ed., L.R.C.S.Ed., & L.M., of a daughter.

LARKIN.—On the 18th inst., at Trinity-square, S.E., the wife of F. G. Larkin, M.R.C.S.E., of a daughter—Ethel.

TURTLE.—On the 17th inst., at High-street, Homerton, the wife of James H. Turtle, M.D., of a daughter.

MARRIAGES.

CHISHOLM—HORSBURGH.—On the 18th inst., at the Presbyterian Church of England, Ipswich, by the Rev. P. M. Martin, Edwin Millidge Chisholm, M.B., C.M. Edin., of Sudbury, Suffolk, fourth surviving son of the late Robert Chisholm, of Edinburgh, to Euphemia Inglis, eldest daughter of the late Andrew Oliver Horsburgh, of Englefield, Reading, Berks.

NORMAN—WILLIAMS.—On the 4th inst., at St. Stephen's Church, Hounslow, by the Rev. Henry Layton, William H. Norman, M.R.C.S.E., eldest son of William H. Norman, Retired Paymaster, R.N., of Gunnersbury, to Rose Constance (Dolly), second daughter of Charles Greville Williams, F.R.S.

DEATHS.

BAIRD.—On the 17th inst., at Linlithgow, George Dallas Baird, Surgeon, aged 73.

DAVIES.—On the 17th inst., at Guildford-terrace, Dover, Edward Pellew Davies, M.R.C.S.E., formerly of Christchurch, Hants, aged 66.

JONES.—On the 14th inst., Llewelyn Jones, M.D., for many years in active practice as Physician at Beaumaris, in the County of Anglesey, aged 78.

SOPWITH.—On the 17th inst., at his residence, Calverly-parade, Tunbridge Wells, Henry Lindsell Sopwith, F.R.C.S.E., in his 72nd year.

TRIBE.—On the 16th inst., at Strood-hill, near Rochester, Benjamin Tribe, F.R.C.S., late of Chatham, aged 95.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Feb. 26th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Feb. 20	29·40	W.	49	47	..	55	47	0·03	Bright
,, 21	29·81	W.	45	43	..	54	42	0·24	Bright
,, 22	29·79	W.	43	41	..	54	43	..	Overcast
,, 23	29·97	N.E.	38	37	..	43	35	0·23	Overcast
,, 24	30·28	N.E.	39	38	..	42	36	0·06	Overcast
,, 25	30·45	N.W.	35	34	..	50	32	..	Bright
,, 26	29·92	WNW	45	43	..	50	33	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE FEAR OF FAT.

No doubt it is unpleasant to be excessively obese; but the morbid dread of fat which has in recent years become fashionable has no foundation in physiological fact. Fat answers two purposes: it acts as a non-conducting envelope for the body and protects it from too rapid loss of heat, and it serves as a store of fuel. In the course of exhausting diseases, it not unfrequently happens that the life of a patient may be prolonged until the reserve of fat is exhausted, and then he dies of inanition. Fats supply the material of the heating process on which vitality mainly depends. In great excess it is inconvenient; but the external layings-on of fat is no certain measure of the internal development of adipose tissue; much less does a tendency to grow fat imply, or even suggest, a tendency to what is known as "fatty degeneration." It is time to speak out on this point, as the most absurd notions seem to prevail. Again, it is *not* true that special forms of food determine fat. That is an old and exploded notion. Some organisms will make fat let them be fed on the leanest and scantiest and least saccharine descriptions of food; whilst others will not be "fattened" let them feed on the most "fattening" of diets. The matter is one in regard to which it is supremely desirable and politic to be *natural*, adapting the food taken to the requirements of health rather than substance. Simple food, sufficient exercise, and regular habits, with moderation in the use of stimulants, compose the maxim of a safe and healthy way of life.

G. J. S.—We sympathise entirely with our correspondent, and regret that any medical man should be found ready to foil an attempt to bring about a reasonable remuneration of medical services.

Dr. E. B. Baxter.—The paper is marked for insertion in an early number.

"STREET MUSIC."

To the Editor of THE LANCET.

SIR,—Many of your readers, professional and others, will be glad to hear that a Society is already formed to deal with the nuisance of street organs, German bands, &c. I take the liberty of asking you to give your support to the movement by inserting this letter in your columns. The name of the Society is "The Society for the Regulation of Street Music." Mr. Bass, M.P., is President; the Secretary is Mr. T. K. Soady; the Offices at No. 32, Piccadilly-circus, where the names of any who are anxious to help should be sent at once, as it is proposed to try and get a Bill passed this session. It appears to me only reasonable to expect that the profession will come forward to assist the suffering.

Yours faithfully,

ROBERT BRIDGES, M.B.

Savile Club, Savile-row, W., Feb. 16th, 1880.

ALLEGED INEFFICIENT INQUESTS.

THE action of a coroner has, according to the *Western Morning News*, been strongly commented on by the Plymouth guardians, who have passed a resolution, calling on the coroner to explain his conduct. A female inmate of the imbecile ward died two hours after eating her breakfast heartily. Before breakfast she was in her usual health. Death was preceded by vomiting. The resident medical officer was not summoned by the nurse on the ground that there was not time! He was not summoned to the inquest because the deceased had not been under his care! Had the deceased been under special medical observation immediately before death, the neglect of medical evidence would have been more intelligible, but not, even then, justifiable in the circumstances. But to allege the absence of medical attendance in a workhouse patient as a reason for not taking medical evidence is a curious departure from the ordinary proceedings of coroners. As it is, the death of this pauper is a mystery which ought to be explained.

Mr. T. Whitehead Reid.—The official list has not been forwarded.

THE COINCIDENCE OF HUMAN AND ANIMAL ZYMOTICS.

To the Editor of THE LANCET.

SIR,—The very interesting remarks of Mr. G. Fleming on "Human and Animal Variolæ" lead me to mention what I have long felt to be but a pure coincidence, but which I should like to know if others have observed.

During the last epidemic of small-pox here I witnessed, as did some of my friends, well-marked variola in a herd of milch-cows, the udders and paps, which I carefully examined, being in various stages in different cows, and, as I remarked at the time, they all looked sickly, thin, and miserable. I knew that the milk (for they were being milked regularly) was sent to town, and principally supplied one district, a great part being delivered in bulk to retailers, who sold it in the immediate locality. I naturally inquired of the cases of small-pox which came under my care whence they obtained their milk, and in many instances found it was procured from these milk retailers and from these cows. Small-pox was certainly very prevalent in this locality and this district, much more so than appeared elsewhere, as far as I was able to judge at the time. I did not follow up the inquiries, although I felt certain of its deleterious effects, and warned many to discontinue its use. I believe it is not uncommon for cows to be milked during the disease, and the milk sold as usual. I do not read of the milk producing ill-effects, nor have I found it condemned, but it certainly is unfit for use; for if the cow is affected, the milk must also suffer in quality and wholesomeness, which points to a careful supervision of dairy farms by the sanitary authorities, as milk seems to be a continual source of disease and a contagium-carrier. More recently I noticed an epidemic amongst pigs of what was called measles, and I remarked that we had an attack of scarlet fever and measles of a severe type amongst children at the same time. If the problem of identity of small-pox and cow-pox is so indefinable, then we require more observation on this subject, and also more information from those who have given to it long and special study; and also, if animal diseases of the contagious type are readily transmitted to man, then it behoves our teachers to lay more stress upon this part of our education so as to guard us against the communicability of diseases from the lower animals.

I am, Sir, yours obediently,

Rotherham, Feb. 1880. HARRY D'O. FOOTE, M.D. Edin.

*** The simultaneous occurrence of small-pox and cow-pox, if such it was, must be, as our correspondent admits, a "pure coincidence," if we are to accept the evidence as to these maladies being distinct and independent. If the outbreak among the cows was really one of vaccinia, then it proves that the disease is not so rare as some speakers at the late Conference on Animal Vaccination would have us believe. But it must not be forgotten that there are some eruptions on the lactiferous apparatus of bovines which somewhat resemble vaccinia, and would readily lead those unacquainted with them to think it was that disorder. Measled pigs are supposed to be those which are infested with the *Cysticercus cellulosus*—a parasitic disease,—not rubeola. Perhaps the pigs alluded to were suffering from "swine plague"—a malady *sui generis*, and not transmissible, so far as is yet known, to mankind, though it has been conveyed by inoculation to guinea-pigs, rabbits, sheep, and pigs. Small-pox and cow-pox are well-defined affections, their distinguishing features being well marked. Many animal diseases of the contagious type are communicable from animals to man, and very few indeed of the human species to animals. —ED. L.

Vindex.—Distant politeness is the very principle of conduct towards the gentleman described with great moderation in our correspondent's letter.

HELMINTHOLOGY.

To the Editor of THE LANCET.

SIR,—If "Helmints" has not tried perchloride of iron administered as an injection (tincture of perchloride of iron, one drachm; water to eight ounces), I should advise him to do so. At the same time I should administer iron by the mouth. Yours &c.,

Feb. 1880. PISISTRATUS.

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RATES OF MORTALITY.

A PAPER read at the Statistical Society on Tuesday, the 17th instant, by Mr. Thomas A. Welton, "On Certain Changes in the English Rates of Mortality," is of considerable interest, as showing that whereas, according to the English life table, a certain number of males and females respectively would survive out of a fixed number of births, to be counted at a census as being aged 75—80, viz.: 238,993 males, and 333,526 females, the experience of 1871-75 points to the survival of no more than 264,475 males, but an increased number of females—viz., 356,190. The tendency towards an increasing excess of surviving females at high ages, as compared with the numbers of males attaining such ages, seems to have steadily gained strength throughout the thirty years ending with 1875. Turning to the causes of this state of things, Mr. Welton showed that there has been a steady increase during the whole of the period in male mortality after 35 years of age by diseases of the lungs, heart, and brain, and also the less important diseases of the kidneys and cancer. Such increased mortality has been so general, even in the rural divisions of the kingdom, that it seems difficult to attribute it to the increased strain upon the vital energies occasioned by modern conditions of life; but he did not attempt to assign a cause for the changes which have taken place, nor for the fact that the mortality from consumption has remained almost stationary, whilst lung disease has become so much more fatal.

L.R.C.P. would oblige by sending the newspaper report of his claim.

FOGS, AND HOW THEY MAY BE DISPERSED.

To the Editor of THE LANCET.

SIR,—I have read the "note" on the "Philosophy of Fogs." My present purpose is not so much to combat the "philosophy" there set out as to indicate the means by which they may be dispersed in great measure, or at any rate rendered comparatively harmless.

If you or any of your readers suffer from the annoyance of fogs in your bed-rooms, sitting-rooms, or offices, place a kettle of water—a "bronchitis kettle" with a long spout is the best—on the fire, and keep it boiling. In a few minutes after it has begun to boil and diffuse its steam about the apartment, the fog will be in great measure dispersed, and the remainder rendered so harmless that the atmosphere of the apartment will be rendered perfectly breatheable, and the irritation to the eyes and larynx abated in great measure. My friends and myself have tried this experiment over and over again, and with the result above mentioned. A room which before was so dark that you could not see to read, write, or even eat in the daytime without the use of artificial light, will in a few minutes be rendered comparatively light. It is true you will fill your room with steam, somewhat after the fashion of a laundry or brewery, but it will be without the disagreeable smell of soapsuds as in the former case, or the fragrant odour of stewing malt in the latter.

It is not so easy to find a perfect remedy for fogs in the thoroughfares outside the house; but I believe they might be much diminished if they were traversed by a steam locomotive—say a small steam-roller,—which would be perpetually giving off its steam vapour. I have never tried the experiment; but my belief in its feasibility is fortified by the circumstance that the fog along the lines of the Underground Railway is much less dense and disagreeable than it is on the higher level of the streets. I noticed this particularly some five or six years ago, at the time of the Agricultural Show at Islington, when many of the beasts were suffocated by the fog. Islington is one of the highest elevations in London, yet the fog there was much more intense than any other part through which I penetrated; whilst I noticed that whilst coming from King's-cross to Moorgate-street along the Underground Railway the fog was less, and by no means so irritating. I suppose the steam given off from the engines had in some measure dispersed it, and also "softened" it and made it respirable. One point to be attended to is to keep the engine or kettle frequently supplied with fresh water, as a full boiler gives off much more vapour than one partially full, and water which has been several times boiled gives off but little or no vapour. I heard Professor Thomas Graham demonstrate this fact more than twenty years ago. He showed that distilled water would not boil at the ordinary boiling point of 212° F., and that water which had been boiled three or four times, and then allowed to cool, would not give off vapour until raised to the temperature of about 217°.

I do not think the argument put forward in your "note" about the drains being the chief cause of fogs at all a tenable one, as I have several times seen fogs quite as dense and disagreeable as any to be found in London on elevated spots, such as Banstead or Epsom Downs, which have a chalk subsoil, and no drains whatever, simply because there are no buildings to drain.

The "philosophy of fogs" is a subject well worth ventilating; but I dare say I have written as much as you will care to insert at the present time.

I am, Sir, yours faithfully,

Croydon, Feb. 16th, 1880. J. H. SHORTHOUSE, M.D., LL.D.

NEWSPAPER PUFFS.

A Physician.—The puff is a very objectionable one, and should be brought under the notice of the writers of the testimonials mentioned.

Mr. Alfred Marriott.—No, and we have a strong opinion that needy men should not enter the profession.

CORONERS' INQUESTS IN JERSEY.

INSULARITY, beyond a certain degree, is disadvantageous. In islands like Jersey, many old customs persist beyond any intrinsic claim to continuance. But still there is progress. Two very good changes in regard to inquests have been made in the law. The first, to insist on witnesses taking an oath before giving evidence. This change was made in spite of a speech to the contrary by the Attorney-General. Secondly, henceforth the expenses of inquests will be made, not by the family, but out of the public exchequer.

Mr. James Paris.—At the time of birth the crowns of the anterior teeth of the first set, still enclosed in their sacs, are completed within the jaw, and their fangs begin to be formed. Dissection would show this and similar conditions, but less advanced, in other teeth, both of the first and second set.

Inquirer is referred to THE LANCET, vol. i. 1875, pp. 36, 74, 110.

NERVE-STRETCHING IN TETANUS.

To the Editor of THE LANCET.

SIR,—Your journal for Dec. 27th, 1879, contains a letter which places me among the staunch advocates for nerve-stretching in tetanus; but anyone who will take the trouble to read my first letter in your issue of Dec. 13th for last year will see that its whole object was to call attention to three cases in which the operation was not completed, and to prevent them from vitiating the statistics of those in which the indications have been carried out.

By Mr. Morris's acknowledgment in this communication, he began the operation, but did not complete it, so that my protest against his case still holds good, and there is nothing left for statisticians but to exclude it from the "completed list." Why he was so alarmed at an aggravation of the symptoms by the first part of the operation, it is not my province to state. For if a patient falls back in syncope when we first open the trachea for an obstruction, is it any reason that we should relax our efforts to give a free opening to the respiratory organs? And, as your correspondent admits when he says, "I acted under the impression of the necessity of operating early, and of procuring 'complete isolation' from the wound,'" the best chance in either operation is to go on and finish it. But no matter how well we agree on the necessity of an interruption of the nerve current, I must enter a protest against his favoured method of obtaining it—that of nerve section. It has been tried long and faithfully, and, as Mr. Morris says, "the hope it holds out is slight." I do not pretend to be a prophet, and will not say that the future of stretching will give any better results; but what I do say is, that the operation itself is a milder one than any form of "section," and that so far its results are more encouraging. Why anyone should think that a cutting through the neurilemma, the consequent evacuation of a portion of the neural medulla, combined with a section of the axis cylinder, and its exposure to the irritating influences of the air at the time of the operation, and the secretions of the wound afterwards, can be productive of a less "severe shock or irritation" than is "excited by nerve-stretching itself," is more than I can see. For when stretching is properly done, the fascia which not only covers the nerve-trunk, but also dips between and holds the fibres together, is not torn, so that as far as the axis cylinders are concerned it might as well be a "subcutaneous" operation. Exactly what lesion stretching produces on these small organs is more than I can say; but, as my last letter will show, I know that for a *short time* it suspends their function, and, as I said before, by repeating the operation as often as the power of conduction returns; this fact should be turned to account in the control of the muscular spasm. This has been long thought to be the chief source of danger in "lock-jaw"; but anyone who thinks that his task is accomplished when this is done most certainly has never examined the changes that are sometimes found in the nervous centres. So that we must make the best of the respite that this procedure gives us to soothe and quiet the excited centres with chloral or anything else that will do it best.

I hope that in the "make up" of the future statistics of this operation the temporary improvements will not be lost sight of; for even if the operation does nothing but this, it has done much towards robbing the disease of its horrors, and that alone will be a boon to humanity.

As to Mr. Morris's parting shot at the description of my case, I admit that the expression "a burn in front of and below the knee" is not as exact as it might be; but I hope that none of your readers will be "bulldoged" (excuse the Americanism) into believing that it means the popliteal space or the back part of the leg, for this is the region that is supplied by the third nerve, to which he refers. At any rate, I secured paralysis of the affected part for eighteen hours, with a total cessation of all spasm for the same period.

Before I close, please allow me to assure your readers that it was not the anatomical knowledge of your contributor that I wished to criticise (for surely what "any tyro in anatomy could see," a "surgeon to, and lecturer on anatomy at, the Middlesex Hospital" is fully conversant with), but his failure to use it was the cause of my comments. I do not think that science is often the gainer by these wordy wars; but if the smoke we have raised by "this ventilation" of our ideas attracts the attention of someone who has the material as well as the ability, and will so fan this spark into a flame that will give us a light on which we can rely, I will not count the time "misspent" that has been given it by,

Your former contributor,

Danville, Kentucky, U.S.A., Jan. 14th, 1880. A. W. JOHNSTONE.

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Deadichado.—The amalgamation of the administrative branches of the Indian and British Medical Services in India was an imperative necessity, and we have long urged it on the consideration of the authorities. It appears to us to have been carried out equitably. Of course in all amalgamations cases of individual hardship must occur; but these will be met to a considerable extent by the conditions of retirement offered to the officers affected. The period from which the amalgamation is to take effect appears to us to have been regulated by the commencement of the financial year, and not by any of those unworthy considerations to which our correspondent refers. We sympathise with the medical officers affected by the new arrangements; but we feel strongly that they were necessary in the interests alike of the service and of the tax-paying public. Efficiency and economy were both required, and we trust will be attained by the new system of administration.

A CASE OF TYPHOID FEVER TREATED WITH CARBOLIC ACID INTERNALLY.

To the Editor of THE LANCET.

SIR,—If you will oblige me by bringing before your readers the following case, it may induce those who have more opportunities of meeting with typhoid fever than I have to see if similar results may be obtained in a more extensive trial.

On Jan. 24th I visited Ellen S——, aged eighteen, living in a detached cottage in the country. She had taken to her bed two days before, having been previously ailing for a week. I found her in a very febrile condition, with highly flushed face, anxious expression, tongue furred, and bowels relaxed three or four times a day; very little headache. Pulse 108; temperature (11 A.M.) 102·5°; skin dry. With the usual instructions as to diet, &c., I prescribed acetate of liquor ammoniæ and compound tincture of camphor.

Jan. 25th.—No apparent change. She complained much of sleeplessness. Ordered compound ipecacuanha powder and mercury-with-chalk at bedtime.

26th.—Some sleep. Tongue browner; diarrhœa lessened; some spots on abdomen, but scarcely observable. Pulse 109; temperature (12 A.M.) 103°.

27th.—Much flushed; tongue more glazed; pulse 108; temperature 103·5°. I prescribed glycerine of carbolic acid, six minims, every four hours.

28th.—Face less flushed; tongue moister, but spots more distinctly coloured; pulse 100; temperature 101°. Continued carbolic acid.

29th.—Patient cheerful after a good night; diarrhœa nearly ceased; tongue rapidly cleaning; spots less evident; pulse 89; temperature 99°.

From this day she made a rapid recovery, sat up on Feb. 1st, and was down stairs on the 4th.

Now, the sudden subsidence of fever on the administration of carbolic acid may be merely a coincidence, and the same remark may be made regarding the supposed results of other medicines in solitary cases; but such remarkable coincidences are certainly suggestive of more extended experiments. Until disproved, it appears to me more probable than otherwise that one was the effect of the other. Our great authority, Sir W. Jenner, says (THE LANCET, Nov. 15th, 1879): "I have never known a case of typhoid fever cut short by any remedial agent—that is, cured. The poison which produces any one of the acute specific diseases (to which order typhoid as much as small-pox belongs) having entered the system, all the stages of the disease must, as far as we know, be passed through before the recipient of the poison can be well." Yet I submit that this very disease (small-pox), here linked with typhoid fever, is undoubtedly modified and cut short in its course by introducing vaccine lymph into the system, even when vaccination has been performed so late as to run its course concurrently with the small-pox. Why then should we remain content with thinking that typhoid fever must continue to the end unchecked?

I am, Sir, yours faithfully,

Melksham, Feb. 16th, 1880. HENRY WEEKES.

Mr. J. H. Warwick.—A Siegle's atomiser can be obtained of any manufacturer or dealer in druggist's sundries, but it wants some modifications for this particular plan of treatment. We may add that later researches do not support the first statements of its success.

A DISCLAIMER.

To the Editor of THE LANCET.

SIR,—I shall be much obliged if you will allow me to state that I have had no connexion with the late Paine trial.

I am, Sir, yours obediently,

AUGUSTUS WALLER, M.B.,
Physician to the St. Marylebone General Dispensary.

Upper Gloucester-place, Dorset-square, N.W., Feb. 25th, 1880.

REMOVAL OF STONE FROM THE BLADDER.

To the Editor of THE LANCET.

SIR,—In connexion with Mr. Buckston Browne's letter on this subject, I would like to make a suggestion, to the effect that possibly the adoption of supra-pubic lithotrity would overcome the difficulties he mentions which exist against the present method of performing the operation recommended by Dr. Bigelow. Yours obediently,

Queen's College, Birmingham, Feb. 1880. JOHN GODSON.

Decan.—We regret that we cannot publish our correspondent's letter, because he starts with a statement obviously inaccurate, and his subsequent deductions must therefore be wrong. He assumes that the surgeon-generalships of the three presidencies, so far as the Indian Service is concerned, are to be abolished, but the Order which we published on the 14th instant, assigns the appointment in Bombay to the Indian Medical Department. He also supposes that "the number of deputy surgeons-general is to be reduced in the different presidencies, officers of the Army Medical Department taking their places." This is not a correct statement of the case, as the number of deputy surgeons-general of the British service is also to be reduced. There will remain employed eleven deputy surgeons-general of the Indian and ten of the British service.

Ex Absentiâ.—1. Sibson.—2. Roberts or Bristowe.—3. Parkes or Wilson. 4. Blandford's Lectures.

Mr. W. H. Kesteven.—The error has already been corrected.

TOBACCO-SMOKING.

To the Editor of THE LANCET.

SIR,—The gist of "C.'s" letter lies in the suggestion that perhaps the poison of tobacco is destroyed in the pipe, and that only the men whose mucous membrane is brought in contact with the cigar are in danger of becoming paralysed. Although chemical considerations are worth much less than actual physiological results, it may be well at once to state that *all* the investigators have found the poisonous alkaloids present in the smoke from both pipe and cigar.

"C." refers to a few cases he knows of men well up in years, whose lives seem to him to give contradictory evidence, and he concludes by proposing that some half-a-dozen gentlemen in good practice be asked to question their paralytic patients, and then pronounce whether smoking really induces paralysis, and, if so, whether pipes give more immunity from it than cigars.

As the greater includes the less, and as it would be unfortunate if the general question raised by Professor Parkes' letter degenerated into a side issue, I venture to gather up the various threads of the discussion by asking, Does tobacco in any form *shorten life?* I believe there is a mode of investigation which will give us a correct answer to the question.

"C." will no doubt perceive on second thoughts that by his method even the point as to paralysis could not be definitely settled. If it be an axiom in sanitary statistics that single injurious influences, considered apart from others equally active, lead to wrong generalisations, it is evident that an inquiry would be misleading which took account only of the smoking habits of paralytics, and ignored another recognised productive cause of paralysis—the use of alcoholic drinks.

The only way it appears to me in which we could eliminate this disturbing factor, and ascertain the real influence of tobacco upon longevity, would be to get an investigation made by the Insurance Societies which separate their moderate drinking lives from their total abstinence ones. Some time ago, in conversation with a prominent agent of the largest of these Companies, having over 30,000 lives under review, I was told by him that his Committee would probably entertain a proposition for an investigation of the kind if it came to them from the leading physicians, and had a purely scientific object in view. Yours &c.,

Feb. 1880. CRUCIBLE.

The Editor of the "Garden."—The article appears in THE LANCET for Sept. 27th, 1879, page 477.

Mr. C. C. Whitefoord is thanked.

GYMNASIA IN CHILDREN'S HOSPITALS.

To the Editor of THE LANCET.

SIR,—In your issue of Jan. 17th is a notice by your local correspondent of the treat given last Christmas in the Wirral Children's Hospital, Birkenhead. I beg to draw the attention of your readers to another form of entertainment, serving, moreover, as an important curative means, which may be witnessed any Wednesday forenoon in the same institution. The importance of gentle, repeated, and skilfully directed exercise has long seemed to me to be a health-restoring means (especially in the case of convalescing children) which has been sadly overlooked. Accordingly it gave me much pleasure recently to receive the consent of the Committee of the Wirral Hospital for Sick Children to place in one of the rooms a well-furnished, portable gymnasium, and I was fortunate, too, in securing the services of Mrs. Leslie Batt, who directs the various exercises most intelligently and zealously, and apportions the exercises to the strength and muscular deficiency of the several little children, both in-patients and out-patients, who come to the class. Mrs. Leslie Batt gives her services gratuitously, and enters with full heart into her useful work. The gymnasium includes horizontal bar, ladder, inclined plane, rowing board, dumb-bells, and clubs. In going through their dumb-bell and club exercises, the children are taught to keep time, and, to better enable them to do this, it would be an advantage to have a musical accompaniment. However, anyone visiting this class cannot but be struck with the advantages thus afforded for skilful physical training, and the children look forward with pleasure to their weekly gymnastic entertainment. I would further suggest that some such form of physical training would be found invaluable, and should be established, in connexion with every sick children's hospital. I remain, Sir, yours truly,

Liverpool, Feb. 14th, 1880. P. M. BRAIDWOOD.

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Dr. Robt. S. Peart.—We are not aware of any law that compels a medical man to give such particulars as our correspondent mentions; and medical men do rightly in refusing irrelevant information, or information that should have been obtained before the acceptance of the life.

Dr. Blomfield.—Yes, if concise, and with the name of the writer.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Gowers, London; Mr. Thomas Smith, London; Dr. D. Powell, London; Dr. Maclagan, London; Dr. Sedgwick, London; Dr. C. T. Williams, London; the Right Hon. James Stansfeld; Dr. Iliff, London; Mr. C. Lucas, London; Dr. Robinson, London; Dr. Schlesinger, Vienna; Dr. Lynch, London; Dr. Baxter, London; Mr. Little, London; Mr. Cowlard, Launceston; Dr. Lowson, Huddersfield; Mr. Allbutt, Leeds; Mr. Garrard, Kington; Mr. Ransford, Liverpool; Dr. Kane, New York; Dr. Burman, Ramsbury; Mr. Wright, Church End; Mr. Frank; Mr. Cobbold, Leavesden; Mr. Cropp; Dr. Davison, Wrexham; Mr. Blomfield, King's Lynn; Dr. Whitefoord, London; Dr. Service, West Boldon; Dr. Mapother, Dublin; Dr. Oliver, Newcastle; Mr. Tebay, London; Mr. Lucas, Hitchin; Mr. Lennox Browne, London; Mr. Illingworth, Pretoria; Mr. Newstead, London; Mr. Richards, Exeter; Dr. Fowler, London; Mr. White, Llanelly; Mr. Armstead, Manchester; Mr. Wood, Uxbridge; Mr. Kennard, Plymouth; Mr. Jessett, Erith; Mr. Price, London; Dr. Wilson, Southport; Mr. Roth, Brighton; Mr. Dumville, St. Albans; Mr. Gillespie, London; Mr. Norris, Weston-super-Mare; Mr. Trewman, London; Mr. Godson, Birmingham; Mr. Juler, Bury; Mr. Pepper, London; Mr. Craigie, London; Mr. Reid, Canterbury; Mr. Marriott, Birmingham; Mr. Beckett, Oswestry; Dr. Warwick, Brooklyn; Mr. Aste, Sydenham; Mr. Jones, London; Mr. Cullimore, Ennis; Dr. Whipham, London; Mr. Jeaffreson, Framlingham; Mr. Tatham, Salford; Mr. Finlay, Edinburgh; Mr. Wood, London; Dr. G. Budd; Mr. Ledward, Manchester; Dr. Roberts, Denbigh; Mr. Mann, Leith; Mr. C. D. Davies; Mr. Lewtas; Dr. Ewatt, Cabul; Mr. Bridges, London; Dr. Charteris, Glasgow; Dr. Pinkerton, Bombay; Mr. Cunningham, Coldstream; Messrs. Allen and Hanbury, London; Mr. Jones, Harleck; Mr. Jelley; Miss Bett, Bury; Mr. Cole, Hatton; Messrs. Monk and Co., London; Mr. Cornish, Manchester; Messrs. Smith and Son, Dublin; Mr. Hudson, Bungay; The Military Secretary, India Office; Douglas; F. F., Liverpool; Pisistratus; W. H. K.; An Old Subscriber; Alpha, Dublin; The Director-General of the Army Medical Department; The Editor of the *Garden;* Volunteer; Chiropodist; Public Officer; W. R.; T. W., Cardiff; F.R.C.S., Clifton; Ex Absentiâ; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Easby, March; Mr. Harris, Milldenhall; Messrs. Farwig and Co., London; Mr. Dutton, Dursley; Mr. Savage; Messrs. Porteous and Co., Glasgow; Mr. Sampson, York; Messrs. Ellis and Co., London; Mr. Chisholme, Sudbury; Mr. Grinling, Burton-on-Trent; Messrs. Armfield and Sons, London; Dr. Bower, Bedford; Dr. Bowse, Elham; Dr. Foster, Birmingham; Mr. Kinder, Leamington; Dr. Clark, Folkestone; Messrs. Phillips and Co., London; Messrs. Prothero and Co., London; Mr. Scott, Westry; Mr. Whitlock, Luton; Mr. Hunsworth, Liverpool; Mr. Fulton, Toronto; Mr. Bryan, Nottingham; Messrs. Smith and Son, Manchelter; Mr. Veley, Chelmsford; Dr. Sutcliff, Burnley; Mr. Edwards, Furneaux Pelham; Mr. Roberts, Cardiff; Mr. Davison, Bath; Mr. Kennedy, Dublin; M. H., Coventry; Gamma, Manchester; Delta, Dudley; Gamma, London; C. N., Scunthorpe; W. R. P., Newton-in-Marsh; A. D. C. O.; Warden, London; R. M., Grantham; Medicus, Kingston-on-Thames; F. N. B., Bawtry; C. F., Maddington; J. B.; A. B., Warwick-square; E. P., Brockley; X. B., Sandhurst; M.R.C.S.; X., Liverpool; A. B., Gainsborough; M.D., Bridgwater; Surgeon; &c.

Journal de Médecine de Bordeaux, Le Progrès Médical, Medical Record, Revista de Ciencias Médicas, Revue Médicale, La Lumière Electrique, Boston Medical and Surgical Journal, Gazetta delli Ospitali, Sheffield Daily Telegraph, Clare Examiner, Manchester Guardian, Liverpool Daily Post, Chelmsford Chronicle, Stroud News, Edinburgh Courant, Hastings and St. Leonard's Times, &c. &c., have been received.

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Medical Diary for the ensuing Week.

Monday, March 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Comparative Anatomy of Man."
ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.
MEDICAL SOCIETY OF LONDON. — 7½ P.M. Annual Meeting; Ballot.—8½ P.M. Dr. J. Braxton Hicks, "On Variations of Abdominal Tension and their Clinical Significance."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8 P.M. Annual Meeting; Report; President's Address.

Tuesday, March 2.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Schäfer, "On the Physiology of Muscle."
PATHOLOGICAL SOCIETY OF LONDON. — 8½ P.M. The following Specimens will be shown:—Syphilitic Osteitis; Pulsating Tumour of the Cranium; Degeneration and Regeneration of the Axis Cylinder in Non-traumatic Lesions; Fungus of Tropical Ringworm; Primary Cancer of Liver; Pedunculated Fatty Tumours; Horny Growth from Eyelid; Drawings of Cancer; Aneurism of Mitral Valve; Disease of Pulmonary Valves; Case of true Leprosy; &c. &c.

Wednesday, March 3.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Comparative Anatomy of Man."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lectures: Dr. Cayley, "On some Points in the Pathology and Treatment of Typhoid Fever."
OBSTETRICAL SOCIETY OF LONDON. — 8 P.M. Specimens: Dissection of a Two-headed Monster, by Dr. Godson; Pelvic Viscera, showing Congenital communications (1) between Rectum and Vagina, (2) between Rectum and Urethra, by Mr. Alban Doran; Anteflexed Uterus, by Dr. Hayes.—Paper: Mr. Lawson Tait, "On Axial Rotation of Ovarian Tumours, leading to their Strangulation and Gangrene: three Cases successfully treated by immediate Ovariotomy."
EPIDEMIOLOGICAL SOCIETY.—8 P.M. Surgeon-Major W. G. Don, "On the Endemic Continued Fevers of Sub-tropical Latitudes."

Thursday, March 4.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Dewar, "On recent Chemical Progress."
HARVEIAN SOCIETY.—8½ P.M. Mr. George C. Coles: "Cases of Cyphosis." Dr. Percy Boulton, "On the Typical Development of Children."

Friday, March 5.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Comparative Anatomy of Man."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lectures: Dr. Cayley, "On some Points in the Pathology and Treatment of Typhoid Fever."
ROYAL INSTITUTION. — 8 P.M. Evening Meeting. — 9 P.M. Mr. H. N. Moseley, "On Deep-sea Dredging and Life in the Deep Sea."

Saturday, March 6.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Mr. Saintsbury, "On Dryden and his Period."

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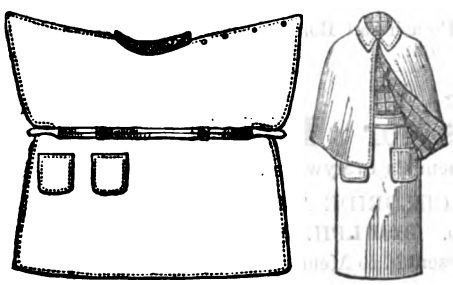

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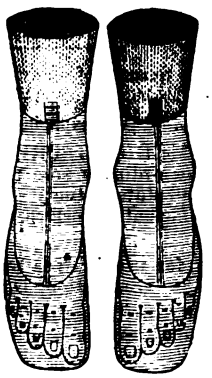

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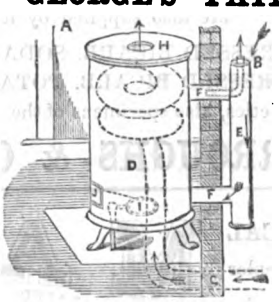

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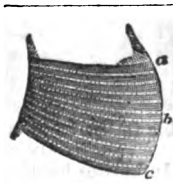

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THE

Gulstonian Lectures

ON

EPILEPSY.

Delivered before the Royal College of Physicians,

BY W. R. GOWERS, M.D., F.R.C.P.,

ASSISTANT PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

LECTURE I.—PART II.

THE next point which demands consideration is how far age and sex influence the occurrence of the hystero-epileptic or co-ordinated forms of convulsion. We have seen that, of 1000 cases in which the form of convulsion could be ascertained, it was co-ordinated in 185, or 18½ per cent. At every age the proportion of females is greater than of males. Under ten, these cases constitute 15 per cent. of the male and 18 per cent. of the female cases. Between ten and twenty the difference is, as might be expected, much greater. They constitute 14 per cent. of the male, and no less than 26 per cent. of the female cases. Between twenty and thirty the percentage of the males remains the same (14), and that of the females falls slightly (to 21). Between thirty and forty, the male cases with hystero-epileptic symptoms fall to 12 per cent., while the females present a slight rise and constitute 24 per cent. In the male cases commencing over forty none of this character occurred; and in women, although 29 cases of the series commenced over forty, only 1 presented these symptoms. Thus cases with hystero-epileptic symptoms commence almost exclusively under forty. In males, they bear at each age nearly the same proportion to the cases of pure epilepsy, decreasing very slightly from a maximum in childhood to a minimum in middle life. In women their minimum is in the first decade; their maximum is in the second; and the proportion after adolescence remains nearly double that of males during the period in which they occur. I think, however, that some surprise will be felt at the fact shown by these figures—which my actual observation of attacks fully confirms—that, even up to the fourth decade of life, one-third of the cases presenting hystero-epileptic phenomena occur in males.

I pass next to consider the information which this series of cases affords as to the exciting causes of epilepsy. The first point which demands attention is the causation of the large number of cases which begin in the first three years of life. Of these, 180 in number, no information was forthcoming in about one-third. In 24 cases, although information was obtained, no cause could be ascertained. In 97 cases, however, a cause for the first fit was assigned. In 2 it was exposure to the sun; in 1 ascarides; in 7 an acute disease; in 8 a fall; and in 8 the first fit occurred soon after birth, the labour in several of these cases having been difficult, and in some the forceps employed. In the remaining 72 cases, 33 males and 39 females, the first fits occurred during dentition, and were attributed to teething. The percentage of neurotic heredity in these cases was nearly the same as for the whole of life—34 per cent.

Thus nearly two-thirds of the cases beginning in infancy, the conditions of origin of which could be ascertained, arose from the so-called dentition convulsions. It seems legitimate to ascribe to the same cause a similar proportion of the cases respecting which no information was forthcoming. If so, we have a total number of cases due to this cause which constitutes 7 per cent. of all the cases investigated.

Few persons who have attended closely to the diseases of children can fail to be convinced of the truth of the opinion long ago urged by Sir William Jenner, and now widely accepted, that almost all convulsions associated with dentition are really due to the constitutional condition of retarded development, which we call rickets, to the irritability of the nervous system which accompanies this condition. The further details of the cases I am considering fully confirm this, for in a large number there was a history of late teething, late walking, and in many of crooked limbs.

Even these facts probably do not represent fully the influence of rickets in the production of epilepsy. In many of the cases just described, the course of the attacks was continuous from infancy to adult life. In others, however, there were intermissions, especially during the period of childhood. In several, for instance, the fits ceased at seven, to recommence at ten or eleven years. Now, in 27 other cases which commenced after the period of childhood was over, repeated convulsions had occurred during the first dentition, accompanied in many with other signs of rickets. It seems reasonable to ascribe to these convulsions of infancy a share in predisposing to the convulsions of later life, and the addition of these cases raises the number, in which a causal influence may with probability be ascribed to rickets, to nearly 10 per cent. of the whole.

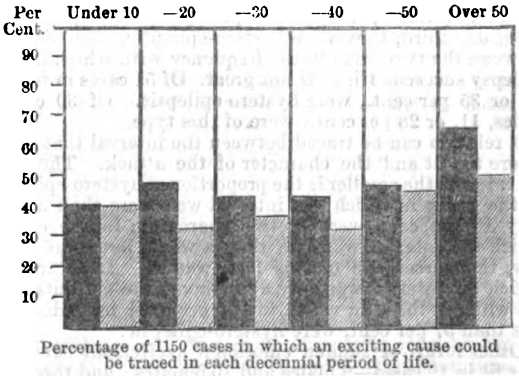
Whether rickets is or is not entirely preventable, there can be little doubt that in the degree in which it leads to convulsions it is always preventable by proper attention to the diet and hygiene of infancy. These facts, therefore, suggest that a considerable proportion of the cases of epilepsy are really within the range of preventable diseases. They suggest also that inherited taint exerts the same influence here as at other periods of life, predisposing to the occurrence of convulsions in backward children, and to the persistence of the fits, and that the management of children with such inherited taint should be a subject of extreme care.

The statements made by patients as to the causes of their fits have of necessity to be received with caution, and the facts carefully investigated. An occurrence so striking as a fit is naturally assumed to be due to some cause at least discoverable, and so is often attributed to a remote and improbable antecedent. Of 1150 cases in which this point was noted, a reasonable cause for the first fit was given in 428, or 37 per cent., and in the remainder no probable cause could be ascertained. From this series the cases distinctly originating in dentition convulsions are excluded.

An exciting cause is met with in males much more frequently than in females: in 44 per cent. of men (235 out of 537 cases), and in only 31 per cent. of women (193 out of 616 cases)—a difference between the sexes of 13 per cent. This can scarcely be accounted for by greater exposure to exciting causes, since some of these act more on the female sex; it seems to indicate a greater predisposition on the part of women.

If we examine the proportion of cases in which an exciting cause can be traced in the different periods of life, we find that under ten it is nearly the same for both sexes (males 41, females 40 per cent.) From ten to twenty there is a great difference between the sexes, excitants being traceable in 19 per cent. more males than females (males 47, females 32 per cent.) In the next two decades, 20—40, the percentage in men continues the same (at 42 per cent.); but in women it rises (to 35) in the first, and falls (to 32) in the second. In the cases which occur over forty years of age the percentage in each sex is about equal (40); but in the male cases commencing over fifty, an exciting cause could be traced in as high a proportion as two-thirds. Thus the most striking peculiarity is the large proportion of cases which commence in women between ten and forty years of age without any discoverable exciting cause to which they can be ascribed.

FIG. 3.



Percentage of 1150 cases in which an exciting cause could be traced in each decennial period of life.

Of all the immediate causes of epilepsy the most potent are psychical—fright, excitement, anxiety. To these were ascribed 157 cases, more than one-third of those in which a

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cause was given and one-seventh of the whole series. Of the three forms of emotion, fright takes the first place with 119 cases, 10 per cent. of the whole. The relation of this cause to age is, however, very distinct. It is effective chiefly in early life, when emotion is the most ready, and is most powerful at the transition from childhood to adult life, while after middle life it is almost inactive. Of the 119 cases only 3 commenced after thirty years of age, and 100 commenced under twenty. Of these, the majority, 70, commenced between ten and twenty, only 30 cases under ten. The female sex is notoriously the more emotional, and accordingly the disease, as Dr. Sieveking and others have pointed out, resulted from fright in a larger proportion of females than of males, although the difference is, perhaps, less than might be expected—71 females and 48 males, 60 and 40 per cent. respectively. It is notorious also that the difference between the sexes in emotionality increases as life advances. In childhood one sex is as emotional as the other, but with puberty men become far less emotional than women. The influence of fright as a cause of epilepsy is in strict harmony with this fact. Under ten years of age, the sexes suffer equally. Between ten and twenty the males are to the females as 3 to 4; between twenty and thirty as 3 to 13, and over thirty the only cases due to this cause occurred in women. After seventeen only 3 cases occurred in men, while 20 occurred in women.

The influence of this cause is accurately recognised in popular phraseology, and is easily comprehensible when we consider how powerfully fright affects the nerve-centres. The stimulation of the motor centres shows itself in the sudden muscular actions, such as the start of alarm, which, no doubt, originates in the need for immediate action, which danger often entails. The tremor, which often persists, indicates the enduring disturbance of the nerve-centres. In the organic nerves the vaso-motor centre is first stimulated and then inhibited, the sphincter centres are released from control, the sweat nerves are excited, and the heart's action is accelerated, perhaps, by inhibition of the vagus, and the last effect is the most constant, the most ready.

The exact form of fright varied, of course, in different cases, but the list teaches many lessons. In no less than 8 cases the cause was some stupid practical joke—as a pretended ghost. In 2 cases children were shut up in dark cupboards. In 5 cases the fright was from an alarm of fire, in 6 from burglars. In 6 cases the patient had watched other persons in fits. Three resulted from alarm during severe thunderstorms. One case was that of a soldier who had his first fit a few hours after being terrified, while on sentry duty, by the unexpected appearance of some goats.

Of 76 cases in which the interval between the fright and the fit was noted the fit occurred immediately in 28, or one-third; within a few hours in 16. The interval was between a day and a week in 19, and it was more than a week in 13.

As might be anticipated, in a considerable number of cases the fits were of the hystero-epileptic type. Of 90 cases, in 61, or two-thirds, they were purely epileptic; in 29, or about one-third, they were hystero-epileptic. The difference between the two sexes in the frequency with which hystero-epilepsy succeeds fright is not great. Of 51 cases in females, 18, or 35 per cent., were hystero-epileptic. Of 39 cases in males, 11, or 28 per cent., were of this type.

A relation can be traced between the interval that elapses before the fit and the character of the attack. The longer the interval the smaller is the proportion of hystero-epileptics. In the cases in which the interval was more than a week, only 18 per cent. were of this character; in the cases in which the interval was less than a week, but more than a day, the percentage of this form was 21. In the cases in which the interval was only a few hours the percentage was 25, while in those in which the fit occurred immediately no less than 57 per cent. were hystero-epileptic.

Other forms of sudden emotional excitement caused the first fit in 19 cases—9 males and 10 females; and these cases also occurred during the emotional period of life, under thirty years of age.

Anxiety was the only traceable cause in 29 cases, and in these males preponderated, 16 males to 13 females, and 7 occurred over thirty years, 6 of these being men.

Next, in numerical importance, among the exciting causes of epilepsy are traumatic influences, blows and falls on the head. To these, after the elimination of doubtful instances, 65 cases were due. A third (21 cases) occurred under ten years, rather more than a third (25 cases) between ten and twenty. Males are affected by this cause more than females, the numbers being 39 to 26. This is clearly due to the risks of occupation, for in the cases commencing before ten years the females were in excess. Between ten and forty the male cases in each decennium were rather more than twice the number of the females. Over forty the only cases were in men.

Hystero-epilepsy resulted from a traumatic cause in only a small number of cases—6 out of 44; and in estimating the significance of these it must be remembered that traumatic causes often involve intense emotional disturbance.

In two-thirds of the cases the injury was a fall on the head, in one-third it was a blow on the head. In most of the cases the patient was stunned for a time, but in only a fifth (8 cases) did the first fit occur immediately, in the rest an interval elapsed; in one-third of the cases the interval between the injury and the fit was more than a day and less than a week; in another fifth the interval was between a week and a month, and in about the same proportion the interval was more than a month.

Exposure to the sun was given as the cause of the first fit in a considerable number of instances, and in 27 it seemed probable that the statement was correct. From this cause, as may be expected, males, from their greater exposure, suffer most: 20 were males, and only 7 females. The cases were pretty equally distributed through life, but the cases in females were relatively most numerous in childhood, and decreased in adult life, to cease at thirty. The form of convulsion was almost always pure epilepsy, only one case presented hystero-epileptic symptoms. In 10 of the cases there was a distinct attack of sunstroke, occurring, in 6, in the tropics. In 10 the fit occurred immediately; in several others in which an interval elapsed, this was marked by some form of nerve disturbance, such as tremor.

An acute disease was the apparent cause of the first fit in 37 cases (14 males and 23 females), and in more than half (19 cases) the disease was scarlet fever; in a quarter of the cases (9) it was measles; in 5 cases it was continued fever, called typhus, typhoid, or low fever; in 1 case it was rheumatic fever; and in 1 a severe attack of diarrhœa.

The remarkable influence of scarlet fever in the causation of epilepsy demands further consideration. The cases due to this all commenced during early life, under seventeen. It may be thought that the first fits in these cases were due to uræmic poisoning, but this is not supported by the particulars ascertained regarding 14 cases. It is true that in 3 of these all that could be learned was that the first fit occurred during scarlet fever, accompanied with dropsy, and in 2 others that the fits occurred after an attack of scarlatinal dropsy was over. But in 2 other cases in which the scarlet fever was succeeded by dropsy, the first fit occurred after the fever, before the dropsy. In 6 cases there was no dropsy; in 2 of these the first fit occurred after the fever was over, in 1 during convalescence, and in 1 a month later. In 3 cases the first fit occurred during the height of the fever, and in 1 convulsions ushered in the disease, persisted throughout the attack, and continued afterwards as permanent epilepsy. In only 1 case did ear disease also result from the fever. The urine was examined in most cases, but no albumen was found.

These facts suggest that the first fits were due to some peculiar effect of the scarlet-fever poison upon the nervous system. It may be remembered that the scarlet-fever poison has a very widespread action in the system, and that, after scarlet fever, optic neuritis, leading to subsequent atrophy, may occur, without renal or coarse cerebral disease.

Intestinal worms rank low as a cause of persistent epilepsy, but were noted in 6 cases, the convulsions continuing long after the worms had been expelled. In 5 cases the first attack was attributed to digestive derangement. In 1 case asphyxia, and in 9 immersion in the water, caused the first fit.

Certain toxæmic influences were the apparent cause of the disease in several cases. Of these, chronic alcoholism was the cause in a comparatively small number—13 cases only. In some the first fit occurred during intoxication, and in a few the attacks recurred after each alcoholic excess.

Six patients were the subjects of chronic lead-poisoning. In 2 of these there was also chronic renal disease. In 1 of the others the epilepsy had existed from infancy, but became much more severe when the plumbism was developed. In the remaining 3 the lead-poisoning was the apparent cause of the attacks, which resembled, in character and course, those of idiopathic epilepsy. It is well known that acute lead-poisoning may be accompanied by convulsions;

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that chronic poisoning may cause chronic convulsions precisely like those of ordinary epilepsy, has been pointed out by others, but is not, I think, generally known. The list of nervous disturbances which may result from lead is a long one, and includes, as cases I have seen testify, acute and chronic mental derangement, neuralgia, brachial spasm, as well as palsy, and muscular wasting and optic neuritis. It is known that lead is to be found after death in the brain in considerable quantity.

I have mentioned that in 2 of the cases of lead-poisoning there was also consecutive renal disease. In 2 other cases of chronic renal disease convulsive attacks, resembling perfectly idiopathic epilepsy, brought the patients under treatment. In 1 the absence of any coarse changes in the brain was proved post mortem. It appears, therefore, that such convulsive attacks may occur and recur for months, without other sign of uræmic mischief. Several cases in which chronic mental derangement resulted from Bright's disease have also come under my notice.

I have met with no case which suggests that tobacco-smoking exerts any influence in the production of epilepsy; but in 1 case the fits were apparently due to the patient, a lad, having shortly before commenced working in a tobacco factory, where his occupation caused frequent nausea. In 1 case the first fit occurred after the administration of chloroform, and, in 1, attacks, which had ceased for many years, recurred after the inhalation of nitrous oxide.

Of sexual processes, retarded or absent menstruation coincided with the first fits in a large number of the cases which commenced in girls between fourteen and seventeen, but the difficulty in determining the exact causal relationship between the two conditions is very great. Epilepsy once set up in such cases, the subsequent establishment of regular menstruation appears to exercise very little influence upon the fits. In boys who are epileptic masturbation is unquestionably common, but here again it is most difficult to decide to what degree it can be regarded as a cause of the disease, and it was distinctly the cause in only a small number of cases. The first fit occurred, in 7 cases, during pregnancy, without other obvious cause, and in 5 cases the disease commenced after parturition.

No facts which have come under my notice suggest that acquired syphilis is a cause of idiopathic epilepsy.

There remain for consideration two conditions, occasionally associated with epilepsy, in some cases causally, in others probably only by coincidence, or as the effects of a common cause—these are heart disease and chorea.

An abnormal condition of the heart was noted in 93 cases, but this does not represent the proportion of the whole in which abnormality existed, since in many its condition was not noted. I have, however, rarely failed to examine the heart in epileptics, and I think that the proportion of cases of valvular disease is not far below the mark. In 8 cases there was extreme frequency of action; in 9 there was irregularity; in 13, all young persons, there was reduplication of the first sound. In 30 cases there was valvular disease, mitral regurgitation in 20, mitral constriction in 7, aortic regurgitation in 3, and aortic constriction in 1. There was obvious dilatation, without valve disease, in 20, and considerable hypertrophy, without renal disease, in 2. The cases of irregularity and reduplication were all observed within a comparatively short space of time, and I am sure that had my attention been earlier directed to their frequency I should have found them in a larger number of cases. In a few cases it seemed that the heart disease and epilepsy were in accidental association. In some cases the cardiac condition, especially simple dilatation and reduplication of the first sound, may have been a consequence of the repeated strain to which the heart had been subjected during the attacks. But in other cases, especially of valvular disease, there was reason to believe that the heart disease existed before the epilepsy, and in many there was no other etiological condition to which it could be ascribed.

In 20 cases of epilepsy the patients had also suffered from chorea. The relation between the two diseases was as follows. In 8 cases epilepsy existed before the chorea. In 12 the chorea occurred first; in 4 of these the fits began at the time of the chorea and persisted afterwards. In only 2 of these was there heart disease. In 5 cases the fits occurred long after the chorea, the interval being four, six, twenty-seven, thirty, and forty years respectively. In 1 case peculiar choreic convulsions occurred at the height of the chorea, but passed away as the disease lessened, and did not recur. It seems probable in the cases in which the fits immediately succeeded the chorea, and possible in the cases in which an interval elapsed, that the impaired nutrition of the motor centres during the chorea may have left a predisposition to further disturbance under the action of some other exciting cause.

In the next lecture I propose to consider the illustrations presented by the cases of some of the symptoms of the attacks.

Lectures
ON SOME
RECENT INVESTIGATIONS
INTO THE
PATHOLOGY OF INFECTIVE AND CONTAGIOUS DISEASES.

Delivered in connexion with the Brown Institution, at the University of London, Dec. 1879,

BY W. S. GREENFIELD, M.D. LOND., F.R.C.P.,
PROFESSOR SUPERINTENDENT OF THE BROWN INSTITUTION, ASSISTANT-PHYSICIAN AND LECTURER ON PATHOLOGICAL ANATOMY TO ST. THOMAS'S HOSPITAL.

LECTURE I.—PART II.

THE hypotheses as to the nature of the contagia in these two classes of disease—infective and specific—have been numerous. In the case of the infective diseases it is natural to look to the process of decomposition, and to seek either in the products or the agents of the decomposition of animal fluids or tissues the source of contagion. But, in spite of recent discoveries, opinions are divided as to whether there is any organised element having an existence independent of the putrefactive process, which is the agent both of the decomposition and of the contagium.

With regard to the specific contagia, the hypotheses most commonly entertained may be classified in three main groups, and expressed in the following way:—(1) That the contagium of any specific disease consists of some protoplasmic constituent of the body possessing the power, when transferred to the body of another individual, of setting up a similar disease process; or (2), That an unorganised ferment produced in the disease is transferred, and sets up the vital change; or (3), That the contagium is some organism having an existence independent of the body, but capable of growing and multiplying within it, and by this growth and reproduction giving rise in some way to the phenomena of the disease. To the first and third of these hypotheses the term "germ theory" is equally applicable; whilst to the latter alone is usually limited the term "theory of the *contagium vivum*," or *contagium animatum*.

In considering these hypotheses, we must bear in mind that the contagia are not merely specific, in the sense of giving rise each to its peculiar series of changes when introduced into the body—changes which may be likened to those caused by a poison or an unorganised ferment, such as diastase or ptyaline,—but that each contagium is reproduced in enormous amount in every case of infection, and that an extremely minute quantity introduced into another living body will again give rise to similar phenomena with like self-multiplication; and this cycle of change may be continued in an indefinite series under the most varying conditions. From what little we do know of the life history of contagia, especially as to their cycle of development, their reproduction and enormous self-multiplication within the body, the minute quantity needed to give rise to infection, and the absence of relation between quantity and effect, the capacity in many cases of long dormancy and resistance to some chemical and thermal influences, most pathologists have been led to reject the unorganised ferment theory as not sufficiently supported by known facts, and to accept one of the other hypotheses in preference.

To state these more fully, the first hypothesis consists in the view that a particular tissue or element of the organism having undergone some particular change or vital reaction

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is capable of impressing upon another similar organism the tendency to a like vital change; in fact that a communication of vital energy analogous to the transmission of molecular force is the essential factor in contagion. In favour of this view is what we see in the propagation of morbid growths, or even, I might say, of normal growths in the body. For every specialised tissue element not only reproduces its like under normal conditions, but we have strong reasons to believe that the leucocytes grow into specialised elements under the influence of some of the tissues into which they enter, which thus assimilate them. In the same way morbid tissues and morbid processes repeat themselves under favouring conditions, bending the tissue elements and the nutritive processes to their own likeness, and in so doing often display a selective tendency for tissues analogous to those in which they have arisen.

The other hypothesis regards the essential contagium as consisting in some organism foreign to the body, and possessing an independent existence, which has the power of self-multiplication within the body by nutriment derived from it, and of propagating its species further by seeds or germs given off from the body. During this process of self-multiplication, changes are produced in the body which we know as febrile and specific symptoms and lesions, which together make up the specific disease, and which upon this hypothesis may be the direct consequence of the self-multiplication of the foreign organism, or of some special fermentative change produced by it in the tissues and fluids of the body itself. This latter hypothesis is equivalent to that of the contagium vivum or contagium animatum, as defined by Dr. Burdon-Sanderson;[1] and although it is not equivalent to a bacterial theory of contagion (for the organisms on which the disease depended might be of some other nature than bacteria), yet our present knowledge on the subject points towards the view that if microphytes constitute the contagia, they are probably bacterial.

I need not enter further into the discussion of this question, especially as it has been so ably dealt with by many writers. I may refer especially to the writings of Nägeli, Sir Thomas Watson, Professor Lister, Dr. Maclagan, and others. But it is well known that there is at the present time a very strong tendency to the view that bacteria or some allied lower organisms are intimately related to contagion, either as the actual contagium, or as carriers of it, or as an essential condition of its potency. The precise relation of bacteria to contagion has long been a favourite subject of speculation, and every new fact ascertained with regard to their development seems to be hailed or rejected by some persons, accordingly as it appears to favour or oppose some theory upon this subject. At present, therefore, I shall content myself with pointing out that in what we now know of the life history of certain bacterial forms there is some presumptive evidence in favour of their being the actual contagia in certain diseases. For, in the first place, of all known organisms bacteria most closely conform in their life conditions to what we know of specific contagia, as to nutrition, rapidity of multiplication, powers of latency, and retention of vitality in the form of spores. Indeed, recent discoveries as to the life conditions and cyclic changes of bacilli show a most striking analogy with certain contagia. And, secondly, in certain diseases, notably splenic fever and contagious pneumo-enteritis of swine, it may be regarded as conclusively proved that the contagium is a bacillus, and we have thus some positive evidence in favour of the hypothesis.

Turning now to the subject of bacteria, we find that, important as are the discoveries which have been made, we must be content with a knowledge as to their mutual relations, life history, and variations under cultivation, which is, perhaps, more confusing and difficult than the subject of contagion itself. In the present transitional state of our knowledge we must anticipate conflicting views, and it need hardly surprise us that diametrically opposite opinions are entertained by those whose special study and acquaintance with the subject lend weight to their authority. Let me mention one or two of the more important of these disputed points. Are there a multitude of different bacterial forms, each separate from the other in its origin, its action, and its form; or, rather, its life history? Or are all the variations in form and size, in development, and, what is more important, in reaction, merely phases in the development of one protean form? Does every change in condition of life, every fermentative process, lead to a modification of this original form, and the acquisition of special powers of reaction, which are capable of transmission by heredity, so long as favouring conditions exist, but which die away when those conditions cease, to be called again into existence and potency when like conditions recur. In favour of some such view I may quote two distinguished authorities. Naëgeli, one of the earliest workers in this field, has said that he has never seen reason to believe in the existence of more than two kinds of bacteria. Professor Ray Lankester holds, I believe, the view that only bacilli are separate from common bacteria, the latter being mutable with varying conditions. As a contrast to this I may mention that Koch[2] believes that all bacteria (pathological at any rate) are bacilli, holding firmly, however, that there are a large number of absolutely distinct pathological bacteria, not only distinguishable by their size and form, but by their special physiological and pathological reactions. Professor Cossar Ewart has done good work in showing how closely the several morphological varieties or classes may approach one another in certain stages of their existence.

I might quote many distinguished names in support of one or other of these more or less modified views, but time forbids. I believe that for practical purposes it is well that we should hold provisionally, as a probable and workable hypothesis, that there are many distinct kinds of bacteria, that they are probably distinguishable either by their physical characters or their vital changes, or by some power which they possess. And we may leave the solution of the metaphysical question, whether they originated from some common stock, and have merely acquired certain potencies and forms, until we know more of their actual relation to the processes in which they are concerned.

Seeing, then, how important is a knowledge of the various forms and phases of bacteria, in order to a comprehension of their relation to putrefactive and contagious processes, I trust I may be excused if I venture to give a brief and elementary account of some of the more important of the common forms, which may be of use to those who have not specially studied the subject; and in doing so I shall refer almost exclusively to such facts as have some probable bearing on the study of disease.

Disregarding for the moment the nature, habitat, size, and so on, of bacteria, we may roughly divide them, following Cohn, into spheroidal bacteria, typified by micrococcus; rod-shaped bacteria, of which the type is bacterium termo; long-rod bacteria or bacilli; and spiral or twisted bacteria, of which the type is spirillum. We now know that in the course of development of bacteria and bacilli, short and long-rod forms, and also more or less spherical forms, are produced, so that mere form in one stage does not serve as a ground of distinction; but we have as yet reason to doubt whether some bacteria ever pass beyond the spherical stage, whilst others do not appear to develop into elongated rods; others, again, habitually assume rod or spiral forms.

It would occupy far too much time to enter with any detail into the various researches into the mode of development of bacteria, or even to mention the numerous workers in this field. The observations of Ehrenberg, Nägeli,[3] Cohn,[4] Pasteur, Klebs,[5] Billroth,[6] Dallinger,[7] Huxley, Sanderson, Lister, Ray Lankester,[8] Koch,[9] Klein,[10] Cossar Ewart,[11] Lewis,[12] and many others, are familiar to all who

[1] Dr. Sanderson has thus expressed this view:—"According to the view which these words (contagium vivum) are understood to express, the morbific material by which a contagious disease is communicated from a diseased to a healthy person, consists of minute organisms called 'disease germs.' In order that any particle may be rightly termed a disease germ, two things must be proved concerning it—namely, first, that it is a living organism; secondly, that if it finds its way into the body of a healthy human being, or of an animal, it will produce the disease of which it is the germ." (Proc. Roy. Soc., Nov. 22nd, 1877, No. 184, p. 122.) In quoting this, I do not wish to express agreement in so strict a limitation of the words "disease germs."

[2] Klebs, Archiv. f. Path.

[3] Nägeli, Die Niederen Pilze.

[4] Cohn, various papers in Beiträge zur Biologie d. Pflanzen, Band i., Heft 2, p. 127, and Heft 3, p. 141; Band ii., p. 249.

[5] Klebs, various papers in Archiv. f. Pathologie.

[6] Billroth, Coccobacteria Septica.

[7] Dallinger, various papers in Phil. Trans., Journal of Royal Microscopical Society, &c.

[8] Ray Lankester, various papers in Proc. Royal Soc., Quarterly Journal of Microscopical Science, and elsewhere.

[9] Koch, Beit. zur Biol. d. Pflanzen, Band ii., p. 277, and Band ii., p. 399.

[10] Klein, various papers in Quart. Jour. Micr. Science, Proc. Roy. Soc., and Seventh Annual Report of Med. Officer of Loc. Gov. Board.

[11] Cossar Ewart, Microsc. Jour., vol. xviii., and Proc. Roy. Soc., No. 188, 1878.

[12] Lewis, Dr. Timothy, Microscopic Organisms found in the Blood in Relation to Disease.

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have made a study of the subject. As a very valuable elementary help in the consideration of many difficult points, I may mention the papers by Dr. Cossar Ewart, the accuracy of whose descriptions I can for the most part confirm from personal observation.

In the following brief sketch I shall limit myself to the more essential facts with regard to the commoner orders—micrococcus, bacterium, and bacillus,—and chiefly state those points which are matters of personal observation.

GENERAL CHARACTERS OF BACTERIA.

Structure.—Bacteria have been defined by Cohn as cells free from chlorophyll, of spherical, oblong or cylindrical, sometimes twisted or curved form, which increase by transverse division exclusively, and grow either isolated or in cell families. These cells consist of protoplasmic, usually colourless, cell contents, strongly refractile, in which usually shining, oil-like nucleoli or nuclei are imbedded. The protoplasm is flexible or contractile; hence their spontaneous bending and stretching when the membrane is not too rigid. The protoplasm having a different refractive index from that of water and most fluids in which they grow, their production in abundance gives rise to a milky appearance. This protoplasm is surrounded by a cell membrane, shown both by its resistance to reagents and by actual observation; this is composed of cellulose or some analogous substance. Cohn believes that the membrane is soluble, and can form the intercellular substance.

The division of bacteria, the characteristic mode of reproduction, is accomplished by longitudinal stretching to a length nearly double the normal; then a transverse constriction appears at the centre, and sooner or later the two members separate, and this process continues indefinitely. Longitudinal division is, according to Cohn, extremely rare in free bacteria. In some forms of bacteria the individual members remain attached, then form long chains, especially under certain conditions; but when free, and in most forms, they rapidly separate, only two, three, or four elements remaining attached. In most cases, when the bacteria elongate to form long threads, the division may be invisible, or seen only with difficulty.

Under certain conditions, spherical and rod bacteria, instead of elongating and dividing, and forming free single or double elements, become agglomerated into a mass consisting of a large number of individuals united by a sort of intercellular substance, which form rounded, or flattened, or irregular masses in the nutrient fluid. In these masses the bacteria continue to multiply, the individual elements being closely massed together at first, but by increase of the intercellular substance they may become more widely separated. These zoogloea masses are liable to absorb colouring matter, or to be stained by iron, or by iron and sulphur, if contained in the fluid. The multiplication in zoogloea having continued to the formation of an immense number, these may become broken up by solution of the intercellular substance, and the elements become free in the fluid. According to Cohn, this zoogloea formation is never observed either in filamentous or twisted bacteria (bacillus or spirillum) though they may accumulate in masses.

When bacteria are growing in any fluid they are apt to accumulate more or less on the top, and form a layer on the surface, called by Pasteur mycoderma, this being distinguished, according to Cohn, from zoogloea by being composed merely of individual elements, without intercellular substance.

The formation of spores of all forms of bacteria is as yet undecided. Cohn now believes that only bacilli form spores. But in zoogloea masses one constantly finds ovoid or rounded bodies, apparently derived from bacteria, and often, too, one sees bacteria containing nuclei resembling the spores of bacilli.

Most bacteria have a motile and a non-motile condition, and these alternate. Some bacteria—e.g., bact. termo—are usually motile, others motionless. In a certain number the movement has been shown to depend on cilia, in others evidence of their presence is as yet wanting.

Lastly, bacteria require the presence of oxygen for their growth and development, but are not absolutely destroyed by its absence.

Such, in brief, are some of the more important facts with regard to the nature of bacteria.

The *classification* of *schizomycetes* or *schizophytes* proposed by Cohn in 1872,[13] to which I have already referred, may serve as a convenient basis of description, although many distinctions which formed part of the groundwork of his classification cannot now be maintained. It is as follows:—

Tribe I. Sphæro-bacteria (Kugel-bacterien).
Group 1. Micrococcus (char. emend.).
Tribe II. Micro-bacteria (Stäbchen-bacterien).
Group 2. Bacterium (char. emend.).
Tribe III. Desmo-bacteria (Faden-bacterien).
Group 3. Bacillus.
,, 4. Vibrio (char. emend.).
Tribe IV. Spiro-bacteria (Schrauben-bacterien).
Group 5. Spirillum (Ehrenberg).
,, 6. Spirochæte (Ehrenberg).

[13] Beitr. zur Biol. d. Pflanzen, Band i., Heft 2, p. 146. It is allowed by Cohn that this classification is only provisional, though the orders are natural. Beit. zur Biol. d. Pflanzen, Band ii., p. 274.

Lecture
ON A
CASE OF INTRACRANIAL SYPHILIS.

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(Concluded from p. 277.)

LATER on (March 7th) the man was admitted for left hemiplegia, which had come on (Feb. 26th) as follows:—At dinner he found he could not hold the fork in his left hand, and when he got up next morning his left leg was paralysed. This account is, I must confess, indefinite; but it suffices for the matter we have in hand. It is one of the ways in which hemiplegia from thrombosis comes on. The patient had no albuminuria; if he had, that mode of onset might signify small cerebral hæmorrhage. The hemiplegia on his admission into the hospital was not perfect, on which more anon. He still had the paralysis of the fifth and sixth nerves; and he still had the valuable diagnostic symptom, pain in the head. Mr. Atkinson notes: "He complains of severe pain at several points on his head, each painful point being about the area of a shilling. Pressure on these points increases the pain."

Superficially looked at, his paralytic condition was like that of a patient suffering from some disease of the right side of the pons Varolii; for there was then "cross paralysis." Paralysis of the fifth nerve on one side, and of the arm and leg on the other, can occur from a lesion in part of one lateral half of the pons. But the mere fact that the facial and the limb symptoms come on at different times, with a long interval, would make one hesitate in coming to such a conclusion. A man may have symptoms which, if not minutely inquired into, seem to be such as depend on disease of a part, and yet have no disease of that part. Thus I have recorded, in THE LANCET of Sept. 6th, 1873, a case of paralysis of the third nerve on one side and of the arm and leg on the other, in which case the diagnosis of disease of the crus cerebri was negatived because the two symptoms came on at different times: there was disease of the right side of the brain and syphilitic disease (a neuroma) of the right third nerve. To find evidence of two very different lesions is to find evidence in favour of syphilis, in accord with Dictum No. 2.

In some cases we have not the advantage of a history. Let us then consider this patient's condition as if we saw him for the first time, without history. The paralysis of the sixth nerve from a circumscribed lesion of the pons would be more likely to accompany paralysis of the facial (portio dura) nerve, and does more often accompany it. I do not remember a case of hemiplegia from disease of the pons Varolii in which there was paralysis of the sixth nerve without paralysis of the portio dura. I am not speaking of lateral deviation of the two eyes. If the lesion were in the pons in this case the explanation would be that the disease had first involved the trunk of the fifth, and then "eaten" its way into the adjacent substance of the pons. I would here mention that, in some cases of disease, in one lateral half of the pons Varolii there is loss or defect of

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sensation of the face on the side opposite the lesion, and paralysis of the temporal and masseter (and presumably of the other muscles supplied by the fifth) on the side of the lesion. We now return to the case itself, and consider the symptoms and their relations.

It might be supposed that there was at first disease of the trunk of the fifth nerve close to the pons, and that the disease by increase involved next the right side of the pons itself. I have only once seen a case of this kind. It is, however, a legitimate supposition, and I think so even taking note of the comparative quickness with which the paralysis came on—that is, if we simply take the hemiplegia as paralysis of the *limbs* on the left. But here comes an important matter: there was some paralysis of the face on the *left*. This, saying nothing of the other evidence, leads to quite another kind of diagnosis—to the diagnosis of an independent lesion above the pons. This is an important conclusion. A hemiplegia, owing to increase of the disease of the trunk of the fifth, "eating its way" into the pons, and thereby producing hemiplegia, would scarcely have warranted us in saying that there was another and different symptom, because when we speak of another symptom, we mean one depending on another distinct lesion. We conclude, as I said, for another lesion anatomical miles above the pons. Let us now consider this entirely new and different symptom in detail.

A common variety of "syphilitic hemiplegia" is owing to thrombosis of, or of a branch of, the middle cerebral artery; the blocking of the artery produces softening of the brain, or, rather, of part of it, of the corpus striatum for example. Cerebral arteries become, so to speak, ready for blocking by syphilitic disease of their coats. Now, we found such hemiplegia as the process of thrombosis would produce in this patient. He had not only paralysis of the left limbs, but he had also on the left that degree of facial and lingual paralysis which is commonly found in ordinary hemiplegia, from the disease of corpus striatum. He could shut both eyes, but did not close the left one so tightly as the right; when he showed his upper teeth, the mouth was slightly distorted to the right. The tongue on protrusion turned very slightly to the left. (Had the tongue been, or had it become, atrophic, we should have felt certain of disease of the hypoglossal nerve-trunk or of its nucleus.) Hence the conclusion was arrived at that there was not an extension of the old lesion causing the paralysis of the fifth and sixth nerves, but an altogether new lesion higher up, some softening of the corpus striatum. This is exceedingly important in diagnosis, for it points to another lesion. More than this, it points to a very different kind of lesion from that paralysing the third, fifth, and sixth nerves. Let us contrast the *two* symptoms, syphilitic paralysis of the fifth and sixth nerves, with the syphilitic hemiplegia, or, rather, the two pathological conditions on which they depend. But first let me remark generally on the pathology of syphilitic nervous diseases.

The ascertained morbid anatomy of syphilitic nervous affections is that they are extra-nervous, *begin* in non-nervous elements of nervous organs. In this they are like nearly all cases of nervous disease of which there is a known morbid anatomy. I do not deny that there may be a clinical case to be made out for the dependence of posterior sclerosis on syphilis, which sclerosis may arise from changes primarily nervous, that is to say, beginning in the nervous elements. Fournier and others have brought forward facts on this point. Gowers, in a valuable paper on "Syphilitic Neuroses," read before the British Medical Association, Bath, Aug. 8th, 1878, has gone carefully into this question. He discriminates betwixt cases of locomotor ataxy resulting from gummata in the posterior columns and cases of posterior sclerosis. Having excluded cases where the former kind of lesion seemed likely, and cases of damage to the posterior columns, secondary to a myelitis, he found that half the cases of locomotor ataxy he examined presented a history of constitutional syphilis.[1] Recently Erb has come to a similar conclusion. Hutchinson, in a valuable paper read before the Hunterian Society, after speaking of the several supposed causes of locomotor ataxy, adduced evidence to show that syphilis was sometimes a cause or a factor in causation. In his recent lectures at the National Hospital for the Paralysed and Epileptic, Buzzard mentioned that he had found a history of syphilis in upwards of 50 per cent. of patients suffering from locomotor ataxia. In several of these there was evidence which pointed to the disease having commenced with spinal meningitis, but in a large number nothing had been observed to mark the cases as differing in their onset and course from tabes of non-specific origin. He thought that in many of these cases, if the history could be accurately known, it would often be found that early and slight symptoms of tabes (lightning pains) had really *preceded* the syphilitic infection.

I have already referred to Hutchinson's opinion, that syphilis is, by leading to degeneration of centres, a probable cause of the affection he calls ophthalmoplegia externa. Nor am I concerned to deny that syphilis affects nervous tissue primarily in other cases. All I have said is that "all we *know*" of the pathology of nervous symptoms from syphilis is that the changes begin in non-nervous tissues. There is at present only clinical evidence, excepting Gowers' observation, for the causation of nervous symptoms by syphilis producing changes *beginning in* the *nervous* elements of nervous organs. This statement leaves me as free as any one else to hold the hypothesis that syphilis may directly affect nerve tissue.

The palsy of the fifth and sixth and the hemiplegia are equally extra-nervous; or, in other words, syphilis causes these symptoms indirectly. But there is a difference betwixt them. Syphilis causes the paralysis of the parts supplied by the two nerve trunks, because the active syphilitic process beginning in connective tissue directly squeezes the nerve-fibres. This is comparatively a direct action. In syphilitic hemiplegia the process is doubly indirect. We obtain here a good illustration of Dictum No. 3. There is (1) syphilitic disease of the artery, and so far no obvious symptom; this alone is the stage of syphilis. Then (2) blocking occurs, leading to softening of the brain; this is a post-syphilitic stage. This process was first described in this country by Bristowe. Wilks, Moxon, and Allbutt have recorded cases. It has been thoroughly and methodically treated of by Huebner. I have published several cases.[2] There is no difference, so far as giving rise to hemiplegia goes, betwixt the condition produced by blocking of a syphilitic artery and that induced by blocking of a non-syphilitic—let us say of an atheromatous artery; in each there is local softening of the brain from arterial occlusion. Hence the term syphilitic hemiplegia, if convenient clinically, is scientifically inexact. In the case before us the hemiplegia depends on local cerebral softening. Whilst it may be as legitimate to speak about "syphilitic softening" as it is to say "the kettle boils," we must not *think* of the softening as being syphilitic, any more than we must *think* of the copper apparatus boiling; for the softening is *not* syphilitic, and the kettle only holds the boiling water. The expression "atheromatous hemiplegia" or "embolic hemiplegia" would be as correct a term for hemiplegia caused by blocking of an atheromatous artery, or by blocking of a healthy artery by an embolon, as is "syphilitic hemiplegia." About the artery in fault there are two things—(1) syphilitic disease, and (2) thrombosis; just as in another case there is (1) atheromatous disease, and (2) thrombosis; the final result in each is local cerebral softening. (I do not say the same kind of softening. I have not yet seen "red softening" from syphilis.)

This matter has a directly practical bearing. To show that the hemiplegia is owing to another lesion, and also to a different *kind* of lesion from that paralysing the cranial nerve, is additional evidence of syphilis. We now come to the most important part of our subject. Mark this dictum—our No. 2: "It is the *disorderly grouping* of certain symptoms, and the disorderly succession of certain symptoms, which are most characteristic of syphilis." I wrote this in 1868, and I still find it borne out by facts. "If young patients have paralysis of any one cranial nerve (excluding nerves of special sense), and at a distinct time convulsion, hemiplegia, or paraplegia, syphilis is very probable. Most generally palsy of any motor cranial nerve, followed by any other [nervous] symptom, is very suspicious of syphilis."[3]

[1] At a meeting of the Medical Society, Dec. 8th, Gowers showed sections of a cord from a young syphilitic woman; they presented scattered areas of primary sclerosis. One of them in the dorsal region occupied the lateral column, the other lateral column presenting "descending" degeneration from syphilitic brain disease. This is a very important communication to the pathology of syphilitic disease of the nervous system. In the paper referred to Gowers had already expressed the opinion that syphilis is an occasional cause of lateral sclerosis. The specimens he showed are, so far as I know, the first instalment of direct evidence on the question.

[2] London Hospital Reports, vol. iv., 1868.

[3] Med. Times and Gazette, May 23rd, 1868.

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The disorderly succession and grouping point to different foci of disease. Now, had we no evidence that the hemiplegia was due to changes far away from—much higher up in the nervous system than—those producing the paralysis of the fifth and sixth nerves, we might have supposed that there was but one lesion—one involving the sixth and fifth, and simply extending into the pons.

The ascertainment of the real, the direct, pathology of this variety of "syphilitic hemiplegia" bears on therapeutics. Would you expect to cure this man's hemiplegia by iodide of potassium or by mercury? *A priori* you would have no warrant for supposing yourselves to be able to do it, for to rid him of the hemiplegia you would have to cure local cerebral softening. You might as well expect to cure hemiplegia depending on softening from plugging of an atheromatous artery by drugs. Let it be granted for the sake of argument, but only for the sake of argument, that your drugs would sweep away every vestige of syphilis in the man's body, and, among other things, the syphilitic disease of the blocked artery. Would that affect the softening which is not syphilitic, but simply softening from blood stoppage? To cure the softening you would have to get rid of the plug inside the artery, and you would have to get rid of it very soon—to get rid of it before the nervous elements of part of the corpus striatum, which the blocked vessel should supply, are starved to death. There is no treatment of any value to this end. The expression "hemiplegia caused by syphilis" is vague. To take a somewhat distant illustration. Would you expect to cure embolic hemiplegia "caused by valvular disease" if, granting it to be possible, you could restore the heart to an absolutely healthy state? Would you expect to cure an abscess of the cerebellum "caused by ear disease" if by some magical process you could restore the ear to an absolutely normal condition?

When I saw the patient for his hemiplegia, I gave him large doses of the iodide of potassium, and predicted that he would get well. He got well rapidly, but I do not believe I cured him. There is often a confusion of facts and inferences about such cases; some, in support of their opinion that the patient was cured, say, "It is a question of facts." It really is not a question of facts betwixt me and my supposed opponent. He says the man had a "syphilitic hemiplegia," that he took large doses of the iodide, and recovered. But all acknowledge these facts; the difference of opinion is as to inferences. Whilst my supposed opponent infers that the patient was cured, I infer that he simply got well, and that the drugs he took did nothing for his paralysis. I do not rest my inference on *à priori* grounds only. We happened to have a patient in the ward for recent hemiplegia (which we supposed to depend on local softening, the indirect result of atheromatous disease), as nearly like our other patient's "syphilitic hemiplegia" as could well be. We gave that man nothing at all, and he got well just as rapidly. Why did I give my syphilitic patient iodide of potassium if I believed, as I said, when prescribing it, that it would do nothing for his hemiplegia? I gave it because he was syphilitic; experience teaches us that syphilitic changes within the skull are often widespread; doubtless other arteries were syphilitically diseased, and I wanted to cure them, in order that they might not get blocked. It was a very likely thing indeed that the opposite middle cerebral artery was diseased, and our iodide might, I hoped, restore that vessel to a normal state, and prevent *its* being blocked up and causing him an attack of hemiplegia on his right side. So you see there is no inconsistency at all in believing that iodide does no good for this kind of syphilitic hemiplegia, and in energetically treating a syphilitic patient who presents this paralytic symptom for syphilis. But next you may say, "After all, in spite of what you say, your practice is just like that of your supposed opponent. Why, then, make so much of the matter?" I do so for several reasons. First, because I consider that to show what drugs will *not* do is sometimes as valuable a contribution to the art of therapeutics as to show what they will do. To say that iodide or mercurials cure this kind of hemiplegia is equivalent to saying that they cure local softening of the brain, and this is, I submit, a very erroneous inference. There are other reasons which I will give in trying to answer the question, "How was it that this patient, who was not *cured* of his hemiplegia, got *well* from it?" You may say that there was restoration of circulation by anastomosis. But then the arteries supplying the corpus striatum have no anastomosis; so this explanation will not do. You may say next that the plug shrank, and that thus the blood-stream was re-established. I do believe that the plug might disappear, but I do not believe that the man got well in that way. It is of no avail for the plug to disappear unless it does so before the nervous elements are dead. It is no use bringing food to a man who is dead, although his death was caused by starvation. I believe my patient had softening of part of his corpus striatum, and I believe he has it still, although he is rid of his hemiplegia. He is luckily alive, and when I last saw him, I am glad to say, except for the palsy of the fifth and sixth nerves, apparently robust. This is, you may say, only an inference; but it is not an inference as regards some other cases. I do not think, I know, that patients will get rid of hemiplegia notwithstanding that part of the corpus striatum remains destroyed. Of course recovery depends on the quantity of damage, and, as Charcot insists, on the exact seat of the lesion. He tells us that irrecoverable hemiplegia is owing to lesion of the internal capsule.

Why did I think this patient's paralysis would pass off? I could not, of course, be certain. I ventured on the prediction, because the paralysis was slight in degree. The following is Mr. Atkinson's account:—"There is marked loss of power in the left arm, though there is a good deal of movement remaining. All the movements are, however, somewhat impaired. He can raise the arm from the bed, but cannot, when sitting up, raise the limb until it forms a right angle with the trunk. He can flex and extend the forearm, but does so feebly. He can close his fist, but squeezes one's hand very feebly. He cannot quite extend the fingers, but can adduct and abduct them pretty well. He can oppose his thumb to his forefinger, but cannot pick up a pin without first getting it to the edge of the board on which it is placed, so that it may drop into his hand. He makes a very feeble attempt at beating the 'devil's tatoo.'"

This curiously-named operation is valuable, I think, as a means of estimating the rapidity of movement; slowness of movement is evidence of loss of power.

Mr. Atkinson notes the condition of the leg, and you will see in his account what influence the paralysis of the sixth nerve had on the patient's walk, and how needful it was to eliminate that in estimating the degree of paralysis of the lower extremity. "Keeping his right eye closed he can walk in a limping fashion, but still he lifts his left foot clear from the floor. *When he keeps both eyes open he is very unsteady.* When one tests his strength while he is lying on the bed, it is seen he can raise his left leg, but cannot overcome much resistance. There is no loss of sensibility anywhere except on the right side of his face. He has no urinary trouble."

There was another nervous symptom. One night the patient was delirious; he was shouting and talking volubly. Next day the patient said he knew all the time where he was, but was in a "half dreamy state." This did not recur. Here is another symptom to add to our "random" list, but I should not add it for purposes of diagnosis; for I do not believe that any sort of *positive* mental symptom is of any value *in the diagnosis of* any sort of primary acute disease of the brain, nor of tumour, nor of any sort of syphilitic intracranial disease. This remark does not imply that syphilitic disease may not be to blame for delirium. I spoke of the diagnostic value of the symptom. We have delirium in some cases of tubercular meningitis, but until somebody shows there to be a kind of delirium *peculiar* to tubercular meningitis I shall hesitate to take delirium as being of value in the diagnosis of that kind of acute brain disease. Delirium is, I think, a sign of "giving out" of the brain from many causes; there may be primary cerebral disease, but more often it occurs with non-cerebral diseases. I entered into this question at length in a former lecture.[4] Putting it therapeutically, delirium very often indicates exhaustion and the need for food, and in some cases stimulants. So far for positive mental symptoms; not a word is said which by implication denies that *negative* mental states, hebetude, confusion, stupor, dementia, or coma may and do help us in severe cases to the diagnosis of syphilitic brain disease.

[4] See Lecture on Softening of the Brain, THE LANCET, Sept. 4th, 1875.

A DEATH during the inhalation of chloroform is reported to have taken place last week in the South Infirmary, Cork.

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BIGELOW'S OPERATION FOR STONE.

A CASE, WITH REMARKS.

BY THOMAS SMITH, F.R.C.S.,
SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

I WISH to place on record another successful case of lithotrity by Bigelow's method, and though in this instance the stone removed was of relatively small size, yet the operation was a good test of the comparative value of the proceeding, as the patient had on previous occasions, when under lithotrity, shown extreme sensitiveness to operative interference. The cure also was complete—that is, the stone was removed, all symptoms vanished, health and strength were regained, no catarrh of the bladder remained behind, and the patient was able to retain his water for the normal period.

A patient, aged sixty-six, under the care of Mr. W. B. Thorne, had for some two or three years used a catheter for prostatic troubles. On several occasions he had withdrawn from his bladder small calculi sticking in the eye of the instrument. In the summer of 1878 he was subjected to lithotrity (two sittings), and was cured of a stone, but while under treatment for a catarrh of his bladder, he was attacked with symptoms of pyelitis and was seriously ill; he slowly recovered, but the attack left his bladder in a very irritable state, so that he was obliged to abandon his customary injections of warm water.

In November, 1878, it became evident that he again had a stone in his bladder, though he was not in a favourable condition for operative interference. Throughout this winter, by Dr. G. Johnson's advice, he adopted an almost exclusively milk diet, with great benefit both as regards his vesical catarrh and his general health.

In April, 1879, I removed from his bladder, by lithotrity, portions of stone which, when dried, weighed over 150 grains; the treatment being suspended on a threatened reappearance of his symptoms of pyelitis.

In August I removed the remainder of his stone, using two scoop lithotrites and Bigelow's bottle, without causing him either discomfort or constitutional indisposition. The fragments, which were finely comminuted, weighed, when dried, eighty-two grains. Shortly after his return from the country the patient had symptoms of the passage of a renal calculus, soon followed by a recurrence of his bladder troubles. In October, 1879, I removed by Bigelow's method at one sitting of twenty minutes a stone, the collected fragments of which weighed, when dried, twenty-four grains. The operation was not followed by the least alteration of temperature, constitutional irritation, or local discomfort, but with complete relief to his symptoms.

At the present time (Feb. 13th) the patient is in better general health than he has been during the last four years. He suffers from no symptom of stone, his water is clear, he can walk six or seven miles, and, if need be, can hold his water for six or seven hours. He still voids all his urine by means of a catheter, and continues to follow, though with less rigour, the milk diet.

In this case, owing to the necessity of passing all urine through the catheter, I was unwilling to incise the meatus, and on this account the stone had to be finely pulverised, so as to pass through a No. 12 English catheter. The operation, therefore, occupied a proportionately longer time, and it was impossible to collect all this débris.

I venture to append to this account the sequel of the case of the patient from whom I removed in two sittings four ounces of calculi and fragments.[1] From a condition of urinary incontinence which existed before the operation he has completely recovered. He holds his water for four or five hours at a time by day, and rises once in the night for the purpose of relieving his bladder; he has no symptom of cystitis or catarrh, and is free from pain and irritation. His general health and strength are good.

[1] THE LANCET, Jan. 10th, 1880.

DURING the December quarter of the past year the number of deaths in Ireland from the eight principal zymotic diseases amounted to 2479, or 10·1 per cent. of the total deaths registered, and equal to 46·2 per 100,000 of the population.

ON TONGA: A REMEDY FOR NEURALGIA, USED BY THE NATIVES OF THE FIJI ISLANDS.

BY SYDNEY RINGER, M.D.,
PROFESSOR OF MEDICINE AT UNIVERSITY COLLEGE, LONDON;
AND
WILLIAM MURRELL, M.D., M.R.C.P.,
LECTURER ON PRACTICAL PHYSIOLOGY AT THE WESTMINSTER SCHOOL OF MEDICINE, AND ASSISTANT-PHYSICIAN TO THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

A FEW months ago Mr. Ryder, a gentleman residing in Fiji, placed this remedy in our hands with the following account:—It has been used for several centuries by the aborigines of the Fiji Islands. A European, who married the daughter of a chief, learned the secret from his father-in-law, in whose family the knowledge of the composition of this remedy had been an heirloom for upwards of two hundred years. This European gave the drug to Mr. Ryder, who requested us to test its virtues.

This gentleman tells us that the remedy consists of parts of at least two plants, whose botanical relations, however, he does not know. He has returned to Fiji, and intends sending specimens of the plants, that we may learn their natural order, &c. The parts of the plants are broken up into a coarse powder, and then wrapped up in a cover of the inner bark of the cocoa-nut tree. Mr. Ryder gave us the following directions regarding its use:—"The bundle, without being unfastened, to be steeped in half a tumbler of cold water for twenty minutes, then squeeze the liquid from the bundle back again into the tumbler, and take a claret glass of the infusion three times a day, about half an hour before each meal. Dry the bundle and hang it up in a dry place to prevent its getting mouldy. It will answer for twelve months."

Mr. Ryder sent a large packet of the powder to Messrs. Allen and Hanburys, of Plough Court, City, who have prepared a liquid extract, containing one part of the drug in one part of the extract. Of this Mr. Ryder recommends a drachm three times a day. He and his friends have tried the remedy extensively, and find it most successful. He finds that it generally cures by the second or third day. In eight or ten days the pain may return, when a few additional doses permanently remove the pain. It has been used in Sydney with great success.

We have used this remedy in eight cases of neuralgia; six were promptly cured; one was much improved; in the other, after a week's trial, it failed. We give a short account of these patients.

A woman, aged twenty-three, had suffered for fourteen days from severe neuralgia of the infra-orbital and great occipital nerve. She had four severe paroxysms in the day, lasting from half an hour to an hour and a half. Many of her teeth were bad. Three doses of the extract cured her.

A woman, aged about fifty-five, had suffered from severe neuralgia for a week. The twisting dragging pain affected the supra-orbital branch of the fifth and the great occipital, and was both continuous and paroxysmal. She did not improve, though the infusion from a bag was used for a week. The bag had been used on several occasions, and possibly had become inert.

A woman suffered from neuralgia in the left great occipital nerve. Four half-drachm doses of the liquid extract cured her.

A man, aged twenty-five, had suffered for a fortnight from severe bilateral neuralgia in the temples, in the eyes, and under the eyes. Half a drachm dose of the liquid extract thrice daily cured him in three days.

A woman, aged twenty, for ten days had suffered from severe neuralgia in the first and third branch of the fifth nerve. She had daily about five paroxysms, each lasting from one to two hours. A drachm of the liquid extract thrice daily cured her in three days.

A girl, aged eighteen, suffered from toothache and severe neuralgia along the lower jaw, and in front and behind the ear. Half a drachm of the liquid extract cured the neuralgia in twenty-four hours, but the toothache continued.

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A man, aged sixty, who suffered from rather severe bilateral orbital neuralgia, was greatly benefited in three days by a drachm of the extract thrice daily.

A woman, forty years old, had suffered for a month with about six severe paroxysms daily of pain in the second branch of the fifth nerve. The infusion made from a bag cured her in three days.

This remedy, whilst apparently highly useful in neuralgia, produces no toxic symptoms, for we have given two half-ounce doses of the liquid extract at half an hour's interval, and repeated it again in two hours, without producing any effect beyond slight drowsiness. To another person we gave three two-drachm doses at half an hour's interval, and only produced slight drowsiness. These doses did not affect the pupil, nor increase nor lessen the secretion of the mouth or skin, neither did they affect sensation of the skin, supplied by the fifth nerve.

Tonga does not affect the pupil when topically applied to the eye; for Mr. Copley made observations on three people, and applied in each case an aqueous extract (1 in 1) to the eye, repeating the application four times at an interval of fifteen minutes, but the pupil remained unaltered.

A

CONTRIBUTION TO CLINICAL HÆMOMETRY.

BY E. BUCHANAN BAXTER, M.D., F.R.C.P.,

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EVERY new method intended to increase the precision of our clinical observations requires and deserves to be carefully and repeatedly tried before its claims to be added to the armoury of the practitioner are finally admitted or rejected. This consideration has induced us to put on record the results incorporated in the following paper. Taken by themselves, they are insufficient in number, and spread over too wide an area, to afford a basis for generalisation; but, taken in conjunction with similar material collected by the industry of others, they may contribute towards the formation of opinion respecting a comparatively novel mode of investigation, its chances of future usefulness, and the directions in which that usefulness is most likely to be manifested.

Forty years ago, when bleeding was in fashion, and the dominant pathology was still imbued with the humoralism of a previous generation, large hopes were entertained of the advantages to be got from the application of chemical analysis to the blood in health and disease. The material for study was abundant, and it was utilised by observers like Andral and Gavarret (1842), and Becquerel and Rodier (1844), the value of whose work has been little affected by the lapse of time. Their papers are still the chief source of our knowledge concerning the qualitative and quantitative variations in the composition of the circulating fluid in different morbid states. With our fuller understanding of the chemistry of healthy blood and our more precise and delicate methods of investigation, further labours in the same field would undoubtedly prove fruitful. Of late years, however, the attention of pathologists has become more and more concentrated on the morphological changes in the solid tissues, while the almost complete abandonment of venesection has checked the development of pathological hæmatology. The red corpuscles alone, with the hæmoglobin to which they owe their functional importance in the economy, have not been neglected. They may, indeed, be said to have received more than their due share of notice; the term "anæmia" having come to be all but synonymous with "oligocythæmia," the remaining constituents of the blood sinking altogether into the background. One reason for this may be found in the possibility of tracing the variations in the red discs and their colouring matter without taking more than infinitesimally minute quantities of blood from the body. Processes for counting the number of discs in a given volume of blood, and for determining its richness in hæmoglobin, have long been in existence. But most of these processes, owing to the time, special apparatus, and technical skill required for carrying them out, have never made their way beyond the laboratory, and have practically been restricted to the ends of physiological research. Recently, however, methods of numeration, simple enough and rapid enough for bedside use, have been devised by Malassez and Hayem. They have already yielded results of value, and may be expected to yield more at no distant period.[1]

But it is not enough to count the corpuscles. We require some means of determining their functional value, or, in other words, their richness in hæmoglobin. Strangely enough, it seems for a long time to have been taken for granted that the number of corpuscles in a given volume of blood might be taken as a measure of the hæmoglobin contained in it, and, conversely, that the number of corpuscles might be deduced from an estimate of the colouring matter. The two were supposed to vary together. Even Welcker, the pioneer in this field of investigation, did not realise the possibility of their independence of each other. From repeated examinations of his own blood he arrived at the conclusion that its richness in hæmoglobin was always proportionate to its richness in corpuscles, the differences observed being small enough to come within the limits of instrumental error. The same conclusion was arrived at by Worm Müller, who examined the blood of healthy dogs. The truth seems to be that although in health the two usually vary together, in disease the normal ratio between them may altogether cease to be maintained. This truth was first grasped by J. Duncan.[2] In three chlorotic patients, whose blood he examined by a somewhat rude method, he found that the reduction in the amount of hæmoglobin per cubic millimetre was out of all proportion to the reduction in the number of corpuscles. This led him to see the possibility of anæmia being developed in one of several modes: by a diminution of the corpuscles, by an impoverishment of the individual corpuscle, or by a combination of the two. To save words, we may call the first of these modes a *hypocytosis*, the second a *hypochrosis*. Hence the obvious need of chromometry—the direct valuation of the hæmoglobin—to supplement the results of numeration. There is a choice of methods open to the student. The most exact and delicate of these is that of Vierordt, by means of the spectroscope. It has been employed by Professor Leichtenstern[3] in what is probably the most elaborate and complete inquiry into the quantitative variations of the hæmoglobin, under various conditions both of health and disease, that has hitherto been published. For obvious reasons, however, it is little suited to the rough exigencies of hospital work, and is never likely—at all events in its present form—to become popular. Both Malassez and Hayem have contrived instruments of a simpler kind. That of the former is described and figured in the *Archives de Physiologie* for 1877. It is exceedingly ingenious, but it is surpassed in simplicity by the equally efficient chromometer of Hayem, which we used. This does not seem to have been much, if at all, employed in England; a brief account of it will, therefore, not be out of place here. It consists of two parts: the first, a glass slide (such as is used for mounting microscopic specimens), in the middle of which two small circular troughs, each capable of holding rather more than 500 cubic millimetres of liquid, are fixed side by side. Into one of these troughs a mixture of 500 cubic millimetres of distilled water, with from two and a half to ten cubic millimetres of blood, is introduced; into its fellow an equal volume of distilled water only. The second portion of the apparatus is a series of small round discs of tinted paper, ten in number, each of which is attached to the centre of a slip of white cardboard. The colour of these discs is made to match exactly with that of a series of standard mixtures of blood and distilled water, every one of which contains a known number of normal red corpuscles. We place our glass slide over one of these discs in such a way as to bring the latter exactly under the trough filled

[1] The capillary numerator of Malassez is too well known to need description; a figure of it, accompanied by full working details, is given by Professor Rutherford in his "Practical Histology." We employed the instrument of Hayem (as modified by Dr. Gowers); it seems to be the best for clinical work.

[2] Duncan's short but suggestive paper is buried in the Wien. Sitzungsber. for April, 1867.

[3] Untersuchungen über den Hæmoglobulingehalt des Blutes in gesunden und kranken Zuständen. 1878.

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with pure water; we then seem to see two solutions of hæmoglobin side by side. When the tints are accurately matched the optical illusion is well-nigh perfect, and it is almost impossible to tell which trough contains the mixture of blood and water and which the water alone. The various little precautions to be observed are fully laid down in Hayem's paper,[4] and we have often verified his assertion that the practised eye is able to distinguish tints intermediate between those of two successive discs.

At this stage of the process we have ascertained that a mixture of 500 cubic millimetres of distilled water with a measured volume of blood containing a known number of red corpuscles per cubic millimetre (for chromometry is always preceded by numeration), corresponds in depth of tint to a mixture of the same quantity of water with a known number of *normal* discs. The latter figure is obtained from a table supplied with the chromometer. Supposing the corpuscles of the blood under examination to be functionally equivalent to normal corpuscles—i.e., to contain an equal proportion of hæmoglobin—the number of those in the mixture will be equal to the number represented by the coloured disc, and their ratio will equal 1. This figure represents the functional value of a normal corpuscle. Supposing the corpuscles under examination to be impoverished, they will yield a tint equivalent to that furnished by a smaller number of normal corpuscles; the ratio between the figures will be fractional. An example will make the mode of calculation plain. Let us take a specimen of blood containing 3,400,000 red corpuscles per cubic millimetre (the normal average is usually put at 5,000,000). We introduce 6 cubic millimetres of this blood, mixed with 500 cubic millimetres of water, into our trough, and find that the tint exactly matches that of the disc marked 2. On reference to the table we find that this disc represents the colouring power of 9,730,125 normal corpuscles. Accordingly, we conclude that $3,400,000 \times 6$, or 20,400,000 of our corpuscles, only contain as much hæmoglobin as 9,750,125 normal elements. The functional value of each of our corpuscles, referred to unity as a standard, will therefore be represented by the fraction $\frac{9730125}{20400000}$, or 0·48.

Sufficiently delicate for rough work at the bedside, and with many practical advantages, Hayem's method has one radical defect— a defect, it is only fair to add, common to it with its rivals. The standard of comparison is relative, not absolute; the "normal" corpuscle is an arbitrary unit. The blood of some one healthy individual served, in the first instance, for the construction of the scale of tints, and with this blood every other has to be compared. We are disposed to conclude, from our own observations, that the corpuscles of this standard individual were of more than average richness. As a general rule, we found the value of the corpuscle, in apparently healthy persons, to vary from ·6 to ·9 of Hayem's unit, approaching the lower much more often than the higher figure. It is interesting to find Dupérié, working under Hayem's own direction, admitting that the value of the corpuscle in healthy individuals fluctuates between 1 and 0 6.

The following are a few instances of the application of numeration and chromometry to healthy blood. N stands for the number of red corpuscles per cubic millimetre, G for the functional value of the individual corpuscle. The blood was always drawn from the finger.

1.	Male, aged thirty-five	N = 5,870,000;	G = 0·81
2.	Male, aged thirty-three	N = 6,100,000;	G = 0·91
3.	Male, aged twenty-three	N = 6,100,000;	G = 0·64
4.	Male, aged twenty-five	N = 6,890,000;	G = 0·52
5.	Male, aged twenty-five	N = 6,000,000;	G = 0·58
6.	Male, aged twenty-four	N = 6,270,000;	G = 0·55
7.	Female, aged fifty-two	N = 5,980,000;	G = 0·75

Again, the normal average of corpuscles per cubic millimetre is usually put at 5,000,000 in conformity with Welcker's estimate. We should be disposed to put it nearer 6,000,000. There is a striking absence of agreement on this point. Dupérié puts the mean at 5,100,000. Wilbouchewitsch (employing the numerator of Malassez) finds the number vary between 4,200,000 and 6,477,000; he considers Welcker's average too low. Lastly, Cutler and Bradford, who also worked with Malassez's instrument, found the average to lie between 3,000,000 and 4,000,000 only. There can be little doubt that this discrepancy ought, in large measure, to be attributed to instrumental error; the smallest fault in the original graduation of the numerator being enormously multiplied in the final calculation. Still, an error of this kind is a constant quantity, and although the possibility of its existence must make us very reluctant to compare results obtained by the use of different instruments, it will not invalidate the comparison of results obtained with the same numerator. We think it not unlikely that the values furnished by our own numerator are somewhat too high, and that the value of G is correspondingly lowered throughout. As all our observations were made with the same numerator and chromometer, however, this will not impair their *relative* significance.

Apart from instrumental errors, and errors of observation, it must be remembered that the proportion of corpuscles per cubic millimetre of blood is known to be affected by a great variety of conditions within the limits of health. The influences of age, sex, season, diet, purging, sweating, &c., all make themselves felt. Again, the proportion of corpuscles is not the same in all parts of the vascular system; it is higher, for example, in the capillaries of the skin than in the great arteries, in the great arteries than in some veins. All these physiological variations have been carefully studied. They need only to be mentioned here as a warning, not altogether unnecessary, against drawing clinical inferences from any but gross deviations from the normal standard, such as exceed the possible limits both of physiological variation and of instrumental error.

(To be continued.)

[4] Archives de Physiol., 1877, p. 946.

CASE OF FRACTURE THROUGH THE BASE OF THE SKULL; RECOVERY.

BY HARRY LUPTON, L.R.C.P. LOND.,
SURGEON TO THE STRATFORD-ON-AVON INFIRMARY.

I WAS called on the evening of May 31st, 1879, about 9.30, to Mrs. ——, who had fallen from the top to the bottom of the stairs. It was supposed that her foot had slipped on the top stair, and she fell headlong to the bottom, falling with great violence on the top of her head. She lay just as she fell, snoring loudly, until her brother-in-law, who was in the house, went to her assistance. He picked her up and carried her into an adjoining room, where she recovered consciousness, but became greatly excited in her manner; it was also noticed that she was bleeding rather profusely from her right ear.

On my arrival I found her semi-conscious, not recognising persons; rather violent in her manner, the bleeding from the ear still going on; skin cold, and moist with perspiration; pupils acted, but sluggishly, to the stimulus of light; pulse about 70, weak and compressible. I at once had her carried up to bed, and gave orders for the application of ice to the head, to be continued through the night.

June 1st.—10 A.M.: Had been alternately drowsy and wandering through the night, but on the whole seemed better than could have been expected. Pulse rather quicker. Pupils acting to light; the right perhaps not quite so readily as the left, but the difference was but very slight. Protrudes the tongue, when told to do so, without deviation towards either side. Complains of great frontal headache. 2 P.M.: Pulse quicker, 90. Has wandered a good deal. Does not recognise persons, or know where she is. Has had several "trembling fits"—rigors (?). To continue ice. Small quantities of milk to be given at intervals, room kept dark, &c. Has had a natural motion, and passed water, making known her desire to do so in each instance.—8.30 P.M.: Pulse quick, full, and bounding, 118; temperature 101·5°. Complains greatly of frontal headache. Oozing from the ear continues, but in diminished quantity. Has been very restless. To continue treatment.

2nd.—9 A.M.: Better; skin not so hot, pulse less full and bounding; has slept about half the night; pupils act more readily to light; urine and fæces passed naturally; complains of pain and throbbing in the head. To take bromide of potassium fifteen grains, solution of acetate of morphia thirty minims, and syrup of oranges twenty minims, in one ounce of water, three times a day.—2 P.M.: Has slept comfortably, and taken small quantities of milk and calvesfoot jelly.—8.30 P.M.: Expresses herself as feeling better, but

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pulse quickens to 118; temperature 101°; pupils acting more readily; decidedly more conscious. To have a dose of the mixture at her usual bedtime.

3rd. — 10 A.M.: Menses commenced. Slept well at intervals during the night, but was restless and wandering between sleeps. Perfectly conscious and rational at time of my visit, and apparently much better. Pulse 98; temperature 100°. — 8.30 P.M.: Has been wandering and delirious since morning; appears better now. Pulse 84; temperature 98·8°.

4th.—10 A.M.: Much better. Pulse 78; temperature 98·8°. 8 P.M.: Perfectly conscious and rational. Complains of frontal headache. Pulse and temperature normal.

5th. — Has had a very bad night; delirious from 9 P.M. till 7.30 A.M.; skin bathed in perspiration, and drowsy and exhausted. Pulse 68; temperature 98·8°. To take four grains of calomel at once; diet as before.—9 P.M.: Pulse 80; temperature 99·8°. Has been wandering.

6th.—10.30 A.M.: Better; slept fairly well. Bowels open. Pulse 80; temperature 98·8°.—8.30 P.M.: No change.

From this time her progress to recovery was uninterrupted, and when I last saw her, July 12th, she was fairly well, but easily fatigued, and subject to headache if she attempts prolonged conversation; complains that her memory is much impaired.

Remarks.—I think I am right in regarding this as a case of fracture through the base of the skull; for (though the symptoms were less severe than are usually met with in cases of this grave injury)—first, the stream of blood issuing from the ear immediately after the accident was much too large to have come from any of the vessels of the auditory canal; it flowed in a slow and regular stream of almost half the breadth of one's finger. Second, the fluid which ran from the ear during the first two days after the accident was not pure blood, but a mixture of blood and a thinner, more serous fluid, and this in sufficient quantity to wet several towels during the day. Third, her present state, the readily induced headache, and the impaired memory.

INDUCTION OF PREMATURE LABOUR.

BY G. S. GARRARD, M.R.C.S., L.S.A.

THE following notes of a successful case of induction of premature labour at the seventh month, in a fourth pregnancy, after destruction of the children at the full term in the three previous labours, may perhaps be of sufficient interest for publication.

Mrs. —— has no apparent defect of form; her height is below the average, and her figure is small; her health has always been good. During the last eleven years, from the twenty-fifth to the completion of the thirty-sixth year of her age, she has been twice married, and has had four children, two by her first husband, which were born in London, and two by her second, which were born in this neighbourhood. Of the first two labours my patient has given me a very clear and intelligent account; the last two came under my own observation. Mrs. —— tells me that the birth of her first child occurred in London ten years ago. After twenty-four hours of strong labour pains, her medical attendant, finding that no progress was made, and that she was getting exhausted, sent for two other medical men who resided near, and that, after consultation, instruments were used, and she was delivered of a dead male child. She afterwards examined the infant, and found an opening in the head, through which the brain protruded. Her recovery was very tedious.

Two years after this she was in labour with her second child, also in London. She had another medical attendant, and, after about the same duration (twenty-four hours) of severe pains, with as little progress as in the first case, a consultation was obtained with a professor of midwifery at one of the London medical schools. Every effort, therefore, that exceptional skill and experience could suggest was now made to save the infant. After an unsuccessful attempt to use instruments (? forceps), delivery of a dead male child was effected by turning. So much force was necessary to complete this operation that the infant's neck was broken.

Mrs. —— was then advised to have premature labour induced at the seventh month in case of a third pregnancy. So long a time had elapsed, however, and such great changes had taken place in the circumstances of my patient, before pregnancy occurred for the third time, that this advice was neglected. She had lost her first husband, had remained for three years a widow, and was then married again, and come to reside in this neighbourhood. When I first saw her she was in an early stage of pregnancy with her third child, in good health and spirits, and full of hope that she might be more fortunate with her second family than she had been with the first; and, as this hope did not appear to be altogether unreasonable, the full period of pregnancy was allowed once more to expire, and I had an opportunity of watching the progress of her third labour at the full term.

On the 26th November, 1877, the pains commenced, and after they had continued for a few hours I found the os uteri fully dilated, and the head presenting, resting on the brim of the pelvis, from which position twelve hours of strong labour-pains did not advance it in the slightest degree. At this period I was glad to avail myself of the kind advice and assistance of my friend Mr. Foote, who, after examining the patient and hearing her history, agreed with me in thinking that craniotomy should be performed without further delay. We had no reason to expect that long-continued pains, which had twice before proved fruitless, would have any better result on the present occasion. The head was not within reach of the forceps, and previous experience of turning gave us no encouragement to try that operation again. She was therefore delivered of her third male infant by craniotomy. Her recovery was remarkably rapid and good.

To a finger of ordinary practice the cause of obstruction in the three cases above mentioned was not apparent; but there can be no doubt that in all alike the head was arrested in a high position, out of reach of the forceps. Some degree of contraction of the pelvic brim is therefore indicated: not great, indeed—for in the very instructive case of turning, it was found *possible* to draw the head of a child at the full term through the pelvis,—but sufficient to render the birth of a *living* child at the full term almost hopeless. Chloroform was not given in either of these cases.

When it became evident, at the beginning of 1878, that Mrs. —— was pregnant for the fourth time, it was decided that premature labour should be induced about the seventh month. Menstruation having ceased on the 7th of February, on the 3rd of October—at the end of the thirty-second week of gestation—an examination was made. The point of the forefinger could be easily passed through the os uteri, and a head presentation was at once detected. A gum-elastic bougie, No. 10, the bone end of which had been cut off, was passed through the os uteri, guided by the finger, and an endeavour was made to slide it between the membranes and the uterine wall, but after it had passed some distance it was felt to penetrate the membranes, the end was pushed completely within the vagina, and it was allowed to remain; the patient was kept in bed; there was no hæmorrhage, but a quantity of water soon began to ooze away. The bougie was introduced at 10 o'clock in the morning; at 3 o'clock in the afternoon slight pains began; they soon increased in severity, and before 7 o'clock in the evening a living female child was born. Some time before the birth of the child the bougie was withdrawn; it was found to be held with some firmness by the descent of the head. I have to thank Mr. Foote on this occasion also for his kind concurrence and assistance. The infant is now a year old, and is thriving in all respects. The mother made a good recovery. One more proof may, therefore, be added to the many which already exist, of the value of the induction of premature labour; and, although the mode of operation selected in this case has no doubt been often adopted with success, it would be difficult to find a better illustration than that afforded in the present instance of its sometimes safe, speedy, and efficient action.

On the 5th November, 1879, Mrs. —— was again successfully delivered of a child—male—by induction of premature labour at about the thirty-fourth week, aided by the forceps.

Kington, Herefordshire.

THE governors of the Royal Surrey County Hospital are able to congratulate themselves, at the end of another year's work, on the possession of a slightly larger balance than at the previous annual meeting. The excess of income over expenditure for 1879 was £175. This state of things was not, however, brought about by restricting the benefits of the institution, as the number of both in- and out-patients during the year showed a slight increase.

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A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

GUY'S HOSPITAL.

SURGICAL CASES ILLUSTRATING WOUND TREATMENT AND REPAIR.

(Under the care of Mr. BRYANT.)

THIS series, begun at page 286, is continued from page 328.

Cancer of the Breast; Excision, with Enucleation of Axillary Glands; Primary Union of Wound. (From notes taken by Mr. Palmer.)—Sarah J——, aged forty-four, was admitted into Lydia ward on Nov. 5th, 1879. She was a widow, the mother of nine children, the youngest being six years old. She had suckled all her children, and had never had any breast trouble. One year ago she noticed a small lump in the left breast, which slowly increased in size. She experienced no pain until a month before admission, and then she had at intervals sharp lancinating pain.

On admission there was a hard tumour of considerable size, involving the whole of the gland-tissue on the left breast. The skin was adherent to the tumour, but the whole moved freely over the parts beneath. The axillary glands were enlarged. The nipple was slightly retracted, and upon squeezing a small quantity of serous liquid exuded.

On Nov. 11th, under chloroform, the whole breast was amputated. The incision was extended to the axilla, and one of the glands was enucleated. The tumour was a scirrhus carcinoma, and involved the whole breast.

On Nov. 13th the catamenia appeared. Next day the wound was dressed. It had healed, except at one end, where the drainage-tube protruded. On the 24th the wound was healed, and on Dec. 1st the patient left the hospital. The temperature in this case rose to 103·8° in the three days following the operation, yet there was no constitutional disturbance, and the wound healed nearly by primary union in its whole extent. After the 16th the temperature varied from 98·2° to 99°.

Carcinoma of Breast; Excision; Recovery. (From notes taken by Mr. Palmer).—Louisa N——, aged forty-six, was admitted into Lydia ward on Nov. 6th, 1879, for "some disease of the right breast." She was married, and mother of three children, whom she had suckled at the left breast, as the right had always troubled her, and the nipple was not properly formed. Fifteen months ago catamenia ceased, and four months after a small painless lump appeared in the right breast. It grew rapidly, and about four months before admission commenced to cause pain.

On admission the patient appeared healthy. The breast on the right side looked like a large irregular mass, extending into the lower part of the axilla. The skin was adherent to the tumour, which was perhaps attached to the muscle beneath. The surface was wrinkled with radiating lines, which were probably enlarged lymphatics. The nipple was very much retracted, but was not ulcerated. There were no enlarged glands in the axilla. The left breast was healthy.

On Nov. 11th, under chloroform, two elliptical incisions were made, and the whole breast, with the diseased skin over it, was dissected away. The wound was well washed with iodine water. The skin could not be brought into apposition after, but was drawn together by strapping. The wound was dressed with terebine oil and lint. Next day the catamenia returned.

On the 14th the wound was dressed, and looked very healthy. Free granulations were being thrown out, and healthy-looking pus covered the surface. On Dec. 1st thirty grafts were applied to the surface of the wound. On the 3rd twenty-four fresh grafts were applied.

The bowels caused some trouble, but the wound granulated up very nicely, and the patient was discharged on Dec. 22nd with a quite dry wound surface, and the depression nearly filled up with new healthy-looking tissue. The temperature only once reached 100°, and that was on the evening of the 14th. After the 15th it was normal.

Adenoma of Breast; Excision; Recovery. (From notes taken by Mr. Row.) — Caroline P——, aged thirty-eight, was admitted into Lydia ward on Dec. 9th, 1879. Eight months before admission the patient first noticed a hard lump, about the size of a small acorn, an inch above and to the inner side of the nipple of the left breast. Three weeks ago she noticed a shooting and pricking pain, and also that the lump was increasing. There had been no discharge from the nipple. Occasionally at the menstrual periods she had felt some fulness in the diseased breast.

On admission she was a healthy-looking, well-nourished woman. A firm, movable mass, about the size of a walnut, could be felt beneath and to the inner side of the nipple; it was attached, but not firmly, to the mammary gland. There were no enlarged lymphatics of glands.

On Dec. 12th, under an anæsthetic, the growth was removed without trouble by enucleation; it was an adenoma. The patient was sick during the night after the operation, and was troubled with pain in the shoulder. On Dec. 22nd, when the wound was dressed, it was found to have healed in great part. The bowels were confined. On the 31st the wound was nearly healed. On Jan. 3rd, 1880, she was discharged.

The temperature of the patient never rose higher than 99·4°, except on the fifth day, when the bowels were confined.

(This series will be continued in a future number.)

WEST LONDON HOSPITAL.

ASCITES SUCCESSFULLY TREATED BY TAPPING WITH SOUTHEY'S FINE TROCAR.

(Under the care of Dr. THOROWGOOD.)

FOR the following notes we are indebted to Mr. Blamey, house-physician.

Henry S——, aged about thirty years, was admitted on Nov. 17th, 1879. The patient had been in the army, and while in the West Indies was laid up with an attack of "break-bone fever." He stated that he had never drunk much, his usual beverage in the West Indies being rum, and this on returning to England he exchanged for gin. He got on pretty well till 1876, when he was invalided from the army at Aldershot on account of bronchitis and heart disease. Gradually he noticed some swelling of his right foot, and then he found his abdomen larger than usual. During September, 1879, he was under the care of Dr. Fish as out-patient at the West London Hospital with well-marked ascites, and on the 17th of November he was sent into the hospital.

On admission his abdomen was distended and very tender, the circumferential measurement at umbilicus was thirty-seven inches, a few enlarged veins were seen on the surface, and the left lobe of the liver was tender and swollen. He had a mitral regurgitant murmur, and subcrepitant râles were audible at the lung bases. He had never vomited blood, or passed any by the bowels; had complained of cough, burning acid risings, and a good deal of soreness and pain at the epigastrium.

On Nov. 21st, pulse 84, urine four pints, clear, free from albumen. Ordered five grains of compound ipecacuanha powder and three grains of mercury-and-chalk powder every night.

The remedies not making any reduction on his ascites, on Dec. 2nd Mr. Blamey placed him on his right side and introduced one of Dr. Southey's fine trocars in the mesial line, two inches below the umbilicus. The instrument was retained for five hours, during which time eight quarts of clear, greenish-looking fluid drained away. In the evening the temperature was 100°, and the man complained of much pain over the abdomen. Pulse rapid and irregular. To continue the powders as before.

The patient gradually improved, and on Jan. 8th, 1880, was allowed to leave the hospital, feeling himself quite well. The abdominal tenderness had subsided; the belly was flat and resonant at the lowest part of each flank, and now measured 29·5 inches at umbilicus. The tongue was clean; appetite good, and liver dulness normal. For a week he had taken nitro-hydrochloric acid, with taraxacum and infusion of gentian.

The point of interest in this case seemed to be the value

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of gradual evacuation of the ascitic fluid. The marked abdominal tenderness rendered it advisable to give small doses of Dover's powder before the operation to keep the intestines quiet. The valvular disease of the heart was another reason for taking away the fluid very slowly.

The increased temperature after the operation, the pain and tenderness complained of by the patient for several days, and the quick and irregular pulse, all showed that the precautions were not likely to have been taken needlessly. The fine trocar and tube had previously proved beneficial in the case of a man in the hospital with enormously swelled legs on whom Mr. Blamey operated, and the case of ascites seemed quite a fitting one to treat on the same principle. Dr. Southey had very kindly explained every detail in the management of the trocar and tube, and the result was as satisfactory as could be desired.

LEEDS GENERAL INFIRMARY.

CASES OF NERVOUS DISEASE, PRESENTING OPHTHALMOSCOPIC PHENOMENA.

FOR the following notes, continued from page 329, we are indebted to Dr. E. H. Jacob, late resident physician.

CASE 7. *Aphasia: Hemiplegia; Optic Neuritis: Partial recovery.* — W. S——, aged thirty-three, was admitted Oct. 11th, 1878, under the care of Dr. Heaton. He was brought to the hospital by his landlady, with whom he had lodged for a year and a half, who stated that he was strictly temperate, but had suffered from pain in the head for the last year, occasionally severe enough to make him stop work. He had had good work, but had not lived well. Two weeks before he began to suffer from severe pain in the forehead, and his speech became incoherent; his hands shook, but there was no special loss of power. Nine days before he stumbled while going upstairs, and then seemed to lose his senses for a short time. He did not work after on account of the severe pain in the head.

On admission he was rather thin, and not very intelligent. There was great difficulty in getting any information from him. He occasionally said a few words distinctly and short sentences, but frequently did not seem to understand what was said to him. He sometimes appeared amused at his own failure to make himself intelligible. He complained of frontal pain. He would not put out his tongue or shut his eyes when told to do so. He heard a watch on the right, but not on the left side. There was slight ptosis of the right eye. The right pupil was larger than the left, and there was considerable thinning of the choroid on the inner side of both discs, especially on the right, in which the sight appeared to be impaired. There was no loss of power in the arms or legs, but the hands were rather tremulous. The pulse was rather tense. The second sound over the aorta was sharp. The lungs were healthy. Urine 1012, pale and clear, but with no albumen. Appetite good; bowels open; sleep good.

On Oct. 19th there was well-marked effusion round the right optic disc. There was complete loss of power over the left arm, and considerable loss over the leg. No facial paralysis. His speech was still more incoherent. Right pupil dilated. On the 22nd he had croton oil to move his bowels, which were much confined. He was very noisy at night. There was some paralysis of the left side of his face. Tongue coated; breath offensive. Pupils were equal. He remained for some days in a comatose condition, and his death was daily expected. But about Nov. 1st he began to slowly improve, and regained considerable power in his limbs. On Nov. 5th he could walk with some assistance, but appeared to understand very little what was said to him. There was some return of power in the hand. On the 7th he could move the hand freely, and his speech was rather more intelligible. He remained in the hospital till Jan. 11th. Slightly improving, but his speech still continued to a certain extent incoherent, and the state of his hand did not admit of his doing any work. He was removed by the parish authorities.

The treatment consisted of iodide of potassium in five to fifteen-grain doses.

CASE 8. *Cerebral and Spinal Tumour; Optic Neuritis; Paraplegia.*—A. M——, aged sixteen, miner, was admitted on April 8th, 1879, under the care of Dr. Heaton. His mother died of diabetes. With the exception of a bronchitic attack a year and a half previously he has had good health up to three months ago. He then began rather suddenly to suffer from weakness and trembling in his limbs, with excessive vomiting. He was also observed to ramble a good deal and to be very emotional; he then complained of failing sight, and pain in the head.

On admission he was fairly nourished but pale, hesitated in his speech, complained of his eyes being weak, and constantly blinked with his right eye. He did not complain of pain. There was almost entire loss of power over the legs. Tactile and electro-sensibility were moderate. There was not much wasting, but considerable impairment of faradaic reaction. Reflex action normal. There was no special tenderness; there was double optic neuritis, with external effusion, and atrophic patches in the choroid. He had a small bedsore on the lower part of the sacrum, and a small ulcer outside the right ankle. There was nothing abnormal in the heart or lungs. On the previous day he passed urine and fæces unconsciously.

On May 12th he had a paroxysm of delirium in the night. He was very emotional, and the other symptoms remained the same. On the 26th there were spasmodic twitchings of the legs, at times severe. There was complete incontinence of urine and fæces. On the 30th he had a severe rigor. On June 3rd the rigor recurred in the night. His intellect was decidedly blunted, and next day he was rather deaf; there was some rigidity and pain about the shoulders. Reflex action not so marked. There were bedsores on prominent parts. There was a well-marked rhythmical tremor in both arms on movement; the arms were much wasted; face pale, with lividity of lips and cheeks. He was very emotional—laughing and crying by turns; very deaf, and occasionally he vomited. His temperature (100° on admission) for the first five weeks varied between 98·4° and 100°; then it gradually rose, and on the 2nd reached 105°, sinking to 100° on the morning of the 3rd. On the 8th the left leg below the knee was œdematous; the pupils were unequal, the left being contracted. On the 9th, acute bedsores appeared on the heels and great toes, the anæsthesia had increased, and the reflex action was less. The mental confusion had also increased. Temperature averaged 103°. Constant vomiting set in, and he died on the 13th.

Necropsy, twenty-four hours after death.—Body much emaciated. Rigor mortis well marked. Bedsores on heels and all prominent points of the back; those on the heels being distinctly of an acute nature, being large, punched-out, circular cavities, exposing in some parts the subjacent bones, and in others filled with a thick, black slough; margins sharp, red, and granulating, and surrounded by a red areola, half an inch in breadth. The brain weighed 48 oz.; symmetrical and of fair consistence; no changes at the base or in the membranes. On removing the upper part of the left hemisphere, and making transverse sections of the parts removed from its cut surface to the convexity, at the point where the sections exposed the grey matter, small, rounded, tolerably tough masses of cheesy consistence and yellowish colour were seen, evidently connected with the membranes, in the sulcus of which they were situated, and involving both white and grey substance, though sharply defined from the surrounding tissue. The right hemisphere was affected in a similar way, but not to so marked a degree. The nodules were scattered indiscriminately throughout the sulci on the convexity, but perhaps more towards the anterior than the posterior part of the hemisphere. The third and right lateral ventricles were much distorted, the floor of the latter having a swollen, irregular appearance, and the former being much expanded, especially on the right side. Each corpus striatum contained a large yellow, caseous-looking mass, similar to those described on the surface. Each was situated at the anterior part of the intraventricular portions of the ganglion; the left was larger than the right. Similar masses were found scattered throughout the cerebellum. The medulla, pons, and crura cerebri were unaffected. The membranes of the spinal cord were healthy; the tissues of the cord itself were normal till the lower fourth of the dorsal region was reached, when the cord began to lose its natural consistency, and become soft and semi-diffluent. This softening occupied a portion of the cord three inches and a half in length. In the centre of this softened portion was a nodule of precisely similar appearance to those described above, only a thin layer of cord tissue being left on its surface. This was of cartilaginous consistence, soft and caseous in the centre. The roots of the nerves were free from any change. The apices of both lungs were riddled with small caseating

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masses, apparently connected with the smaller bronchioles. Hydrostatic congestion of both bases; old pleuritic adhesions on left side. The kidneys weighed fifteen ounces, swollen. There were points of ecchymosis on the surfaces, and two or three small greyish semi-transparent nodules (tubercles). Gland tissue striped with bands of congestion with a few suppurating points. The liver was healthy; no evidence of syphilis or tubercle. The left knee contained a quantity of serum, and the synovial membrane was injected, and of velvety appearance. (The account of the autopsy, and a part of the notes of this case, are supplied by Dr. Barrs, Dr. Jacob's successor.)

(The series will be continued in a future number.)

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Annual Meeting.—The Vote to the Harvey Memorial Fund. President's Address.

THE annual general meeting of this Society was held on the 1st inst.; J. E. Erichsen, F.R.S., Esq., President, in the chair. The question of the vote of fifty guineas to the Harvey Memorial Fund, made at the last annual meeting, came on for consideration, and after a debate lasting for nearly an hour, a motion to rescind the vote, proposed by Dr. John Harley and seconded by Dr. Greenhow, was lost on a show of hands by 24 to 22. The President then delivered the customary address, dealing with the life-work of those Fellows who had died during the past year.

The PRESIDENT took the chair at 8 P.M., and on opening the ballot nominated Dr. Poore and Mr. R. W. Parker as scrutineers. The audited balance-sheet of the income and expenditure of the Society for the year 1879 had been previously circulated among the Fellows, and was therefore, as usual, taken as read; and the hon. sec., Mr. T. Holmes, at once commenced the reading of the Report of the President and Council. The Report was a favourable one as to the increase in the number of the Fellows; the deaths had been seventeen, and consisted of ten resident and seven non-resident, the former including many important workers in the Society whose faces had long been familiar ones at its meetings. The new Fellows elected were thirty-two—considerably above the average—and of these twenty-six were resident and six non-resident. After making some further special statements relative to changes among the Fellows, the report stated that the total number, resident and non-resident, had increased in the year from 666 to 679. The receipts of the year for subscription and admission-fees exceeded those of last year by about £130, the ordinary expenditure was slightly greater than the average of the last three years. The extraordinary expenditure in the printing of the catalogue and index had been £614, which had been met by the sale of funded property to the amount of £500, the sale of the catalogue to the amount of £60 10s., and the payment of the balance out of the year's income. The Reports of the Scientific Committees on Membranous Croup and Diphtheria, and on Suspended Animation had both been read and discussed at meetings during the past year. The Report referred to the question of the contribution of fifty guineas to the Harvey Memorial Fund, agreed to at the last annual meeting, which was again to be brought before the general meeting by the Council, owing to their having received counsel's opinion adverse to the legality of the grant. The Report relative to the library stated as usual the number of additions during the year, its favourable condition and the triennial inspection, and the completion of the library, copies of the new catalogue and index, with the shelf references, &c. It also included tables of statistics as given for a long period every third year, of the number of works and of volumes in the library, number last out and of visits of Fellows. The adoption of the Report was moved by Dr. Greenhow, seconded by Mr. R. W. Parker, and carried.

The PRESIDENT explained the reasons why the Council had referred the question of the payment of a subscription to the Harvey Memorial Fund to the Fellows for reconsideration. He stated that an ex-President, Mr. J. M. Arnott, on hearing of the vote passed last year, had taken counsel's opinion on the subject, and that opinion was to the effect that the grant was beyond the scope of the Society. The Council thereupon, through their solicitor, obtained an opinion from another eminent counsel, also adverse to the grant. One of the Vice-presidents (Dr. Quain) had, however, obtained counsel's opinion to the effect that it *was* within the Society's power to make such a grant. Under these circumstances the Council deemed it best to refer the matter for final decision.—Dr. JOHN HARLEY then moved a resolution to the effect that the vote of last year be rescinded in accordance with the opinion obtained through the Society's legal adviser.—Dr. GREENHOW seconded the resolution on the ground that it had been shown to be illegal to make this vote by the opinion obtained through the Society's own lawyer—a view with which he entirely coincided. Harvey needed no memorial.—Dr. QUAIN maintained that, if the opinions adverse to the vote were correct, then the Society would have no power to expend its funds in any other way than on the maintenance of the library, rooms, &c. He had submitted the case to Mr. Chitty, Q.C.—a great authority on charters,—and obtained from him an opinion which he read to the Fellows. He had taken this step because he felt it right to show that the Society had no narrow limits imposed on it by its charter in the disposal of its funds.—Mr. COOPER FORSTER hoped the Fellows would have regard for him in his position as treasurer. If they voted this money they would be compelling him to do that which their own counsel had declared was illegal; and in that case he might find himself in the unpleasant position of having a mandamus issued against him to call upon him to refund the amount so disposed of.—Dr. J. HARLEY urged that by voting the sum an injurious precedent would be raised, which would weaken the bonds of the Society.—Mr. BIRKETT did not think the matter much open to legal discussion. An opinion could be got in any way one pleased, according as the case was presented to the counsel. Here their own counsel had passed an opinion adverse to the vote. But the question opened up a new state of things with regard to the funds of the Society. Hitherto they had expended their funds in accordance with the original intention, and if this new precedent were originated they might have many applications of a similar kind. But there was a precedent for not acceding to the application. When John Hunter's monument was erected in Westminster Abbey, the Society was asked to subscribe, but refused on the ground that it was beyond their scope. The Society might have opened a subscription in their rooms, and obtained the fund from individual members, but they could not grant this in their collective capacity.—Dr. SYMES THOMPSON and INSPECTOR-GENERAL MURRAY also spoke, the former in favour, the latter in opposition to the grant.—Dr. CHARLES WEST was not aware there was so much difference of opinion on the subject. He was president of the Society when it was first discussed in council, when it was agreed to recommend the Fellows to make the grant. In matters of right no opinion of counsel was required. By making this grant the Society would do honour to themselves in doing something to pay their debt of gratitude to Harvey, for whom there was no precedent. A subscription from individual members of the Society would not carry with it half the weight or honour that one from the Society as a whole would. Two years ago, in Rome, he saw a tablet, which had just been raised to the memory of Cesalpinus, with an inscription lauding him as the discoverer of the circulation. It had been erected by the Medical and Chirurgical Society of that city. And yet our Society is unable to pay a smaller tribute to the memory of a far greater man—the true discoverer of the circulation, because forsooth its hands were tied. Laws were sometimes, when they shackled and bound us from doing the right, better honoured in the breach than in the observance.—Mr. HOLMES was quite of Dr. West's opinion, and thought it a pity that the Society should be so shackled, and with Dr. West, he would rather the Society ran the risk of a breach of the law, and pay this tribute to Harvey. But as many whose opinions were worthy of all respect took a different view, he would suggest, as a compromise, that a voluntary subscription be raised among the Fellows of the Society, the proceeds to be sent to the fund as the contribution of the Society. It would

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be a disgrace to the Society if it did not contribute, seeing that the Colleges of Physicians and Surgeons, and other medical Societies have done so.—Dr. WEST said that such a subscription would *not* be the subscription of the Society; it would not be comparable to that of the College of Physicians, which was granted out of the funds of the college.—Mr. C. FORSTER cordially seconded Mr. Holmes's proposal.—Dr. WEST reiterated that this would not be the Society's contribution; and he trusted, for the honour of the Society, that the compromise would not be accepted.—Dr. PAVY pointed out that if in making this grant the Society exceeded its powers, the constitutional thing to do would be for the promoters to obtain alteration in the charter. It may happen that in years to come this step would be cited as a precedent.—Dr. QUAIN said it was impossible to render the charter plainer than it was. It distinctly empowered the Society to devote its funds to alien objects.—Dr. GREENHOW urged that they were but trustees of the Society's property, and had no right to do that which would form a precedent for its disposal beyond the direct objects of the Society.—On a show of hands, 22 voted for Dr. Harley's resolution, and 24 against. The resolution for rescinding the vote of last year was therefore lost by a majority of two.

The PRESIDENT then addressed the meeting, and, after alluding to the general condition of the Society, the valuable volume of Transactions for the previous session, and the completion of the new catalogue and subject index of the Society's extensive and important library, he gave short obituary notices of the seventeen Fellows who had died since the last anniversary meeting. They comprised, among the resident Fellows, the names of Charles Murchison, M.D., Charles Brooke, F.R.S., Tilbury Fox, M.D., Patrick Black, M.D., George W. Callender, F.R.S., Arthur Leared, M.D., John Soelberg Wells, F.R.C.S., Duncan Maclure, M.B., Henry Hancock, F.R.C.S., and Edward Cator Seaton, M.D., and among the non-residents, those of Jesse Leach, F.R.C.S. (Heywood), William Reeves, M.D. (Carlisle), Samuel Wood, F.R.C.S. (Shrewsbury), Frederick Collins, M.D. (Wanstead), Richard Francis George, M.R.C.S. (Bath), Thomas Cutler, M.D. (Spa, Belgium), and Alfred Keyser, F.R.C.S. (Berkhampstead).

A vote of thanks to the President for his address was moved by Sir H. Thompson, seconded by Dr. Cholmeley, and carried with applause.

Votes were also passed to the retiring Vice-presidents and other members of the Council, moved by Dr. Douglas Powell, seconded by Mr. Heath, and to the retiring secretary, Dr. James Andrew, moved by Dr. Symes Thompson, and seconded by Dr. John Harley.

CLINICAL SOCIETY OF LONDON.

Treatment of Impacted Urethral Calculus.—Pott's Disease (with Paraplegia) treated by Sayre's Jacket.—Death from a Kink in the Duodenum.—Molluscum Fibrosum.

THE ordinary meeting of this Society was held on Feb. 27th, the President, Dr. E. H. Greenhow, F.R.S., in the chair. A case read by Dr. Buzzard contained points of surgical and medical interest—viz., the application of Sayre's jacket for angular curvature of the spine, and the diagnosis and treatment of acute intestinal obstruction; the case was one of paraplegia with spinal disease, ending fatally from a volvulus of the intestine. Dr. Sangster showed a case of molluscum fibrosum; and Mr. G. Brown a specimen of intra-pelvic tumour, the details of which he intends shortly to bring before the Society.

Mr. TEEVAN read notes of a case of Impacted Urethral Calculus treated by Lithotrity, after it had been pushed back into the Bladder. He brought it forward to illustrate the use of the wax bougie. The case was one of retention of urine in a large muscular man; the retention was of twelve hours' duration, and had caused an increasing difficulty in micturition lasting for ten days. Some years before he had passed some calculi per urethram. Mr. Teevan, passing a silver catheter, came in contact with a stone impacted in the urethra. Accordingly he introduced a wax bougie, and passing it down to the stone pushed this back into the bladder; then introduced the lithotrite and crushed the calculus, which was about the size of a hazel nut, and composed of oxalate of lime. It had become impacted in the membranous urethra; and the author pointed out that when this occurred it was far easier to push it back into the bladder than to attempt its extraction by pulling it forward. For this (the former) purpose a bougie of wax, which moulded itself to the stone, was the most useful.

Dr. BUZZARD read notes of a case of Paraplegia, with Pott's Disease, treated by Sayre's Jacket; death from a kink in the duodenum. The patient was a young labouring man, who had suffered for some time from pain in the back. In November, 1878, he lost power in his legs, and in January, 1879, took to his bed. In April he was admitted into the National Hospital, under Dr. Buzzard's care. He was then completely paraplegic, due to angular curvature in the dorsal region, the angle being opposite to the sixth spinous process. There were marked wasting of the lower limbs and complete cutaneous anæsthesia over lower half of body from a line two inches below the nipples. There was greatly exaggerated reflex action. On April 24th he was swung and encased in a Sayre's splint. On the 28th he was feeling comfortable, and there was less twitching in the legs. On the 30th he dined heartily off dough pudding; his bowels were moved in the afternoon, but in the evening he was seized with vomiting which continued through the night. The plaster casing was removed, and morphia injected hypodermically. Next day there was much abdominal tenderness, and marked distension to left of epigastrium, percussion showing that this was due to distension of the stomach. The vomiting continued, the matters ejected being greenish and watery. The vomiting was temporarily controlled by the morphia, but on the following day it recurred with violence, and he died from exhaustion. It should be said that an enema had been given, which resulted in a slight evacuation. The symptoms of intestinal obstruction had lasted for sixty-eight hours, and at no time was the vomiting "fæcal." At the post-mortem examination there was found the projection of the sixth dorsal vertebra, and caries of the bodies of the sixth to eighth vertebræ, two semi-fluctuating swellings projecting into the thorax on each side of the spine filled with inspissated pus. The canal formed an angle of forty-five degrees at the point of curvature. The dura mater was thickened and inflamed on its outer surface, but there was no lymph or adhesions around the cord, which was softened, especially opposite the fifth and sixth vertebræ. In the abdomen the duodenum was found to be folded sharply on itself about eight or ten inches from the pylorus. Below this point the gut was collapsed; above it was greatly distended, the distension being shared in by the stomach, so that the pyloric valve was almost obliterated. The distended stomach and duodenum contained much greenish fluid. The duodenal mucous membrane was congested, and the mesenteric vessels engorged. The dilated stomach reached into the umbilical and right lumbar regions. Dr. Buzzard remarked upon the several points of interest in the case. The origin of the spinal disease appeared to be traumatic—due to strain from carrying heavy weights. In a case now in hospital there is a similar history, but in neither of the cases is there any evidence of strumous disease, so that they bear out Professor Sayre's views as to traumatism being a great factor in the production of spinal disease. The cause of the paraplegia was the softening of the cord opposite to the diseased vertebræ, although there was no continuity of inflammation between the dura and the cord, and although the canal at the curvature was not narrowed sufficiently to have compressed the cord. The Sayre's splint was applied to obviate the necessity for continued recumbency, and the question arose whether the jacket conduced to the occurrence of the volvulus. The situation of this twist was rare. Brinton says only a fourth of the cases of intestinal obstruction are met with in the small intestine, and of these cases the ileum is the most frequent site. In this case the innervation of the intestines was probably interfered with owing to the softening of the spinal cord. The seat of the kink was at the point where the duodenum is most fixed—viz., at its passage into the jejunum. It is conceivable that when the ribs were fixed by the jacket, and the stomach inordinately distended by a heavy meal, the jejunum was pressed down in inspiration, and, owing to feeble peristalsis or absence of peristalsis, the twisted gut, pressed between the abdominal wall and spine became unable to unravel itself. The incident may have been a coincidence, but a case of fatal vomiting after one application of Sayre's jacket is recorded by Mr. Willett in

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St. Barth. Hosp. Reports, vol. xiv. The seat of the obstruction during life was thought to have been high up from the rapid occurrence of vomiting; and it was thought possible that the intestine had become blocked by the dough food he had so freely indulged in. As it turned out, the case would have been favourable for operative interference—i. e., if the opinion was that the region involved could have been readily reached by the surgeon. — The PRESIDENT asked whether any unusual strain, any injury on a particular occasion, could be traced as giving rise to the spinal disease. He also asked what were the microscopical appearances presented by the diseased cord. — Dr. DUCKWORTH inquired whether any ulceration existed in the bowel at the seat of the twist, which might have led to this change. He had more than once found it necessary to direct a Sayre's jacket to be removed, owing to the occurrence of impeded respiration, bronchitis, &c. — Mr. HEATH pointed out that the volvulus was to the left of the mesenteric artery, and in the jejunum rather than duodenum. It occurred at the spot where rupture of the bowel mostly occurs in abdominal injuries, the explanation given being that the whole weight of the intestines is borne by the mesenteric fold around the artery. This fact might account for the folding over of the gut at this spot, when some cause was added to the weight of the intestines. It was difficult to assign this effect to the meal partaken by the patient, and he could hardly think that the pressure on the ribs above would suffice to have produced the displacement, seeing that this compression was not nearly so much as that produced by tight lacing, and that the accident did not happen until some days after the jacket had been applied. He was interested at the discovery of the abscesses in front of the spine; it had been said that spinal caries could occur without suppuration; but he believed that this is never the case, the statement arising from the rarity with which the spine was examined. — Mr. MARSH would be glad if Dr. Buzzard would give his reasons for attributing the spinal disease to mechanical violence. The occurrence of injury would not exclude a substratum of scrofula, and he thought all surgeons were inclining strongly to the belief in the existence of a constitutional defect underlying these cases of disease of the cancellous texture of bone. Speaking of the intestinal obstruction, he pointed out that the rapidity with which it ended fatally was a great argument in favour of having early recourse to surgical interference. When it was remembered in how many cases the abdomen could be safely opened, and how large a proportion of cases of intestinal obstruction ended fatally, he thought that when the operation was allowed better play than at present the outlook of these cases would be more hopeful. A few weeks ago he was called to operate in a supposed case of hernia; the sac only contained fluid, and on search he found an internal strangulation, which he relieved. Unfortunately the patient died from blood-poisoning, contracted from a neighbouring case. Surgery must be allowed more play in the future in such cases. The old plan of giving morphia (and he asked why it was followed in this case) only served to mask the symptoms, and to delay the operation, and often after death an obstruction was found, which could have been relieved by operation. There was some misapprehension as to the fitting of the bandage. Sayre's statement that it was perfectly moulded to ribs and interspaces was absurd, for if that were the case the patient could not breathe at all. In the majority of cases the bandage does not cause any obstruction to respiration or circulation, and the "dinner-pad" allowed free play to the abdominal muscles; but he would be sorry to think that it was liable to lead to intestinal obstruction.—Dr. BUZZARD wished to know if the seat of obstruction in this case would have been any bar to operation.—Mr. MARSH said that in two or three cases of laparotomy he had traced the intestine quite up to its fixed attachment at the duodenum. The distension of the stomach might have created an extra difficulty.—Dr. DUFFIN had recently under his care a case of Pott's disease with paraplegia, in a young man aged twenty-two, to whom Sayre's jacket was applied. There was not much loss of sensibility; the temperature of the lower limbs was good, and there was a sense of constriction around the trunk at the level of the ninth and tenth ribs. After the bandage had been applied for a week it was removed, and reapplied after an aperture had been made over the most prominent part, to enable the application of the actual cautery over the spine. The cautery was thus applied in two or three spots, and the man improved so much as to be able to walk three miles without difficulty. How much of this benefit was due to the bandage, and how much to the cautery, it was difficult to say. The chest and spine were fixed by the bandage, but there was nothing to interfere with the movements of the intestines.—Mr. BARKER asked the author whether the abscesses were so placed as to have compressed the cord. He pointed out that when the plaster case is put on the thorax is distended, and therefore after its application there is ample room for respiratory movements. Another point was that when the body is swung the shape of the thorax is that of a double inverted cone, and no constriction was produced in the abdomen by the casing; if anything freer play was given to the intestinal movements than before. He had examined a case (put up by Professor Sayre) which had died from pneumonia. He asked Dr. Buzzard if there was any evidence of considerable pressure on the dura mater.—Dr. COUPLAND pointed out, in reference to what had fallen from Mr. Marsh, that the great difficulty in the way of calling in early surgical aid in cases of acute obstruction was that of diagnosis. In Dr. Buzzard's case it was reasonable and likely to infer that the obstructing cause was *within* the gut, and there were no very definite criteria between obstruction so caused and that due to external conditions. Dr. Buzzard had acted on the belief that the obstruction was due to the abnormal contents of the bowel, and surely no surgeon would open the belly in such a case.—Mr. MARSH could not agree with Mr. Barker. When the Sayre's jacket is being applied the spine is elongated, and the thorax too, so that after the patient is let down the bandage is really tighter than before. He had had one or two cases where the bandage could not be borne, he believed, for this reason. He would ask the physicians whether such violent intestinal obstruction ever followed mere plugging of the gut.—Dr. COUPLAND was certain that such did occur in cases of fæcal masses, gall-stones, and the like.—Mr. BARKER said that when Sayre's jacket is applied the patient is suspended by the shoulders as well as by the head, and the capacity of the thorax is thereby increased. It was unsafe to suspend solely by the head.—Dr. H. HALL had recently met with a case of acute obstruction due to impacted gall-stone, which was found after fæcal vomiting and rupture of the ileum had occurred.—The PRESIDENT pointed out that a gall-stone entered into a different category as causing severe obstruction from a bolus of food as in Dr. Buzzard's case.—Mr. NOBLE SMITH had seen in Guy's Hospital, under the care of Mr. Golding Bird, a case of angular curvature, due to strain five or six years previously. As to intestinal obstruction being sometimes caused by food, he did not know of an instance in man, but cited one in a horse.—Dr. BUZZARD, in reply, read notes of the microscopical examination of the spinal cord, which exhibited myelitic changes in the lower dorsal region, and bands of secondary degeneration in the lumbar. There was no definite history of traumatism in the case, no evidence of struma, the man being perfectly healthy, but engaged in the laborious occupation of lifting heavy sacks. This and the other case he referred to certainly seem to confirm Professor Sayre's view. There was no ulceration of the bowel, only slight hyperæmia. Mr. Broster had informed him that in four out of twenty-two cases a Sayre's jacket could not be borne, and had to be taken off within twenty-four hours of its application; males seemed less tolerant than females. The defective peristalsis, owing to the paraplegia, and the enormous quantity of indigestible substance he had taken, surely justified the reasonable delay that under the influence of morphia and atropia the obstruction might pass away. He did not think the abscesses could have pressed on the spinal cord, their contents were so thick and inspissated. The canal was opened first.

Dr. SANGSTER read notes of a case of Molluscum Fibrosum, exhibiting the patient and also some sections of the growth. He is a man fifty years of age, small in stature, and he says that the tumours developed all over his body within twelve months, the first to be noticed being one on the lower end of the sternum. The face was attacked quite recently. The trunk is now covered from clavicle to loin with hundreds of molluscum tumours, as well as on the back, buttocks, and scapular regions, and on the limbs, the thighs being more affected than the legs; the sole of the right foot was the seat of one small tumour, another occurring on the hard palate. The largest growth was a pendulous mass the size of a Tangerine orange, to the right of the sternum. Dr. Sangster said that examination of the growths—many of which showed a central comedo-like spot—pointed to their origin in the dermal envelope of the hair-follicles and seba-

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ceous glands, as Dr. Fagge had stated; the prevalent view, especially of Continental observers, being that the affection is one of the subcutaneous tissue generally—the glands, if involved at all, being secondarily affected.

The Society then adjourned.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

AT the meeting of this Society on February 18th, 1880, W. A. N. CATTLIN, F.R.C.S. (President), delivered an address on the Relations between Dental Surgery and Medicine, of which the following is an abstract:—Allow me to express the gratification it affords me to know that, by the goodwill of the fellows of this Association, I have been elected to preside over the only Society of Dentists which has been formed in this country composed entirely of educated surgeons. I thank you for this honour, which is greatly increased by the fact that it has not been the custom for learned Societies holding their meetings in London to select a president who resides, as I do, in the provinces. I congratulate the Association on the success of its first dinner. The cordial manner in which our views have been supported by the very heads of the medical profession is, to say the least, encouraging. Another point of congratulation is that a fellow of this Society, and one practising our special branch of surgery, Mr. Imlach, now holds the office of President of the Royal College of Surgeons of Edinburgh. Mr. Hamilton Cartwright, in an interesting speech delivered by him at our late dinner, drew an analogy between the barber surgeons and the dentists of an early period, and spoke of them as distinct callings; but I shall endeavour to show that even then surgery and dentistry were one science. Both medical and dental science have had their days of darkness, error, and delay, and, indeed, if we may judge from recent discoveries, science, in its general sense, is only just expanding to the light of modern times. If we go back to the year 1815, when the apothecaries of England and Wales obtained their Act of Parliament, and began to remove the main obstruction to their progress, we shall perhaps find an example in them which we may imitate. Feeling their degraded position (for the physicians of that day scarcely condescended to consult with an apothecary), they set to work in right good earnest to improve themselves. The better men, whilst using the powers of their new Act to prevent empirical practice, instituted most creditable examinations, the severity of which was gradually increased until the Apothecaries' Licence became one of the best tests of medical knowledge. The public, as well as the medical mind, by slow degrees became convinced that medicine in its broad sense included surgery, and hence arose the superior class of general practitioners who now hold the double qualification. It is indeed curious to note how gradually every improvement in the medical profession has taken place, and how certainly every requirement has been supplied. Let us hope that the same good fortune may happen to ourselves. For some time past the great principle advocated by the London University of conducting one *thorough* examination as a test for both Medicine and Surgery within one portal has been growing into popularity, and the signs of the times plainly indicate that such a system is about to become the law. Thus far since the year 1815 the object of the Legislature has been, and now is, to consolidate the different classes of medical practitioners, and equalise medical education. It is much to be lamented that the Dentists Act should have passed just at this crisis, as it is a strange contradiction of the whole scheme. All was proceeding well with dentistry until the Dentists Act in 1878 fell like a withering storm, and cut it from the parent tree. Looking earnestly at the present position of medical politics, and the wide difference of opinion which prevails among different grades of dental practitioners, I am led to think that the hour of danger has arrived, and that this association will have an anxious duty to perform during the present session of Parliament. Hasty legislation has led to difficulties of a serious character. The Dentists' Register practically separates dentistry from surgery, and in my opinion is an error of the highest magnitude. Its blighting influence will be more apparent as time rolls on; for it will scarcely be believed that if a surgeon, who may or may not be a dental licentiate, declines upon principle to place his name upon the Dental Register, he is by clauses 19 and 28 of that Act deprived of the privilege of serving as an examiner upon the dental board of his own college, unless he sits as one of its surgical members, which is not likely. Probably this flaw is an oversight, and will be altered as soon as the mistake is pointed out. Our subcommittee appointed some time ago will watch the progress of the Medical Amendment Bills, and if possible prevent the abuse of medical titles. They will again urge the Legislature to forbid unqualified persons assuming the title of either physician or surgeon alone, *or in conjunction with any other word or words*. Still the question meets us at every turn, What further action ought this Society to take under existing circumstances? It is to be regretted that out of 5289 names which appear in the Dentists' Register, only 533 have given positive evidence of either a medical or dental education. If the Dentists Act be allowed to remain unrepealed, what security is there that practitioners of other branches of surgery will not apply for and obtain a similar statute? If the Dentists Act be repealed, and I heartily hope it will be, then to prevent a repetition of the evil it has been suggested that when the proposed conjoint examining board is formed a candidate should certify that, in addition to the ordinary examination of a medical practitioner, he desires to be examined particularly as to his proficiency in dental, ocular, aural, orthopædic, or any other branch of surgery, and if he shall show a thorough knowledge of any such branch, a certificate to that effect should be appended to his diploma, and he should be allowed to appear in the Medical Register as practising that specialty. If a little learning is a dangerous thing, and if it be true of all professions that he who is only half educated can only be half trusted, then the dental licentiates will be most unwise if they remain in their present anomalous position. I will, in my individual capacity, say candidly what course I think it would be wise to pursue in order to repel the serious charge which may now be brought against dentists, of being the first to sow the seed of discord, and of unnecessarily tearing a useful branch from the glorious old tree of medical science, and that, too, after its roots had been pruned, and just when its branches were about to be trimmed and gathered into harmonious unity by the conjoint scheme. I would, therefore, suggest that the worst clauses of the Dentists Act should be repealed, and that only enough of it should remain to authorise the registration of dentists who were in practice before August 1st, 1879, and such others as are not yet ripe for medical registration. All qualified practitioners now on the Dental Register I would carry as fast as I could to the Medical Register, and for the future adopt the scheme which has been suggested by my son, Mr. W. Cattlin, for the benefit of all specialists in any branch of either medicine or surgery. Should any of the "qualified" desire to remain on the Dental Register, to die out by efflux of time with the "unqualified," I would leave them alone in their glory. It will, I am sure, be the pride of our Association to promote any good object, whether originated by ourselves or not, and especially to hold out the right hand of fellowship to those who, though differing from us in opinion on minor matters, may show a readiness to work with us for the general good.

THE HEALTH OF THE ITALIAN ARMY.

AT the opening of the Medicus Annus in the University of Rome, Professor Baccelli delivered an address, in which he indicated the deplorable condition of the Italian Army from a hygienic point of view, and urged the profession to leave no stone unturned until that condition was ameliorated. The total of the youth sent up by the conscription for the three years' service is (he said) 285,000, and of these 49,000 are rejected by the medical examiners for organic defects. Taking the other causes of exemption from service into account, 195,000 is the total of sound youth enrolled in the army. But when these join the ranks every 1000 yield 1001 to the sick-list during the year! and, as if this were not all, the mortality among them (picked specimens of young Italy) exceeds 11 per 1000. High time is it, therefore, that the Italian Government should interpose to keep

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the successive generations of Italians from deterioration past all physical redemption.

The Medico-Statistical Report on the Health of the Army during 1877, compiled under the direction of Dr. Machiavelli, is just out. In that year the mean force of troops under arms was 196,192. The number of admissions into the civil and military hospitals, and into the military infirmaries, was 193,650—i.e., 987 per 1000 of the mean force. The losses due to incapacity for further service were 2468, or 12·57 per 1000 under arms. Leave of absence for convalescence was accorded to 6000, or 30·58 per 1000. These figures show, as compared with the preceding year, an improvement in the sanitary condition of the army—a diminution, in fact, of 14 per 1000 in the number of admissions into hospital, and of 2·56 per 1000 in that of those rendered incapable of service. The infirmaries attached to the corps received 108,494 men under treatment, and of these 16,919 were sent into hospital. The number of cures effected in the infirmaries has therefore been reduced to 91,575, or 467 per 1000. The mean of days passed in the infirmary was seven days for each.

The maladies cured during the year are classified under four heads—1st, medical, including 46,125 patients (235 per 1000); 2nd, surgical, including 30,125 patients (154 per 1000); 3rd, ophthalmic, including 7702 patients (39 per 1000); and, 4th, venereal, including 7636 patients (39 per 1000). The total mortality among the men under arms was 2072, or 10·56 per 1000. The mortality outside the military and civil hospitals and the military infirmaries was 461, and consequently the number of deaths occurring in the military infirmaries and in the military and civil hospitals was 1611.

The causes of death are specified in 2036 cases, and remained unknown in 36. The maladies which proved most fatal were: typhoid fever, 342; pneumonia and other diseases of the respiratory system, acute and chronic, 773; small-pox, 128; suicide, 86; malarial fever, 78. The deaths are thus classified: 121 inferior officers; 146 corporals; 1805 soldiers. The army also in the same year lost three generals, seven colonels, three lieutenant-colonels, ten majors, 32 captains, 31 lieutenants, and 17 subalterns. In all 103 officers, or 9·07 per 1000 of the army.

These, like all official statistics, come so late as to have lost much of their interest. They indicate to the War Department what provisions it must adopt for the amelioration of the soldier's condition in regard to food, lodging, and clothing, or in regard to the labours of the camp and the annual manœuvres, with the seasons in which they should take place. But they come, as already said, two years after the data they present have occurred, and if we allow the minimum of six months for the War Department to act upon them, the interval between the bane and its antidote robs the latter of its efficacy. And how serious the bane is must be evident from the enormous proportion of the sick—987 per 1000—and from the equally grave proportion of suicides—0·43 per 1000.

SCURVY AND THE PROPOSED ARCTIC EXPEDITION.

No fact in Medicine is more clearly established than that the exclusive cause of scurvy is the prolonged and complete withdrawal of fresh vegetables or fruits from the dietary of those affected; and that the administration of such articles, or their equivalent—lime-juice—in sufficient quantities, is effectual to prevent an outbreak of the disease or to remove it when it occurs. It is therefore a matter of surprise, as well as of regret, that we find so many naval commanders of ability and experience ignoring the evidence on this point that has so frequently and strongly been brought before them. It was proved in the clearest possible manner, in the report of the committee appointed by the Lords Commissioners of the Admiralty to inquire into the causes of the outbreak of scurvy in the recent Arctic Expedition under Sir George Nares, that the main purpose of the expedition was foiled on account of the outbreak of scurvy that occurred among the members of the sledging party; and it was also shown, in an equally conclusive manner, that the appearance of the disease was due entirely to the absence of lime-juice from the sledge dietaries. After the strong expression of opinion given on this point by the members of the Scurvy Committee, and testimony, not only of officers and men who had taken part in previous Arctic voyages, but of the Medical Director-General of the Navy, and, through the Royal Colleges of Physicians and Surgeons, of the most eminent medical authorities, we are surprised to learn that another Arctic Expedition is likely to leave our shores in which the use of lime-juice as a prophylactic against scurvy promises to be again ignored. Commander Cheyne, R.N., in whose hands the command of the proposed British Canadian Arctic Expedition is placed, speaking at the Mansion House on the 28th ult., is reported to have said: "The last expedition came back broken down with scurvy, and the reason was, not the want of lime-juice, but the want of proper ventilation between decks on board ship, and the want of fresh air and exercise." Good sanitary conditions undoubtedly enable men to withstand for a time the ill effects of long-continued deprivation of fresh vegetable food, but no amount of exercise, fresh air, or free ventilation will prevent an outbreak of scurvy when the salts supplied by fruits, vegetables, or lime-juice are reduced beyond the fixed physiological limit. Whatever views of his own, therefore, Commander Cheyne may have with regard to the etiology and treatment of scurvy, we trust that on the question of lime-juice or no lime-juice he will not be permitted to use his discretion, but that the Committee of Management will see that not only provision is made for its supply to every member of the crew throughout the voyage, but also that a guarantee is given by the Commander that it shall be administered. It would be intolerable, with the disastrous experience of the past so clearly before us, and in the face of the most complete scientific evidence that any disease has had brought to bear on it, if more brave men were sacrificed to ignorance and prejudice. That some such idea crossed the minds of many at the meeting is more than probable, as we find that one of the speakers, towards the end of the meeting, mentioned the fact that Dr. B. W. Richardson had undertaken to supervise the provisioning of the ship. This is reassuring, since we are convinced that Dr. Richardson will indicate all requisite articles, and issue adequate instructions on all particulars essential to the preservation of health among the crew. But in addition, as we before remarked, it is incumbent on the Committee to secure from Commander Cheyne a written pledge that the sanitary and dietetic instructions issued to him shall be carried out completely.

The task, however, undertaken by Dr. Richardson is not an easy one. So long as the men are confined to the ship the diet can be varied, and no difficulty need arise with regard to a sufficiency of lime-juice; but when the men leave the ships, the question as to portability at once suggests itself. With regard to lime-juice, we cannot help thinking that great advantage would be derived from the substitution of concentrated preparations of lime- or lemon-juice for the crude juice generally issued. Of course it would be necessary to test its efficacy as compared with that generally in use. The physicians at the Dreadnought Hospital, Greenwich, could no doubt speak as to this point, or afford facilities for the test being made. In making a trial of lime-juice in a concentrated form, we would suggest that the evaporation be effected at low temperatures, certainly not above 100° F. Extract of malt also is very portable, and Dr. Ralfe has shown by experiments at the Dreadnought Hospital that it possesses considerable antiscorbutic properties. It might take the place of one ration of tea in the twenty-four hours, though, as its effect on the nervous system is not equal to the latter, it could not entirely replace it. Finally, some glass frames that could be packed and stowed away during the voyage might be taken and set up when the ship went into winter quarters. By means of these frames the crew could be supplied with a constant succession of fresh salads of the hardy kind, a double ration being served out to men destined for sledging, a fortnight before they started. Sufficient warmth for these miniature greenhouses could be obtained by utilising the waste heat of the between-deck stoves.

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THE LANCET.

LONDON: SATURDAY, MARCH 6, 1880.

THE friends of medical reform must lose no time and abate nothing of their energy, if the labours of the Select Committee are to end in a satisfactory measure. The Committee met on Monday to choose a chairman and to consider the course of proceedings. We intimated some time ago that there was a doubt whether Mr. FORSTER would again accept the office of chairman. We regret to say that at the meeting on Monday Mr. FORSTER, in a letter, expressed his inability to accept the duties of the chair during another session. Lord GEORGE HAMILTON was appointed chairman. The Vice-President of the Council will, of course, bring to the work considerable knowledge of the questions at issue between the defenders of the existing system and those who are gravely dissatisfied with it, but his other labours last session were such as almost entirely to prevent his attendance, and a member of a committee, like a judge, labours under a great disadvantage who does not hear and see witnesses for himself. It can scarcely be hoped that Lord GEORGE HAMILTON will have much more leisure this year than he had last, in which case it is understood that the duties of the chair will devolve on some other member of the Committee who may chance to be present. We cannot help regretting this. Much of the value of such an inquiry as that now going on depends on the continuity of the presiding member. This being secured secures a continuity and order in the investigation itself which is very apt to fail under other circumstances. We must, however, hope that Lord GEORGE HAMILTON'S acceptance of the chair will enhance his interest in the whole question, and his wish, for its own sake and for the sake of the Ministry of which he is an able member, to see it well settled, as a part of this year's domestic legislation.

We understand that the Committee will meet on Monday next to take evidence, and that it has determined then to hear further witnesses from the Universities of Aberdeen and Glasgow. We look forward with much interest to their examination. It is quite clear to us that the Scotch Universities have nothing to fear from the creation of a good examining board by each division of the kingdom, and of a properly constituted Medical Council. There can be no difficulty in reconciling the universal demands of the profession for reform in these matters with the interests of institutions which were never more effective or prosperous as teaching institutions than they are now. It is said that Sir WILLIAM GULL is anxious to be examined. There can be but one opinion about his personal claims to consideration; but it is time to ask if every member of the Medical Council is to be examined. Already a third of the entire Council has been examined, including Dr. ACLAND, Mr. SIMON, Dr. QUAIN, Sir JAMES PAGET, Sir DOMINIC CORRIGAN, Dr. HAUGHTON, Professor TURNER, and Dr. ANDREW WOOD. Surely this implies that the case for the Council has been amply heard already, and that the scanty time of the Committee should now be given to hearing representatives of institutions which may feel aggrieved by proposals of reform, and to hearing further witnesses on behalf of those changes which the profession almost unanimously demands. There are members of the profession whose evidence has not yet been taken, but which would be of the utmost interest and value; but who are so absorbed in professional duty that they are not likely to volunteer their evidence, and might even have to be pressed to give it. Surely this is the kind of evidence that is now wanted. The members of the Council, including Sir WILLIAM GULL, have been discussing this question for ten years. Their opinions have been recorded over and over again. Sir WILLIAM GULL lately said he had had twenty different opinions on the subject himself, all of which have had ample publicity. It will be lamentable if the time of the Committee is to be so occupied in hearing a mere repetition of arguments and views which have had already such ample statement both in the Medical Council and before the Committee. We must appeal to the Committee to put some limit to the examination of members of the Council, and to endeavour to procure the evidence of some outside and independent witnesses, such as Sir WILLIAM JENNER and Dr. ANDREW CLARK, whose knowledge of the profession and of its wants must be unsurpassed, and who have not been warped by officialism into the belief that medical corporations are greater than the medical profession.

We feel confident in the spirit of fairness and in the earnestness of the Committee; but time is short, and officialism is strong. It behoves the friends of medical reform to consult together to bring reasonable pressure to bear on the Committee to hear witnesses who really represent the profession.

MR. DILLWYN'S proposal to reform the laws relating to lunatics has, probably, little in common with the measure of consolidation and amendment promised in the QUEEN'S Speech; and it would be convenient to defer criticism on the subject, as a whole, until the Government Bill is before Parliament and the country, but that it may help to save time and space hereafter if we say now what it seems desirable should be said on the scheme of the member for Swansea. We have already stated our own views, and urged the considerations by which they are supported. It is therefore evident that we cannot regard the scheme, issued just as we were going to press last week and then briefly summarised, as satisfactory. It is broad to the extent of impracticability in some respects, but narrow and inadequate in others. Nevertheless, the public and the medical profession have cause to feel grateful to Mr. DILLWYN for having brought the question of Lunacy Law Reform prominently before Parliament, thus rescuing the question from the hands of agitators, while, first by the Select Committee he procured, and since by the Bills he has drafted, supplying the Legislature with sound and useful hints as to what it may be desirable to do and what to avoid.

Our primary objection to the scheme was stated in the few remarks we were able to append to the epitome which appeared in our last issue. The measure is *permissive*, and the option allowed the parties charged with putting the pro-

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posed Act in motion—namely, the justices of counties and boroughs—is of a peculiarly mischievous character. They may raise money to purchase the existing licensed houses with the business accruing to them, at a fair valuation for property and goodwill; or they may employ the money so raised to establish and inaugurate, in commercial opposition to the asylums carried on by private individuals, a new class of institutions, which will be, in fact, equally private, but the trade enterprise of the justices. Of course, the justices will not personally benefit by the success of their business; but it is contemplated that they shall make a profit by "keeping madhouses," and the funds so accumulated are to be appropriated to the reduction of the rates for the maintenance of pauper lunatics. Stripped of its technical verbiage, the proposal is simply this: as a remedy for the alleged abuses of private asylums conducted for gain by private persons, the justices of counties are to be empowered to embark in a similar enterprise; and, which makes the proposal the more remarkable, whereas every precaution is deemed necessary to prevent the proprietors of licensed houses from entering into collusion with the licensing authorities, with the inspectors who visit their establishments, or with the medical men who certify the insanity of their inmates, no precautions are deemed necessary for the supervision of the business carried on by the justices, beyond a biennial visit by the Commissioners. The justices, because they are justices, are to institute houses without the consent of any authority; and they are, moreover, to control the licences of their opponents in the competition for public favour. They are to make all Orders for the admission of lunatics to asylums—their own and those of their competitors; and their powers generally will be so extended that, in addition to having unlimited capital at their back, they will be able to clear the field of all opponents. Is it conceivable that, under these conditions, the clause empowering justices, "if they see fit," to purchase the property and goodwill of the existing proprietors, should be anything but a dead letter? It is, in fact, mere surplusage to provide for buying up the present licensed houses, when the Bill would empower justices to establish new institutions at less cost. Any measure of reform to be satisfactory and successful must provide for the compulsory purchase and sale of the existing private asylums.

It may be alleged that considerations of profit could not possibly influence the justices of a county or borough, because the gain is not *personal*. Such a contention overlooks the pertinent fact that nothing can be so dear to the heart of an honorary manager of public funds as success in "saving the pockets of the ratepayers," and if the profits made by keeping "private asylums" are to be applied for the reduction of the rates levied for carrying on pauper institutions, we can conceive of no "motive" more powerful for filling the paying establishment with inmates, and keeping them in custody as long as possible! The sole consideration which presses on the public mind is the fear that private proprietors study their own financial interests in preference to those of the insane. We utterly fail to see what consolation can be derivable from the fact that if this Bill becomes law the ground of fear will be so far varied that henceforth it must be the justices who are suspected, and the interest to be promoted at the expense of the paying patient will be the reduction of the local rates. As matters now stand, there is the feeling that if the friends of a lunatic are careful they may avoid the influence of any person who has an interest in filling the private asylums and keeping them full. Under the new system, the managers of the public asylums for paying patients, the persons who are to stand in the place of the proprietors, and make a profit out of the enterprise—not, it is true, for their personal gain, but for that most pressing of all objects, public or rather *local*, economy—will have the amplest opportunity of exercising any influence they may please to exert in favour of the public asylums and the rates, as they, the justices, are to sign *every* Order of admission.

The transfer of the licensed houses of the metropolis to the control of the justices, themselves interested keepers of the public institutions, is also, unless we are much mistaken, a proposal of the greatest gravity. For many years past it has been apparent that the growing power of the justices in public asylums has been disastrous, crippling medical work and throwing an insurmountable obstacle in the way of methods of treatment and systems of management which the progress of medico-psychological inquiry has rendered desirable. The magistrates of Middlesex and Surrey have been felt to be a dead weight on the medical enterprise of improvement. It is obvious that the collateral effect of handing over the licensed houses in the metropolitan district to the jurisdiction of the justices—taking them out of the control of the Commissioners—must be to augment this evil, by increasing the influence of the magistracy. We have always contended that the powers of the Commissioners should be both enlarged and strengthened, and that, in place of recommending, they should be armed with authority to enforce their directions. The new proposal is wholly antagonistic to this policy, and we cannot but oppose it. Again, there does not appear to be any sufficient reason for adding to the number of the Commissioners, if they are to be less influential than they now are. Least of all should the proposed increase take the form of appointing a paid chairman and vice-chairman, if the judicial, in fact, the licensing, business of the Board, is to be transferred to the justices. To speak frankly, we should have thought that the honorary members of the Commission—men who have served the office of Commissioner and retired on a suitable pension—might have been willing to discharge the not very arduous duty of presiding at the meetings of the Board without additional remuneration! The Earl of SHAFTESBURY has so perfectly organised the official machinery of the Commission, and placed its deliberations on such a footing, that when this noble lord—the father of the whole system of legal protection for the insane in England—resigns the chair, it will be a coveted honour to take up the work where he has left it. Of course, as outsiders, we cannot be supposed to know what the duty to be discharged really is, but it certainly seems startling to be asked to sanction two new salaries for chairman and vice-chairman without any increase of work which can fall on the president of the Board, more especially at a time when the practice of retaining ex-commissioners as honorary members of the Board has been fairly inaugurated. If any increase of strength is necessary, it would seem to be most urgently needed in that section of the Board which consists of the comparatively vigorous men engaged in visiting the asylums

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It is clearly necessary that the duty of supervision by personal inspection should be increasingly well performed. Visits paid with tolerable regularity, once every year or fifteen months, are not sufficient. We cordially approve the clause of Mr. DILLWYN'S Bill which provides that all asylums shall be inspected at least *twice* a year. It would be still better if the visiting could be even more frequent. A radical change is necessary in the *manner* as well as the number of the inspections carried out by the Commissioners; and it is not easy to see how any substantial improvement in this respect is to be effected by the appointment of a paid chairman, who must be understood to remain principally at home.

It is not worth while to discuss the Bill in its relations to the subject of "certifying." We do not see that safety will be increased by requiring a justice to sign the Order for admission. That plan has, we believe, been tried in America, and it certainly does not render the alleged lunatic more secure against the mistakes or malevolence of those around him. How should it do so? No lay magistrate can form an independent judgment. His "order" must be signed on the ground of the medical certificates. It is to *these* the public must look if they desire to be safe. We have declared for an official certificate by a salaried officer. The clauses enabling a person of weak mind to enter an asylum as a voluntary boarder, and empowering any two persons interested in a lunatic to apply for the admission of two medical men to examine him, are likely to be useful. As a whole the Bill may be regarded as supplying the outline of a measure which may attain the object in view, but it will need to be amended, considerably, in detail when in Committee, and this stage being reached we shall have more to observe. Meanwhile let us say again, as we have said so many times before, that a sweeping measure of reform is the most likely to succeed. In short, what should be done is precisely what has now at length been proposed for the assumption of the business of the water companies—namely, the creation of public stock for which the enterprise shall be transferred to the State, and carried on under constant supervision, and with a single eye to the general good. The monetary scheme proposed by Mr. CROSS for the purchase of the water companies originated with Mr. R. H. PATERSON, a member of the Council of the Statistical Society; and it was published in his "Economy of Finance" some twelve years ago. Its applicability to the purchase of "private asylums" is fully as obvious as to that of the business of the water companies, for which it was first devised.

THE vote to be proposed for the expense of "the medical establishments and services" of the Army for the year ending 31st March, 1881, amounts to £308,440, being, as stated in the estimates, a "net increase of £42,258" upon the sum taken for the current year. But an examination of the details shows that about £20,000 of this excess is due not to an increase in the expenditure, but to a transfer of charges from other votes. Thus the allowance to probationers at Netley, heretofore charged to the vote for establishments for military education, now appears under the head of "pay of medical department," and the free hospital ation to the men of the Army Hospital Corps, which formerly was included under the vote for "provisions, &c.," having been commuted to a money allowance, is included in the departmental pay of the corps. The rest of the excess arises chiefly from the additional number of medical officers employed, and from the increased pay and allowances granted by the new Warrant. We shall give a brief analysis of the various charges as shown in the estimates. As regards the *personnel*, there will be an increase of one Deputy Surgeon-General (in Ireland, replacing one reduced last year), twenty-four Brigade Surgeons, one Surgeon-Major or Surgeon, and forty-eight Acting Medical Officers. The latter are, we presume, "the medical officers on the retired list, and medical officers of the militia on the departmental list, whose regiments are not embodied," whose employment is authorised by the forty-ninth paragraph of the new Warrant. The amount required for the pay of the medical officers at home is £181,435, and in the colonies £53,734, the former being £39,367 above, and the latter £606 below the sums voted for the current year. Of the increase, £18,435 are required for the additional number of Acting Medical Officers, £5120 for the Surgeons on Probation, and the remainder is chiefly for the higher rates of pay granted by the new Warrant. In addition to these sums must be taken £9000 for the pay of militia surgeons, being £2000 above the preceding year, an excess due, probably, to the determination of Government to call out the militia for twenty-seven days' drill, instead of twenty as last year. The charge for "pay of civilian medical practitioners and medical bills" at home is put down at £7910, being an increase of £2455; this appears to require some explanation, for with the increased establishment of medical officers we should have anticipated a considerable reduction. In the colonies there has been a very marked decrease under this head, amounting to £12,930. This has been entirely the result of the termination of the war in South Africa, and the discontinuance, in consequence, of the services of civilian medical practitioners, who were there employed. The departmental and extra duty pay of the Army Hospital Corps, and miscellaneous labour, amount to £22,089, as against £5755 in the last estimates. With the exception of a slight increase due to the addition of 200 men to the strength of the corps, this difference is caused, as already explained, by the transfer of a charge from the vote for "provisions" to that for "departmental pay." A saving of £1083 is shown in the pay of clerks and other civilian office subordinates, whose duty will probably be, in future, performed by men of the Army Hospital Corps. The estimated cost of medicines and surgical instruments is £23,000, the same as in the last two years.

We regret to observe that the medical department is still charged with the expense of the military staff at Netley, which is retained there, we presume, on account of the time-expired men. We have repeatedly called attention to the injurious effect of having these idle men attached to such an establishment. No occupation is, or can be, found for them, and they do no good to themselves or the service, but demoralise the whole place. We would press upon the consideration of Colonel STANLEY the propriety of removing this depôt from the great invalid hospital of the Army. The time-expired men would be much better with the depôts of their corps, where

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discipline could be kept up, and where they could be efficiently looked after and employed till the date of their discharge. We sincerely trust that the Secretary of State for War may see his way to getting rid, and that speedily, of such an anomaly as a military depôt within the precincts of an invalid hospital.

THE abortive "Noxious Gases Bill" of 1879 has been re-introduced as the "Alkali Acts Amendment, &c., Bill" of 1880. The first draft of the latter is now before us, and we have compared it carefully with its predecessor, the main provisions of which were recently described in these columns. The new Bill is better drawn than the old, and several slight modifications have been introduced into it, but its main features are the same, and we therefore most heartily hope that it will pass into law.

The Bill is essentially an extension of the Alkali Acts, which have stood so well the test of practical working. A large number of the factories which emit noxious gases, but which yet are not alkali works, are included in its operation, are compelled to register, and to submit at all reasonable times to the visits of the alkali inspectors, who have power to take proceedings against them if they infringe the regulations. The factories are classed under three heads: the alkali works proper, whose owners are to limit the escape of acids in the manufacture of sulphuric acid, and to avoid the nuisance arising from alkali waste; the sulphuric acid, nitric acid, chemical manure, gas liquor, and coke works, which in respect of sulphuric acid are treated like alkali works, but of which the owners have otherwise only to use the now proverbial "best practical means" for the abatement of their nuisances; and, lastly, a large class of metal, cement, and other works, which are even less stringently dealt with, special provisional orders of the Local Government Board, confirmed separately by Parliament, being required for the restriction of the nuisances of each separate manufacture.

These are the main provisions of the Bill. It is a somewhat timid and professedly tentative attempt to diminish the evils complained of by extending the system of registration and inspection. We fully admit the difficulties of the experiment, and should be sorry to be compelled to advocate any measure that might cripple important industries. Probably the experiment is the wisest that could be tried at the present time, and we think that, if it be fairly tried, it will shortly be found that more stringent regulations are possible. Improved means of fume condensation have frequently been suggested, and several recent inventions are said to yield good results. The stimulus of necessity will soon bring success, and this stimulus will be supplied, to some extent at any rate, by the proposed Act.

Up to this point there is no substantial disagreement between the manufacturers and the public. The manufacturers fully admit the existence of evils, and have, as a body, shown throughout an honourable desire to lessen them. Many of them have spent large sums in the effort to reform, partly, no doubt, from fear of prosecutions, but also with the honest desire to avoid inflicting annoyance on their neighbours. They profess themselves willing to open their works, when they are not already opened, to Government inspectors of sufficient knowledge and known impartiality, and to pay any penalties fairly imposed upon them; but they draw a line here, and decline to submit to any similar powers vested in the hands of local authorities or private individuals, possibly prejudiced, and almost certainly ignorant. Frankly, we cannot wonder at the objection, for our experience of local authorities has not inspired us with any blind belief in their wisdom. The public, however, who suffer annoyance, and sometimes loss, from the manufacturers, are entitled to be heard in the matter, and there are not wanting many, whose opinions carry great weight, who allege that the proposed extension of the powers of the Local Government Board to its inspectors would alone do but little to remedy their grievances. They would even prefer to leave matters as they are a little longer, rather than see the Bill pass without at least one clause granting power to individuals or sanitary authorities, or both.

This brings us to the disputed clauses in the two Bills. In the Bill of last year a proviso was inserted (Clause 27), by which a sanitary authority, after trying unsuccessfully to induce the chief inspector to take action against a factory charged with infringing the Act, might have taken proceedings in the County Court on their own account, and, if successful, have obtained a prohibition of the nuisance. It is unnecessary to discuss this clause now, as it is so completely altered in the new Bill, that the objections of the manufacturers no longer apply. Under the new clause (29) the local authority has only the power of complaining to the Local Government Board, who will then be compelled to institute an inquiry, and either direct proceedings to be taken or punish the authority which has complained without cause, by making them pay the incidental expenses.

The other clause, formerly the 29th, now the 30th, deals with what are called contributory nuisances. It enables "any person" injured by a nuisance arising from the joint acts or defaults of several persons to proceed against them jointly or severally, and recover damages from each in proportion to the contribution of each to the nuisance. This power, as regards money losses, is already possessed at common law under a clause in the new Judicature Act, as has recently been proved by an important trial before Mr. Justice LUSH at Newcastle (Charlton *v.* Russell and others), but such a trial involves great expense, and it appears doubtful whether this one decision would be found to govern all cases.

It is, then, over this clause that the battle must be fought. The arguments in its favour were well stated by Lord DERBY at the recent deputation to Mr. SCLATER-BOOTH, while its opponents could have found no better spokesman than Mr. E. K. MUSPRATT, who, on the 25th ult., read a remarkably able paper on the subject to the Society of Arts at a meeting, presided over by Mr. J. C. STEVENSON, M.P., and consisting to a great extent of chemical manufacturers, many of them among the most celebrated in England. Space forbids us to state the arguments, *pro* and *con.*, in detail. We must be content with expressing our opinion, formed after very careful consideration, that the clause may be surrendered without serious injury to the Bill. It is true that the "joint and several" remedy is, in some form or other, necessary for the

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protection of the public, and that such a remedy should be obtainable without ruinous expense to the aggrieved party. But the opportunity which the present Bill affords of trying the important experiment of extended inspection is one that should not be allowed to escape, as it will certainly afford, in time, a basis for further legislation, and there is really little chance that a measure, seriously opposed by so influential a body as the chemical manufacturers, can pass in such a busy session as this is likely to prove.

We may add that the clause is quite out of harmony with the rest of the Bill, which elsewhere deals with penalties to be paid to the Exchequer, and not with damages to be awarded to individuals.

Annotations.

"Ne quid nimis."

THE CHARTER OF THE VICTORIA UNIVERSITY.

THE draft Charter of the proposed Victoria University of Manchester has been issued, and its provisions are substantially the same as those contained in the draft scheme which received the sanction of the Privy Council during the last session. The Charter provides for three governing bodies—viz., the Convocation of the University, the University Council, and the University Court. The Convocation will consist of the chancellor, vice-chancellor, professors, lecturers, and registered graduates of the University for the time being; and all graduates of three years' standing shall be entitled to register. A meeting of Convocation is to be held at least once in every year, and any question may be decided on if thirty members at least are present; but, as in the case of the University of London, its powers are exceedingly limited, and the superior authority is not bound even to take its discussions and decisions into consideration. It elects, at first, four members to the University Court, and this number may be gradually increased to seven, and then to ten, or even further with the consent of the Lord President of the Privy Council. It will also have the power of electing the chancellors of the University, after the first; and the chancellor, in his turn, nominates three members of the Court. An exceptional privilege granted to members of Convocation is that they may be present at the meetings of the Court, subject to any exceptions and regulations prescribed by the Court. If this clause be liberally interpreted by the higher authority, as doubtless will be the case, it will be a great boon to the graduates, and make the deliberations of the Court of much interest to the junior members of the University. The University Council is the executive body of the University, and may exercise such of the powers as the statutes of the Court direct, except the admission or exclusion of a college to or from the University, and the election of a vice-chancellor or members of the Court. Due provision is made for an appeal to the Court against the acts of the Council. The Council will consist of (1) the chancellor; (2) the vice-chancellor; (3) six members of the University Court appointed by the Lord President of the Privy Council; (4) two other members of the Court chosen by the Court from amongst those members elected by Convocation; (5) four other members chosen by the Court itself; (6) the president and chairman of the Council, and the principal or other chief academic officer of each College in the University; and, lastly, such of the Professors of the College in the University as are members of the Court by virtue of the choice of the senates or academic boards of the several colleges. We attach more importance to the constitution of the Council than to any other part of the charter, and everyone interested in the future of the University will appreciate the thoughtful and liberal manner in which the various interests are represented. Crown nominees, members elected by Convocation, by the Court itself, and more especially the professors and heads of colleges, all have places. It is the exclusion of the last-mentioned element, except by a chance nomination of the Crown or election by Convocation, that constitutes the weak point in the Senate of the University of London, and which has already caused, and must cause, grievous dissatisfaction. The University Court is the highest authority, and to it is entrusted all matters concerning the University, but it is expressly stated that it shall not be lawful for it to impose any test whatsoever of religious belief or profession. The Court will consist of the Duke of Devonshire as Chancellor of the University; J. G. Greenwood, LL.D., the Principal of Owens College, as Vice-Chancellor; the Archbishop of York, the Marquis of Ripon, the Earl of Derby, Lord Frederick Charles Cavendish, Baron Winmarleigh, and the Bishop of Manchester, as life members; Mr. W. E. Forster, M.P., the Rev. Mark Pattison, and Dr. Joule as members for six years; Dr. Gott, Mr. E. Baines, and Mr. W. Bowman, F.R.C.S., as members for three years. On the death or resignation of any of the above, or at the expiration of their term of office, the Lord President of the Council will fill up the vacancy. The other members of the Court will be the three nominees of the Chancellor, four others elected by Convocation, and the representatives of the Colleges, and these are to hold office for not less than three nor more than twelve years. The Colleges will be most fully represented by their presidents, chairmen of council, principals or chief academic officers, as well as by not less than two or more than four of their teaching staff, and not less than four, or more than twelve, chosen by the governing board of every college. Owens College naturally takes precedence, but due powers are given for the admission of other colleges, and the number of Yorkshire representatives on the Court is evidently intended to at once secure admission for the Yorkshire College of Science. All examinations are to be conducted jointly by external examiners and by examiners who are professors or lecturers of the University. Full freedom for the admission of women is maintained by the University, but inasmuch as degrees can only be obtained after collegiate study, each college may take its own line of action in the matter; and hence, whether this privilege be made full use of, or be rendered inoperative, is entirely beyond the discretion of the University. Degrees in Medicine or Surgery are expressly excluded, unless and until authority in that behalf is given by further charter, or by Act of Parliament. We shall look with great interest for the regulations which the new University considers necessary that the students of Owens College, and the other Colleges which may join it, must observe before being allowed to present themselves for degrees.

SMALL-POX STAMPED OUT.

THE beginnings of small-pox in a parish are an occasion for showing the stuff of which a medical officer of health is made. If he is worthy of his office, and if he has a vestry equal to its functions, he can save the community hundreds of lives and thousands of pounds by timely removal of the first cases to hospitals, by house-to-house visitation in the infected streets, and by inspections of children in schools. If he is not worthy of his office he will not look near the infected houses; he will ply no influence with stricken families; he will take his information from the newspapers, or the registrars of health, and content himself with issuing large posters on the efficacy of disinfectants and rhetorical reports for the vestry, until the epidemic is past all control,

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and sanitary law and medical science are alike discredited. The recent outbreak of small-pox in St. Pancras fortunately has been met by a vestry and a medical officer of health answering to our first description, and up to this time it would seem to have been stamped out. Mr. Murphy, in a recent report to the guardians, describes the first cases as occurring on the 5th and 6th of January in Brunswick-grove, and being removed on the 9th to the hospital. They were infected by cousins living in Islington, where sixteen cases were known to have occurred in November. Ten or twelve cases more occurred in Brunswick-grove, and were removed. Between Feb. 5th and 16th fourteen other cases came to Mr. Murphy's knowledge, twelve in Brunswick-street and two in Brighton-street, and were at once removed. Three medical visitors were sanctioned by the vestry, and a house-to-house visitation of the infected district was made. Many susceptible persons were discovered and vaccinated by Dr. Claremont, public vaccinator, to whom and to Dr. Smith, the district medical officer, Mr. Murphy paid a well-merited compliment for their prompt co-operation. He himself received the formal thanks of the vestry, which is to be congratulated on having not only a good officer but the power to appreciate and take his advice. After writing his report there were six other cases. But Mr. Murphy, at the time of the meeting at which his report was read, believed the whole thing was at an end.

THE DEAD-LOCK AT GUY'S.

THE dispute which has arisen between the medical staff and the treasurer of Guy's Hospital is a most unfortunate one, and is likely very seriously to interfere with the well-being of one of the most important of our medical charities and medical schools. The staff are unanimous, and the treasurer stands alone. The contention at present is of twenty against one; and without prejudice to the question at issue, we may say that it is a strong argument against the constitution of Guy's Hospital that it has been possible for such a dispute to arise. The idea of a layman, presumably without any special knowledge of nursing or doctoring, having power to run counter to the unanimous opinion of a staff of twenty eminent members of the profession seems incredible. The treasurer having made a sweeping alteration—we will not call it a reform—in the nursing system without first consulting the medical officers, meets a protest on the part of the staff with an expressed determination to stand to his guns, and accordingly a full meeting of the governors has been called to arbitrate between their representative on the one hand, and their tried and faithful servants, the medical staff, on the other.

Such an event is without precedent in the annals of Guy's Hospital, and it is to be hoped that a full statement of the opinions of the staff and of the treasurer will enable the governors and the public to calmly consider the merits of the case. We gather that the staff fear the "ward system," which has been that in vogue at Guy's Hospital, will be done away with, and another substituted, in which the interests of nursing as a craft will be made superior to the interests of the patients and the students, and that the thoroughly competent nurse, who hitherto has been supreme in her own ward, and who is well versed in the views as to treatment which are held by the physician or surgeon under whom she serves, will give place to a constantly shifting "sister," who is in all things subordinate to the "lady superintendent." The treasurer, we believe, has replied to these allegations of the staff, and has assured them that their fears are groundless; but any impartial person who is capable of reading between the lines will see that, although the staff may have overstated their case a little, the treasurer has also overstated his, and that there is good reason to believe that the "ward system" under the new régime cannot be the same thing as it has hitherto been. As to the value of the ward system, we have no doubt whatever, and we are sure that it is greatly to the advantage of the patients that a nurse should be to some extent a specialist, and should devote herself to one class of cases—medical, surgical, obstetric, or special. The position of a head nurse at Guy's ought to be so good, and her independence ought to be so assured, that women of fair education, thorough nursing capacity, and undeniable respectability should be found in plenty to fill it. We would remind the governors that nursing is not a sentimental matter, but a business, just as cooking, shop-keeping, or teaching is a business. We would also remind the governors that it is a matter upon which the medical staff are better able to give an opinion than any number of ladies, who are far too prone to look only to the sentimental side, and to think that a woman who is sober, obedient, religious, and genteel is necessarily a good nurse. This is not by any means always the case, and it is undeniable that the strong, homely woman of the lower classes, who as a nurse is going out of fashion, often possessed qualities of value which are looked in vain for among many who take up nursing rather as a "sacred calling" than as a matter-of-fact business.

It is in human nature to love independence, and the legitimate ambition of a young woman who takes up nursing as a calling is that she may some day rise to the position and independence of a head nurse; just as a kitchenmaid dreams of some day being a cook, or even a housekeeper. Under the modern system this ambition is never gratified, since the officers and petty officers are seldom recruited from the ranks; and the really clever, skilled woman has often the mortification of finding herself under the control of a lady-tyro who has a maximum amount of sentimental enthusiasm with a minimum of common sense.

We hope the governors, before they arrive at the fatal decision of running counter to the deliberately expressed and unanimous opinion of their medical staff, will at least take some pains to find out what the modern system is elsewhere; although we warn them that much skill is often shown in concealing its defects; the chief of which is that the nurses do not stop, and after using the hospital merely as a school quit it to practise their "profession" for themselves. They prefer being "farmed" by the proprietor of a nursing institution, where, when actually nursing, they enjoy absolute independence, to remaining in a position of rigid subordination at a hospital.

TRICHINOSIS.

LORD THURLOW did good service the other night in asking when the report of the Government Inspector, who had been commissioned to inquire into the circumstances of the alleged outbreak of trichinosis on board the *Cornwall* reformatory school-ship, would appear. The subject is one not merely of professional interest but affects both the sellers and consumers of cheap American and other pork. The symptoms of trichinosis and the anatomical appearances met with after death, are tolerably characteristic, so that it would not be difficult to determine the presence or absence of the parasite in any given case. Since the alarm has been raised it is only natural that persons interested in the matter should be informed of the facts on which it was based. What the public wants to know is whether an outbreak of trichinosis has occurred, as alleged, from the use of American or other foreign pork, and if there is evidence to show that the meat was sufficiently cooked before it was served out. Considering the period that has elapsed between the first commencement of the outbreak and Lord Thurlow's question, the Government by this time ought to have been prepared with some definite answer. Till Government gives some information on this important

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subject, we would advise the public to be particular in seeing to the careful cooking of all American and German pork, bacon, or ham that they may purchase. Opinions differ as to the temperature necessary for the destruction of the trichinæ, but experience shows that thorough cooking confers an immunity from the disease. This probably explains the circumstance why persons who apparently have partaken of the same trichinous pork are not equally affected, some having eaten the well-cooked, others the underdone, portion of the meat. In North Germany, where the people eat raw ham, sausage made from raw pork and but slightly smoked, and even raw-chopped pork itself, several severe outbreaks of the disease have occurred; but in Southern Germany, according to Niemeyer, where the people dislike raw flesh, and even pickled and smoked ham and sausage, not a single case of acute trichina poisoning has been reported.

COLONEL STANLEY ON THE ARMY MEDICAL DEPARTMENT.

IN bringing forward the Army Estimates on Monday night Colonel Stanley adverted to the very different position in which the Medical Department stood this year as compared with last. Thanks to the liberal terms of the new Warrant students of a better class than those brought into the army of late years had come forward for admission. In the two examinations held since the promulgation of the Warrant 118 candidates presented themselves, of whom 107 were accepted. He was glad to say that, although he was "fully aware that no one in this world can please everybody, there is a great concurrence in favour of the Medical Warrant as it now stands." He took the opportunity of bearing testimony to the efficiency, zeal, and self-devotion of the medical officers in South Africa and Afghanistan, remarking that of this there is even melancholy evidence in the large numbers who have succumbed to hard work, especially among the Indian forces. He drew especial attention to the loss the army medical service and the medical world in general had sustained in the death of Dr. Porter at Sherpur, "an officer whose arrangements for all the medical duties of the campaign left nothing to be desired." He died leaving behind him "a reputation to which his friends may look back with satisfaction, and a memory which will be dear to all who knew him." Colonel Stanley also called attention to the very satisfactory manner in which the ambulances were organised and worked under Surgeon-Major Hector in the attack on Secocoeni's camps, quoting from a letter written by Colonel Brackenbury: "It was a sight to see, for I suppose it was the first action fought by our troops in which it can be said that not a single *fighting* man left the ranks to move the wounded to the rear." He also stated on the authority of the Principal Medical Officer that "so efficiently and rapidly did the bearer corps perform its duty that no wounded man was left two minutes on the ground before he was taken to the dressing station." Colonel Stanley alluded to the permission granted to medical officers to exchange, to the restoration of forage to the department, and to the provision made for the employment of a number of officers on the half-pay list at certain stationary posts, as being important boons secured by the new Warrant.

Having disposed of the candidates and medical officers, Colonel Stanley proceeded to make some remarks on the health of the army, and here he must have been either very incorrectly reported, or very badly coached up; we are disposed to think the former from the tenor of his remarks. The statement of the sickness and mortality, as reported, is so obviously wrong, that it would be useless to quote it. He concluded his remarks on Vote 4 by noticing the marked improvement of the health of the troops in Cyprus, and stated with reference to the 42nd and 71st Regiments, which suffered so much in that island, that their health is now good in all respects, and that since they left Cyprus "they have had an entire immunity from malarious affections." The latter statement, however, scarcely accords with a previous remark, that the increased sickness at Gibraltar "is stated to have arisen from the prevalence of paroxysmal fever among the troops sent thither from Cyprus."

THE PATHOLOGICAL SOCIETY.

THE Council of the Pathological Society has decided to try to direct the attention of its members especially to certain given subjects which particularly require elucidation, and for this purpose has appointed a committee, which will publish a list of specimens it seeks to have exhibited and of subjects to be more especially worked at. The idea is good, but we hope the committee will be thoroughly representative and not direct the work of the Society into one or two grooves merely. It is evident that a time must arrive when it is no longer desirable to exhibit and place on record examples of disease already fully described in the Transactions of the Society. And it is also evident that a Society with such a large number of working members as the Pathological has will do better work if it prosecutes its labours in given directions at certain times. Of course this arrangement will in no way restrict the exhibition of other specimens. The success of the new scheme will depend mainly upon the skill of the committee in the selection of subjects, which must not be too narrow. On Tuesday last the meeting was prolonged beyond the usual hour for the exhibition of some recent specimens. We cannot but think that it is a pity to do this unless in very exceptional circumstances; the recent specimens should be taken first, so that if numerous they might be exhibited and described at a subsequent meeting. The half hour tacked on is usually very wearisome; most of the members are tired and listless, while the wiser ones leave at the usual hour.

OLEOMARGARINE.

THE recently published correspondence with regard to the manufacture of the so-called oleomargarine, oleomargarine butter, butterine, or bosch butter, in the United States, has created no little disgust in England, and has been commented on by many of our daily contemporaries. The "delicacy" in question is well known to English chemists. Accurate methods for its detection and quantitative estimation are known, and there is no difficulty in obtaining convictions against tradesmen who sell it as genuine butter. Nevertheless, it is startling to read of the gigantic scale on which the manufacture has been carried on in America. One company alone, working under the patent of M. Mège of Nancy, converted in 1876-7 as much as 500,000 lb. of fat into the so-called butter every week. The State of New York now prohibits the sale of this article as butter, and this prohibition, coupled with the reduced price of the genuine article, has diminished the manufacture greatly. It is still, however, enormous, and there can be no doubt that much of this American sham produce finds its way, directly or indirectly, into this country. The newspaper extracts which are printed with the official report of Consul-General Archibald, exhibit an amusing conflict of statement and exchange of incivilities between the scientific men engaged in the controversy. On the one side oleomargarine is lauded as a most excellent and valuable article, equal in dietetic value to all, and superior to most, kinds of genuine butter. It is said to be made exclusively of the caul-fat of the ox, carefully purified and flavoured with milk. Its detection, except by chemical analysis, is asserted to be impossible. On the other hand, the defenders of the dairy allege that oleomargarine is a loathsome and

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dangerous article, that it is made in part, at least, from the refuse fat of the pork packing establishments, and from "every variety of vile grease." They give startling microscopic drawings, and make even more alarming statements, as to the probability of the trichina being carried by its means. In fact, the two parties seem to vie with each other in the exaggeration of their statements. The chemical knowledge of the scientific combatants is evidently of the loosest kind, for several glaring absurdities occur in their analyses, and they do not seem in any single case to have determined either the specific gravities or the melting points of the samples they examined.

The truth in regard to the whole matter may be very simply stated. Oleomargarine, or whatever we may choose to call it, made from beef-fat is not a noxious or dangerous substance, and there is no reason why it should not be eaten if people, knowing what it is, choose to eat it. There is, however, an obvious risk that "vile grease" may be used by the manufacturer as a cheap substitute for caul-fat. The manufacture should, therefore, if carried on at all, be carried on under inspection. We are not inclined, however, to attach much importance to the trichina story. Certainly no English analyst would venture to certify that butterine was an adulteration dangerous to health.

On the other hand, the selling of animal fat as butter, or the mixing of it with butter without full and intelligible description, is clearly a fraud, and as such should be punished with rigour. When properly made and described, the sale of such articles should not, in our judgment, be prohibited. The price of good butter is becoming in many places so extravagant as to place this valuable article of food almost out of reach of the masses.

COMPOUND FRACTURES AT ST. GEORGE'S HOSPITAL.

WE have already alluded to the paper on compound fractures, in the last volume of the St. George's Hospital Reports, by Mr. Holmes, but the statistics he there gives appear worthy of more special notice. Mr. Holmes takes all the compound fractures of the leg in St. George's Hospital during a period of 14 years, in all 203 cases, of which 67 died, a mortality of 1 in 3. Of these 31 were submitted to immediate amputation, and 17 of the patients died. In 10 others death occurred within 2 days from other injuries or "shock." The remaining 162 cases, with a mortality of 40, or 24·7 per cent., may be conveniently divided into three groups, according to the treatment employed. In 33 strict antiseptic measures were used, and of these 7 died—21 per cent. The complications noted are—delirium 5 cases, fatal in 2; gangrene, 1 fatal case; tetanus, 1 case fatal; pyæmia, 2 cases, in 1 of which delirium made it "next to impossible to carry out the antiseptic treatment properly;" visceral disease proved fatal on the sixth day in 1 case. The only deaths out of the 7 which were surgically preventable are the 1 from gangrene and the 2 from pyæmia, only 1 of which may fairly be said to follow the use of antiseptics. The next series is a set of 60 cases treated by sealing the wound with dry lint, blood, or collodion, with a mortality of 14, or 23 per cent. Death occurred from pyæmia in 9 cases, from delirium in 5, and erysipelas or diffuse inflammation occurred 3 times. Particulars of the individual cases are not given, but there can be no reasonable doubt that among those treated by sealing of the wound there would be a large number in which the soft parts had been merely punctured by the bones, and not bruised or crushed by the fracturing force, while there is nothing to render it probable that there would be any such favourable selection of cases among those treated by Listerism. But in the absence of specific evidence this is only conjecture, and we would disregard it; the fact that out of 60 cases thus treated so many as 9 died of pyæmia is painfully eloquent, especially when compared with the single fatal case of blood-poisoning in the 32 cases treated antiseptically. The third set of cases, 69 in number, includes all those treated by other methods; the deaths were 19 in number, 27·5 per cent. Pyæmia was the cause of death in 10 cases, erysipelas or diffuse inflammation in 2, gangrene in 2, secondary hæmorrhage in 1, delirium in 3, and in 1 case the cause of death is not stated. But in addition, among the cases that recovered phagedæna occurred 4 times, erysipelas or diffuse inflammation 7 times, and delirium 4 times. It is noteworthy that the mortality from pyæmia is practically the same in these cases and those treated by sealing the wound; it is when strict Listerism is applied that a marked difference is seen. There is another point of view from which these facts are important. We often hear German statistics referred to as being no guide to the value of Listerism in England on account of the far greater prevalence of blood-poisoning on the Continent. But, surely, when in a London hospital so many as 13·5 per cent. of cases of compound fracture of the leg die of pyæmia, not to mention the results of local infection recorded in these statistics, we can hardly speak thus with justice, nor can we regard as unimportant the general adoption of a mode of treatment which reduces infection from a wound to a minimum, if, indeed, it do not prevent it entirely. Mr. Holmes confesses to a belief in the value of strict antiseptic measures, and we feel sure that his paper will induce or strengthen the same faith in those who will carefully and impartially weigh the facts cited therein.

METROPOLIS WATER-WORKS PURCHASE BILL.

UNDER this title the Home Secretary has brought in a comprehensive and apparently statesmanlike measure to buy the plant and business of the existing water-companies, with a view to "the supply of pure and wholesome water for drinking and other domestic purposes," &c. The mode of purchase is that which we have repeatedly recommended for adoption in the case of private asylums—namely, the creation of State bonds bearing interest, and the gradual extinction of the debt by a sinking fund. If these principles were generally applied to the purchase of property vested in shareholders, many difficulties would be avoided. The business of the companies is to be worked under the superintendence of a board, to be called the Water Trust. The measure, which may be more conveniently discussed after we have had an opportunity of examining its provisions in detail, is to take effect on the 1st day of July in the present year, and the enterprise is to be fully transferred to the Water Trust by the 1st of October next, so that the Government evidently "means business."

PLAGUE AND POLITICS.

THE Vienna correspondent of *The Times* appears to be under the impression that the Czar must have been influenced in the selection of General Count Loris Melikoff as chief of the Imperial Commission just created in Russia, by that nobleman's recent successful efforts in stamping out plague in the province of Astrakhan. It will be remembered that when the alarm of plague on the Volga spread, Count Loris Melikoff was despatched to the seat of the disease armed with powers as extraordinary for effecting its extinction within the limits of the provinces of Saratow and Astrakhan, as he is now armed with for repressing the political plague which is causing a panic throughout the Russian empire. The writer referred to thinks that his success in the former case suggests his fitness for dealing with, and promises a successful issue in, the latter case. Let us hope, however, that there are juster grounds for trusting in the success of Count Loris Melikoff's efforts in the political

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crisis, than those derived from his attempts to arrest plague in the province of Astrakhan. There is too good reason for the belief that the measures organised at so much expense and trouble by the Count in Astrakhan exercised no appreciable influence upon the dissemination of plague, except in so far as they transformed the hygienic conditions of the places attacked. If he can succeed in transforming the unwholesome conditions of political or social life out of which the present political trouble arises, well and good; but if he aims at stopping the trouble by a moral quarantine, so to speak, the lesson from Astrakhan would not give much hope of good result.

ROYAL MEDICAL BENEVOLENT COLLEGE.

THE ensuing election at the College is to be made in accordance with the new rules—i.e., by the advice of a committee of six members elected by the council and the treasurer. This committee will examine the claims of each candidate for election, and will then submit a list of names to the council in accordance with the number of vacancies to be filled up.

The council will not forthwith appoint the candidates selected by this committee to the vacancies, but, with the ballot papers supplied to subscribers, they will enclose a slip with words printed upon it to the following effect:—"*The Committee of Examination recommend the following cases as being, in their opinion, the most urgent.*" A knowledge of the course to be pursued has, we believe, very much diminished the amount of canvassing, and we sincerely trust that the new plan will be found to work well, and that the objectionable touting and canvassing will be things of the past.

THE PARKES MUSEUM.

THE course of demonstrations lately given in this museum to members of the Working Men's Club and Institute Union is to be followed by a second course by Professor Corfield and Mr. Rogers Field, C.E., for the benefit of members of the Institution of Builders' Foremen and Clerks of Works. It is very gratifying to find that the museum is appreciated by the very class in which a practical knowledge of hygiene is so essential. The museum bids fair to occupy a prominent place among technical schools, and we are glad to find that the City companies are showing some disposition to help the committee in their work. The Clothworkers' Company have recently given a second donation of 50 guineas, and the Drapers' Company have contributed a similar amount. The Merchant Taylors' Company have also given 10 guineas. The committee are, therefore, just able to pay their way without trenching upon the small nest egg which they have wisely invested as the nucleus of an endowment fund. A very few thousand pounds would be sufficient to securely establish this useful museum for all time, and we have little doubt that a public body, or perhaps an individual, will be found who will erect a suitable building for the permanent housing of the collections and endow it with the moderate income which is necessary for its efficient maintenance.

MEDICAL EVIDENCE AT INQUESTS.

WHATEVER reforms may be effected in the office of coroner, we trust means will be taken to make it plain to this dignitary that medical evidence needs, and must, be called in every case of unexplained death. It is not for a coroner, be he a layman or a member of the medical profession, to allow evidence as to the cause of death to be taken or disregarded at pleasure. There should be no discretion in the matter. Even if he *thinks* he can recognise the cause of death, without evidence, there should still be proof offered to the Court. An ordinary judge does not convict a prisoner because he himself happens to possess a strong faculty of guessing whether the prisoners tried before him are guilty or innocent. Professional knowledge is required to qualify the coroner to understand and sift medical evidence, not to enable him to dispense with it. This should be clearly understood, or it will be necessary to take away from coroners, whether medical men or laymen, the discretion now entrusted to them, and which they sometimes abuse.

HUMAN FILARIÆ AND MOSQUITOS.

THE new investigations of Dr. Manson, communicated to the Quekett Club last week, appear to afford positive proof of a singular habit on the part of the filariæ. These microscopic worms periodically pass in and out of the circulation. Dr. Manson gives a table showing the hours of the day and night at which they are either present or absent in the blood. The worms are remarkably punctual in keeping to their appointed times. The evening inrush to the circulation commences about half-past seven, the overcrowding attaining its maximum at midnight. Into the clinical bearings of the subject it will be time to enter when the remarkable evidence brought forward by Dr. Manson has been fully published in the Transactions of the Club. In addition to some introductory remarks by himself, the President read brief communications on the subject of filariæ from Drs. Somerville, Mortimer-Granville, J. Bancroft, J. L. Paterson of Bahia, and others. The meeting was well attended, and in the course of the discussion which followed, Dr. Stephen Mackenzie stated that he had at present under his care, in the London Hospital, a patient from Calcutta, with chyluria. Although Dr. Lewis had found filariæ in the blood of this man in India, Dr. Mackenzie's efforts to find the filariæ had at present been unattended with success. The interest of the various papers was much increased by the exhibition of drawings and specimens of the filariæ in all the stages of growth hitherto observed. Numerous infested mosquitos were also shown.

INTERNATIONAL SANITARY CONFERENCE.

A JOINT resolution, authorising the President of the United States to call an International Sanitary Conference, to meet in Washington, was introduced into the Senate, and also into the House of Representatives, on Feb. 2nd. The resolution, which was referred to the Committees on Epidemic Diseases, set forth that the several powers having jurisdiction of ports likely to be infected with yellow fever shall be invited to send delegates, properly authorised, for the purpose of securing an international system of notification as to the actual sanitary condition of ports and places under the jurisdiction of such persons and of vessels sailing therefrom.

THE PROVIDENT DISPENSARY MOVEMENT.

IT is gratifying to notice the reports of the steady progress of this movement in various parts of the country. Three such reports are before us. The Kingston Provident Dispensary shows an increase of 516 members in 1879 as compared with 1878. The seven dispensaries connected with the Manchester and Salford Provident Dispensaries Association are rapidly becoming self-supporting. Two, in fact, are already so. The total cost to the guarantors has been reduced from £1235 in 1876 (the first year of the Society's operations), to £306, the amount paid in 1879. At the annual meeting it was resolved to unite the Association with the Manchester and Salford Provident Society. The Liverpool Dispensaries, not provident in the strict sense of the word, have resolved to give their honorary officers an honorarium of £40 per annum. It is to be hoped that the committee will see its way to applying the provident principle in a systematic form. Mere payments by

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patients for medicines have not the same moral or economic effect, and the time has come when the free dispensaries can assist most materially in the provident movement by adopting the principle and applying it, where it can be applied without hardship, to the patients.

ALDERSHOT.—MESS FOR MEDICAL OFFICERS.

WE are glad to hear that Government has sanctioned the formation of a medical officers' mess at Aldershot, and we understand it is contemplated to open one without delay in the East Infantry Barracks, South Camp. This is a step in the right direction; Aldershot is not only our largest garrison, and has therefore always a large staff of medical officers, but under present arrangements the young medical probationers are sent there, after they leave Netley, for instruction in ambulance and stretcher drill at the depôt of the Army Hospital Corps, and for a course of riding drill; it is therefore most essential for their wellbeing and comfort that a mess should be provided. Netley already possesses a handsome and well-regulated mess, and we have a vivid recollection of the hospitality and sociability of the old medical staff mess at Fort Pitt in days gone by. We hope the example of Aldershot will be followed at all our large garrison towns.

DR. FAIRBANK.

THE chief facts of Dr. Fairbank's honoured life and sadly premature death are noticed elsewhere. It is happily seldom that we have to record a death so untimely, and in the very midst of active professional life. The supposition is that Dr. Fairbank suffered from aneurism of a cerebral artery, and there is some reason to connect this lesion with a fall from his horse which occurred five years ago. Dr. Fairbank filled an important position with credit to himself and with satisfaction to his Royal clients, who, we have reason to know, were unremitting in their kindly attentions during the few anxious hours that elapsed between the seizure and his death, as they have been in manifestations of sympathy since the fatal occurrence. The thousands who lined the way of the funeral on Wednesday were a proof that Dr. Fairbank enjoyed the respect of the community as well as of the Court. These facts, and the general sympathy of the profession, will afford some alleviation of the grief of Dr. Fairbank's family, and constitute a striking example of the position to which a young man may attain in this country, who begins life with no special advantages.

MEASLES FATALITY IN PLYMOUTH.

THE frequent and exceptional fatality of measles in Plymouth is noteworthy. Excepting Liverpool and Salford, not one of the twenty large towns, dealt with in the Registrar-General's Weekly Return, has shown nearly so high an average death-rate from this disease during the past ten years as has Plymouth. During the ten years 1870-79 the annual death-rate from measles in Plymouth has averaged 0·71 per 1000, and the disease was fatally epidemic in 1871, 1874, 1876, and 1878. The disease has again been exceptionally fatal within the borough during the past fourteen weeks, during which period no less than 104 deaths have been referred to this disease. The great and constant fatality of measles in Plymouth is probably in great measure due to the high death-rate from diseases of the respiratory organs in that borough. During last month the annual death-rate from diseases of the respiratory organs in Plymouth was equal to 9·3 per 1000 of the population, against but 6·5 in Portsmouth, 8·1 in London, and 5·1 (the average rate) in 151 urban sanitary districts. Plymouth enjoys a higher mean winter temperature than any other of the twenty large towns, which makes the high death-rate from diseases of the respiratory organs the more unaccountable. These facts are strongly suggestive of low and unsatisfactory condition, and call for the earnest consideration of the local sanitary authority.

THE AFGHAN CAMPAIGN.

A RETURN has just been presented to Parliament showing the numbers killed, died of disease, and invalided of the troops serving in the late Afghan campaign from the date of their advance into the Khyber Pass till their return across the Indus at the close of the operations in the field. From this it appears that of the European force 1 officer and 11 men were killed in action or died of their wounds, 12 officers and 349 men died of disease, including, however, 1 officer and 46 men accidentally drowned in crossing the Cabul river, and 19 officers and 925 men were invalided. Of the native troops 3 European officers, 1 native officer, and 49 men were killed, 7 European and 14 native officers and 794 men died of disease, and 14 European and 17 native officers and 960 men were invalided. Unfortunately the returns give no information respecting the strength of the two forces, or of the various corps composing each, and we are thus unable to institute any comparison of their respective losses. We may observe, however, that nearly half of the invaliding among the European troops occurred from two corps, the 81st Regt. and the 4th Batt. Rifle Brigade. The highest invaliding in the native force was from the 27th Infantry, and next to it from the Sappers and Miners. But without a statement of the strength of the various corps it would be useless to attempt any comparison.

THE LIVERPOOL WATER BILL.

THE Liverpool Water Bill has been read a second time in the House of Commons and referred to a so-called hybrid Committee. We refer to the subject here on account of a suggestion made by Mr. Raikes in the course of the discussion on the Bill, and which seems to us new under such circumstances. He observed that it was desirable the Committee should be assisted by evidence from the Local Government Board, adding that such evidence was more valuable than professional evidence on either side, which was always open to the suspicion that it was supplied to order. Having regard to the very important public questions at issue in this case, we trust Mr. Raikes' suggestion will be acted upon.

"DEATHS FROM VACCINATION."

A QUESTION was put by Mr. Gourley in the House of Commons on Monday evening (March 1st) in reference to deaths from vaccination, which is, perhaps, the most curious incident which has happened even in anti-vaccination vagaries. He asked the President of the Local Government Board if his attention had been called to the returns of the vaccination officer for the Durham Board of Guardians for the year 1878, in which it was stated that out of 2381 children born in the Western and St. Nicholas district, 305 had died from the effects of vaccination, while during the first six months of last year the number of deaths in the same union was 141 from the same cause. The deaths referred to, it appears, were those of children who died *before* vaccination!

ACROBATIC PERFORMANCES.

THE Bill to be introduced by Mr. Jenkins for the prevention of dangerous acrobatic performances will, if it pass, add a very necessary statute to the code of laws framed to save the squandering of human life. In this Bill dangerous performances are first of all defined, and by the principal clause it is sought to enact that any lessee or occupier permitting a dangerous performance shall be liable to a fine of

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fifty pounds. Any proprietor who should compass a child's death by encouraging it to perform a dangerous feat would be liable by the existing law to be convicted of manslaughter, and certainly he would be so liable were any spectator killed by the fall of an acrobat or his machinery. Nevertheless, a new Act is urgently required. If the managers of music halls cannot make their business thrive without catering for the sensational and prurient tastes of the public it is desirable, on public grounds, that this class of enterprise should fail.

THE UNIVERSITY OF GLASGOW.

PROFESSOR J. B. COWAN, M.D., has, as we announced last week, petitioned the University Court to report to Her Majesty in Council in favour of his application to be allowed to retire from the chair of Materia Medica in consequence of the state of his health. It is creditable to Dr. Cowan to resign, though in middle life, when feeling unequal to the duties of his important chair, but his resignation will be not the less regretted. Dr. Cowan has been very much respected as a most just and impartial representative of the Senate in the University Court. It is satisfactory to notice that several eligible candidates are presenting themselves for the vacant chair. Amongst them are Dr. Matthew Charteris, Dr. John Dougall, Dr. James Finlayson, and Dr. Gavin P. Tennent.

THE HEALTH OF CALCUTTA.

SURGEON-MAJOR DR. MCLEOD, the health officer for Calcutta, reports favourably on the state of health of the city during the last quarter of 1879. The aggregate mortality of the quarter was lower than that of the corresponding quarter of any year in the preceding decade, with the exception of 1869, 1870, and 1873. This lowering of mortality is observed in all of the deaths the causes of which are given in the tables accompanying the report—namely, "fevers," cholera, dysentery, diarrhœa, and small-pox. The mortality from cholera fell below the number recorded in any of the preceding ten years, except 1870 and 1873, and amounted to less than one-third of the average. With regard to this diminution Dr. McLeod observes, it "is all the more satisfactory considering that the period is composed of the reduced returns coincident with the introduction of a pure water-supply." The reduction of the mortality from "fevers" was observed equally in the suburbs as in the town, and was coincident with a scanty rainfall and cheaper food.

DEATH OF A MEDICAL OFFICER AT KANDAHAR.

TELEGRAPHIC information has been received of the death at Kandahar, on the 29th ultimo, of Surgeon-Major Robert Henry Bolton, Army Medical Department. Mr. Bolton entered the service in September, 1863, and was promoted to the rank of Surgeon-Major in April, 1876. He took part in the Ashantee campaign, accompanying the left wing of the 2nd Battalion 23rd Fusiliers to Coomassie, for which he received the Ashantee war medal and clasp. During the Afghan war he has been in medical charge of a battery of Royal Artillery of General Sir Donald Stewart's Division, and was under orders to return to India when he succumbed to disease due to the arduous services of the campaign.

AT a meeting of the Society of Medical Officers of Health, held on Feb. 20th, the following resolution was passed, a copy of which has been forwarded to Lord Beaconsfield and to Dr. Farr:—"The Society of Medical Officers of Health desires to record its high appreciation of the scientific qualifications of Dr. Farr, and of his long and valuable services in the department of the Registrar-General, and is of opinio that his able deductions and statistical work have contributed in an eminent degree to the advancement of sanitary science, and entitle him to some special mark of honour and approval. The Society also desires to express its gratitude to Dr. Farr for his invariable courtesy towards all medical officers of health."

THE forthcoming annual banquet on behalf of the funds of University College Hospital, to take place on March 11th, at Willis's Rooms, and at which H.R.H. Prince Leopold will take the chair, will, there is reason to believe, be a very brilliant gathering. The French ambassador, the Lord Mayor, and several well-known members of the aristocracy have expressed their intention of being present; and we trust the result will prove financially satisfactory, as the recent enlargement of the hospital has necessarily very much increased the annual expenses.

A CORONER'S JURY in Manchester having returned a verdict of "Death from natural causes, aggravated by neglect of medical aid," in the case of a woman who had been an inmate of the Royal Infirmary, the House Committee met to consider the matter, and have formally denied the charge of neglect. They explain that the disease under which the patient laboured "being a chronic one, the medical officer no longer considered hers a suitable case to remain in the hospital, and she was therefore made an out-patient."

THE death of Edward Owen Jones, M.B., C.M., of Carmarthen, under peculiarly melancholy circumstances, has been announced. Mr. Jones was sailing in a friend's yacht, which came to anchor off Tenby pier on the night of the 25th ult. His absence from the vessel was discovered by the sailor in charge, who at three o'clock on the following morning went on deck to make preparations for sailing. With the daylight several boats went out and dragged for the body, which was recovered a few hours afterwards, and conveyed to the Cottage Hospital, to await an inquest.

IN the way of remuneration for watching over the health-interests of their fellow-townsmen, the members of the Local Board of Exmouth deem £40 per annum as too much by half. They have, therefore, resolved to reduce the salary of their health officer to £20 a year. As might well be expected, the Local Government Board have declined to sanction this little economical (?) arrangement. But the Local Board of Exmouth "stand by their guns"!

IT is proposed to build a new lunatic asylum for Exeter, and a site has, it is stated, been procured on favourable terms. There are, it seems, some hundred insane persons belonging to the city scattered over the county, the cost of whose maintenance ranges from £3000 to £4000.

THE Belgian Royal Society of Public Medicine is, we understand, organising, in connexion with this year's independence *fêtes*, a General Congress of Public Hygiene and Medicine, to be held in Brussels at the Palace of the Academies, next August.

DURING the severe weather of the fortnight ending Feb. 14th, forty persons were reported to have died in Marylebone Workhouse, twenty-six of them being "old and infirm," and nine of these being over eighty years of age.

AURAL surgeons, and others interested in the pathology and therapeutics of the ear, will be glad to learn that the next Oto-iatric Congress will be held at Milan in September next, after the International Public Health Congress at Turin.

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WE learn that a committee, under the presidency of Admiral Hoskens, will shortly assemble to consider the means best calculated to remedy the grievances of which the medical officers of the navy so justly complain.

TESTIMONIAL TO DR. FARR.

A UNANIMOUS feeling prevails among Dr. Farr's friends and admirers that his retirement, after a distinguished public service of forty-two years during which he has laboured unremittingly for the promotion of public health and statistical science, affords a fitting opportunity for presenting him with some substantial mark of their appreciation of the value of his labours. In order successfully to carry out this project, the initiation of which has already met with unanimous and hearty approval, a representative committee is now in the course of formation. Comparatively few have at present been applied to, and among those from whom answers have as yet been received, the promise of cordial support has been invariable. We are requested to state that it is the distinct wish of the promoters of this testimonial—and all those who know Dr. Farr will readily understand that this course will be thoroughly in accordance with his wishes—that the presentation should only be a personal tribute to his past statistical and sanitary labours, without reference to the controversial aspects of his retirement, which could not fail to be painful to him, and which he would wish to be forgotten.

As each post is bringing fresh promises of support, the names below are to be considered merely as a preliminary list of the committee, to which other names will be added so soon as the consent of those applied to is received. We shall be glad to receive any promises of support or assistance in promoting the object in view, which appears to appeal to all who appreciate the value of Dr. Farr's services in promoting sanitary and statistical science. Communications on the subject may be addressed to Mr. Noel A. Humphreys, of the Registrar-General's Office, Somerset House, who is temporarily acting as Honorary Secretary.

Preliminary List of Committee.

The Earl of Derby.
The Earl of Shaftesbury, K.G.
Earl Fortescue.
Sir John Lubbock, Bart, M.P., F.R.S.
Sir Brydges Henniker, Bart., Registrar-General.
Sir Thomas Watson, Bart., M.D., F.R.S.
Sir William Jenner, Bart., K.C.B., M.D.
Sir James Paget, Bart., F.R.S.
Sir William Gull, Bart., M.D., F.R.S.
Sir George Burrows, Bart., M.D., F.R.S.
Sir Joseph Fayrer, K.C.S.I., F.R.S., President of the Epidemiological Society.
Mr. William Newmarch, F.R.S., 67, Lombard-street, E.C.
Major Graham, late Registrar-General.
Dr. Acland, F.R.S., President of the General Medical Council.
Dr. Risdon Bennett, President of the College of Physicians.
Mr. Luther Holden, President of the College of Surgeons.
Mr. Erichsen, F.R.S., President of the Medical and Chirurgical Society.
Mr. A. H. Bailey, President of the Institute of Actuaries.
Dr. Alfred Carpenter, President of the British Medical Association.
Mr. G. W. Hastings, President of the Council of the Social Science Association.
Dr. James Wakley, Acacia-park, Long Cross, Chertsey.
Mr. John Simon, C.B., F.R.S., late Medical Officer of the Privy Council.
Mr. Robert Rawlinson, C.B., Chief Sanitary Inspector of the Local Government Board.
Mr. Ernest Hart, Chairman of the Parliamentary Bills Committee of the British Medical Association.
Mr. Thomas Wakley, Radcliffe-gardens, South Kensington.
Mr. Richard B. Martin, 68, Lombard-street, E.C. (Hon. Treasurer).

HEALTH OF LARGE ENGLISH TOWNS.

EIGHTH WEEK OF 1880.

THE rate of mortality in our large towns has again fallen to its normal proportions. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5412 births and 3322 deaths were registered last week. The births exceeded by 227, and the deaths by 47, the average weekly numbers during 1879. The deaths, however, showed a further decline of 418 from the excessive numbers returned in the three preceding weeks. The annual death-rate in the twenty towns, which had been equal to 37·0, 30·1, and 26·0 in the three previous weeks, further declined to 23·1 last week. During the past eight weeks the death-rate in these towns has averaged 27·5 per 1000, against 26·0 and 27·0 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 14·4 in Wolverhampton, 16·9 in Bradford, 17·0 in Leeds, 18·5 in Leicester, and 19·0 in Brighton. The rates in the other towns ranged upwards to 26·7 in Oldham, 27·0 in Liverpool, 31·8 in Nottingham, and again the highest rate was 32·0, in Plymouth.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 637, 589, and 557 in the three preceding weeks, further declined last week to 467; they included 186 from whooping-cough, 118 from scarlet fever, 80 from measles, and only 26 from fever. The annual death-rate from these seven diseases averaged 3·2 per 1000 in the twenty towns, and ranged from 1·1 both in Birmingham and Leeds, to 7·6 and 9·7, respectively, in Nottingham and Plymouth. Whooping-cough showed the largest proportional fatality in Plymouth and Newcastle-upon-Tyne; measles in Plymouth, Nottingham, and Hull; and scarlet fever in Sunderland, Nottingham, Brighton, and Norwich. The deaths from enteric fever in Sheffield, which had been ten and eleven in the two preceding weeks, declined to two last week. Small-pox caused 13 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 91, 126, and 139 at the end of the three preceding weeks, further rose to 163 on Saturday last; 48 new cases of the disease were admitted to these hospitals during the week, against 57 and 58 in the two previous weeks. The Highgate Small-pox Hospital contained 12 patients on Saturday last, ten of whom were suffering from small-pox.

The fatality of lung diseases, which had showed so large an excess in recent weeks, fell below the average last week. The deaths referred to diseases of the respiratory organs in London, which had been 1557, 1020, and 693 in the three preceding weeks, further declined to 459 last week, and were 12 below the corrected average number in the corresponding week of the last ten years; 306 resulted from bronchitis, and 104 from pneumonia.

THE MANCHESTER MEDICO-ETHICAL ASSOCIATION AND THE CHILDREN'S HOSPITAL, PENDLEBURY.

AT a special general meeting of the above Association, held on February 25th, 1880, the question of Dr. Humphreys and the Children's Hospital was introduced by Dr. Henry Simpson, the President, who moved the following resolution:—"That this Association having had its attention called to the action of the authorities of the Children's Hospital, Pendlebury, in suspending Dr. Humphreys, the senior physician, and having considered the published statements in vindication of this action, hereby records its deep sense of the cruelty and injustice of the treatment which Dr. Humphreys has received, and assures him of its sincere sympathy." In supporting the resolution, the President made the following remarks:—"We are met this evening to consider a matter which seems to come very appropriately before the Manchester Medico-Ethical Society. Its special object, or at all events one of the most important of them, is

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to discuss the relations between the medical profession and the public; and no recent occurrence has excited more painful interest among us than that which has taken place at Pendlebury. It is important in its bearings on the relation between the lay and medical elements in a hospital, and on those between the nursing department and the medical staff. The latter is especially interesting just now, if we bear in mind the evidences of a foolish attempt in some quarters to put the nurses above the doctors. This case also opens up the question as to whether or not it is advisable to invest any one man with what amounts practically to a dictatorship. In moving the resolution, which it is my duty as President to bring before you, I will leave those questions aside, and confine myself as closely as possible to its special subject matter." Dr. Simpson then criticised the line of defence of the medical superintendent and the lay committee, and referring to the language of one of the governors said: "Not even the hysterical fear of 'anarchy' displayed by Mr. Steinthal justified such a proceeding. Dr. Humphreys is not one of the 'dangerous classes.' He is not an anarchist, or Communist, nor, as far as I know, even a Republican. No, gentlemen, Dr. Humphreys is one who has attained to high university distinction, being fifth wrangler and a former fellow of his college. He is a man of scholarly and scientific tastes, and has shown marked ability in the pursuit of medicine as a science. The history of the Children's Hospital is distinguished by this peculiar feature, that during its long period of existence it has added next to nothing to medical science and literature. I must except some valuable papers contributed by Dr. Barlow, but otherwise I am not aware of any scientific work emanating from that hospital. Dr. Humphreys, however, was alive to the value of the wide field of observation before him, and by his frequent appearances at the Manchester Medical Society, and at the meetings of the Microscopical Section of that Society, with communications displaying earnest thought and careful observation, he gave a foretaste of what might have been looked for in the increase of our knowledge of disease and its treatment, had not his connexion with the hospital been ruthlessly cut short. There are," he continued, "one or two questions still to be named before I move the adoption of the resolution. The letter of Mr. Oliver Heywood to Dr. Thorburn, which appeared in Monday's papers, conclusively settles one point which was justly rousing a strong feeling of indignation in our profession. The trumpery and ridiculous charge against Dr. Humphreys, which was the sole reason given for his suspension, together with the feeble defence of it in the medical and local papers by Mr. Cross, Mr. Steinthal, and Dr. Borchardt, have led to a wide-spread belief that there must have been some grave delinquency which the Board, out of kindness, have not published. Mr. Heywood's letter disposes of this idea, for he emphatically says there was nothing."

The following gentlemen—viz., Mr. Meacham, Dr. J. S. Fletcher, Dr. Royle, Dr. Brierley, Mr. Dacre Fox, Dr. Stone, Mr. T. N. Dean, Dr. Leech, Dr. Bury, and Mr. Cullingworth, took part in the discussion, and expressed their concurrence in the views enunciated by the president. The resolution was then put to the vote, and carried without a dissentient voice.

THE RELATIONS OF MEDICAL MEN TO THE CORONER'S COURT.

THE following resolutions were proposed and carried at recent meetings of medical men to consider their relations with the Coroner's Court. A report (for which we regret we cannot find room) of the proposals and subjects discussed at those meetings has been drawn up by Dr. Thomas, the Deputy Coroner for Central Middlesex, and Dr. Steavenson, and has been submitted to Dr. Hardwicke, the chairman of the meetings, and received his sanction:—

1. "That the coroner be requested to accept the services and receive the evidence of a skilful medical gentleman in such cases where the medical man called in at death does not desire to make the post-mortem examination, the fee for which (one guinea) should be paid by the medical man desiring such services."

2. "That it is desirable to refer the friends of a deceased person to the registrar in cases where the medical man called in cannot satisfactorily certify as to the cause of a death, but that the said medical man communicate the ascertained facts direct to the Coroner's office on a form to be supplied for that purpose, so that the coroner can form his judgment as to the necessity of holding an inquiry. The communication being of a private character."

3. "That no registrar of deaths shall be entitled to give an order for the burial of a body without first receiving from a duly registered medical practitioner a certificate of the death as from natural causes; or a certificate from the coroner of the district after an inquest."

Correspondence.

"Audi alteram partem."

"THE CORONER'S FUNCTION."

To the Editor of THE LANCET.

SIR,—The proposal contained in your leader of the 21st instant with reference to the possible future relation of Medical Officers of Health with the Coroner's Court, harmonises so completely with a recent similar suggestion of my own, that I am induced to ask for a short space in your valuable journal with a view of further ventilating this increasingly important question.

You are correct in stating that an extension of the duties of public health officers might be effected with much public advantage, and without interference either with their present functions or with the mode of their appointment. It is, however, certain that a considerable alteration must be made in the requirements of the law relating to special qualification for such appointments, if health officers under the proposed *régime* are to possess the confidence either of the public or of the medical profession. However desirable it may be, theoretically, that preventive and curative medicine should be considered as one science, it is found by experience that the practice of the physician's art and that of State medicine are mutually incompatible. Inasmuch then as it is certain that the official sanitarian who desires to excel in his special calling must give up all hope of success in the ordinary walks of professional life, it becomes a matter of simple justice to him, not less than of public policy, that some means should be within his reach of procuring some authoritative public testimony as to his special qualifications and attainments, analogous to that which his brethren in ordinary practice secure by the acquisition of a medical degree or diploma. In other words, power should be given to one or other of our Universities to examine for and grant degrees in State Medicine, which, like ordinary medical degrees, might confer the titles respectively of Bachelor and Doctor of State Medicine.

The regulations for the first of these degrees might be similar to those now in force for the certificate in Sanitary Science of the University of Cambridge, and might provide for the admission to examination of all registered practitioners over a certain age. The range, however, of the examination should be further extended, so as to embrace the whole of what is included in the term "State Medicine;" and the report of the examiners, instead of discriminating between passed and plucked merely, might usefully class the successful candidates into two or more divisions according to merit, their relative position in the class-lists being duly notified on the degree certificate.

The regulations for the higher degree should be stringent, and should exclude from admission to examination all candidates who have not had actual experience in sanitation and in the practice of public health for a considerable period. The examination for this degree should be an extended and thorough one, and should be conducted by men of the highest attainments in these branches of science respectively. The approval by the examiners of any candidate should moreover be made conditional on his evincing throughout his examination a scientific and practical acquaintance with his subjects, similar in point of accuracy to that which, *mutatis mutandis*, is exacted from candidates for the Doctorate in Literature or in Science of the London University.

I do not know what difficulties beset the way of the existing universities with regard to the inauguration of new

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degrees, but it would surely not be difficult to insert a clause in the Charter now in course of preparation for the Royal Irish University, empowering that institution to grant degrees in State Medicine. However this may be, it is certain that were such an examination instituted by a respectable university, there are a large number of highly-qualified men who would be glad to procure such a "hall-mark" for their attainments as is implied in the granting of a good university degree; and it is only reasonable to assume that the fact that a number of men had thus given such high guarantees of special proficiency in State Medicine would act as a powerful incentive with Parliament to authorise such a desirable and, I may add, economical extension of the duties of health officers, as your able leader foreshadows and suggests.

I am, Sir, yours &c.,

Salford, Feb. 23rd, 1880. JOHN TATHAM.

BRITISH MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—In last week's LANCET you announce the promotions to the rank of brigade-surgeon, and in doing so say, "We are gratified to record the liberal manner in which the Secretary of State for War has acted." I feel sure, therefore, that you will be pleased to hear that the Secretary of State for India in Council has decided that the medical officers who joined under the terms contained in the Royal Warrant of April, 1876, are to be paid at the rate of £250 a year, instead of the rate of £182 10*s.* a year, the amount received during the past two years by those officers serving in India, and authority to issue the difference has been forwarded to India. This recognition of the just claims preferred by those medical officers who were sent to India on the old rate of pay will go a long way to promote a healthy feeling of faith in the promises of the War Office, and to make men prize the commission they should consider it an honour to hold. Young medical men may now come forward without any fear that the promises held out to them will not be fulfilled, and that breach of faith (the result, I am inclined to think, of imperfect understanding) of which we have heard so much is a tale of the past, only to be forgotten in the one great effort now being made to consolidate the Department and secure for our soldiers in every clime the skilled medical attendance to which they are so justly entitled, and which it is the desire of a grateful country to procure for them.

I have great pleasure in forwarding this information to you for publication, and subscribe myself,

Yours obediently,

March 3rd, 1880. "420."

THE NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—As one interested in Naval Medical Reform, would you permit me to offer a few observations from a surgeon's point of view? You will do us a bad turn, indeed, if you succeed in having a period of twelve years' "service," or "in the service" fixed, for our promotion to Staff Surgeon. In the last batch of promotions Surgeons under eleven years were included, who had no special claim, and from this time forward the flow of promotion would seem to promise even to improve still more. The Senior Surgeons now eligible are about ten years in the service, and vacancies already exist for promotion. Should any period be fixed, we hope it will be ten years, of which five shall have been served abroad, it being manifestly unfair for some to be allowed to serve almost continuously at home. From what I have learned from time to time in conversation with many of my brother officers, I do not think that the examination for promotion should be abolished; it is no grievance or terror to the man who keeps himself apace with the times, and reads his LANCET regularly, but there should be no further penalty after loss of promotion in due turn—no forfeit of time or increased pay. I would advocate 12*s.* a day on entry; 14*s.* after four years' service; 16*s.* after eight years; promotion to Staff Surgeon at ten years on 18*s.* a day, with an annual increase of 1*s.* a day until the maximum of 24*s.* be reached; promotion to Fleet Surgeon at eighteen years' service, with a proportionate increase of pay in this and the higher ranks, to those already indicated for Surgeons and Staff Surgeons, £1 per diem retirement on completing twenty years' service.

I am, Sir, yours faithfully,

February 27th, 1880. SURGEON R.N.

*** Our correspondent must not forget that the present state of the list is very abnormal, and that promotion can scarcely continue for long at ages so low as at present. We think that a junior grade being an unquestioned necessity, it is right to fix it at the same age for both services, particularly as foreign service in a junior rank is sometimes a naval grievance, as reported to us, and, moreover, as compulsory loss of time on half-pay is not suffered while in the junior grade. By our proposal an annual mean for the first eighteen years of £308 5*s.*, and by our correspondent's of £311 5*s.*, is asked for; that by the new Army Warrant being a fixture at £284 14*s.*; with which the percentage differences are respectively 8·11 for ours and 9·11 for his. We would sacrifice the 1 per cent. for sake of uniformity with the army scale in its periods of increase. Be that as it may—for we profess to have proposed only the lowest acceptable scales—we find that promotion at ten years, with "Surgeon R.N.'s" scale of pay up to eighteen years, would benefit only to that extent 1 per cent. above our plan, with sure promotion at twelve years, and pay, on our proposal; and therefore we do not ask for the earlier promotion, except for "meritorious services."—ED. L.

DRUGGISTS' CHARGES.

To the Editor of THE LANCET.

SIR,—I was rejoiced, in common with many of my professional brethren, to read your remarks in a leading article of the 28th inst., on Druggists' Charges. The remedy you suggest, that the dispensing of medicines should be given up by the profession into the hands of the druggists, is a most efficient one, and I beg to bear my testimony to the fact that it is quite practicable in all towns of any size, if the medical profession will act in concert. The medical men of this town agreed some time ago to give up the supplying of medicines to their patients, and to write prescriptions only. But in order to protect the public from unreasonable charges, they first communicated with the chemists, requesting them to furnish a tariff of charges (of which I enclose a copy) at which they would consent to supply medicines. I may mention that the system has been in operation now for over twelve months, and appears to work quite satisfactorily. Any further comment on the desirability of this course being followed by the profession generally would be superfluous, as you have quite sufficiently shown its advantages in your article above mentioned.

I am, Sir, your obedient servant,

GEO. M. PITTOCK,

Margate, Feb. 28th, 1880. Hon. Sec., Margate Medical Club.

Obituary.

EDWARD COPEMAN, M.D.

DR. COPEMAN was the son of a merchant living at Great Witchingham in Norfolk, and was educated at the Grammar School at Trunch. After leaving school he was apprenticed in Norwich, first to Mr. A. Brown, and then to the celebrated J. G. Crosse. Having studied with these gentlemen, and served as a dresser at the Norfolk and Norwich Hospital, he came up to London, and entered at St. George's Hospital. Soon after obtaining his qualifications to practise he returned to Norwich, and was elected house-surgeon to the hospital. He first practised in Coltishall, near Norwich, and obtained there a considerable reputation. Having graduated as M.D. Aberd. in 1847, he removed to Norwich the next year and started in practice as a consulting physician, and in 1851 was elected physician to the hospital, with which institution he was connected until the time of his death.

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He was officially connected with several other medical charities in the city. He was a Fellow of both the College of Surgeons and the College of Physicians. He was an active member of the British Medical Association, and when the Association visited Norwich in 1874 he was elected its President. Although seventy-one years of age, he continued busily engaged in practice up to the very day before his death, which occurred suddenly at the Close, Norwich, on Feb. 25th.

Dr. Copeman was very successful in practice, for, in addition to being a skilful physician, he was ever fortunate in winning the respect and esteem of his patients. He has written on several medical subjects, such as apoplexy, diphtheria, and intestinal obstruction, but he was chiefly interested in gynæcology, and has made several valuable contributions in this department of science. He edited "Crosse's Cases in Midwifery," and published some "Records of Obstetric Consultative Practice," "Illustrations of Puerperal Fever," "On Flooding after Delivery." Lately he has been urging the great value of dilatation of the cervix uteri for the cure of the vomiting of pregnancy, and has published several cases—one only last week—where this line of treatment has been followed by marked success. Others, encouraged by him, have had equally good results, and probably it will be for his advocacy of this treatment that he will be most widely known.

Dr. Copeman was an accomplished musician, and we believe he regularly played the violoncello in the orchestra at the Norwich Festivals. He was for many years the chairman of the sub-committee of management of these festivals, and on retiring from the office a few years ago was presented with a handsome gift of plate. He was a warm friend, a most upright man, and held in high esteem by all classes, one evidence of which is the fact that he was a magistrate of the city. At the meeting of the weekly board of the Norfolk and Norwich Hospital, on Saturday last, a resolution expressing the high esteem in which he was held, their sense of the value of his services to the institution and city generally, and of condolence with his bereaved family, was unanimously adopted.

THOMAS FAIRBANK, M.D., M.R.C.S.

WE feel very deep regret in announcing the death of Dr. Fairbank, of Windsor, at the early age of thirty-six. This untimely close of a most promising career will awaken in the profession a keen feeling of sorrow and of deep sympathy with his bereaved family.

Dr. Fairbank was born in the year 1843, and received his education at the Forest School, under Dr. Guy, in the course of which, we are assured, he evinced an aptitude for classical and other literary studies which gave promise of the highest success, if, as was at one time contemplated, he had proceeded to the University of Oxford. But Dr. Fairbank's preference for the medical profession induced his friends to give him an early opportunity of pursuing the career which he had chosen. He entered St. Bartholomew's Hospital at the age of seventeen, where his quiet geniality and humour, as well as his studious habits and retentive memory, were long remembered. Old fellow-students will recall how frequently, in the exposition of any difficult case, the lecturer or physician would turn to him as the student most likely to recall a precedent. At the University of London Dr. Fairbank passed brilliantly on the examination for the second M.B., receiving gold medals in medicine and in forensic medicine, and otherwise acquitting himself so as to obtain first-class honours in all the subjects. He became for a short time house-surgeon to the Metropolitan Free Hospital, in Devonshire-square; and when Mr. Brown, the Queen's surgeon at Windsor, retired from practice, Dr. Fairbank was recommended for the appointment by the late Sir James Clark, and Sir James (then Mr.) Paget. Thus, at the early age of twenty-three, he succeeded to one of the best and most responsible private practices in England, besides becoming surgeon to the Queen, the Royal family, and the Royal household at Windsor Castle, as well as to the Prince and Princess Christian and household at Frogmore. During fourteen years he lived respected and honoured by all who knew him; and we believe that we are not transgressing the bounds of good taste in saying that throughout that period Dr. Fairbank was regarded by the Prince and Princess Christian as not only an invaluable medical adviser, but also as a tried and esteemed friend, whose loss they deeply deplore.

His sudden death on the 26th ult., from aneurism of an artery in the brain, aroused the deepest sympathy not only in Windsor, but throughout the whole medical profession. Dr. Fairbank leaves a widow and five young children. He was buried in the churchyard at Clewer on Tuesday, March 2nd. The burial service was performed by the Dean of Windsor, and the funeral was attended by representatives of the Queen and of the Prince and Princess Christian, by the Mayor and Corporation of Windsor, and by the Committee of the Royal Albert Institute in that town, of which he was chairman.

DAVID FIDDES, M.D.

DR. FIDDES, whose death, in his sixty-eighth year, took place on the 25th ult., after an illness of only four days, was a native of Aberdeen, where he was educated. In 1832 he obtained the diploma of Member of the English College of Surgeons, and eleven years later took the degree of M.D. at Marischal College. Appointed surgeon on board an East Indiaman, he made several voyages to the East in that capacity. Dr. Fiddes afterwards settled in his native town, and gradually acquired one of the best practices in Aberdeen. For many years he held the post of surgeon to the Royal Infirmary, and at the time of his death was consulting surgeon to that institution. He was also connected officially with several other medical charities of the town. Of a kindly sympathetic nature, Dr. Fiddes leaves behind him pleasant memories, and his loss will be widely felt.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Feb. 26th:—

Astley, John Dugdale, Cambridge-gardens, Notting-hill.
Berridge, William Alfred, Redhill, Surrey.
Collier, William, Stapleford, Cambs.
Eagle, Edgar, Whitby.
Lloyd, John Jenkin, Llanelly.

The following gentlemen on the same day passed the Primary Professional Examination:—

William Parker Deeter, Royal Infirmary, Bristol; Edward Coells Johnston, Queen's Hospital, Birmingham; William Alsops Shillito, General Infirmary, Sheffield.

INDIAN MEDICAL SERVICE.—The last name in the first column of names of gentlemen who passed the examination for the above service was misprinted in our last issue. It should have been "Paul, P. D.," not "Park."

STAFF-SURGEON S. LEXTON has been appointed to the *Pembroke*.

MR. ROBERT WILLIAMS, of Kingsland, has received the Government grant for vaccination (£8 14*s.*)

DR. J. CRICHTON-BROWNE and DR. WM. MANSELL MACCULLOCH have been elected members of the Royal Institution of Great Britain.

DR. ARCHIBALD HAMILTON has been placed on the Commission of the Peace for Westmoreland, and Dr. Arthur Edward Turnour for Denbighshire.

THE Local Government Board have sanctioned the borrowing of £83,000 by the Town Council of Colchester for the purchase of the waterworks of the town.

THE Duke and Duchess of Connaught, accompanied by Count Münster and Countess Marie Münster, visited the German Hospital, Dalston, on the 25th ult. Their Royal Highnesses minutely inspected the whole of the establishment, and expressed themselves highly satisfied with all the arrangements.

SEWERAGE OF LOUGHREA.—The guardians of this union, at a meeting recently held, resolved to carry out the necessary works for the proper sewerage of the town. The desirability of executing such a sanitary improvement was brought under the notice of the guardians by the Town Commissioners, and it is satisfactory to find that no time will be lost in carrying out the proposed scheme.

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THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—The annual festival in aid of the funds of this hospital was held on the 24th ult., the Duke of Connaught presiding. Since the foundation of the hospital 236,362 women and children have been treated in the out-patient department, and 5877 women have been admitted as in-patients. £5000 per annum is required to maintain the hospital and its branch, Dorset-street, Manchester-square, of which sum the annual subscriptions amount to about £1200, the remainder having to be raised by donations. His Royal Highness, in proposing the toast of the evening, commented upon the excellent work the institution had done, and made an earnest appeal for assistance. The secretary announced subscriptions amounting to £1682.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The late Miss Jane Steele, of Clifton, has bequeathed the following legacies, all duty free:—The Bristol Royal Infirmary, £1000; the Bristol General Hospital, £1000; the Bristol Blind Asylum, £1000; Müller's Orphan Asylum on Ashley Down, £1000; the Bristol Deaf and Dumb Institution, £1000; the Bristol Dispensary, £200; the Eye Dispensary in Orchard-street. £200. The Royal Berkshire Hospital, Reading, has become entitled to £2000 under the will of Miss Susanna Caroline Palmer, of Holme Park, Sonning. Mr. Edward Ward, of Claremont-square, bequeathed £200 to the British Lying-in Hospital, and £50 to the Finsbury Dispensary. The Warneford, Leamington, and South Warwickshire Hospital has become entitled to £300 under the will of Mr. Frederick Manning. The Cumberland Infirmary, Carlisle, has received £100 under the will of Mr. Joseph Barnes. The Dorset County Hospital, Dorchester, has become entitled to £100 under the will of Mr. John Francis Hodges. The Royal United Hospital, Bath, has become entitled to £100 under the will of Miss M. A. Cross. The Goldsmiths' Company have given £100 to the Surgical Aid Society.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ADAMS, Mr. M. A., has been reappointed Analyst for the County of Kent, for one year.

ANGELL, Mr. A., has been reappointed Analyst for the Borough of Guildford for one year.

ANGIER, G. A., M.D., has been appointed a District Surgeon to the Brighton, Hove, and Preston Provident Dispensary, vice Wooldridge, deceased.

BATTAMS, J. S., M.R.C.S.E., has been appointed House-Surgeon and Dispenser to the Tiverton Infirmary and Dispensary, vice Lillies, resigned.

BATTY, E. L., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Northern Hospital, Liverpool, vice McGeagh, resigned.

BAYNES, Mr. J., jun., F.C.S., has been appointed Analyst for the Borough of Boston. Remuneration by fees.

BELL, Mr. J. C., has been appointed Analyst for the Borough of Stalybridge.

BLAKE, W. H., M.B., B.Sc., has been appointed Honorary Medical Officer to the St. Albans Hospital and Dispensary.

BLUNT, Mr. T. P., F.C.S., has been appointed Analyst for the County of Merioneth. £1 1*s.* per analysis. Also reappointed Analyst for the County of Montgomery for one year.

BOULTON, P., M.D., has been appointed Physician for In-patients to the Samaritan Free Hospital, London.

BUTLER, F. W., M.R.C.S.E., L.S.A.L., has been appointed a District Surgeon to the Brighton, Hove, and Preston Provident Dispensary.

CLIBBORN, W., M.D.., L.R.C.S.I., L.M., has been appointed one of the Medical Officers of the Birmingham Lying-in Charity, vice Ravenhill, resigned.

CLOWES, Mr. F., D.Sc. Lond., has been appointed Analyst for the Borough of Newcastle-under-Lyme. £10 10*s.* per annum and fees.

COLLINS, C. E., L.R.C.P.L., M.R.C.S.E., has been appointed Acting Surgeon to the East Grinstead General Dispensary.

CONNOLLY, W. R., B.A., M.B., L.R.C.S.I., has been appointed Medical Officer to the Lying-in Hospital, Waterford.

COVEY, G., M.R.C.S.E., L.S.A.L., has been appointed Acting Surgeon to the East Grinstead General Dispensary.

CROOK, Mr. W. G., has been reappointed Analyst for the City of Norwich.

DAVISON, S. T., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of the Carlton District of the Basford Union.

DUNLOP, A., M.D., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Consulting Physician to the Jersey General Dispensary, vice Bull, deceased.

DUSTAN, H., M.R.C.S.E., L.S.A.L., has been appointed Honorary Medical Officer to the Jersey General Dispensary.

EDWARDS, F. S., F.R.C.S.E., has been elected an Assistant to the West London Hospital, vice Butlin, resigned.

FORBES, D., M.B., L.R.C.S.Ed., has been appointed Assistant Medical Officer at the Brownlow-hill Workhouse, Liverpool.

HARDY, H. L. P., M.R.C.S.E., L.S.A.L., has been appointed House-Physician to the London Hospital, vice Lawton, whose time has expired.

HARVEY, Mr. S., has been appointed Analyst for the Borough of Sandwich until Nov. 9th next. Remuneration by fees.

IVENS, A. S., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer of the Eighth District of the Tendring Union, vice Hayman, resigned.

JONES, S., M.B., has been appointed Honorary Consulting Surgeon to the Beckenham Cottage Hospital.

LOVELESS, W. K., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Stockbridge District and the Workhouse of the Stockbridge Union.

MACKESY, G. I., A.B., M.B., L.R.C.S.I., has been appointed Medical Officer to the Lying-in Hospital, Waterford.

MCNEILL, J. C., M.D., has been appointed Honorary Physician to the Tiverton Infirmary and Dispensary.

MCRITCHIE, D., M.B. &c., has been appointed Honorary Surgeon to the Huntingdon County Hospital, vice Davies, resigned.

MAGRATH, J., M.D., M.R.C.S.E., has been appointed Acting Physician to the East Grinstead General Dispensary.

MYLES, G. H., L.A.H.D., has been appointed Resident Apothecary to the Hospital for Incurables, Dublin.

NAPIER, Mr. J., F.C.S., has been appointed Analyst for the Eastern Division of the County of Suffolk. 10*s.* 6*d.* per analysis.

PENRUDDOCKE, C., M.R.C.S.E., has been appointed Assistant-Surgeon to the Tewkesbury Rural Hospital.

REDWOOD, Dr. T., has been reappointed Analyst for one year for that part of Middlesex beyond the limits of the Metropolis.

REED, W. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Donhead District of the Tisbury Union, vice Bey, resigned.

RICE, G., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer of the North District of the Derby Union, vice Copestake, resigned.

ROBBINS, J., M.B., C.M., has been appointed House-Surgeon to the Richmond Hospital, vice Gadsby, resigned.

SHEARS, C. H. B., M.R.C.S.E., L.R.C.P.L., has been appointed Assistant House-Surgeon to the Northern Hospital, Liverpool, vice Batty, promoted.

SHIELS, R., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of the Micheldever District of the New Winchester Union, vice Willis, resigned.

SMITH, J. S., M.D., has been appointed Honorary Physician to the Tiverton Infirmary and Dispensary.

STATHERS, G. N., M.R.C.S.E., L.R.C.P.Ed., & L.M., has been appointed House-Surgeon to the Burton-on-Trent Infirmary.

STEELE, W. C., M.R.C.S.E., L.S.A.L., L.R.C.P.E., has been appointed House-Surgeon to the Huntingdon County Hospital, vice McRitchie.

STILWELL, R. R., M.D., has been appointed Honorary Consulting Medical Officer to the Beckenham Cottage Hospital.

STURGES, M. J., M.D., has been appointed Honorary Medical Officer to the Beckenham Cottage Hospital.

TORRANCE, R., L.R.C.S.Ed., has been appointed Consulting Surgeon to the Throat and Ear Infirmary, Saville-row, Newcastle-on-Tyne.

WILKIN, J. F., M.D., has been appointed Honorary Medical Officer to the Beckenham Cottage Hospital.

WITZ, J. F., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Kiburn District of the Thirsk Union, vice Smith, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BOOTH.—On the 24th ult., at The Beeches, Farnworth, the wife of J. B. Booth, M.R.C.S.E., L.R.C.P.Ed., of a son.

CLAY.—On the 26th ult., at Plymouth, the wife of R. H. Clay, M.D., of a daughter.

DE BRENT.—On the 29th ult., at Church House, Aveley, Essex, the wife of Mortimer de Brent, M.R.C.S.E., L.S.A.L., of a son.

ILIFFE.—On the 27th ult., the wife of Walter Iliffe, F.R.C.S.Ed., of a daughter.

MOSSE.—On the 16th January, at Mona, Jamaica, the wife of Deputy Surgeon-General Charles B. Mosse, C.B., of a son.

PRINGLE.—On the 20th ult., at Angelton, Bridgend, the wife of H. T. Pringle, M.D., Medical Superintendent of the Glamorgan County Asylum, of a son.

RAPER.—On the 18th ult., at Great Wakering, Essex, the wife of W. A. Raper, M.D., of a son.

MARRIAGES.

GRAHAM—THOMSON.—On the 25th ult., at Garry Cottage, Kinnoull, Perth, John T. Graham, M.D., M.R.C.S.E., to Anina, only daughter of William Thomson, Esq.

TURBERVILLE—ADAMS.—On the 24th ult., at St. Andrew's, Bath, William Turberville, M.B., second son of the late Captain Edmund Buckle, Bengal Artillery, to Fannie Ada, widow of James D. Adams, Esq., and only daughter of the late Richard Ashe, Esq., of Coolehane, Cork.

DEATHS.

DUKE.—On the 3rd inst., at his father's residence, 321, Clapham-road, Herbert Duke, M.B., seventh son of Thomas Oliver Duke, aged 26.

DUNLOP.—On the 27th ult., at Aberdeen, Andrew Vans Dunlop, M.D., of Rutland-square, Edinburgh.

EDDIE.—On the 21st ult., at Barton-on-Humber, William Hesleden Eddie, M.R.C.S.E., L.S.A.L., Justice of the Peace for the County of Lincoln, aged 68.

FIDDES.—On the 25th ult., at Union-street, Aberdeen, David Fiddes, M.D.

SCOTT.—On the 22nd ult., at Marsh Gate, Richmond (of pneumonia), Robert Scott, L.S.A.L.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, March 4th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Feb. 27	29·91	N.W.	40	38	..	50	36	..	Overcast
,, 28	29·51	S.W.	47	46	..	54	38	0·02	Overcast
,, 29	29·61	S.W.	47	45	..	55	42	..	Cloudy
Mar. 1	29·47	S.W.	49	47	..	55	43	0·12	Cloudy
,, 2	29·40	S.W.	45	43	..	54	37	0 17	Cloudy
,, 3	29·31	S.W.	52	48	..	55	42	..	Cloudy
,, 4	29·78	W.	48	45	..	50	45	..	Fine

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

HINTS FOR THE HUNTING FIELD.

IF we may be pardoned a solecism, clinical studies may be pursued, and medical men are, unhappily too often, found to be well placed, in the hunting field. Among the hints which practitioners in this department would be inclined to offer their fellow-riders are the three following. They are simple enough, but relate to points sometimes overlooked:—Take care when hunting to grip your horse with the side of the leg as well as the inside of the knee, so that *all* the muscles concerned in this act shall be brought into play, and permitted to relieve each other. A grip by the inner side of the knee only may seem to suffice for a short ride; but going across country a long time at a stretch, it is impossible a really safe seat can be thus maintained. Prepare to fall easily, as instinct teaches the practised rider; but take the precaution before starting to see that the foot does not penetrate the iron of the stirrup so far as to become fixed and jammed by the instep, or caught between the waist and heel of the boot. The boots themselves should be so "easy," while fitting closely, that the foot may be readily withdrawn if caught by the stirrup, leaving the boot in its entanglement. To minimise the chances of a fall, avoid compressing the thorax of your horse by girths so tight that he cannot take a full inspiration before leaping. There is reason to believe that many a horse which would otherwise go well over his fences is hampered by the pressure of girths which do not allow for the necessary expansion of a forced inspiration. There are two perils incident to this mistake—first, the lungs may not be properly filled, and there will be a refusal or a check in the leap and a short jump, and the girths, if not very strong, may be broken.

Enquirer.—Yes, under certain conditions which may be ascertained from the Secretary of the College. We believe the examinations are suspended for the present.

Inquirer, (St. Albans.)—We are not acquainted with an institution of the kind named.

Mr. Palliser.—Thanks. The announcement has already appeared.

THE COPLAND FUND.

To the Editor of THE LANCET.

SIR,—In closing the above Fund, I beg to state that the whole sum collected amounted to £101 5s., which I have handed over to Mrs. Copland, and I am desired, on the part of the Committee, to thank the subscribers and the Editor of THE LANCET for their kind assistance.

I remain, Sir, yours truly,

R. H. SEMPLE, M.D.,

Torrington-square, March 1st, 1880. Treasurer of the Fund.

HORSEFLESH AS FOOD IN IRELAND.

ON lit dans *l'Abeille Médicale*:—"Les journaux font connaître chaque jour les détails navrants des misères endurées par la population irlandaise. Dimanche, 15 février, une quête a été faite dans toutes les églises de Paris, pour lui venir en aide, comme elle nous est venue en aide pendant la dernière guerre. Mais c'est moins l'argent qui manque que les aliments; en temps de famine, l'argent n'a pas diminué, ce sont les aliments qui font défaut. Je rappelle donc qu'en Angleterre et en Irlande, pendant que des milliers d'hommes sont affamés, on laisse encore perdre des millions de kilog. de viande de cheval. Ne se trouvera-t-il donc pas, dans ces contrées, un philanthrope pour attaquer le préjugé qui existe encore contre l'hippophagie? L'exemple de ce qui se passe à Paris devrait pourtant ouvrir les yeux de nos voisins: pendant l'année 1879 on a livré à la consommation, dans la capitale, 10,281 chevaux, 529 ânes et 26 mulets, qui ont donné 2,067,850 kilog. de viande, non compris le cœur, la langue, le foie, etc. Il y avait au 1er janvier de cette année, 78 boucheries à Paris et dans la banlieue. (Pour les renseignements, écrire à M. Decroix, secrétaire général du Comité de la Viande de Cheval, rue Saint Benoît, 5, Paris)."

A Metropolitan Teacher.—The vacancies in the Board of Examiners of the College of Surgeons have not yet been filled up.

Public Officer's letter shall appear next week.

"STREET MUSIC."

To the Editor of THE LANCET.

SIR,—Under this heading a letter appears in your columns of to-day to encourage members of the medical profession to add their names to the list of those whose aim is to abolish or regulate street music in large towns, and by so doing "the profession will come forward to assist the suffering."

The question suggests itself to me—Who are "the suffering" who call forth pity, and who require the assistance of the profession? Are they the sick poor who crowd the wards of charitable institutions in large towns, or who too often drag on their miserable existence in dirty, ill-ventilated, over-crowded, and poverty-stricken homes in the numerous courts and alleys of London and all manufacturing towns? Or are they represented by a small faction of irritable beings, whose home comforts and surroundings are such that they can afford to oppose anything in the least degree hurtful to their sensitive natures? To such a class, perhaps, the fact may never have occurred that the majority in a large population are poor, and these, from lack of educational advantages, have no means of opposing the objects of the Society alluded to by your correspondent, which has for its aim the abolition of one of those few blessings which serve to brighten for a time their unenviable surroundings.

It appears to me that, before any steps are taken for this object, the poor should be allowed to express their views. They have none of those musical advantages to be met with in the homes of the rich. Their musical tastes differ, too, materially from those of their more fortunate neighbours; but yet the poor *are* musical, and the refining influence of this art—although acting upon them through the medium of the rudest of street instruments—should not be denied them.

Anyone who has had the opportunity of observing the effect of a sudden outbreak of music, whether such be produced by a street organ or German band, upon a ward full of sick patients, or upon a group of the more unfortunate of our fellow-creatures who crowd our large asylums, or whether the observer has been district or dispensary surgeon, spending much time amongst the poor,—such a one cannot fail to have noticed repeatedly the moral, not to say therapeutical, value of music. By the influence of this so-called "nuisance" sorrow is often drowned, pain eased, and happiness and contentment take the place of misery and despair.

Perhaps I may be considered sentimental by some in introducing a defence in the cause of music, but I do so without entering here upon its mental, moral, and social advantages, to support an art insufficiently valued by Englishmen. I do not, for one moment, regard the style or rendering of the music produced by organ grinders, or by our so-called German bands, as pleasing to the ears of refined society, but it is, nevertheless, welcomed by the million, whose tastes differ from those of Dr. Bridges, or of the President, and supporters of its abolition.

As a member of the medical profession, and as a lover of music, I trust that these few lines of mine may find a place in your columns to encourage others, before signing a protest, to consider the value of so ancient an art, before supporting a cause which is to diminish its influence in this country. Let us endeavour to promote, rather than discourage musical interests; and, in so doing, we must not altogether disregard the tastes of the community which mainly represents the nation.

I am, Sir, yours faithfully,

Brownhills, Feb. 28th, 1880. G. HERBERT LILLEY, M.D.

THE VINE-PEST.

THE German Government appear to be making strenuous exertions to get rid of the Phylloxera vastatrix, which has been committing sad ravages in the wine-growing districts. To this end, directions have been given that all vineyards and nursery gardens from which vines are sold for planting should be subject to annual inspection by experts with a view to the gradual extermination of the pest.

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PUBLIC WORKS AT HYÈRES.

THE municipality of Hyères have just obtained permission to issue a loan for a million and a half francs. Unfortunately this sum is to be expended in embellishing the external appearance of the town, instead of improving the sanitary condition of this one of the most favoured spots on the Riviera. For some years to come, at least, Hyères will remain not a pleasant resort, but a town where invalids take serious care of their health. The advantages of the climate, which are exceptionally favourable even for the Riviera, and the presence of Dr. Griffith, one of the most experienced practitioners in the South of France, all tends to confirm our opinion that the medical, and not the social, is the most important aspect of this town. For two thousand years it has maintained its renown as a health-resort, and all its resources should first be devoted to the sanitary exigencies which are becoming more and more pressing. Out of the £60,000 loan, however, £4330 are to be spent on a new cemetery, and £880 on repairing the water conduits and canals. This is all! New boulevards, gardens, roads, a casino—these are to absorb the newly-secured capital.

Messrs. Allen and Hanburys.—The publication of our correspondents' interesting letter is rendered unnecessary by the appearance in our present number of Drs. Ringer and Murrell's article on the drug.

An Old Subscriber, (Brussels.) — Yes. Twenty-five guineas. Trübner and Co.

W. F.—Not if the structure of the skin is destroyed.

EFFECTS OF TOBACCO.

To the Editor of THE LANCET.

SIR,—Seeing a letter on the subject of "Tobacco-smoking" in your issue of Feb. 7th, I thought perhaps the following case might prove interesting to some of your readers.

In August last I was summoned to a patient, who, as was stated, was in a "fit," with his hands and feet "drawn up." I hurried off at once, for the message had arrived some time previously, and found my patient in bed, from whom and his parents I elicited the following facts: Being distracted with toothache, he was induced to try the introduction of a plug of tobacco, the size of a pea, into the hollow of his painful tooth. In a few minutes he began to experience a strange, indefinable feeling, which gradually resolved itself into a creeping sensation, beginning at the fingers and toes, and extending up the arms and legs until it spread all over the body; and with this creeping there was felt a clammy coldness; then giddiness, with a desire to vomit; cramps in the hands and feet; severe pain in the stomach; panting breathing; swimming in the head; insensibility; sliding to the floor from the couch on which he had been reclining, his head falling back as though lifeless, saliva oozing from his mouth, and breathing now scarcely perceptible. Indeed they began to fear that life was extinct, and in a moment of despair his mother raised his shoulders, which caused him to vomit, the vomit consisting chiefly of bile, and after this he gradually returned to consciousness, though the numbness in his limbs remained for more than an hour. He had a motion and return of the cramps and bilious vomiting during the same night. I may add, my patient is twenty-one, fair, and had never used tobacco before in his life.

The small quantity of tobacco used, the sudden and quick succession of the symptoms as above enumerated, and the utter prostration are points worth noting. Had it not been for his mother raising his shoulders, and so causing him to vomit, I believe that death would have ensued, and we might have been seeking a widely different cause for the same, as it was not until after my patient had recovered that anyone knew of his having used the tobacco.

I am, Sir, yours truly,

Hull, Feb. 10th, 1880. FRED. R. CHAPMAN, M.B. & M.S.

IMPROVED LABELS.

A CORRESPONDENT, "Assistant," makes a good suggestion, to the effect that the example lately set by the Post-office might be followed by manufacturers of labels, and that the good qualities as to texture, adhesiveness, &c., which are so manifest in the new postage stamps, might with great advantage be given to labels, the sticking of which upon medicine bottles is at present a labour of sorrow.

Volunteer.—The rank of medical officers of volunteer corps is that of surgeon. If more than one is attached to a corps, the second has the rank of acting surgeon only. Corps not entitled to a medical officer of substantive rank will be allowed a medical officer with the rank of acting surgeon. See War Office Circular, 25th October, 1877. The duties in camp will be found in the Army Medical Regulations.

Subscriber.—Either is good, and we are not prepared to say which is the better.

CORNS.

To the Editor of THE LANCET.

SIR,—Will those readers of THE LANCET who take an interest in the subject of corns say how it is possible to destroy the vitality that may be lurking in the subjacent structure of a corn after it has been extracted, and also what are the best means of eradicating them without the aid of a knife?

Yours &c.,

Feb. 23rd, 1880. CHIROPODIST.

"HEALTH AND DRESS."

DR. B. W. RICHARDSON has just delivered one of his popular lectures at the London Institution, the subject chosen on this occasion being "Health in relation to Dress." It is needless to say that on such a topic this able and experienced physician had much advice to give which was not only useful in itself, but sufficiently novel to awaken more than a passing interest. We are glad to note that Dr. Richardson approves the suggestion we recently made with regard to the wearing of bright and light colours in winter. Our recommendations have been challenged in other quarters; but we adhere to them, and must be excused for cherishing a lingering regard for the opinions and experiments of Faraday, though these have been "reversed" by the researches of certain more modern lights.

Devonshire should consult a solicitor. The question is a purely legal one.

L.R.C.P.—The question has, we think, been sufficiently discussed.

COUGH PRODUCED BY ACCUMULATIONS IN THE EAR.

To the Editor of THE LANCET.

SIR,—The following case, though similar to one recorded by Mr. Rudd Leeson, may prove of interest and possibly of use to some of your professional readers.

The patient, a singularly robust young lady, consulted me in regard to a cough of some three years' standing. The cough was loud, incessant, and peculiarly "hollow." It was dry, unaffected by times of day, seasons, or weather. It deprived her often of rest at night, and rendered her a source of annoyance and anxiety to her friends. She had consulted various medical men, and had taken almost every conceivable patent medicine, including some powerful sedatives, without obtaining even slight relief. The heart and lungs proved, as I had expected, to be healthy. The functions of the uterine, gastro-intestinal, and renal systems were stated to be strictly normal. There were no symptoms indicative of the presence of entozoa. The condition of the throat was natural; there was no relaxation of the uvula. I had come to the conclusion that the cough must be of an hysterical nature, when it occurred to me to examine the ears. The left membrana tympani was plainly visible and healthy. The state of the right one was hidden by a dark mass. On touching this mass with a probe through the speculum, the patient's peculiar cough was immediately produced, and, by keeping up a very slight, steady pressure on it, a fit of coughing, not unlike a violent paroxysm in whooping-cough, resulted. By the aid of a large ear-syringe and a weak hot alkaline solution, a piece of hard wax, *fons et origo mali*, was with some difficulty produced. It weighed over three grains. I followed up the syringing by the use of Politzer's apparatus. The cough ceased, and, though some weeks have now elapsed, it shows no sign of returning.

The above case is, I think, instructive, as tending to show that accumulations of wax &c. in the ears, sufficient to produce violent cough, may not betray their existence by the tinnitus aurium, giddiness, &c., which we are so apt to associate with their presence.

I am, Sir, yours faithfully,

Barking-road, E., Feb. 24th, 1880. A. E. BRIDGER, M.B. Edin.

SUPERANNUATION OF POOR-LAW MEDICAL OFFICERS.

Mr. Wickham Barnes asks us to publish the following reply to a letter directed by the Council of the Poor-law Medical Officers' Association to the Local Government Board:—

"Inquiry having been made of the guardians of the —— Union respecting the case of ——, formerly medical officer of that union, the guardians have explained that they entertain objection to the system of superannuation, especially in cases where the whole time of the officer is not devoted to the duties of the office. As the Council are probably aware, the initiative in these cases rests with the guardians, and the Board have no power to insist upon a superannuation allowance, even where it might seem to them that a proper case for superannuation had been made out."

F.R.C.S. Exam.—Sir James Paget will take the chair at the festival of the Fellows of the College of Surgeons on the evening of the annual election into the Council. Mr. B. T. Lowne, F.R.C.S., is the Honorary Secretary.

"THE NEW INFIRMARY, EDINBURGH."

To the Editor of THE LANCET.

SIR,—Will you kindly allow me to correct an erroneous impression which your correspondent's remarks under this heading, in your issue of February 21st, may give rise to?

No instance of all the septic cases in one ward taking erysipelatous action has occurred here. Out of 778 patients admitted to the surgical wards up to February 21st, twelve have subsequently been affected with erysipelas; one other case suffered from it on admission. Two of the twelve were antiseptic cases, in one the face being affected, the wound (in the thigh) not participating; in the other the carbolic dressing had been left off when the wound became superficial, and it was being dressed daily with boracic lotion when it was twice affected with erysipelas. Of the "septic" cases, in two at least the wound remained healthy, and in two, if not more, the patients had been subject to frequent attacks previously.—I am, Sir, yours &c.,

ROBT. ROBERTSON,

March 1st, 1880. Resident Surgeon, New Royal Infirmary.

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EXTRAORDINARY CASE OF SUPERFŒTATION IN THE COW.

MR. RICHMOND KEELE, of Hanger-hill, Ealing, states, in the *Veterinary Journal* for March, the following extraordinary case:—"I have a cow that, on August 9th last, had a heifer calf, apparently at full time; indeed, so fine a one that I am rearing it. The cow milked well for about a month, and then suddenly lessened the quantity, and shortly ceased to give any. On September 26th she took the bull, and from that time I noticed nothing unusual with her, though constantly seeing her, until December 24th, when she had another calf, a bull, strong and full-sized, and certainly not premature. The calf is now alive and doing well, and the mother is giving as much milk as after any of her previous calvings."

M.D., (Madras.)—Surgeon-General Sir Joseph Fayrer, K.C.S.I., is the President of the Indian Medical Board.

Student.—One of the effects traceable to the cause we alleged.

NITRITE OF AMYL IN SEA-SICKNESS.

To the Editor of THE LANCET.

SIR,—It was only yesterday I became aware that my letter to you on the above subject, in your issue of August 2nd last year, had roused the ire of Drs. Bradburn and Potter. Had these gentlemen read my communication a little more carefully, they would have seen that I avoid giving an opinion upon the case I describe. I wrote decrying the indiscriminate use of the drug, and mentioned, as a minor matter quite, my "experience" in the treatment of one case. The result of my treatment struck me as being peculiar, and gave rise to conjecture and inquiry, not, as our friends seem to think, to utter condemnation of the remedy. Thus, in the belief that each capsule contained an overdose, I ask, "Was an overdose the cause of the vomiting?" And, knowing that the effect produced is only temporary, "Is it advisable to continue the use of it two or three times a day?" Dr. Potter says "Surely not." I, on the other hand, do not know. My experience is limited. Will anyone inform me who has tried three or four doses a day? The opinion I express, that "for my part I would rather get over my day or two of occasional vomiting without the remedy," on account, as I state, of its disagreeable effects, is turned by our friend into a conclusion from the knowledge that its effects are only temporary. Now, I am not aware that temporary has ever been considered synonymous with disagreeable.

Although Dr. Bradburn has also had the misfortune to misunderstand the purport of my epistle, I am pleased to observe that he has had the good sense to concur in my opinion that all healthy young people require neither nitrite of amyl nor any other drug to allay sea-sickness.

I am, Sir, yours faithfully,

Pretoria, Transvaal, Jan. 9th, 1880. C. R. ILLINGWORTH, M.B.

DR. CROWLEY AND THE VACCINATION ACTS.

WE deeply sympathise with Dr. Crowley in his indignation at being summoned as an anti-vaccinationist. The administrators of the Vaccination Act should be better advised than to prosecute those who are enthusiastic advocates of vaccination.

Dr. Stephen Mackenzie.—The paper has been received, and will be inserted in an early number.

W. M. M.—We know nothing of the matter.

Mr. Appleby.—Robbins and Co., 372, Oxford-street.

THE EFFECT OF SALICYLATE OF SODA ON THE HEART.

To the Editor of THE LANCET.

SIR,—There has been some discussion in THE LANCET as to the effect of salicylate of soda on the heart-sounds in acute rheumatism. Would you permit me to call attention to the presumption that it will have exactly the same effect on a healthy heart whether its possessor be suffering from rheumatic fever or not? Some accurate observations on the physiological effects of salicylate of soda on the heart would be most useful to the physician, and that it has a powerful influence over that organ, either directly or indirectly, I feel sure from personal experience.

So far as I have been able to observe the heart in rheumatic fever, I believe that it is always affected, that it suffers first, and that the symptoms of its affection in the majority of cases pass off during the first week. If the seat of mischief be pericardial, the symptoms can hardly be overlooked; but when the lesion is endocardial, the disturbance of the pitch, rhythm, and duration of the sounds may be marked without any other symptom than a slight tightness across the chest, the existence of which is seldom spontaneously complained of, or liability to palpitation on exertion or excitement. Sufficient mischief may exist in many cases to give rise to a murmur without the slightest symptom of any cardiac complication. If my observations are correct as to the state of the heart in rheumatic fever, how difficult it must be to determine to what extent any drug affects the first sound of the heart in that disease.

I am, Sir, yours &c.,

Manchester, Feb. 14th, 1880. JOHN HADDON, M.D.

Justitia.—The case seems to be one which might be taken up by the Association named.

Dr. Strange's letter shall appear next week.

Dr. Boyle.—We do not think the case can be regarded as an "extra."

DOMESTIC LIGHTING.

THE *Electrician* quotes a French paper to the effect that Dr. Phipson has succeeded to a considerable extent in solving the question of economical lighting of dwellings. This is accomplished by increasing, by a weak electric current, the phosphorescence of certain substances influenced by the solar rays. For example, sulphide of barium is enclosed within a Geissler tube, through which a constant current of a given intensity is made to pass. By this means, it is asserted, a uniform and agreeable light may be obtained at a cost less than that of gas.

W.—We cannot prescribe or express an opinion.

SANITARY CONDITION OF DUBLIN: THE RIVER LIFFEY.

To the Editor of THE LANCET.

SIR,—It appears from the public press that the Dublin Corporation have completed a contract with a Glasgow firm for the construction of sewers to the amount of £50,000. It is not creditable to the Dublin traders that this contract should be taken by a Scotch firm; but I have no doubt that the work will be better done than that which has hitherto been carried out under the inspection of the Corporation "surveyors." It is to be hoped that something will be done to remedy the pestilential nuisance of the Liffey. As the city of Dublin is but four or five miles from the open sea or bay, the removal of the nuisance is of easy accomplishment, the tide running at the rate of two or three miles per hour, carrying the refuse matters to sea in about two hours. The bed of the river, however, contains numerous hollows, in which the sewage matter is allowed to collect and putrefy. The bed of the Liffey should be paved, and a dwarf embankment raised on each side, so as to form a perfect channel for the escape of all refuse matters. As the length of the river requiring this does not exceed 2000 yards, the work might be done for a few thousand pounds. The Dublin Corporation have been for years endeavouring to obtain a sum of £500,000 to be expended on draining not only the city of Dublin, but also the adjoining suburbs of Rathmines, Rathgar, Pembroke, &c., and have neglected an advantage to be easily gained in the pursuit of an *ignis fatuus*.

I remain, Sir, yours truly,

Feb. 23rd, 1880. ALPHA.

W. T. S. will probably find the information he needs in Dr. Ireland's book on "Idiocy." An ophthalmoscopic examination may throw some light on the case.

Alpha.—1. Yes. 2. Dr. F. E. Pocock, 20, Golborne-road, Upper Westbourne-park, W., is the secretary.

CARDIAC COMPLICATION IN ACUTE RHEUMATISM.

To the Editor of THE LANCET.

SIR,—In connexion with the discussion at present going on in regard to the therapeutics of acute rheumatism, allow me to point out an apparent fallacy in the statistics which are being produced. In these we find statements of so many patients discharged cured in ten or twelve days. Considering that, at least, endocarditis often cannot be diagnosed at its commencement, it is rash to pronounce a sufferer of rheumatic fever cured after a few days of illness, when he may possibly be the subject of a disease which, though latent at first in its effects and developing slowly, will, however, sooner or later manifest itself by unmistakable signs and symptoms. Before the merits of drugs in preventing cardiac complication of the disease can be properly appreciated, cases which appear to be quite well in a few days must be watched for longer periods than has hitherto been the case, and statistics must be forthcoming based on results thus obtained. Then we may expect to have more reliable data; for the cases of cardiac mischief at present recorded can be only those where the lesion, on account of its situation &c., has given rise to effects by which it has been at once diagnosed.

I am, Sir, yours faithfully,

Wrexham Infirmary, Feb. 24th, 1880. J. T. R. DAVISON, M.B.

Science.—Medical evidence should be regarded as indispensable at any inquest in a case of death from an unknown cause.

Mr. W. H. Coates will find an example printed on page 750 of THE LANCET for Nov. 15th, 1879.

SERIOUS COLLAPSE FROM CHLORAL AND BROMIDE OF POTASSIUM COMBINED WITH OPIUM.

To the Editor of THE LANCET.

SIR,—The ill-effects of a combination of chloral hydrate and bromide of potassium, followed by a dose of opium, are not so generally known as one would wish. The administration of chloral hydrate and bromide of potassium together, as everyone knows, forms a useful sedative; but if followed a few hours after with a dose of opium, very grave symptoms of collapse will supervene. More than one case has come under my notice. I remember one case in particular of a fine young fellow who was taking bromide and chloral; but, being very noisy, opium was ordered. Within an hour he became collapsed and died. At the time it did not occur to me that the combined drugs caused this serious state of affairs. Since this case others have come under my notice, and very lately I have heard of two cases that have terminated fatally. Hence my letter.

Yours faithfully,

PETER W. DE LA MOTTE,
Medical Officer, West London District School.

Staines, Feb. 16th, 1880.

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COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Barnes, London; Dr. Gowers, London; Dr. Semple, London; Dr. Greenfield, London; Dr. J. H. Jackson, London; Mr. King, London; Mr. Craigie, London; Mr. Pattison, Heaton; Mr. Cormack, Liverpool; Mr. May, Moreton Hampstead; Mr. Newcombe, Windermere; Mr. Mercier, London; Mr. Webb, Wirksworth; Dr. Eade, Norwich; Dr. Pittock, Margate; Dr. Strange, Worcester; Dr. Dougall, Glasgow; Dr. Sinclair, Dundee; Dr. S. Mackenzie, London; Mr. F. C. Le Fevre, Jersey; Mr. Maycock, Leamington; Mr. Warner, Rugby; Mrs. G. Y. Hunter, London; Mr. R. C. Lucas, London; Mr. Robertson, Edinburgh; Mr. Scot, Edinburgh; Mr. Huckin, Windsor; Mr. Hanmer, Liverpool; Mr. J. W. Barnes, London; Mr. T. P. Pick, London; Mr. Pearson, Driffield; Mr. Challis, Brighton; Mr. Latimer, Plymouth; Mr. Settle, Monaghan; Mr. Reeves, London; Mr. Pank, Dublin; Mr. Tidswell, Morecambe; Mr. Palliser, Harrogate; Mr. Reckitt, Newark; Dr. S. F. Murphy, London; Mr. Kerswill, Looe; Dr. H. Lilley, Brownhills; Mr. Moore, London; Dr. Simms, Twickenham; Dr. Baxter, London; Dr. Tomkins, Manchester; Mr. Cruickshank, Coniston; Mr. T. Smith, London; Mr. Patterson, Tiverton; Mr. Austin; Mr. Bickwell, Beckenham; Dr. Davies, Huntingdon; Mr. Palmer, Coldstream; Dr. Foulis, Glasgow; Mr. Penruddocke, Tewkesbury; Mr. Balding, Royston; Mr. P. Giles, jun., Staunton-on-Wye; Mr. Higginson, Birkenhead, Dr. Sinclair, Moulmin; Mr. Blaney, Bombay; Mr. Milne, Aberdeen; Dr. Collenette, Guernsey; Dr. Carey, Guernsey; Mrs. Cavet, Waterford; Mr. Myles, Dublin; Mr. Rowland, Richmond; Mr. Duncan, Banff; Mr. Edwards, Chester; Dr. Vinen; Mr. Gell, Birmingham; Mr. Berry, Wigan; Mr. Ross, Alderney; Dr. Wahltuch, Manchester; Mr. Lupton, Stratford-on-Avon; Dr. Decroix, Paris; Mr. Costello; Mr. Broadbent, Manchester; Mr. Wilkinson, Stockport; Mr. Forbes, Glasgow; Messrs. Richardson and Co., Leicester; Mr. Gurner, London; Messrs. Macnamara and Co., Uxbridge; Mr. Rudd, Kendal; Messrs. Savory and Moore; Messrs. Hallis and Co., Halifax, Yorks; Mr. Watson, Manchester; Messrs. Eade and Caulfield, London; Dr. Pritchard, Teynham; Mr. Bennett, Marsden; Mr. Woodhall, Scarborough; Messrs. Sutton and Sons, Reading; Mr. Sargent, Woolwich; Dr. Brown, Hartlepool; Mr. Stanford, London; Mr. Ricks, Bradford; Mr. Willis, Bridgnorth; Messrs. Probyn and Co., London; Mr. Eberle, Easingwold; Mr. Crawfurd, East Grinstead; Dr. Hewan, London; Mr. Atkinson, Beckenham; Mr. Spanton, Hanley; Dr. Thin, London; Mr. Alexander, London; Mrs. Ward, Bangor; Dr. Malleson; Mr. Westcombe, Worcester; Mr. G. Hoggan; Surgeon, R.N.; Fairplay; Assistant; Inquirer, St. Albans; Justitia; A Lover of the Science; W. T. B., Pollokshields; W.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Cowland, Launceston; Mr. Grace, Newcastle-on-Tyne; Mrs. Rahn, Ipswich; Mr. Maguire, Stony Stratford; Mr. Hiller, Leighton; Dr. Sutherland, Fence Houses; Dr. Wilson, Old Meldrum; Mrs. Spence, Glasgow; Mr. Newland, Lewes; Mr. Shaw, Salford; Mr. Slingsby, London; Mr. Chute, Port Elizabeth; Mr. Arrowsmith, Bristol; Mr. Swinhoe, New Swindon; Dr. Arnold, Yardley-Hastings; Mr. Williams, Bath; Dr. M'Farley, Reading; Mr. Hallas, Halifax; Mr. Chestnutt, Tralee; Mr. Brown, Rochdale; Mr. Crackle, Ilkeston; Mr. Newman, London; Messrs. Lee and Nightingale, Liverpool; Dr. Wallace, Cardiff; Mr. Stack, Omagh; Messrs. Grace and Co., Bristol; Mr. Broomhead, Aberdeen; Messrs. Evans and Co., Wrexham; Mr. Dickson, Caragany; Dr. Woodroffe, Bournemouth; Dr. Bastable, Blackburn; Dr. Walker, Cheltenham; Dr. Moore, Jersey; Messrs. Dawson Brothers, Montreal; Dr. Fraine; Mr. Smith, Worthing; Mr. Burwell, Bawtry; Colonel R., Kensington; O. A. W., Hastings; Hermes; W. V. W.; F.R.C.S., Blakeney; H. C., Salford; Cowell, Oldham; W. W., Twickenham; W. G., Stratford; B.; Charles, Edinburgh; F. D., Peckham; E. A., Colchester; T. J. H., Barnsley; Mecca; M.R.C.S., Atherston; Omega; A. B. C. and X. Y. Z.; W. F. J.; &c.

Journal of Trinity College (London), Estates Roll, Record, American Wine and Grape-grower, Boston Medical and Surgical Journal, Lloyd's Weekly News, Chelmsford Chronicle, Western Morning News, Holborn Guardian, Metropolitan, Manchester Guardian, Surrey Advertiser, Birmingham Daily News, Sussex Express, Chicago Daily Tribune, Brighton Guardian, Malta Times, Provisioner, Pharmaceutical Journal, &c. &c., have been received.

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Medical Diary for the ensuing Week.

Monday, March 8.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Comparative Anatomy of Man."
MEDICAL SOCIETY OF LONDON.—8½ P.M. 107th Anniversary.

Tuesday, March 9.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Schäfer, "On the Physiology of Muscle."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Mr. Arthur E. Barker, "On Nephrectomy by Abdominal Section."

Wednesday, March 10.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Comparative Anatomy of Man."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lectures: Dr. Cayley, "On some Points in the Pathology and Treatment of Typhoid Fever."
HUNTERIAN SOCIETY.—7½ P.M. Council Meeting.—8 P.M. Dr. F. Warner, "On a Case of Athetosis, associated with Epilepsy."—Mr. J. Startin, "On a Case of Elephantiasis."—Dr. Carrington, "On Cancer of the Bile-duct; Fatal by Suppuration of the Liver."
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Professor M. Duncan, "On a Sponge Parasitic within Carpenteria Raphidodendron." — Professor E. Abbe, "On the Functions of Angular Aperture."—Dr. H. Gibbes, "On Double and Treble Staining of Animal Tissues."—M. A. Nachet, "On a Petrographical Microscope." — Mr. J. Badcock, "On Podophrya Quadripartita."

Thursday, March 11.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Dewar, "On recent Chemical Progress."

Friday, March 12.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Comparative Anatomy of Man."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Lumleian Lectures: Dr. W. Roberts: "Researches on the Digestive Ferments and the Preparation and Use of Artificially Digested Food."
QUEKETT MICROSCOPICAL CLUB.—7 P.M. Conversation and Exhibition of Objects.
ROYAL INSTITUTION.—8 P.M. Evening Meeting.—9 P.M. Dr. C. William Siemens, "On the Dynamo-electric Current and some of its Applications."
CLINICAL SOCIETY OF LONDON. — 8½ P.M. Mr. Eve, "On a Case of Impacted Fish-bone in the Œsophagus, penetrating the Diaphragm and Pericardium, and Wounding the Heart." — Dr. Greenhow, "On a Case of Typhoid Fever, associated with Acute Nephritis and profuse Hæmaturia, without Dropsy."—Dr. Buzzard, "On a Case of rapid and almost universal Paralysis, involving the four Extremities, both sides of the Face, Respiration, and Deglutition; Recovery."—Mr. Eve, "On a Case of Fracture extending through the Temporal Bone." — Mr. Clutton, "On a Case of Femoral Aneurism; Ligature of the External Iliac Artery; Recovery." — Dr. Crocker will exhibit a Case of "Herpes Iris."

Saturday, March 13.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. Saintsbury: "Dryden and his Period."

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THE

Gulstonian Lectures

ON

EPILEPSY.

Delivered before the Royal College of Physicians,

BY W. R. GOWERS, M.D., F.R.C.P.,

SENIOR ASSISTANT-PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

LECTURE II.—PART I.

MR. PRESIDENT AND GENTLEMEN,—The symptoms of the cases of convulsive disease which form the subject of these lectures, the forms of attack, their variations in severity and frequency, the mental and physical condition of the sufferers, and the mutual relation of these and other pathological elements, constitute subjects of much interest. It is useless to attempt in this lecture to traverse the whole of this extensive field, and our survey must be confined to a few points.

One subject which seems worthy of a passing notice, is the relative frequency with which fits occur by day or by night, using the terms as synonymous with the sleeping and the waking states. The investigation of this point in 840 cases has yielded the following conclusions:—The attacks occurred only, or almost only, at night in one-fifth (21 per cent.); only, or almost only, by day in rather more than two-fifths (43 per cent.) They occurred by both day and night in rather less than two-fifths (37 per cent.) Fits occurred in the night, partially or only, in rather more than half the cases (57 per cent.); by day, partially or only, in four-fifths of the cases (80 per cent.) In 1 per cent. the attacks occurred only while going to sleep; in one-half per cent. only on waking up out of sleep. In 5 per cent. the attacks occurred only in the early morning. A much larger number had their first attack in the early morning, and many of these patients were in the habit of early rising, a habit which, it thus appears, should be practised with caution by those predisposed to epilepsy. Between the cases of epilepsy and those with hystero-epileptic symptoms, there was no difference in the frequency with which the attacks occurred in the day or in the night. The proportion, for instance, in which the attacks occurred exclusively, or almost exclusively, by night was, of epileptics, 21 per cent., and of cases with hystero-epileptic attacks, 20 per cent. In epileptics it is somewhat more common for the first fit to occur in the day than in the night—rather more than half commenced in the former, rather less than half in the latter. In hystero-epileptics, it is much more common for the first fit to occur in the day than in the night. Two-thirds commenced in the day, one-third in the night. Nevertheless, in more than half these cases (56 per cent.) some fits subsequently occurred during the night—that is, during sleep. When the first fit occurred in the day the subsequent fits occurred only in the day in half the cases, only in the night in one-seventh; by both night and day in one-third. When the first fit occurred during the night the subsequent fits occurred only at night in about two-fifths of the cases; by both day and night also in about two-fifths; and by day only in one-sixth.

If we may apply to these proportions the doctrine of probabilities, we may say that if a patient who has his first fit in the day has subsequent fits, the probability is as six to one that some of his attacks will occur in the day; the probabilities are equal that his attacks will, or will not, be confined to the day; and they are equal that he will, or will not, have some attacks in the night; while the probability that he will have attacks only in the night is but one in seven. If a patient who has his first fit in the night has subsequent attacks, the probabilities are equal that these also will occur only by night, and that they will occur both by night and by day, being in each case two in five. The probability is as five to one that they will not be confined to the day—that is, in favour of some fits occurring in the night.

Frequently fits which have recurred for a time in one condition, during sleep, waking, or both, change their time. The conclusions deducible regarding these are as follows:—(1) When fits which have occurred only by night commence to occur by day, they commonly continue also during the night. (2) When fits which have occurred only during the day occur during the night, they commonly cease by day. (3) Attacks which have occurred by day and night often cease to occur in the day and continue at night, but very rarely cease by night and continue by day.

The relation of attacks in women to menstruation is a subject on which various opinions have been expressed. The facts I have to offer are small in extent, the point having been investigated in sufficient detail in only 82 cases. In one-twelfth (7 cases) no attacks occurred at the time of menstruation; in one-third (29 cases) there was no difference at these times; in more than half (46 cases) the attacks were worse at the monthly periods; most frequently they were worse before the period (17 cases); next in frequency they were worse during the period (15 cases), and much less frequently after the period (4 cases). In 10 cases the exacerbation was variable, either before, during, or after; in 2 cases the attacks were worse at the menstruation soon after the patient became subject to fits, but not after the disease had existed for some years. In two cases fits never occurred at the periods when menstruation was regular, but they did when it was irregular.

I pass now to the phenomena of the attacks. The fits in idiopathic epilepsy are so rapid in their evolution and so similar in most cases in their developed characters, the opportunities for watching them are so rare, that mere observation of attacks proved for a long time unproductive of much addition to our knowledge. A new era in the study of epilepsy may be said to have commenced with the investigation, by Dr. Hughlings Jackson, of the modes of onset of attacks which begin deliberately, combined with that of the subjective sensations by which attacks commence that are less deliberate in their onset. This subject—the study of the modes of onset—is still full of promise to further investigation, and there is perhaps no point in the symptoms of a consecutive series of cases to which our attention may be more usefully directed.

I need scarcely remind you that the aura of an attack was formerly regarded as a change in the nerves of the part to which it was referred, exciting the fit, and that it is now known to be merely the impression made upon the consciousness by the commencing action in the brain, or by the effect of this on the periphery. The fact that an aura commencing in a limb may be arrested by a ligature around the limb, above the part to which the sensation is referred, was once thought to constitute evidence that the process of the convulsion originated at the periphery. It is now well known that the ligature will arrest a fit which is due to a cerebral tumour as effectually, and more frequently, than one of any other kind, and of this I have seen many striking instances. The fact that the aura is the result of the commencing change in the brain renders its study of even greater importance than if it originated at the periphery. By its means we gain information, to be obtained in no other way, of the brain function first deranged—that is, of the functional region in which the process of the fit begins. In some cases, at least, this may be regarded as the seat of the disease. We learn also something of the form of normal cerebral action, which disease modifies rather than subverts.

The aura of an attack, using the term in its widest meaning, as signifying the subjective commencement, may consist in a consciousness of motion, or of sensation, or in a mental state. It has been long and often maintained by Dr. Hughlings Jackson, in extension of the older view of Laycock, that the whole brain is made up of structures which subserve sensori-motor processes, and that into such processes all its functions may be resolved. It is unnecessary now to consider this view as a whole, but that every structure of the brain concerned with sensation proper is connected, directly or indirectly, with a part concerned with motion may be regarded as a proposition scarcely needing proof. A discharge, such as occurs in an epileptic fit, taking place in either of these related structures, may lead to a discharge in the other. The two may act so simultaneously that the resulting motion and sensation may occur together. The patient may feel a tingling in his hand at the same moment as the fingers begin to twitch. Or the discharge in

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one may lead the way — be followed by the other at an interval. The twitching or the tingling may come first. I think that it is of importance to determine, in any given case, with which the attack commences—the motion or the sensation—i.e., whether the motor or the sensory centre leads in the discharge. By so doing we are able to understand better the association of auræ and their progress. It is necessary, however, carefully to discriminate the form of the sensation, because, as Dr. Jackson has also pointed out, the consciousness may be affected directly by the action of a motor centre, although no movement results. There are motor sensations as well as sensory sensations, and, as we shall see, a fit may begin by a sense of motion before any actual movement occurs. The word "sensation," however, will here be used, when unqualified, to signify a sensation proper, such as numbness, tingling, and the like.

In what proportion of cases is consciousness lost so early that the commencement of the fit is unfelt? Of 1000 cases, in which the presence or absence of a warning was noted, it was always absent in 495, while some aura existed, at least occasionally, in 505. Thus, roughly speaking, loss of consciousness precedes, or accompanies, the first symptoms in half the cases; in the other half the patient is aware of the commencement of the attack. We may consider what facts regarding the modes of onset these 505 cases supply.

The sensation or motion with which the attacks commence may be referred to almost any part of the body, limbs, head, trunk, organs of special sense, and to many viscera. We must therefore infer that the process of the fit may commence in any part of the brain in which these various parts are represented. We may, for the present purpose, classify most of the auræ or modes of onset into seven groups, (1) The unilateral auræ, a motion or sensation in one side of the tongue, face, trunk, or in one arm or one leg. (2) Certain general auræ; bilateral sensations in the limbs, tremors, starts, malaise, faintness, &c. (3) Auræ referred to certain organs, mainly to those to which the pneumogastric nerve is distributed, and to this group belong most of the visceral warnings. The most common is the well-known epigastric sensation, and others are a feeling of choking, dyspnœa, nausea, and cardiac sensations. (4) Vertigo and other allied sensations. (5) Certain sensations in the head, pain, &c. (6) Psychical auræ, the consciousness of an emotion or an idea. (7) Special sense warnings; some of these are strictly unilateral, but it is convenient to consider them together. This classification is clinical, and as such is adopted as affording facilities for the determination of facts apart from theories.

We may take first the unilateral peripheral auræ, present in 86 cases, or 17 per cent. of those with warnings. Of these the commencement was in the arm in more than half (45 cases), in the leg and face in smaller and nearly equal numbers (15 and 17 cases), in the tongue in 5, and in the side of the trunk in only 2 cases. Such unilateral commencement is common in seizures due to organic brain disease, and the organic disease causing them is usually on the surface of the brain, in the region stimulation of which causes movements in the parts first affected in the fit. Such stimulation, indeed, as Ferrier has shown, may cause convulsions beginning in the part. But from the series of cases now under consideration all those presenting symptoms suggestive of organic brain disease were excluded.

In 5 cases only the aura was referred first to the tongue, in 2 others the tongue was affected secondarily. In 1 the commencement was by a movement, in 1 by a beating, in the rest there was merely a sensation; in 3 tingling, and in 1 a sensation of something crawling on the tongue. In each case the convulsion was right-sided, and in each case in which the side of the tongue affected was noted, this was also the right side. Hence it seems probable that the sensori-motor processes for the tongue predominate on the left side of the brain, a fact also suggested by the great impairment of the movements of the tongue frequently noticed in right hemiplegia with aphasia. The association of movement of the tongue is twofold, one in its use for speech, one in its use in mastication and deglutition. We may trace this double association in the combinations of the aura. Tingling in the tongue was associated in one case with twitching in the lips, in another with a lateral movement, or sense of movement, in the jaw. The sensation of something crawling on the tongue, in one case, was followed by a feeling of sickness, then of something rising in the throat, and then by palpitation of the heart.

The seizure commenced in the face in 16 cases, and on one side as frequently as on the other, but much more frequently by a motion than by a sensation. In 8 cases the mouth was drawn to one side, no doubt by the zygomatic muscles. Commencement in the lips was rare. In only 2 cases was there an initial contraction in the orbicularis of the eyelids, and both were associated with a sensation in the hand, and were right-sided.

The cases in which the attacks commenced in the arm were 40 in number. In about three-quarters of the cases the commencement was in the hand. Of these beginning by spasm, twitching, &c., the first motion was, in most instances, either in the hand as a whole (16 cases) or in the arm as a whole (8 cases). In only one case was there initial movement in the fingers, and this was clonic spasm in the common flexors. In 14 cases the attack began by a sensation—"numbness," "tingling," "pins and needles," &c.; and in these the commencement was, in most, in a definite part of the hand—the forefinger in three cases, never in the thumb, twice in all the fingers, once in the middle finger, once in the palm, twice in the back of the hand, three times in the hand as a whole, and twice at the wrist. It never began higher up the arm. In five other cases the sensation with which the fits began was less simple, and in several was certainly a motor sensation. One patient always felt "as if his arm were drawing up," and would beg that it might be held down, although there was no motion in it. The feeling was accompanied by severe pain "as if the arm would break." In another case there was a somewhat similar pain, "as if the arm were withering up." In a third there was a feeling of stiffness, and in a fourth a feeling of twitching in the first three fingers, apparently without movement, and in a fifth there was a sensation in the back of the arm "as if the nerves were being drawn." The attacks, commencing with motion, or with the sensations last described, probably motor, began in the right and left hands in an equal number of cases; but those commencing with a simple sensation began in the left hand twice as frequently as in the right. In three-quarters of the cases consciousness was lost before the seizure had extended beyond the arm. But in 9 cases, after ascending the arm, the aura passed to the head, and in 4 to the mouth. In 2 cases, after passing up the arm to the shoulder, the aura passed down the side to the leg, and down to the foot. In no case, after passing to the head or mouth, did the sensation afterwards pass down the side to the leg; but in 2 cases, in which it passed to the mouth, it afterwards commenced again in the foot, and passed up the leg.

The seizure commenced in the leg in 14 cases, and in 10 of these in the foot. In only 5 did it distinctly begin as a movement, and this began in the toes once only, in the foot as a whole twice. In 1 case the movement, twitching, began in the hip, and passed down the leg. In 5 cases the commencement was by a simple sensation, once in the great toe, once in the sole, once in the dorsum, once in the foot as a whole, and once in the leg as a whole. A motor sensation, without movement, was described in 1 case: the patient suddenly felt as if the leg were bent up under the other, and that he must stretch it out. Of the cases in which the commencement was in the foot, consciousness was lost before the aura had extended beyond the foot in 2 cases; in 6 the aura extended up the leg and thigh; in 3 of these it passed on up the side to the head. In 2 cases, after passing up the side, instead of going to the head it passed down the arm to the hand, and then consciousness was lost. In no case in which it passed up to the head did it afterwards deliberately pass down the arm—just as in the cases in which the aura commenced in the arm if it ascended to the head, it never afterwards passed down the side. The passage of the discharge to the region in which the head is represented appears to be closely connected with loss of consciousness.[1] In 2 cases the sensation, commencing in the foot, passed up the side, and when it had got to the level of the hand it recommenced there, and then passed up the arm. There are thus two modes in which the arm is involved secondarily to the leg, just as there are two modes in which the leg is involved secondarily to the arm—one extension by continuity, passing from the one limb to the other by the trunk, and passing down the limb secondarily involved, and the other by separate commencement in the extremity of the second limb, and the passage of the aura up both. It seems probable that in the

[1] In this statement, it must be remembered, cases of idiopathic disease are spoken of. In convulsion from organic disease, usually more deliberate, I have known a sensory aura pass up the arm to the side of the face and afterwards pass down the side of the trunk to the leg.

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cases in which it passes from one to the other by continuity through the trunk, the discharge in the sensory centre takes the lead, and determines the course of the aura, although it may be closely, even instantly, followed by the motor discharge. The representation in the brain of the cutaneous nerves must be as continuous as the skin in which they are distributed. The passage of the aura by continuity up the arm, down the trunk, and down the leg, or *vice versâ*, is intelligible on this theory, but scarcely on the theory that the discharge in these cases begins in the motor centres. This view is supported by a case lately seen, in which the seizures began with a sensation in the foot, without motion. The sensation passed, as such, up the leg and side, and *down* the arm to the hand, and not until it reached the hand was spasm added; the hand began to twitch, and the movement passed *up* the arm, and then consciousness was lost.

In several cases in which the seizure began in the mouth and face, the aura passed afterwards down the arm first and down the leg afterwards. No aura *beginning* in the tongue, face, or leg was associated with one in the special senses. In 3 cases of attacks commencing in the arm there was a subsequent special sense aura, but in each of these the seizure in the arm began by a sensation proper, not by a motion. This seems to indicate that, as might be expected, the special-sense centres are connected with the sensory-limb centres, rather than with the motor-limb centres. The only case in which a special-sense aura was in any way associated with the lower extremity was one in which the seizures began with a pain in the back of the hand, and this pain, as such, passed up the arm and down the leg. When it reached, still as pain, the middle of the thigh, a flash of light appeared before the eyes. The pain went on down the leg, and when it reached the foot consciousness was lost.

In only 2 cases did the attack commence in the side of the trunk, and in 1 the sensation was described as "burning." In 2 cases a left-sided aura was associated with palpitation of the heart. In one patient, a girl, a singular relation existed. The fits began with a feeling of numbness and beating in the right great toe, which passed up the leg, and when it reached the groin, the patient felt a need to micturate. If she could do so the aura ceased; if she could not she suddenly felt as if turning over and over, then a peculiar psychical condition occurred; she lost consciousness, and passed into a severe epileptic fit. I have met with another case in which micturition sometimes arrested a commencing fit. I have also seen a case in which the act of micturition sometimes brought on a fit. The shiver, which in many children and some adults, normally attends the act, indicates the associated affection of higher motor centres, and these facts suggest that the passage of urine during epileptic fits is not merely the result of loss of consciousness, but is really part of the convulsive action.

The mutual relation of the motor and special sense centres in the surface of the brain, ascertained by Hitzig and Ferrier, enable us to understand something of the progress of seizures. They do this whether we regard epilepsy as a cortical disease or not, because from Burdon-Sanderson's researches the relation is similar in the lower centres. For instance, a fit beginning in the face or tongue, if it involves the limbs, takes the arm before the leg, and we find that the arm centres intervene between those for the face and tongue, near the fissure of Sylvius, and those for the leg in the upper part of the hemisphere. Again, in a fit beginning with twitching of the angle of the mouth, rotation of the head commonly succeeds, and the centre for rotation of the head is situated in front of, and contiguous to, the centre for the action of the zygomatic muscle. But in other cases it is difficult to understand the progress of the aura from the experimental facts. For this there are probably three reasons:—First, we know little of the degree of structural association or separation of these centres, the cerebral sulci, of course, affording no information on the matter; secondly, the centres represent in many cases complex movements, and fits begin usually with simple movements; thirdly, we are entirely ignorant of the mutual relations of the sensory centres for the limbs, which Ferrier's experiments locate on the inner aspect of the tempore-sphenoidal lobe. The facts of many aurae make it probable that these rather than the motor centres lead in the discharge, and determine the course of the commencing fit, and I think that thus the progress and association of many aurae may be explained.

A rare but curious condition sometimes attends the onset of a fit which begins unilaterally—what may be termed the alternation of the aura. In some right-sided convulsions, from left meningeal hæmorrhage, which I once watched, the rotation of the head to the right, which accompanied the fit, was preceded by a rotation to the left, and this itself was preceded by a slight initial rotation to the right—a double alternation. I have obtained very few indications of this phenomenon in idiopathic epilepsy. In one case a left-sided fit was preceded by shaking and trembling of the limbs of the right side; in another case the attacks began with a sensation in some left cranial nerve, followed by a sensation around the right wrist.

The great majority of fits which begin unilaterally are epileptic. Of 76 in which the character of the fit could be ascertained, only 9 (or 12 per cent.) presented hystero-epileptic or co-ordinated symptoms.

Clinical Remarks
ON THE
USE OF THE CLAMP AND CAUTERY IN THE TREATMENT OF HÆMORRHOIDS AND PROLAPSUS.

Delivered at King's College Hospital on Jan. 24th,

BY HENRY SMITH, F.R.C.S.,
PROFESSOR OF SURGERY IN KING'S COLLEGE; SURGEON TO KING'S COLLEGE HOSPITAL.

GENTLEMEN,—You have had opportunities of seeing me operate several times since the beginning of the present session on cases of hæmorrhoids and prolapsus of the rectum by means of the clamp and cautery, and the case just brought before you is one which so well illustrates this particular operation that I think it well to make use of it, as it were, as the text for a few remarks on this subject.

The operation consists, as you are well aware, in drawing down and embracing the tumour within the blades of the clamp; then removing the hæmorrhoid with a sharp pair of scissors, and, lastly, applying the actual cautery freely to the cut surface.

Each of these steps of the operation demands a few words from me. It is very important to isolate the tumours well, so as to compress them easily, and in some cases where the hæmorrhoid runs, as it were, abruptly into the surrounding hypertrophied skin, it is well just to make a slight groove with a pair of scissors. By this means the blades of the clamp compress the growth more readily at its neck. You will have noticed also that in large tumours I use a clamp furnished with a light but powerful screw near its handles. By this means I tighten the grasp of the blades of the clamp more firmly; then, in removing the part, I take great pains not to divide the base of the tumour too close to the clamp. I leave tissue to the extent of an eighth of an inch, so as to have a fair surface for the use of the cautery. The iron is applied very carefully and very freely at a black heat, and then, all the cut surface being so treated, the blades are gently and gradually released by the screw on the clamp. In this way the pressure is taken off the neck of the tumour, and if any vessel is not thoroughly cauterised it immediately bleeds. The blades are then quickly screwed up again, and the hot iron is applied to the vessel until it ceases bleeding. Sometimes it is necessary, as in a case of huge prolapsus you saw me operate on a little time ago, to reapply the hot iron several times to the same vessel before bleeding ceases. You may, however, rest assured that with proper care you can stop bleeding from any vessel here by the use of the cautery.

Each tumour, and there are generally three or four, is treated in this way, and then, when an opiate suppository is introduced by the finger well oiled, the operation is completed. If there is much hypertrophied skin I remove a portion of it, and if the sphincter ani is very tight, I divide it, as in fissure of the rectum. I do this because I fancy in these cases there is less pain after the action of the bowels; for I find that in these cases of long-standing hæmorrhoids

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or prolapsus, when the sphincter is very loose, the patient as a rule complains very little of pain after the action of the bowels.

The after-treatment consists in locking up the bowels by occasional opiates, and strictly dieting the patient. In the majority of cases the patient complains of more or less severe pain for an hour or two, and then it goes off. This pain is much alleviated by the application of hot water by means of a sponge. Retention of urine sometimes occurs, but not very frequently, more often in women, who generally suffer much more severely from hæmorrhoids than do men. As a rule, the patient leaves the hospital in a week, the bowels being acted upon by castor oil three clear days after the operation, and then again two days subsequently. Sometimes blood in a coagulated form comes away with the first movement of the bowels, and frightens the patient, but it is only for the most part blood which ran into the bowel at the time of the operation and remained there. At times there may be a little arterial bleeding, but I have never once had to use any stronger measures than to apply a speculum and throw up iced water for stopping any such bleeding.

Now the advantages I claim for this operation are—that it is all completed at once; that it is eminently safe; that the after-suffering is slight, and that the period of convalescence is short. In the old-fashioned method of applying ligatures, the operation may truly be described as not completed at one sitting, for of necessity the threads are left to come away, not rarely a most tedious and painful process. I have seen the most horrible suffering for hours and days after the use of ligatures. Then, again, we may meet with those uncomfortable sequelæ as the result of the presence of foreign bodies, and the subsequent ulceration, tetanus, diffuse inflammation, and pyæmia. Several cases of death have occurred after the use of the ligature from these and other causes; one or two, I regret to say, in my own hands. Some of these cases have been made known, whilst others, especially those occurring in private, have not been heard of. Now, ever since I began the clamp and cautery treatment in this hospital, in the year 1864, I am happy to say we have not had a single fatal or really serious result; and in my own private practice, where during the same period I have operated on several hundreds of cases—some of the most severe description, and at all ages up to eighty—I have only had one death which could fairly and honestly be placed to the account of the operation itself, and this resulted from an accident which ought not to have happened, and occurred several years ago. Three other cases, it is true, died after I had performed an operation, but in these instances, all of which have been published, the condition of the patients was such that it would be very unfair to attribute the fatal result to the operation alone.

I was afraid, however, I should at last meet with a fatal result at the hospital, and this leads me to call your attention to that case of huge prolapsus in which I operated a few weeks ago. The patient was an elderly man who had a prolapsus as big as a cocoa-nut always coming down, and rendering his life a burden. He had already been operated upon twice by a hospital surgeon, but in vain. The patient was then sent to me, and, formidable as the case looked, I determined to undertake it. I applied the clamp deeply in three different directions. There was a great deal of bleeding, and I had to apply the cautery over and over again before I could stop it; and then, just as I was finishing the operation, a most untoward event occurred—severe vomiting, as the result of the anæsthetic, took place. The prolapsus was forced still further down; and before I and my assistants could return the parts, the violent action of the abdominal muscles was such that the weakened coat of the bowel gave way, and a knuckle of small intestine actually protruded through the rent thus made. I carefully returned this as soon as the vomiting ceased, and anxiously waited the result. Our house-surgeon, Mr. Newmarch, watched the patient with great care and treated him with great skill, keeping him constantly under the influence of opium, and locking up his bowels for several days. The result was not a single bad symptom of any kind. On the first action of the bowels there was no protrusion, nor afterwards; and as soon as the man was fairly recovered I removed three longitudinal folds of skin from the anus, so as further to tighten the parts. The man was completely cured. Now, the lesson this case teaches is this—not to employ an agent which could cause vomiting; because, of course, in such a terribly severe case as this it is absolutely needful to clamp deeply, and thus weaken the bowel. It was a most unlooked-for accident, not likely to occur again; in fact, it is hardly reasonable to expect to meet with another such case for operation. I have, however, been called to cases as bad or worse, but where no operation could be recommended.

Simple and safe as is the operation by the clamp and cautery, it has gone through an ordeal of severe criticism; and although it has for some time been established as the best proceeding for hæmorrhoids and prolapsus, I may refer to the objections advanced against the plan. First, it has been stated that it is a rough and painful treatment; but this argument does not hold good now anæsthetics can be used. A more solid objection is, that hæmorrhage of a serious nature is liable to occur. I admit this. I am sorry to say I have known of cases where most serious bleeding has occurred, and I have been informed of two instances where death ensued from this cause; but I maintain that when such accidents occur it is in consequence of an error on the part of the surgeon. He either uses a faulty clamp or allows a vessel to recede from the blades, so that it does not get touched by the cautery, or he applies the cautery inefficiently. I became a little careless after I had operated on a great number of cases, and did not take sufficient trouble to thoroughly cauterise the vessels, and I had about half-a-dozen cases of somewhat severe bleeding; but since then—now some five years ago—I do not let a single vessel escape without being well cauterised, and I have not been troubled by hæmorrhage at all. Stricture of the bowel may occur, but this is due to the too free removal of tissue, and especially of the skin about the anal orifice, and of course may be prevented. As a rule, after very severe operations, I advise the patient to use a bougie for a few weeks; this is a protection against any possible contraction.

Before concluding, I wish to say a word to you about the history of this operation. Those of you who have heard my remarks before will remember that I have always distinctly disclaimed having introduced this clamp and cautery treatment, and that I invariably give the credit of the origination of the plan to the late Mr. Cusack of Dublin, and you will find this statement in my Lettsomian Lectures;[1] but I have always claimed what merit there may be of improving the clamp in such a way that it can be used with the greatest efficacy and safety. Hence my name is associated with this means of treatment, and in nearly every important work on surgery the instrument as now used is described and figured as mine. I have also in my Lettsomian lectures, and in various papers, prominently drawn the attention of the profession to the subject, and, I believe, have been the means of getting the operation established as it is amongst surgeons both in this country and our colonies. I claim no other credit. I should not have mentioned this matter to you to-day were it not for the fact that an attempt has been made in certain quarters to ignore my claim to any little credit which my surgical brethren at large allot to me. The alleged dangers of this operation, too, have been spoken of in such a way as to lead one to suppose that the proceeding is attended with some considerable risk; but I need only repeat to you what I have told you before, that a fatal result has never happened in this hospital during the fifteen years in which the operation has been constantly performed, and under most adverse circumstances, and I have told you of the results of my private practice; so I must leave it to you to judge how far the operation can be considered a dangerous one. In fact, so far as I am concerned, the idea of danger as connected with this proceeding is not associated in my mind when I undertake a case of this kind, and so I honestly tell my patients when asked the question. For even in some of those desperately bad cases where the patients have been brought down to the lowest ebb by profuse hæmorrhage going on for weeks or months, and where some serious result might be anticipated, the safety and success of the operation by the clamp and cautery are more marked than in instances of much less severity.

[1] Fourth edition, p. 106.

THE result of the People's Subscription Fund in aid of the London Hospital during 1879 has, according to the report just issued, been the collection of the sum of £1908 16s. The whole amount collected in the twelve years during which the People's Fund has been in existence is £12,849. The produce of last year's efforts, therefore, shows a very gratifying proportional increase in the annual proceeds of the fund.

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A CASE OF RUBEOLA (ROTHELN).

By DYCE DUCKWORTH, M.D.,
FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS; ASSISTANT-PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL.

INASMUCH as doubt still exists in the minds of many experienced practitioners respecting the peculiar and specific nature of rubeola, or German measles, it seems desirable to place on record all cases that may be met with. Wunderlich remarked that conviction in this matter could only be secured by the observation of distinct epidemics of the disorder. In Germany the distinctive features of rötheln are dogmatically laid down, and less doubt about its true nature appears to prevail there, than is the case either in France or this country.

If one dips into the literature of the subject, it is curious to note that a broad line divides the writings of those who plainly recognise the disease, from those who feel unable to assign to it a specific character as a distinct member of the exanthematic febrile group. This survey was ably made some years ago by no less shrewd and careful an observer than the late Dr. Murchison, who ably summarised the current opinions in a clinical lecture delivered at the Middlesex Hospital.[1] He gave in his own adhesion, without any hesitation, in favour of the existence of rötheln as a substantive and distinct exanthematic fever.

Under the titles of roseola, epidemic roseola, roseola æstiva, and rose-rash, the disease has been again and again described in English books, with but an imperfect appreciation of its true clinical features and affinities. Without doubt, too, many examples of it have been diagnosed as cases of mild or irregular measles, *morbilli sine catarrho*. Other instances have been described as illustrations of the joint existence of scarlet fever and measles, or the affection has been regarded as a hybrid of these two poisons. Mason Good described it as *rubeola incocta*. In France the distinction was recognised by Trousseau,[2] but he was in error in describing this affection as one unaccompanied with catarrhal symptoms, and in stating that the rash was not raised above the level of the skin. He called the disease roséole, and common measles, rugéole. Dr. Paterson of Leith was amongst the first to describe the disease in this country, and he has been followed by Dr. G. W. Balfour of Edinburgh, by Dr. Dunlop of St. Helier's, Jersey, by Dr. William Squire, and by Dr. Robert Liveing. Dr. Murchison's contributions I have already alluded to. In Sir Thomas Watson's "Practice of Physic" a short allusion to the disease is made; in Reynolds's "System of Medicine" the affection is not specifically recognised; but Dr. Bristowe, in his "Practice of Medicine," gives a good account of it. Medical officers to some of the public schools have had good reason to be impressed with the features of this affection, for it has often been prevalent in some of them during late years, and at Rugby and Harrow many cases have come under notice. "Harrow rash," indeed, had a disagreeable notoriety some years ago. Dermatologists in this country, with a notable exception in the case of Dr. Robert Liveing, describe the disease as a simple roseola.

Happily the disorder is in itself an unimportant one, in that it perhaps never destroys life, and, with the most rare exceptions, leaves no untoward sequelæ. Still, it is due to the spirit of work which prevails in medical science at the present time that the nearest approach possible to truth should always be made, and that each observer should contribute his quota to the common stock of knowledge.

The following case was carefully watched through its whole course, and these are the chief details of it:—

A. M——, aged eighteen, a robust youth, was in his usual health till 10 P.M. on Nov. 14th, when he felt "out of sorts" and more than usually tired, without any known cause. Slept well that night, followed his usual occupations (which were active) next forenoon, and took his meals as usual. About 1 P.M. on this day felt poorly, and had slight rigors. During the evening seemed tired and depressed, apparently suffering from slight cold. His face and neck were noticed to be rather red and puffy-looking. Slight pain and stiffness under the lower jaw was felt. Took a hot foot-bath, and was warm and perspiring on going to bed. Slight tightness at back of nose and throat. Draught taken containing sal volatile, chlorodyne, and ipecacuanha wine.

Nov. 16th.—Slept well all night. On awaking found himself covered with a rash all over the body. Seen at 9 A.M. Face and neck suffused, and skin over trunk and limbs injected and hot. An abundant, raised, crimson rash was found scattered on every part of the body. The general aspect was that of measles, with injected interspaces of skin between the papular patches. The axillary temperature was 101·4°. There were plainly visible crescentic arrangements of the measly eruption in many places. The face was less affected by papules, and was more generally erythematous and swollen-looking. It felt tight and stiff. The throat was sore, and looked red as far forward as the soft palate. The tonsils were enlarged and red, especially the left, and the lymphatic glands at the angle of the jaw were a good deal swollen and tender. Tongue fairly clean; papillæ natural; pulse regular, 84, good volume, quick, and sharp. Conjunctivæ suffused, but no lachrymation, no sneezing, and no cough. Voice rather hoarse. No action of the bowels; urine of fair quantity, clear, acid, void of albumen. During this day the rash was observed to vary in character, so that many of the small raised patches coalesced. On the back there was abundant eruption. A mixture, with aromatic spirit of ammonia in full doses, with chlorate of potass and a little ipecacuanha wine, was given each fourth hour. Milk and beef-tea for diet. Sponging, with "sanitas" and warm water. Vaseline relieved the discomfort of the face. 8.30 P.M.: Temperature 102·2°; 10 P.M., 101·2°. Submaxillary and suboccipital glands have enlarged during the day. The throat is less sore, but looks as it did in the morning. No pains or other noteworthy symptoms. The rash is not itchy, and is only uncomfortable on the face, which is universally red and swollen.

17th.—Passed a good night. To-day the rash is less obvious everywhere. The skin is universally injected and rubeoloid; slightly raised patches can be seen in most parts. The face is less full and stiff. Temperature 99·2°; pulse 64, of good volume. Tongue almost clean, throat less sore, fauces red, tonsils clean and uniformly red; velum punctiform with redness; skin moist. Bowels relieved thrice by Carlsbad salts. Glands enlarged, and slightly tender, at sides of neck, over larynx, supra-clavicular regions, also in the axillæ and groins. Relief to the throat acknowledged immediately after each dose of the medicine. In the evening the rash was less marked. Epistaxis, to the amount of about two drachms, occurred. Feeling of stuffiness in the nose; voice slightly hoarse. Temperature 98°. Urine deposited phosphates, alkaline, no albumen.

18th.—Passed a good night. Skin still injected, and the papular element faintly perceptible, of a yellowish-red hue. Throat red, clean; tonsils still enlarged; velum palati speckled with punctiform petechial spots. Filiform clot of dark blood on the pharynx, evidently from posterior nares. Pulse about 80 in sitting posture. Temperature 98·4°; conjunctivæ still suffused; tongue fairly clean. Right ankle aching, the site of a severe kick at football some four months ago; no swelling or undue heat in it. Urine acid, turbid with lithates, no albumen. Evening: Skin suffused, mottling apparent. Tongue thinly furred, and fungiform papillæ more obvious than before. Glands enlarged as much as yesterday. Pulse 56, temperature 99·4°. Ate some fish with relish; sat up for some hours.

19th.—Had good night. Skin suffused, and slight mottling obvious. Conjunctivæ less injected. Glands about the jaw smaller; same amount of enlargement in axillæ and groins. Throat not sore, fauces less red, voice not so hoarse. Punctiform aspect of velum less marked. Temperature 98·6°; pulse 60. Tongue cleaner, papillæ still distinct. Appetite fair; bowels open, motion solid. Urine acid, no albumen. Sat up ten hours.

20th.—Slept well. Skin, faintest mottling perceptible. Glands about jaw much smaller. Throat not red; trace of the mottling only on the velum. Tongue, thin general fur; urine natural. Temperature 97·6°; pulse 60 (sitting up). Ate some roast mutton. No pulmonary symptoms.

21st.—Going on well. Temperature 97·6°; submaxillary glands still large; all signs of rash subsided.

22nd.—Appetite good. Temperature 97·2°; pulse 56; tongue clean; throat and velum natural; little epistaxis; glands reduced in size; no sign of any desquamation. Had a carbolic acid bath. The mixed day-urine contains a

[1] THE LANCET, vol. ii., 1870, p. 595.
[2] Clinique Médicale, vol. i., p. 151.

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trace of albumen, *possibly* due to a pudding made with eggs, of which he partook freely to day. Evening temperature 98·4°.

23rd.—Out for a short walk. Temperature 97·8° (morning); urine loaded with lithates; faintest trace of albumen; tongue clean.

24th.—Temperature 97·5°; urine depositing phosphates on boiling; clearing with nitric acid. Pulse 60. Another carbolic bath.

25th.—Morning temperature 97°; evening 97·8°.

26th.—Glands about the same; urine deposits phosphates on boiling; no sign of desquamation except a little on lobes of each ear. Out walking to day; appetite good; tongue clean.

Dec. 1st.—Returned to his ordinary duties.

Remarks.—It was ascertained that this patient had sat regularly at table next to one of his fellows who sickened with what was termed "measles" sixteen days previously. This gives a somewhat longer incubative period than has been commonly recognised, ten to fourteen days being mentioned by most observers. No other communication of any kind existed before or after the illness of the first patient.

The prodromic period in this instance was something under thirty-six hours from the time of first poorliness to the manifest universal outbreak of the rash. The eruption is often the first symptom in many instances, but, not unfrequently, patients feel more ill and miserable during the short prodromal stage than at any subsequent period. This brief preliminary period is one of the best-marked characteristics of röthela, and stands out in contrast to the seventy-two hours of the usual prodromic stage of true measles.

Moreover, the catarrhal symptoms, though certainly often present, are less marked than in measles. There are suffused conjunctivæ, but not commonly any lachrymation; stuffiness of the nose, but not sneezing.

Respecting the eruption, this is truly measly. Its rapid development is remarkable, and in this it differs from morbilli. The crescentic arrangement is appreciable, but the patches pass on quickly to develop and coalesce, thus becoming diffused, and somewhat resembling scarlatinal rash. The patches are certainly raised at first. As in measles, much rash is found on the back, and it often begins on this part or on the chest, and not on the forehead and face. The interspaces become rapidly injected, and, thus, the raised patches cohere, and blend into a uniform erythema.

In this case the temperature was highest during the greatest development of the eruption, and a rapid fall occurred on the fourth day. Subnormal temperature was observed for many days subsequently.

The albuminuria was noticed on the eighth day for the first time, and again on the tenth day, not having been examined on the ninth day. On the eleventh day it had disappeared. There was only a trace of it on each occasion.

Desquamation was only noticed on the ears, and in slight amount. No sequelæ ensued.

A specially noteworthy point in cases of röthela is the tendency to enlargement of the lymphatic glands about the jaw and neck. Few writers have laid stress upon this symptom, and yet *it* is one of the most characteristic. It does not occur in true measles, and it seems to be somewhat disproportionate to the amount of irritation manifest about the throat. It may therefore be fairly attributed to the special influence of the fever poison. In their report of an epidemic at Harrow, Messrs. Hewlett and Bridgwater mentioned the occurrence of enlargement of the cervical glands.[3] Thomas, in his article in Ziemssen's Cyclopædia, gives a full account of it. It was well marked in the case just recorded, and the enlargement was here noticed to occur in the suboccipital and submaxillary glands, while the axillary and inguinal lymphatics appeared also to be affected.

The diagnosis in this case was rendered more easy by my having attended the patient previously in well-marked and severe attacks of measles and of scarlet fever, the latter followed by nephritis and general dropsy, from which perfect recovery was made.

Grafton-street, Piccadilly, W.

[3] THE LANCET, May, 1863.

WATER SUPPLY FOR YOUGHAL.—The Local Government Board for Ireland have sanctioned a loan of £6000, for the purpose of supplying this town with water.

AURAL NOTES.

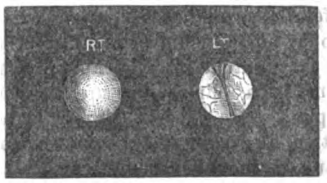
BY A. GARDINER-BROWN, F.R.C.S. EDIN.,
AURAL SURGEON TO THE LONDON HOSPITAL, AND LECTURER ON DISEASES OF THE EAR TO THE MEDICAL SCHOOL.

III. IVORY EXOSTOSIS DEEPLY SEATED IN THE EXTERNAL AUDITORY MEATUS; REMOVAL.

THE case is that of a gentleman (J. S. C——, aged forty-five) sent to me last April by Dr. Stephen Mackenzie. He stated that during the last fourteen days he had experienced a very uncomfortable sensation in his left ear, which was becoming deaf. He was naturally alarmed at this, as he had lost the hearing on the left side, through measles, when a child.

Upon examining the right ear I found a deeply-seated exostosis, apparently spheroidal (Fig. 1), almost filling the meatus. He could only hear the watch on contact, but on

FIG. 1.

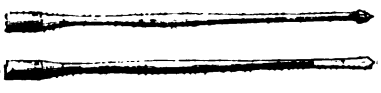


removing a small quantity of cerumen with the syringe the hearing greatly improved. Further investigation proved the exostosis to be growing from the posterior wall of the osseous meatus, its attachment, as far as I was able to determine, measuring six millimetres from above downwards. A fine wire loop (No. 28) could just be forced over, and partly around it. The growth was, however, too sensitive to bear much examination, as the soft tissues, becoming rapidly injected, now added to the difficulties of ascertaining the exact extent of the attachment. Touched with a probe it proved to be of extreme hardness, very dense, and tightly covered with a pale, thin membrane. The growth appeared to be somewhat sessile or subsessile; but this, after the extraction, proved only true of its outer portion. The shape of the growth was mammilliform, with its axis inclined forwards and outwards, as represented in the ideal horizontal section in Fig. 3. A little lead lotion was ordered to allay the sensitiveness caused by the examination, and to harden the surfaces for operation.

In the left ear were found *two* exostoses (Fig. 1), growing from the anterior and posterior walls respectively, but situated nearer the outer part of the osseous meatus, and entirely preventing any view of the membrane. A few vessels were seen meandering upon their surfaces. This ear, as already stated, was found to be quite deaf. Fig. 1 represents the view of the exostoses in the right and left ears, as seen through a large speculum.

It having been determined to remove the growth from the right meatus before absolute occlusion should have taken place, its density and depth from the surface led me to pursue the following course:—Three drills were made of the shape and length shown in Fig. 2, and fitted to an American dental engine. Two pairs of forceps (stump and bicuspid)

FIG. 2.



were also selected, and a screw-top, shown in Figs. 3 and 4, adapted to the size of the drill, B. Some rectified spirits of wine was at hand as a styptic, as perchloride of iron or gallic acid would spoil both the view and the instruments, and ice was inadmissible.

The operation for removal of the exostosis from the right ear was performed on May 6th, at 10.45 A.M. An anæsthetic (chloroform two parts, sulphuric ether three parts, and rectified spirits of wine one part, mixed together) was now administered to the patient whilst sitting in a high-backed arm-chair.

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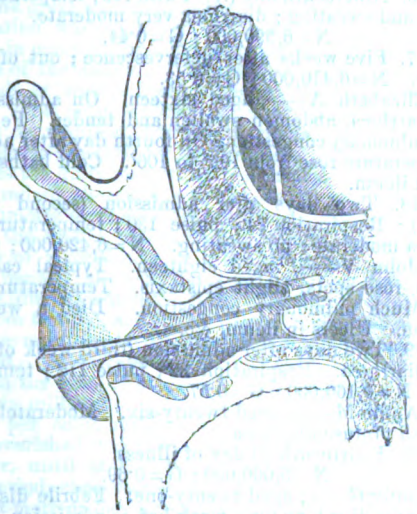
When he was thoroughly under its influence, which occupied twenty minutes, the growth was further examined by those present and myself. I proposed to drill into the centre of the exostosis, fix into it the screw-tap, undermine it by drilling through its base, and then to snap it off by using the screw-tap as a lever. The periosteum was first cut through and torn away as far as was practicable; the blood, flowing very freely, was allowed to be unchecked for a few minutes, as the vessels of the head were much congested. The meatus was now rinsed with cold water, and a large speculum introduced well down upon the growth and plugged with cotton-wool. The boring apparatus was brought alongside the patient. Drill A was made to play

FIG. 3.

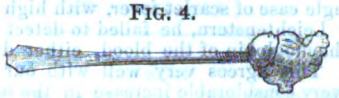


upon the centre of the growth, and kept in the axis of the osseous meatus, entering the bone to the extent of two millimetres. Drill B was now mounted and used to a depth of about six millimetres. Into this hole the tap was now firmly fixed, and the speculum removed. Having well cleansed the meatus, I made three separate drill-holes at the base of the exostosis, entering the bone to the extent of some seven or eight millimetres, and, in addition, tried to get drill C to work laterally, without, however, much success, the density of the bone and the clogging of the teeth with débris rendering it extremely tedious.[1] Thus weakened at its base by the drill-holes, and not suspecting the large area of its attachment internally, I thought to break off the growth by using the screw-tap as a lever. The tap unfortunately broke off close up to the bone without accomplishing this purpose. The pair of stump forceps were now used, but only enabled me to bring away a part of the growth containing the broken end of the screw. (See this line of fracture in Fig. 4.) The part of the exostosis now remaining, being more deeply seated, offered considerable difficulties in the way of removal. Strong traction directly outwards was made upon the auricle, with slight rotation to the *left;* and the bicuspid forceps, touched with oil externally, were introduced (closed), and rotated about a quarter turn to the *right*, accompanied by such a pressure into the meatus as to bring them down upon the remainder of the growth, but without pushing the tubular portion of the *auricle* into the osseous meatus, and thus encroaching upon available space. Opening the forceps as much as possible under the circumstances, taking advantage of the vertical diameter of the meatus, I obtained by a little manœuvring what was undoubtedly a firm grip of my opponent, and brought away the rest of the bony mass, not by traction, as I should thereby have lost my hold, but by a very delicate, yet firm, rotatory movement. The membrana tympani was now seen to be partly hidden by a flap of periosteum, which peeled off the inner surface of the growth during its extraction, remaining loose in the meatus. The greater portion of this was carefully taken away, its attached border being too close to the drum to warrant its entire removal, otherwise I should have been careful to get rid of the whole covering of the growth.

[1] During the boring process I kept my right or operating hand very firmly pressed against the side of the patient's head, so as to have proper control over the drills.

A front view of the entire exostosis is very faithfully portrayed of its natural size in Fig. 4. It measured eleven millimetres from apex to the extreme edge of base, which reached the annulus tympanicus; eight millimetres from

FIG. 4.



above downward, and seven millimetres in thickness. Smooth and irregular on its free surface. The shaded part in Fig. 4 represents an injury by the forceps. It is quite flat on its attached surface, except where channeled by drill-holes. It weighs ·237 of a gramme.

Soon after coming-to the patient vomited several times, and complained very much of pain in the lower frontal region. Did not feel more than a little discomfiture in the meatus, and could hear very fairly. Towards the evening he became very deaf, which lasted five days, much to his alarm. I had previously warned him of this effect, so that he was not so much discomforted as he might otherwise have been. The patient, who was of a plethoric habit, had taken saline aperients just before the operation, and was put on spare diet for a few days afterwards. Very little inflammatory action appeared in the meatus, which was cleansed four times daily with warm carbolic lotion (1 in 75). In a few days granulations appeared. These were first controlled by perchloride of iron, and afterwards by nitric acid. Not seeing the patient frequently after the first week, two of the granulations became sufficiently large to remove with a snare. The hearing was perfectly restored at the end of ten days, and on my last inspection, five months after the operation, scarcely a trace of the site originally occupied by the exostosis could be discovered.

There being no history of syphilis (acquired or otherwise) or hereditary predisposition, the growths are, no doubt, attributable to persistent irritation due to measles at an early age.

I believe from the cases of exostosis and periostosis of the external auditory meatus which have come under my notice, that when they are not of syphilitic origin the patient frequently possesses a more or less marked tendency to general hyperostosis or osteo-sclerosis.

The time occupied by the above-described operation, including the administration of the anæsthetic, was thirty-eight minutes. My thanks are due to Drs. Yeates and Wright, and Mr. Lloyd, for their very able assistance on the occasion.

A

CONTRIBUTION TO CLINICAL HÆMOMETRY.

BY E. BUCHANAN BAXTER, M.D., F.R.C.P.,

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FREDERICK WILLCOCKS, M.B.,

SAMBROOKE MEDICAL REGISTRAR TO KING'S COLLEGE HOSPITAL.

(Continued from p. 362.)

OUR observations may conveniently be grouped under three heads; first, those made in acute febrile diseases; secondly, in chronic diseases; thirdly, in those pathological conditions in which the blood is either the primary seat of the morbid process, or, at any rate, the theatre of its most conspicuous manifestations.

A. ACUTE FEBRILE DISEASES.

Scarlet Fever.—I. Ernest C——, aged four, mild but typical case. Sore throat and rash. No complications.

Obs. 1. Fifth day of illness, two days after appearance of eruption, which is fully developed all over the body. Pulse 130; temperature 102°. N=4,670,000; G=0·61.

Obs. 2. Nineteenth day; temperature 98°. Free perspiration ever since. Rash faded twelve days ago. Constipation. No albuminuria. N=7,510,000; G=0·38.

II.—Samuel B——, aged sixteen. Typical rash and bad sore throat. No complications.

Obs. 3. Third day of illness. Rash universal. No sweating or diarrhœa. Pulse 128; respiration 30; temperature 104·4°. N=4,460,000; G=0·66.

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Obs. 4. Nineteenth day, eleventh after complete defervescence, since when the temperature has been normal or subnormal. Peeling. Skin moist. No purging or albuminuria. N = 6,400,000; G = 0·41.

In the single case of scarlet fever, with high temperature, observed by Leichtenstern, he failed to detect any diminution in the hæmoglobin of the blood, either during or after the attack. This agrees very well with our results; for, although a very considerable increase in the number of corpuscles was observed to take place during convalescence, this increase was almost exactly balanced by a corresponding fall in their individual value, the absolute richness of the blood in hæmoglobin thus remaining nearly constant. The complete nature of the compensation is well shown by multiplying the figures representing the number into those representing the functional value of the corpuscles.

I. (1) 4,670,000 × 0·61 = 2,848,700.
(2) 7,510,000 × 0·38 = 2,853,800.
II. (3) 4,460,000 × 0·66 = 2,943,600.
(4) 6,400,000 × 0·41 = 2,624,000.

Measles.—Henry S——, aged twenty-five; typical case. Catarrhal symptoms with profuse sweating, which ceased when the rash came out; no complications; ran a mild course, ending in recovery.

Obs. 5. Third day of eruption, which is universal. Pulse 104; respiration 24; temperature 101·6°.
N = 6,980,000; G = 0·53.

Obs. 6. One week later: Defervescence complete; bowels confined; moderate sweating. N = 6,160,000; G = 0·59.

Acute Rheumatism.—John L——, aged sixteen. First attack; polyarticular inflammation with profuse sweating; loud mitral murmur; no pericarditis; pulmonary congestion; constipation; no albumen in urine.

Obs. 7. Fifth day of illness: Temperature 103°; pulse 104; respiration 36. N = 5,970,000; G = 0·73.

Obs. 8. A week later: Temperature 97°.
N = 6,330,000; G = 0·72.

Acute Lobar Pneumonia.—I. Lewis B——, aged twenty-eight. Consolidation of left lower lobe; sudden onset; high fever and delirium; no albuminuria; chlorides absent from urine; rusty sputa.

Obs. 9. Fifth day of illness: Delirious. Pulse 130; respiration 44; temperature 103·4°. N = 5,310,000; G = 0·66.

Obs. 10. Nineteenth day (eleventh since defervescence): Lungs have quite cleared up. N = 5,720,000; G = 0·57.

II. Fanny J——, aged twenty-one, a well-nourished and healthy girl. Consolidation of left lower lobe. Temperature 103° to 104°; rusty sputa; onset abrupt.

Obs. 11. Fifth day of illness: Sweating freely; bowels confined; pulse 112; respiration 30; temperature 101°.
N = 5,840,000; G = 0·51.

Obs. 12. Twentieth day (two weeks since crisis): Lungs clear; bowels confined; frequent sweating.
N = 5,720,000; G = 0·57.

In the first of these two cases there was a slight increase in the number of corpuscles, with a corresponding reduction in their individual value. In the second no material variation was observed. The result agrees substantially with that obtained by Leichtenstern in two cases of simple acute pneumonia. He noticed no decided diminution in the proportion of hæmoglobin in either of them.

Typhus.—I. Hannah L——, aged thirty; typical rash; high fever (103·2° to 105°); delirium; tremors; dry tongue; prostration; free sweating throughout. On the evening of the fourteenth day the temperature rose to 107°, and the urine was found to contain one-third albumen; ice pack. By the next morning the temperature had fallen to 97·2°, rising again in the course of the day to 99·8°. Death on the evening of the fifteenth day.

Obs. 13. Thirty hours before death: Skin dry and hot; pulse 150; respiration 48; temperature 105°.
N = 4,190,000; G = 0·71.

II. Mary F——, aged twenty-two; typical eruption; temperature 104° to 105°; pulmonary congestion; delirium; deafness; tremors; sordes on tongue. Recovery.

Obs. 14. Sixth day: Rash well out; skin dry and harsh; bowels relaxed; pulse 124; respiration 64; temperature 103°.
N = 4,430,000; G = 0·79.

Obs. 15. Fifteenth day: Bowels still rather relaxed; pulse 88; respiration 20; temperature 98·6°.
N = 4,460,000; G = 0·69.

In both of the above cases the proportion of corpuscles, both during and after the attack, was somewhat lower than normal, though the value of the individual corpuscles was not much impaired. It is as curious as it was unexpected to find how little the composition of the blood—as regards its red corpuscles and hæmoglobin—was altered in a most severe case of the disease, on the fourteenth day of its course, and only thirty hours before its fatal issue. And this in a malady which is commonly supposed—and probably with justice—profoundly to affect the constitution of the circulating fluid. We were unable to find any recorded observation on a case of typhus fever to compare with our own.

Enteric Fever.—I. Mary H——, aged seventeen; typical example of the disease, running its course in four weeks in a strong and healthy girl; delirium; rose spots; abdominal tenderness; high fever (104·6°). Recovery.

Obs. 16. Nineteenth day (?): Pulse 128; temperature 102°. Flushed and sweating; diarrhœa very moderate.
N = 6,590,000; G = 0·44.

Obs. 17. Five weeks after defervescence; out of bed for ten days. N = 6,410,000; G = 0·53.

II.—Elizabeth A——, aged sixteen. On admission rose spots, diarrhœa, abdomen swollen and tender. Fever very high; pulmonary congestion. On fourth day after admission the temperature rose from 105° to 106°. Cold baths; death; ulcers in ileum.

Obs. 18. Two days after admission (second week of disease?): Respiration 24; pulse 130; temperature 104·8°. Diarrhœa moderate; no sweating. N = 6,420,000; G = 0·53.

III.—John V——, aged eighteen. Typical case, with delirium, rose spots, slight epistaxis. Temperature 104° to 105°. Much pulmonary congestion. Died a week after admission. Ulcers in ileum, &c.

Obs. 19. Two days after admission (third week of illness): Severe diarrhœa. Respiration 32; pulse 112; temperature 104·2°. N = 6,160,000; G = 0·57.

IV.—Annie M——, aged twenty-six. Moderately severe case, with profuse diarrhœa.

Obs. 20. Fourteenth (?) day of illness.
N = 5,060,000; G = 0·69.

V.—Emily G——, aged twenty-one. Febrile disturbance with profuse diarrhœa for a week before admission. Enteric fever suspected; doubtful.

Obs. 21. Four days after admission: Eight loose motions during previous twenty-four hours. No sweating. Temperature 102·5°. N = 6,600,000; G = 0·45.

The general conclusion to be drawn from a consideration of the above observations is, to us at any rate, of an unexpectedly negative kind. Enteric fever, even when it immediately threatens life, does not appear to affect either the number or the quality of the red corpuscles to any marked extent. Hæmorrhage from the bowel would no doubt do so; but this is accidental, not of the essence of the disease. Substantially the same results were arrived at by Andral and Gavarret as regards the proportion of red corpuscles, and, more recently, by Leichtenstern, as regards the amount of hæmoglobin in the blood. In six cases of enteric fever, the latter observer examined the blood repeatedly, and found that "during the first, second, and third week, so long, in fact, as the fever lasts, the proportion of hæmoglobin undergoes no change." He adds, however, that in a majority of cases the subsidence of pyrexia is attended by a decided and rapid decrease in the relative amount of this constituent. Whether this "post-febrile anæmia," which did not show itself in the only one of our cases (Obs. 17) in which it might have been detected, depends on a hypocytosis, or a hypochrosis, or a combination of both, must for the present remain uncertain.

What strikes one most in looking over the series of observations comprised in the present group, is the very small influence exerted on the red corpuscles and the hæmoglobin by even the most severe febrile disorders, such as might naturally be supposed to modify profoundly the whole constitution of the blood. That the nutrition of the body generally is much interfered with by all fevers, especially by such as last for any time, is a commonplace. It may be, as Leichtenstern suggests, that the total mass of the blood, like that of the solid tissues, is uniformly diminished by the febrile process, without any material change in the relative proportion of its constituents. This hypothesis may serve, at all events, as a provisional explanation of what would seem, at first sight, to be altogether anomalous.

In marked contrast to the immunity of the red corpuscles in all the pyrexial disorders which have come under our

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notice, is their liability to destruction in malarial fever. Kelsch's[1] observations on this subject, though published several years ago, do not appear to have attracted all the attention they deserve. They were made at the military hospital of Philippeville, in Algeria, where every variety of paludal disease is met with in great profusion. In his examinations of the blood he employed the numerator of Malassez; unfortunately, no parallel series of chromometric observations was carried out, so that it must remain doubtful for the present whether the hypocytosis was or was not accompanied by a corresponding degree of hypochrosis. The visibly profound anæmia displayed by the victims of ague, however, renders it highly probable that no sufficient increase in the value of the corpuscles occurs to counterbalance the effect of the great reduction in their number.

Numeration was employed in about 70 cases of paludal fever, and in many of them it was repeated daily throughout the course of the disease. The cases are grouped under the three heads of simple fever, malignant fever, and malarial cachexia. The most striking effect of the miasma on the corpuscles is manifested when a previously robust and healthy man is attacked for the first time. Under such circumstances the daily loss of red corpuscles may amount to several hundred thousand, occasionally to one million per cubic millimetre of blood in every twenty-four hours. This is during the initial period of the malady, when the symptoms are of a continued or remittent type. The initial period is usually of short duration, and is followed by a longer one, during which the fever is definitely intermittent (quotidian or tertian), and the number of corpuscles continues to decrease uninterruptedly, though less rapidly than in the first period. A succession of paroxysms will sometimes bring down the number of discs from the normal proportion of five or six millions to one million, or even to five hundred thousand, per cubic millimetre. As the blood is more and more impoverished, the process of destruction grows slower and slower, until at last, when the disease has entered on its third period, characterised by irregular febrile exacerbations, with more or less prolonged intervals of apyrexia, the number of corpuscles simply oscillates to and fro about an average minimum. At this stage a tendency may show itself to a very gradual restoration of the corpuscular elements; or their number may continue to diminish, though very slowly; or it may remain quite stationary for weeks together, notwithstanding the energetic use of quinine and iron, and the comparative infrequency of febrile paroxysms. This last condition is met with more especially in profoundly cachectic patients, with great enlargement of the spleen.

In the malignant form of paludal fever, the rapidity of corpuscular disintegration is proportionate to the previous good health of the patient. When he is a robust and well-nourished man, the corpuscles disappear at the rate of from half a million to one million per cubic millimetre in twenty-four hours; when his health has been broken by previous attacks, and he is already suffering from malarial anæmia, the daily loss varies from one to two hundred thousand per cubic millimetre. It is a noteworthy fact that the loss may go on, and may even amount to several hundred thousand corpuscles per cubic millimetre every day, while the axillary temperature continues normal; bearing no proportion, as it does in fever of the simple type, to the intensity of the febrile movement. On recovery from an attack of the malignant form, the restoration of the corpuscles is usually pretty rapid.

It is clear that in diseases of this class we have to do with some specific action of the paludal miasm upon the formed elements of the blood. Nothing at all resembling the effects just described has ever been noticed by ourselves or others in even the most acute febrile maladies which we have had an opportunity of studying. The destruction of the red corpuscles is not dependent on the pyrexia as such, though it probably stands in close relation to the melanæmia which is so frequent a consequence of the endemic fevers of marshy districts. It is to be hoped that those who enjoy suitable opportunities for the purpose will not fail to repeat Kelsch's observations and amplify them by the simultaneous use of the chromometer. We have not ourselves had a chance of examining the blood in even a case of ordinary ague, and are therefore unable to say how far, if at all, the conclusions stated above may be applicable to the very mild forms of malarial intoxication which now and then present themselves in our wards. Should those conclusions be substantiated, their practical value as regards both diagnosis and prognosis is too obvious to require detailed exposition.

(To be continued.)

[1] Contribution à l'Anatomie Pathologique des Maladies Palustres. Par A. Kelsch. Arch. de Physiologie, vol. ii., 1875.

CASE OF

BILATERAL PARALYSIS OF THE MUSCLES SUPPLIED BY THE RECURRENT LARYNGEAL NERVE.

BY J. A. ORMEROD, M.B. (OXON.), M.R.C.P.

CASES of unilateral paralysis of the laryngeal muscles are, I suppose, tolerably common. Cases of bilateral paralysis of individual muscles, as, for instance, the posterior crico-arytenoids, are being recorded in increasing numbers; but bilateral paralysis of all the laryngeal muscles has hitherto, I believe, been but rarely observed. I therefore venture to publish an account of a case at present under my observation, albeit I have been unable to watch it from the commencement, and the termination of it still remains to be seen.

Von Ziemssen, in his "Cyclopædia of Medicine," mentions eleven cases, six observed by himself, the remainder by Türck, Traube, Münck, and Batimler. In three of these the paralysis was complete on both sides; in seven complete on one side, incomplete on the other; in one (a remarkable case, supposed to be caused by the pressure of a distended pericardium) the paralysis was incomplete on both sides. The cause was in four cases œsophageal cancer; in one cancer of the thyroid gland, in five aneurism. I find records of three other cases: one[1] by Ludwig Brieger in a phthisical patient; the paralysis complete on both sides; the cause (determined post mortem), pressure upon the recurrent nerves by enlarged lymphatic glands. And two[2] by Karl Kittler, in the first of which there was complete paralysis on the right side, with paresis upon the left, ascribed to aneurism; in the second, paralysis not quite complete on the left side, and paresis on the right; the cause undetermined, but supposed to be catarrh. It appears, therefore, that in the majority of these fourteen cases the paralysis was incomplete on one side, and that the cause was usually a tumour or aneurism.

The symptoms are so well described by Von Ziemssen that I need only recapitulate them. On laryngoscopic examination, the vocal cords are seen to occupy the cadaveric position, lying midway between the positions of phonation and deep inspiration, and not altering their position on phonation or inspiration. If the paralysis is incomplete on one side the cord of that side moves, but sluggishly and insufficiently, and it does not, as in cases of purely unilateral paralysis, compensate for the inactivity of its fellow, by crossing the middle line to meet it. There is absolute aphonia (at least in cases of complete paralysis), inability to cough with force, waste of breath on coughing or talking, so that prolonged talking puts the patient out of breath.

In the observation of the following case I have to acknowledge the help of Dr. Felix Semon in pointing out to me some essential symptoms, and of Dr. de Havilland Hall, who also saw the case and agreed in the diagnosis.

Esther C——, aged thirty-eight, marked with small-pox and looking rather out of health, came to me at the Metropolitan Free Hospital in September last, complaining of cough and loss of voice, and of feeling generally out of sorts. The larynx was seen to be deeply seated, the ventricular bands were swollen and overhanging, the arytenoid cartilages a little larger than normal, and the right standing on a higher level than the left. The vocal cords were slightly congested, the right was quite immovable; the left moved but did not reach the right. The pharynx was slightly granular. The chest and neck were perfectly normal. She was treated with benzoin inhalation and iodide of potassium in doses of five to ten grains three times a day. Her appearance and general health improved, but the aphonia remained.

By November the symptoms of chronic laryngitis had subsided, and I was able to examine the patient under more favourable conditions. The following facts were then made

[1] Virchow, Hirsch, Jahresbericht, 1878.
[2] Schmidt, Jahrbuch., vol. clxxix., p. 167.

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out:—There was nothing abnormal in the mouth, tongue, or fauces. The epiglottis was thickened, and there were some white spots of ulceration on it. The right vocal cord lay in the cadaveric position, and there was little, if any, appreciable movement of it, or of its arytenoid cartilage, during inspiration or phonation. The left vocal cord during quiet respiration appeared to be a little more abducted than the right. On deep inspiration the left cartilage and cord moved outwards to a certain extent. On phonation the left cartilage appeared to move inwards, the cord also made a slight motion inwards, but not to an extent corresponding with the motion of the cartilage; it appeared to become lax and bulge in its central part; it did not reach the right cord, or even the middle line. There was no anæsthesia of fauces or larynx. The epiglottis acted perfectly. The paralysis was entirely confined to the muscles supplied by the recurrent nerves. Prolonged talking put the patient out of breath. The chest and neck were re-examined, and again with a negative result.

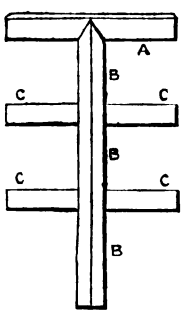
She gave the following history:—In November, 1877, she had a severe cold, cough, and hoarseness, and felt constitutionally ill. She was treated at the Ratcliff Cross Dispensary, and subsequently at the London Hospital, and improved; but in April, 1878, she caught small-pox, and during convalescence from this her voice got much worse. She also stated (but in answer to questions) that at the beginning of her illness she had a swelling in the left side of her neck, such as could be felt externally; and that swallowing food or liquid would cause choking and sneezing. Before her illness she had a particularly strong voice. No history of syphilis could be obtained. There was, therefore, very little from which to conjecture the cause of the disease. The swelling in the throat (an important item if it could have been verified by physical examination) only occurred to her recollection on being cross-questioned, and might, indeed, have been a simple tonsillitis. The laryngeal symptoms, so far as could be made out, had preceded the small-pox, though worse after it. The condition of the epiglottis was suggestive of syphilis, and the patient's general health had improved under iodide of potassium. It seemed right, therefore, to give this drug a fair trial, and she took it combined with tincture of nux vomica in doses increasing till half a drachm three times a day was reached. The induction current was also applied (percutaneously for the most part) twice a week. This treatment was continued till the middle of January. The result has been negative. The patient, indeed, thinks herself in better health, and maintains that her voice is improved, but to me it sounds as whispering as before, and there is scarcely any alteration in the laryngoscopic appearances.

Upper Wimpole-street, W.

DESCRIPTION OF AN APPARATUS FOR THE TREATMENT OF DEFORMITIES OF THE LEGS IN RICKETY CHILDREN.

BY WILLIAM WEBB, M.D., F.R.C.S. ENG. & EDIN.

THE apparatus consists (as will be seen in the diagram) of a foot-piece (A), into the middle of which is firmly fixed, by screws, at right angles, a splint (B), which is well padded on both sides; and covered with flannel. To this splint the legs



are bound on either side by a light bandage, which can be the more readily adapted and kept in position by the aid of the cross-supports (C), which are firmly screwed to the back of the splint, and also padded. The apparatus may be worn in bed, during sleep, or when riding in a perambulator. It has been found effectual, after repeated trials, in restoring the normal contour of the bones in cases of external curvature, or rather cases in which the convexity of the curvature was on the outer side of the limb.

Wirksworth.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

SURGICAL CASES ILLUSTRATING WOUND TREATMENT AND REPAIR.

(Under the care of Mr. BRYANT.)

THE subjoined report is continued from p. 364.

Solid Bursa Patellæ; Excision; Recovery. (From notes taken by Mr. Row.)—Susan B——, aged twenty-nine, was admitted into Lydia ward on Dec. 1st, 1879. Eight years before she had noticed a swelling on the top of the right knee. It was painted with iodine, and washed with a lotion, and got better; but a hard swelling, about the size of a filbert, remained. Eight months before admission the patient walked ten miles, and a few days after found the same knee very tender and slightly swollen.

On her admission she had a hard swelling, about the size of a walnut, just below the patella, freely movable, and not attached to skin or patella.

On Dec. 2nd, under chloroform, an incision an inch and a half in length was made along the outer edge of the patella, and the tumour was removed. The wound was washed with iodine, and dressed with terebine. The dressing was kept on for forty-eight hours, and a back splint applied. The bursa on section was nearly solid, having a good deal of yellow material in the centre.

On the 4th the wound was dressed. There was some suppuration, but no burrowing. There was a good deal of pain in the wound and up and down the leg. The bowels were confined. On the 17th she was discharged well. The wound was firmly closed.

The temperature never rose above 98·8° F.

Congenital Myxomatous Tumour of the Hand; Partial Removal; Relieved. (From notes taken by Mr. Dashwood.) Albert E. P——, aged six months, was admitted into Lydia ward on June 27th, 1879. He was a healthy child, but had a congenital tumour on the left hand, involving the thumb, back of the hand, and the first and second fingers, as well as the front of the wrist. The tumour had bled slightly twice during the last two or three weeks, and had increased in size. The tumour was elastic, and on the thumb was movable.

On July 3rd the temperature was 104·1°, but fell to 97·8° next day. On the 8th, under chloroform, an incision was made into the tumour parallel to the metacarpal bone of the thumb; the tumour was dissected out in pieces, and was found to be of a fibrous nature, containing fat. The edges were brought together with sutures. There was very little bleeding. On the 15th the wound was completely healed without constitutional or local disturbance.

Ossifying Cartilaginous Tumour growing from Ungual Phalanx of Great Toe; Excision; Recovery. (From notes taken by Mr. L. Stokes.)—Arthur J. W——, aged fifteen, was admitted into Job ward on May 22nd, 1879. About a year before the nail of the right great toe began to grow in, and the patient from time to time cut away the in-growing portion. Three months before admission a swelling came beneath the nail and gradually pushed the nail up. The nail came off, and the swelling increased in size.

On admission the right great toe was considerably swollen and inflamed opposite the last phalanx. The bed of the nail was occupied by a hard round swelling, about half the size of a marble.

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On the 23rd, under chloroform, a scalpel was introduced round the edge of the growth, and the growth removed from the phalanx, to which it was found to be attached. The wound was dressed with terebine and oil. The growth was an enchondroma, springing from the phalanx and ossifying in the centre.

On June 8th the wound was not healing nicely; the granulations were large and flabby. On the 12th the growth was apparently reforming, and on the following day, under chloroform, the nail was pulled out of the cavity, scraped, and the wound compressed with a pad of lint. On July 16th the patient left the hospital. The "proud" granulations were cauterised; only a portion of the wound had granulated over. The nail was growing over the granulations. No signs of the growth recurring.

The temperature never rose in this case above normal. The growth was not an ordinary ungual exostosis, but a cartilaginous tumour ossifying in the centre embedded in the phalanx. Such cases are not common.

Varices of Left Leg near the Saphenous Vein; Excision of Portion of Vein; Recovery. (From notes taken by Mr. Duckworth).—Elizabeth W——, aged twenty-four, was admitted on May 3rd, 1879, into Lydia ward. The patient's mother had varicose veins. The patient had a large bunch of varicose veins on the inner and back part of the calf; there were also other varicose veins in the course of the internal saphenous vein along the thigh and leg. At about the junction of the middle with upper third of thigh there was a swelling about the size of a walnut. The swelling did not throb, and was most distinct and largest when the woman was standing, or on compression of the vessels above the swelling. It was a dilatation of the internal saphenous vein.

On the 16th, under chloroform, an incision was made over the dilatation and the vein, and, after it had been dissected out, it was tied above and below the dilatation. The included portion was then removed, and the part was washed out with iodine and water, and a pad of terebine lint was strapped over it. An incision was then made over the varix on the inner side of leg, and was similarly treated. There was much pain during the night. On the 21st the wound in the thigh was unhealthy-looking. The bowels had not been opened since operation. Castor oil was given.

On June 12th the wounds were nearly well. On the 21st an elastic stocking was ordered from sole to groin. The temperature only once rose as high as 100·8° F.—namely, on May 26th; it mostly ranged between 98·5° and 99·5°.

Hæmatoma of Calf; Incision; Recovery. (From notes taken by Mr. Palmer.)—Sarah S——, aged sixty, was admitted into Lydia ward on Nov. 6th, 1879. She had been knocked down by a cab, which passed over both legs. On admission, the right leg was severely bruised, and there was a large hæmatoma in the calf. No bones were broken. The posterior tibial artery could not be felt, but there was no coldness in the limb. There were other bruises, but nothing serious. The leg was put up in sand-bags. On the 10th the tumour was greener; there were two blebs on it containing fluid. On the 18th distinct fluctuation was felt in the tumour, which was softening; and next day an incision was made into it, allowing a quantity of uncongealed blood and small clots to escape. The cavity was washed with iodine-and-water. The patient suffered from slight pyrexia after the operation, as seen in the table, but as she had an herpetic eruption at the same time, and a cold, with no particular constitutional disturbance, it was not considered of importance. The highest evening temperature was 101·9°. The wound healed without suppuration, and the patient was discharged "well" on Dec. 17th.

Temperature Chart.—Nov. 20th: Morning, 98°; evening, 98·6°. 21st: Morning, 97·6°; evening, 99°. 22nd: 100°. 23rd: Morning, 99·8°; evening, 101·9°. 24th: Morning, 99·4°; evening, 100·6°. 25th: 99·3°. 26th: Morning, 98·6°; evening, 100°. 27th: Morning, 98·4°; evening, 99·2°. 28th: 98·5°.

(This series will be concluded in a future number.)

MONTGOMERYSHIRE INFIRMARY.

LARGE EPITHELIOMA OF THIGH IN A WOMAN AGED SEVENTY-SIX; EXCISION; RECOVERY.

(Under the care of Dr. PRATT.)

J. G——, widow, aged seventy-six, was admitted on the 4th September, 1879. She was suffering from a large epitheliomatous-looking tumour, occupying the anterior and internal surface of the middle third of the left thigh, extending six inches and a half in length by four inches and a half in breadth. The tumour was considerably raised above the surrounding surface, its edges were thickened and everted, and it was discharging a nasty-smelling fluid in abundance. The glands below Poupart's ligament were enlarged, but not tender. A small portion of the tumour was removed, and, being examined by the microscope, presented cells with a decided nested arrangement.

The history the patient gave of herself was that she had always enjoyed good health till about nine months ago, when a small wart appeared on her thigh. This she somehow injured when crossing a stile, and it began growing very rapidly. A medical man then applied caustic, and this made it increase with still greater rapidity. With the exception of the epithelioma, the patient professed to be in perfect health, but there was about her a certain cancroid appearance which betokened present and probably future degeneration.

On Sept. 10th excision was performed. The dissection was begun a good half-inch outside the edge of the tumour, and was carried right down to the sartorius and adductor muscles, which were laid bare, and every suspicious-looking part was carefully removed. Very little blood was lost, only a few cutaneous arteries requiring to be ligatured. The femoral vessels were felt immediately beneath the sartorius. At the end of the dissection a wound was left seven inches long by five inches broad. For the first two or three days this was dressed simply with carbolised oil and lint; afterwards it was dressed with strapping, and the edges approached as much as possible. The wound healed rapidly by granulation, and on Nov. 1st the patient was discharged with a healthy-looking cicatrix, seven inches long and one inch broad. The inguinal glands had diminished very much in size, and the general appearance of the patient had greatly improved. A fortnight further on she was reported as perfectly well.

CUNNINGHAM HOSPITAL, ST. KITTS, WEST INDIES.

CASE OF STRANGULATED FEMORAL HERNIA MASKED BY A MASS OF ENLARGED GLANDS; OPERATION ON THE FOURTEENTH DAY; RECOVERY.

(Under the care of Mr. A. P. BOON.)

A. D——, a negro, aged twenty-eight years, an agricultural labourer, complained of pain in the abdomen and vomiting, and stated he had not had a stool for six days. On examination the abdomen was rather distended, and there was general, but not great, tenderness. No hernia could be seen, but on the right side below Poupart's ligament a mass of enlarged glands was visible. This, the man said, had existed for some years. The glands were quite movable, and not tender or painful. The pulse was 80, temperature normal, tongue clean.

The treatment, which included various purgatives, enemata, opium, and belladonna in large doses, was of no avail in overcoming the intestinal obstruction. The case progressed slowly. On the eighth day the vomiting was stercoraceous. Soon after this the pain in the abdomen subsided, the pulse rose to 100, the tongue became foul, the countenance was haggard and anxious, and there were cold clammy perspirations. All this time he had passed neither fæces nor flatus. On the fourteenth day the condition of the patient was apparently hopeless.

In consultation with the late Mr. Boon, it was decided to cut down on the enlarged glands, draw them aside, and see whether there was a hernia under them. This was accordingly done, not with very strong hope of benefiting the patient, but rather to give him a chance. It was not until the glands were drawn aside that a small femoral hernia was discovered as large as the top of the thumb. The sac was opened, and contained a knuckle of intestine, the condition of which was not nearly as bad as might have been expected. There was some difficulty in dividing the stricture, but when this was done the hernia was reduced, and the case treated in the ordinary manner.

The patient passed a large motion a few hours afterwards, and recovered without a bad symptom.

Remarks.—This case is interesting on account of the hernial tumour being so small as to be completely hidden under the mass of enlarged glands, and the long period

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(fourteen days) during which there was complete intestinal obstruction; notwithstanding which, the intestine was in a fairly healthy state.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Nephrectomy by Abdominal Section.

THE ordinary meeting of this Society was held on the 9th inst., J. E. Erichsen, F.R.S., Esq., President, in the chair. A paper contributed by Mr. Arthur Barker, dealing with the subject of extirpation of the kidney, or, as it is more briefly styled, "nephrectomy," led to discussion which occupied the whole evening. The paper was an exhaustive review of the subject, and terminated with the relation of a case of cancer of the kidney, which the author had extirpated by abdominal section. In the course of the discussion Dr. Day and Mr. K. Thornton gave details concerning a case of hydronephrosis, in which the same operation was successfully performed, and the subject of this was shown to the Society. Mr. Clement Lucas related a case now under his care, and other instances of removal of kidney were mentioned by Mr. Wells and Mr. Cartwright.

The following is an abstract of the paper on "Nephrectomy by Abdominal Section," by Mr. A. E. BARKER:—The writer first sketches the reasons which induced Professor Simon, of Heidelberg, to plan and carry out in 1869 the first case of nephrectomy designedly performed on the human subject. He shows that Simon had been preceded by two American surgeons in the mere removal of the kidney. He points out the importance of Simon's experiments on animals, and his main conclusions therefrom—1. That this operation is as well borne in the first instance by the system as others now fully recognised, such as excision of the uterus or ovary. 2. That the sudden removal of one kidney does not so far affect the urinary functions as at all to influence the question of the operation. 3. That the health of the animal may be quite as good after as before, and without any uræmic troubles, hypertrophy of the heart, or other evils. The question as to whether these conclusions hold good for man is then shown to have been settled in many respects by the effect of the operation in Simon's first case, and in many since recorded. Of these the author has collected twenty-eight from home and foreign sources in which from various causes a kidney has been removed. These he tabulated under the headings "operator's name," "sex and age," "diagnosis or object of operation," "duration of complaint," "date of operation," "situation of incision," "form of dressing," "treatment of pedicle," "symptoms after operation," "result, immediate and eventual," "hæmorrhage after or at operation," "condition of organ removed," "remarks" on points of interest about the various cases. From this list two cases are first quoted which seem to prove more conclusively than any experiments on animals that neither the incision down to the kidney in the loin, nor the ligature of its pedicle and its removal, need cause any great disturbance in the system. In neither of these cases did this result. The organ in both had been wounded by a stab with a knife, and prolapsed, and was removed easily and without any ill effect. It was the study of these and a number of the others tabulated which led the writer to operate in the present case. He found that out of the twenty-eight attempted nephrectomies, six were done on a wrong diagnosis; in two for neoplasms the operation was left uncompleted, owing to difficulties experienced in the isolation of the organ. Of the remaining twenty undertaken with the distinct object of removing the kidney and completed, the objects were the following:—Two for fistula of the ureter, both successful; two for acute pain in the kidney (cause unknown), one death, one recovery; two for calculous pyelitis, both fatal; three for injury of the organ, two complete recoveries, one fatal; six for acutely painful movable kidney, four complete recoveries, two deaths; four for neoplasms (one obscure, however), one death, three recoveries; finally, one for pyonephrosis, perfectly successful. Of the whole twenty-eight, there are fourteen recoveries and fourteen deaths; but, excluding the six for wrong diagnosis, there are still thirteen successful and nine fatal; two of the latter, however, were desperate and left uncompleted. The causes of death were —peritonitis, four (abdominal section in all); pyæmia, one; in one, cause not given, patient died sixty-five hours after; in one the cause is stated to have been unexplained by the autopsy, "the patient died within a week;" two died of shock ten hours after operation (both desperate cases). In all the successful cases recovery was complete, possible recurrence in two excepted (neoplasms). Of the thirteen recoveries nine were lumbar sections, four ventral; of the nine fatal, five were lumbar, four ventral. On the whole, a careful examination of all the records convinced the author that nephrectomy is not accompanied by any peculiar shock or risks apart from those attending most grave operations, and that it is well borne in many cases; that as an operation it has a most useful future before it when we have learned to select proper cases and have better studied the operation itself. As to the mode of procedure, he would, from experiment on the dead body and careful comparison of those operations already recorded, feel inclined for the present to adopt the following conclusions:—The lumbar operation appears best suited for removal of healthy or comparatively healthy kidneys; also when there has been much perinephritic inflammation, old or recent; also for pyo- and hydronephrosis, and perhaps for the smaller new growths of the organ, especially if fixed. The ventral incision appears, on the other hand, best suited for taking away movable kidneys, whether healthy or affected with neoplasms, especially if the latter be large; also for the ordinary cysts of the organ not fixed by inflammation. The difficulty, in the case of the neoplasmata, of removing the lymphatic glands in and about the pedicle of the kidney (which are known to be an early seat of recurrence) by the lumbar incision, would influence him much in favour of abdominal section, by which the root can be better reached. The present case was as follows:—An unmarried female, aged twenty-one, had had lumbar pain for eight months before admission into University College Hospital. Three months before admission a medical man diagnosed a movable kidney. She suffered much from this time onwards from intense pain, with frequent nausea, and even vomiting and hæmaturia, preventing all work for considerable periods. All this was aggravated from the time of admission. Diagnosis: movable kidney, and possible new growth in it; later on, after observation, movable kidney affected with encephaloid. The hæmaturia was almost constant and often profuse during her fifty days' stay in hospital. The attacks of pain were very severe and she was much weakened. On Dec. 22nd, 1879, an operation was performed like ovariotomy in almost every respect—strictly antiseptic. Little difficulty was experienced in the ascending mesocolon, though this had to be done with the utmost care, as the tumour was very soft in places; ureter was tied separately; pedicle in two portions by transfixion, with twisted silk. The operation was almost bloodless. Patient bore it well, and showed little shock. Twenty-four hours later she was as strong as before the operation; eight hours later she began to get weak, with hurried breathing, as in attacks before observed; diagnosis, possibly thrombosis. Death occurred at the end of the second day. Cause discovered to be thrombosis of pulmonary artery. The autopsy showed the abdominal cavity to be all that could be desired; repair already far advanced; no trace of cystitis; no evidence of embolus from renal vein, but large thrombus firm and light-coloured in right ventricle of heart and pulmonary artery. Small secondary deposits in lungs and lumbar lymphatic glands; suspicious specks in liver; other kidney healthy.

The PRESIDENT said the paper was specially instructive in that it was, he believed, the first upon the subject that had been read before the Society; and its value was enhanced by the exhaustive survey of the history of the operation. The author had shown how the experiments and observations of Simon had proved the possibility of survival after the extirpation of one kidney, subsequently confirmed by the results of operations. An important point was the determination of the nature of the disease justifying the operation, and the diagnosis of renal from other abdominal tumours. Cases had occurred where the abdomen had been opened under the belief of ovarian tumour, and the operation abandoned on the growth being found to be renal.

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Definite rules for the selection of cases also required to be established; and on these points they might well ask the opinion of physicians. Whether the removal of the diseased organ was to be effected by abdominal section or by lumbar incision was open to debate. Probably this would depend on the nature of the case. A mobile tumour was better removed by the abdominal section; a fixed tumour—e.g., calculous pyelitis—by the lumbar operation. He trusted the matter would be fully debated. He stated that Mr. Knowsley Thornton had brought to the Society a child from whom he had successfully removed the kidney some time ago.—Dr. DAY said that in January he showed to the Pathological Society the renal cyst removed by Mr. Thornton from the case just referred to (see THE LANCET, p. 58). The child was seven years of age, and came under notice in Oct. last with a large cystic abdominal tumour, of five years' duration. Her general health had not suffered at all; the urine was scanty, but natural. Various opinions were given as to the nature of the case, and Mr. Thornton drew off six pints of fluid by the aspirator, the fluid having the characters of urine, and being slightly albuminous. The cyst gradually refilled, and on January 2nd was removed by Mr. Thornton. The highest temperature after the operation was 101·6°. In reply to Dr. Southey, Dr. Day was unable to state whether urea was found in the fluid.—Mr. KNOWSLEY THORNTON said that having made the diagnosis of renal cyst, he confirmed this by the aspirator, and then suggested the advisability of its removal. He came to the conclusion that in such a case as that abdominal section was preferable to the lumbar operation, being strengthened in that view from finding in a case of pyonephrosis which he had incised about eighteen months previously, how difficult it would have been to secure the pedicle through the lumbar wound. One point laid stress on in the diagnosis of the case was the passage of the descending colon in front of the cyst, which, when distended, pushed between the layers of the mesocolon towards the median line of the abdomen. In operating he began his incision about one inch above and to the left of the umbilicus, and carried it down about an inch and a half below that part. He found afterwards that it would have been better to have made the incision about an inch higher. Owing to the child taking the anæsthetic badly, the vomiting and straining caused the intestines to appear at the wound, but this was the only difficulty encountered. After laying open the peritoneal capsule the cyst was shelled out, and its pedicle brought into view by drawing the cyst forwards. The renal artery and vein were first secured separately about an inch from the aorta, and then the whole pedicle embraced in a third ligature, as in Mr. Barker's case. The operation lasted nearly an hour and a half, and no shock followed. Immediately after the operation, temperature 97·8°, pulse 110, respiration 28. Much vomiting followed, and in the evening the temperature was 101·6°, pulse 150, respiration 32. For about the first twelve hours the urine passed was scanty, and contained much blood; but at 3 A.M. next day it was clear and deposited much urates. He found that the bloody urine did not decompose like that which contained no blood; for some days afterwards it was still free from odour and from bacteria. This seemed to indicate that the hæmaturia was really due to absorption of carbolic acid, and not to derangement of renal function from the extirpation of one organ. The child was up on the eleventh day after the operation, and had now just returned from a convalescent home. With regard to the general question of the method of operation, Mr. Thornton held that in cases of hydronephrosis abdominal section was to be preferred to the lumbar operation, as advised by Mr. Barker; but in cases where sinuses existed or adhesions, removal by abdominal section would be very difficult. The great advantage of abdominal section was that it allowed the operator to actually see the pedicle.—Mr. CLEMENT LUCAS considered extirpation of the kidney by either method to be perfectly justifiable; and it had been shown that one kidney could be removed without injurious effect. The choice of the operation must depend on the conditions of the case—e.g., it would be impossible to remove a large mass through the loin. The chief dangers were secondary hæmorrhage and thrombosis extending from the divided vessels. Did Messrs. Barker and Thornton cut the ligatures on the pedicle close?—Mr. BARKER and Mr. THORNTON replied in the affirmative.—Mr. LUCAS, continuing, said that if it were possible to see the renal artery, so as to grasp it well with forceps, then torsion should be employed. He could not understand why torsion was so little practised. At Guy's they did not know what secondary hæmorrhage was since torsion had been employed, and it could be safely applied to arteries as large as the renal. Three weeks ago he had excised a kidney by the lumbar method. The organ had been suppurating for six years, and the abscess had been opened by Mr. Howse. The man recovered sufficiently to go to work, but suffered much pain. The fistula in the loin remained open, and pus was passed in the urine occasionally. Six months ago some urine was passed through the loin. He was kept in the hospital for three months, and it was observed that when the sinus in the loin became blocked the quantity of urine passed from the bladder was not appreciably increased. This occurred several times and proved that the diseased kidney was not doing much work. Extirpation was performed as follows:—A vertical incision, as for colotomy, was made from the last rib to the iliac crest outside the quadratus. Great difficulty was experienced in detaching the organ owing to adhesions, and the incision was enlarged laterally to the extent of an inch and a half. The surface of the kidney was now exposed and ligatures placed round the pedicle, the vessels being tied separately from the ureter, and the organ removed. The case did well until a week ago, when hæmorrhage (apparently started by accidental manipulation) set in, and recurred in spite of plugging. Mr. Lucas reopened the wound, which was lined by granulations, and passed a loop round the pedicle. This not controlling the hæmorrhage, he, as a last resort, plugged the wound with two sponges soaked in a solution of perchloride of iron. There had been no recurrence of bleeding since then, and the patient was recovering from his anæmia. The sponges had not yet been removed.—Mr. SPENCER WELLS had seen Professor Simon of Heidelberg remove a kidney through the loin in a case of urethral fistula following ovariotomy. The case was successful. Mr. Wells had repeated the operation on the dead subject, and found but little difficulty in it. Mr. Barker had included in his tables a case of his own, which occurred to him ten years ago. It was a case of a large cyst of doubtful origin. An exploratory incision gave exit to a large quantity of bloody fluid, and Mr. Wells was obliged to remove the cyst. It had a capacity of fourteen pints, and seemed to be connected with the uterus. The kidney, which was adherent to the cyst, but was free from disease, was removed with this, the renal artery being secured by torsion. The patient only survived three days, dying probably from septicæmia, for it was before he had adopted antiseptic measures in his cases. There were no uræmic symptoms.—Mr. HAMILTON CARTWRIGHT instanced the following interesting fact as showing how much injury may be done to a kidney, and how little effect follow its removal. Some years ago, when in the Yang Tse river in China, he was shown by the doctor of an American vessel, also lying at anchor there, a specimen of a kidney. It had protruded from a wound in the loin, and had been dressed, according to Chinese fashion, with a mixture of bird's dung, saliva, &c.; and when the man was seen by the doctor the organ was in a state of putrefaction. Mr. Cartwright's acquaintance thereupon removed the mass, after which the patient, who had simply taken a pipe of opium during and after the operation, disappeared. He returned, however, in two or three weeks' time, and, as showing his appreciation of the services rendered him, brought with him another man suffering from cancer of the tongue.—Dr. HILTON FAGGE doubted whether the fatal result in Mr. Barker's case could be attributed to pulmonary thrombosis. In almost all cases in which such had been thought to be the cause of death he had found distinct evidence that the clotting was post-mortem, in the gravitation of the corpuscles to the dependent parts of the clot. One may often find the right ventricle and pulmonary artery filled with nearly colourless clot, but in such cases some black clot will mostly be found in the lower stratum, or if not there at any rate in the auricle. He was persuaded that the colourless clot in the right ventricle was often only the upper stratum of a clot, the lowermost and coloured part of which was lodged in the auricle.—Sir JOSEPH FAYRER, on the other hand, was certain that pulmonary thrombosis was a frequent cause of death after surgical operations. In India this was notoriously the case. He had seen and recorded many instances where the most careful observation showed that such clots were found during life, and were the cause of death. Frequently gangrene was caused by clotting in vessels under these conditions, due, he believed, to

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altered states of the blood.—Mr. HOLMES expressed surprise that no speaker had touched the cardinal point of Mr. Barker's paper—viz., the indications for operative interference in cases of rapidly-growing tumours of the kidney. In every other respect Mr. Barker's case was most successful; every care had been taken in the operation, and early union was taking place, but yet the operation was useless. The patient died more rapidly than she would if left alone, and the post-mortem examination showed that ultimate success would have been impossible, the cancer being already disseminated in the body. Was so formidable an operation really indicated in the case of such a malignant growth of the kidney with such severe symptoms? It might be that Mr. Barker was right in supposing that had the case been dealt with when it first came under notice, the chances of recovery would have been enhanced, owing to the disease being less advanced; but do such cases really offer sufficient prospect of success to justify the measure of extirpation?—Mr. BARKER, in reply to Mr. Thornton, admitted that the question whether hydronephrotic tumours would be dealt with preferably by lumbar or abdominal incision was an open one. He suggested the former method as the more applicable, because of the greater ease with which such cysts could be well drawn through the loin, as compared with other renal tumours. That the death was due to pulmonary thrombosis was only an hypothesis arrived at by exclusion of other evident causes. Whether the operation were justifiable in such cases must be left for the future to show. Still, there was the case operated on by Professor Martin; also one of encephaloid cancer, where the patient was well a year after operation. Professor Martin has lately informed him that there is some indication of recurrence now taking place, but it is not certainly established to be so. Even if the disease be recurring, yet the patient's life had undoubtedly been prolonged and eased by the operation. Mr. Jessop's patient survived some months, and it was not known with certainty that death was due to recurrence of the growth.

The Society then adjourned.

PATHOLOGICAL SOCIETY OF LONDON.

Pulsating Tumour of Cranium.—Degeneration and Regeneration of Axis-cylinder in Non-traumatic Lesions.—Tropical Ringworm.—Fatty Tumour.—Primary Cancer of Liver.—Hypertrophy of Masseter and Temporal Muscles.—Sclerema Neonatorum.—Cancer of Stomach.—Abscess in Head of Tibia.

THE ordinary meeting of the Pathological Society of London was held on the 2nd instant, the President, J. Hutchinson, Esq., in the chair. Before the commencement of the usual business of the evening the President announced that the Council of the Society had appointed a committee to draw up a list of subjects which particularly required elucidation, and of conditions of which it was desirable to show illustrations. This list was not intended to restrict the exhibition of specimens, but rather to act as a guide to the younger members. He hoped that anyone who felt particular interest in any special subject would mention it to the secretaries, who would be glad to receive any suggestions. The meeting was prolonged beyond the usual time for the exhibition of two recent specimens.

Mr. H. MORRIS showed a Tumour of the Cranium, which was obtained from a woman who first came under his care at the Middlesex Hospital, in August, 1874, being then forty years of age. Two years previously she fell and struck her head, and a small blood tumour appeared, but vanished next day. A month later she noticed a small hard tumour over the left parietal bone, which in 1873 attained the size of a small apple. A second similar lump then rose up, and soon blended with the first. For two months before admission she had suffered from headaches. When he first saw her there was a very prominent, soft, pulsating tumour reaching to the middle line at the vertex, and forwards to the ending of the hairy scalp; it was fixed to the skull. Around its circumference a hard, raised rim of bone was felt; the skin was marked with distended veins, was freely movable over the tumour, and not ulcerated; pressure upon it caused no discomfort; there were occasional flashes of light; eye normal; cervical glands not enlarged. The tumour was punctured with a needle, and only a little blood escaped. In August, 1874, an expansile tumour was discoverad just above the top of the sternum; no difference could be detected in the radial pulses. Dr. Coupland then examined the patient, and discovered a systolic murmur at both the apex and base, and found the apex beat abnormally near the left nipple; no increase of cardiac dulness. In December the tumours had grown a little, and the hard ring round the one on the head could only be detected in places; the temporal and supra-orbital arteries of both sides could be felt enlarged, and pulsating forcibly. In January, 1875, Dr. Greenhow found the systolic murmur at the base of the heart rougher and more pronounced and conducted up the carotids. The tumours slowly increased in size, and in November, 1878, another was noticed at the top of the right thigh, smooth, soft, and pulsating, and apparently produced by the expansion of the upper end of the femur; later on another was noticed in the left thigh; all the growths became extremely painful, and death occurred in October, 1878. At the autopsy a fifth tumour was discovered near the inner condyle of the right femur, and the thigh was rotated in as if dislocated. The bloodvessels of the neck were very large, and the heart also was hypertrophied, but free from valvular disease. The tumour in the neck was found to be within the inner end of the clavicle, but not implicating the sterno-clavicular joint. A section through the tumour of the parietal bone showed that it was limited by the pericranium on the outer side and the dura mater within, and that springing from the diploë the tumour had spread out on both aspects of the skull, especially on the outer surface. In the centre the parietal bone was perforated for about an inch and a half, and the diploë was encroached upon more than either table of compact tissue; the tumour was growing over and not from the compact tables of bone. There was no sign of inflammation of the brain. The specimen was brought forward on account of the long duration of the growth, six years, the accompanying hypertrophy of the heart, and because Mr. Morris desired the Morbid Growths Committee to report upon its structure. Several competent microscopists had examined it, but had been quite unable to agree upon its real nature.—Dr. BRISTOWE stated that he had under his care a year ago a woman, between thirty and forty years of age, admitted into the hospital for shortness of breath and general debility. Quite accidentally a tumour was found to replace the right scapula; it felt like a bag of worms, and was evidently a congeries of large vessels; a similar growth was found in each buttock; a systolic murmur was audible over each of these growths. Examined after death they were found to be sarcomata. At the request of the President, Dr. Bristowe promised to exhibit the specimens to the Society.—Dr. THIN, premising that this was the only opportunity for discussing the structure of the tumour, stated that he had carefully prepared and examined several sections of it. The tumour consisted of cells, cavities, and a matrix. He traced the formation of the cavities from large globular cells with distinct nuclei. The first change was a division of the body of the cell into smaller cylindrical cells, the nucleus then disappeared, and a cavity lined by hexagonal or polygonal cells remained. If these secondary cells are epithelial, then the growth is glandular, but it is difficult in that case to trace its origin, as it did not resemble the growths from the sweat glands which sometimes pierced the bones, and if the growths in the other bones were the same structure, this difficulty was still greater. Dr. Hamilton, of Edinburgh, was of opinion that the cells were epithelial; he, Dr. Thin, however, was not. The matrix of the tumour was very firm, and could readily be cut in thin sections, even after soaking in water; it also stained deeply with logwood and not with carmine, and thus resembled cartilage and not fibrous tissue. The undoubted fibrous tissue around and within the tumour stained as usual well with carmine. The association of epithelial and cartilaginous growths was unheard-of and could hardly be conceived.—Mr. KNOWSLEY THORNTON asked what the opinions of others who examined the growth were. He thought Dr. Thin's specimens showed the origin of cysts from a single cell, and he thought the cells were secreting epithelial cells, especially as in some places the spaces were tubular.—Mr. R. PARKER had examined several glandular tumours of the scalp, and thought this was of similar structure, but the cells were not quite so

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well mapped out, possibly owing to faulty preservation of the tumour.—The PRESIDENT stated that the Morbid Growths Committee would examine and report upon the specimen, and that it was a rule of the Society that no discussion could take place on that report.—Mr. MORRIS stated that some of his friends had thought it a myxoma, others a cystic enchondroma, others again glandular, some called it a sarcoma or angeioma; and when many competent observers were at such variance, he thought it best not to express any view of his own. He was greatly indebted to Mr. Couling and to Mr. Morris, of Brighton, for notes of the later progress of the case.

Dr. HOGGAN exhibited some microscopical specimens to illustrate the Degeneration and Regeneration of the Axis-cylinder in Non-traumatic Lesions of Nerve Fibres. He thought that the results obtained by direct experiment were vitiated by the irritation of the nerve by the section. He had studied the process in gangrene affecting cutaneous nerves, and had arrived at different results from those hitherto described. At present Ranvier and his school held that after section the axis-cylinder between the cut and the next node on the central side did not degenerate, but Engelmann and others taught that the axis-cylinder did degenerate on each side of the section. Dr. Hoggan found that at a distance from the gangrene and where the segmental elements were quite healthy, the axis-cylinder broke off and curled up in a spiral, and to such an extent that several segments may intervene between the two ends. When regeneration occurs this spiral uncoils itself and passes into the new segments. Often, however, the axis-cylinder does not break off beyond the gangrene, and when this is the case the appearances are such as to suggest the existence of a central axis cavity, filled by a soft fluid material, which undergoes spurious vacuolation and swells; the outer portion at the same time becomes granular, and is pushed up to the bulbous ends of the segments; these bulbs sometimes burst and quite disappear. He failed to find any regularity in the level at which these changes occurred even in the fibres of the same nerve; the withdrawal of the axis-cylinder preceded the other changes.

Dr. THIN showed under the microscope the Fungus of Tropical Ringworm, and exhibited drawings of his specimens. Some years ago Hebra drew attention to a disease occurring on the skin of the perineum and scrotum, which he named eczema marginatum; soon after Kübner found a mycelium in the ring, and stated that the disease was really tinea circinata modified by the moisture of the situation, and this view has since been generally adopted, though Hebra still maintains that the two forms of the disease are clinically distinguishable. Dr. Thin greatly questions the accuracy of this view, and a few years ago published two papers in the *Practitioner*, in which he advocated his opinions and stated that dermatologists were scarcely competent to pronounce upon the exact similarity or the reverse of fungi. He mentioned the case of a gentleman who suffered from the disease for twelve years, and then was apparently cured, but a short visit to Singapore quickly caused it to reappear. Dr. Manson of Amoy, China, has lately been working at the subject, and has succeeded in inoculating ordinary tinea circinata on one arm, and this disease on the other arm of a Chinaman, and he has found that the fungi thus grown are distinct, and on repeating his inoculations has found that each of them always breeds true. Dr. Thin examined some scales from a case which were sent to him by Dr. Manson, and he found that the mycelium and spores varied in size much more than those of tinea circinata—from much larger to much finer. The disease occurs most often about the Straits of Malacca.—Dr. BRISTOWE had lately seen a lady, about sixty-five years of age, with thickening of the nails on three fingers of one hand and two of the other, which had existed for seven years, and came on while she was attending a grandchild suffering from ringworm of the head; the nails were loaded with the usual ringworm fungus. This case showed that tinea circinata had sometimes a very long existence.—Sir J. FAYRER had seen this affection very often in India, and had noticed that it was always worse in the moist climate of Calcutta than in the drier regions, and was particularly prevalent in Burmah and all over the Malay Peninsula. He had not noticed that it was different from common ringworm—like it, it was easily cured by three or four applications of the goa powder; he had seen several cases of the disease since his return to England, and they too had speedily yielded to this treatment.—The PRESIDENT asked if Dr. Thin meant that all cases of ringworm in the tropics were due to this fungus, or did the fungus affect only one part of the body? It was necessary to be precise in the use of terms, and he thought the term "tropical ringworm" misleading. He was certain that some of the cases of the eczema marginatum he had seen were really common ringworm: thus a lady consulted him for the affection of the genitals, which came on four years before while she was attending to the head of a child with tinea tonsurans.—Dr. THIN did not mean that all cases of ringworm in the tropics were produced by this fungus. He had found the disease very troublesome to treat; it was easy to cure it temporarily, but it generally relapsed. If away from the perineum, this form of ringworm is more like syphilis than anything else. One important distinction from common ringworm is, that it creeps around hairs, but does not spread down their shafts nor lead to their destruction.

Dr. PYE-SMITH showed a specimen of Primary Cancer of the Liver. It was removed from a boy fourteen years of age, who first came under his care at Guy's Hospital two years ago. Two months before, he fell and struck his right side, and soon after noticed pain and fulness over the liver, the swelling increased, and when he saw him there was evident bulging, and the liver was felt some inches below the ribs, smooth and at one part so elastic that he tapped it with the idea that it might be hydatid disease. He entered the hospital a second, and then a third time, and was tapped once again, but nothing but a little blood escaped. Three days before death he took to his bed, his temperature rapidly rose to 104°, and he became deeply jaundiced. At the autopsy an enormous cancerous infiltration of the right lobe of the liver was found, the organ weighing 200 ounces. Large soft yellow masses were seen growing into the large hepatic veins. With the exception of one small nodule of cancer in one lung, all the rest of the body was quite healthy. It was then a primary cancer of the liver, which was extremely rare. Microscopically examined it was seen to be a carcinoma, with epithelial-like cells packed in fibrous alveoli, and of the variety called malignant adenoma. In some places the structure was almost a repetition of the liver itself, but the cells were arranged irregularly, not in columns. The specimen was of interest from its rarity, the youth of the patient, the length of time during which there were no grave symptoms, and the rapid and great pyrexia just before death, for which there was no obvious cause.

Dr. WICKHAM LEGG showed a girl with marked enlargement of the Masseter and Temporal Muscle on one side. It had been noticed about a fortnight; there was no loss of power in the muscles, which responded well to faradaism, but not to galvanism. There was no enlargement, nor loss of power in any of the other muscles of the body. These muscles had been seen affected in the later stages of pseudo-hypertrophic paralysis; but, as far as he knew, there was no instance recorded in which the disease began in them, and he was therefore unwilling to give that name to this case, but he should wait and watch its development. There was no history of syphilis in the case, nor of Duchenne's disease in the family. He stated that, like hæmophilia, and sometimes gout, polydipsia, and colour blindness, Duchenne's disease is seen only in the male members of families, but is transmitted by the females to their sons.

Dr. STEPHENSON showed the body of an infant ten weeks old affected with Sclerema Neonatorum. He was requested by the coroner to make a post-mortem examination, and was assisted by Dr. Barlow. The body at first appeared to be frozen, for the parts in which there was fat were quite hard, while where fat was absent they were flaccid and soft, and decomposition was commencing. The internal organs were quite healthy, with the exception of collapse of part of one lung. The sclerema did not exist at birth, and he had been unable to learn that it had been noticed at all during life. The disease appeared to be a substitution of palmitine for olein in the fat, rendering it solid at a higher temperature.—The PRESIDENT remarked that such a condition could hardly escape the notice of the nurse during life.—Dr. BARLOW had seen quite the same condition in a still-born child, and in another seven weeks old. It was nearly the same disease as that seen in children four or five years old. It differed from the sclerema neonatorum of French authors in being waxy from the very beginning, and not occurring as bluish-red patches; he had seen a case of this form. In Paris he saw a young child which answered closely to Dr. West's description of the affection, where there was great marasmus with very

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low temperature, and on post mortem the fat was not solid, but a very little reddish serum could be squeezed from it. These varieties of sclerema should be distinguished.—Dr. N. MOORE thought the form occurring in infants was always attended with marasmus; but that met with later on was not. He had seen the ear affected in a child of five or six.—Dr. DOUGLAS POWELL asked what was the cause of death? Is this condition of the fat fatal?—The PRESIDENT stated that the children are exceedingly ill at the onset of the disease, and perhaps this child died at that stage; usually the extreme illness passes off.—Dr. STEPHENSON stated that it was nearly always fatal at this early age.

Mr. BARROW showed a fresh specimen of Colloid Cancer of the Stomach, removed that day from a patient under the care of Mr. Butcher. The gentleman from whom it was removed had suffered from general wasting and loss of appetite for two years, and he died of exhaustion without exhibiting more definite symptoms. The stomach was adherent, and the lymphatic glands very large and hard. It was alveolar in structure, with colloid cells.

The following card specimens were exhibited:—Pedunculated Fatty Tumour growing from Ilium, by Mr. WALSHAM; Abscess in Head of Tibia, by Mr. FURNEAUX JORDAN.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Annual General Meeting.—Epithelioma of the Penis.—Pudendal Erythema in Diabetes.—Stricture of Bile-duct.

THE general meeting was held on the 1st inst., Dr. Cockle, President, in the chair. The Hon. Secretary read the report of the Council, in the course of which it was stated that the Council had awarded the silver medal of the Society to Dr. Gowers for his admirable demonstration on diseases of the spinal cord. The Fothergillian medal has not been awarded. Other reports were read, and the subject for the next Fothergillian prize essay was announced—viz., Whooping-cough, its Pathology and Treatment.

The ballot having been taken, the following gentlemen were declared duly elected to their several offices for the session 1880-81:—President: Mr. F. J. Gant. Vice-Presidents: Dr. C. Theodore Williams, Mr. W. F. Teevan, Dr. Alfred Wiltshire, Mr. J. W. Barnes. Treasurer: Mr. Francis Mason. Librarian: Mr. H. Royes Bell. Secretaries in ordinary: Mr. D. H. Goodsall, Dr. T. Gilbart Smith. Secretary for foreign correspondence: Dr. J. I. B. Berkhart. Council: Mr. J. Astley Bloxam, Dr. Percy Boulton, Mr. Thos. Bryant, Mr. R. Brudenell Carter, Dr. John Cockle, Mr. Walter Coulson, Mr. A. E. Cumberbatch, Dr. W. H. Day, Dr. T. S. Dowse, Sir Joseph Fayrer, M.D., Dr. Clement Godson, Dr. F. de Havilland Hall, Mr. Thomas Harvey Hill, Dr. Constantine Holman, Mr. Malcolm Morris, Mr. Edmund Owen, Mr. H. E. Sewill, Dr. Heywood Smith, Dr. J. C. Thorowgood, Dr. L. S. Forbes Winslow.

Dr. HARE took occasion to make a few remarks, which he said, "though somewhat of a personal nature, would, he trusted, have a wide professional hearing." He referred to his attack of typhoid fever, which he had no doubt he contracted at Homburg, five cases of typhoid having occurred at the hotel he stayed at. He left Homburg on Sept. 25th, and reached Vienna on Oct. 4th, after staying a few days at Nürnberg and Munich. With the exception of slight gastro-hepatic derangement one day at Munich, no symptoms showed themselves till Oct. 8th, so that the incubation period must have been at least fifteen days. He referred in the warmest terms to the extreme kindness, attention, and care he had received from the Vienna physicians, Dr. Finck and Dr. Bamberger. Dr. Hare then referred to some of the leading symptoms of this attack, and especially to the relief obtained during the earlier period by the application of a few leeches to the temples, which were allowed at his own earnest solicitation, and as a "concession."—The PRESIDENT, in the name of the Society, thanked Dr. Hare for the lucid account of his recent illness, and assured him it afforded the Fellows much satisfaction to have him among them again.

Mr. PEARCE GOULD read notes of a case of Epithelioma of the Penis. The disease occurred in a man aged seventy-five, who for five years had noticed a black growth on and behind the glans penis. On admission into the Westminster Hospital in July last there was one large pendulous growth, obscuring the glans penis and several smaller sores above it. All were deeply pigmented. No enlargement of inguinal or iliac glands. The penis was amputated, and the patient made a good recovery, the *modus operandi* consisting in the formation of a flap of corpus spongiosum and urethra, and then division of the corpora cavernosa by a wire écraseur.—Mr. ROYES BELL thought that amputation was the proper course to pursue in such subjects, and recalled a case of Sir W. Fergusson's where the diseased part was shaved off, but speedily recurred. Several excellent microscopical preparations of the tumour, made by Dr. Meneage Gibbs, were exhibited. Dr. Gibbs also showed the stereoscopic effect with a high power.

Dr. PERCY BOULTON read notes of a case of Pudendal Erythema due to Diabetes, suggested a neurotic rather than a urinary origin for the rash, which occurred also in the axillary regions. He drew a parallel between the functions and character of these two seats. In the case given, cedeia internally and the local application of morphia and vaseline were very successful.—Dr. DE H. HALL remarked that in all cases of diabetes in women that he had seen, there was more or less vulvitis, which he attributed to the mechanical effect of saccharine crystals.—Mr. GOULD suggested that the sugar might escape in the sweat.—Dr. HARE had found prurigo of the vulva successfully treated by the application of an ointment containing calomel (one part to four) at night, the part then to be dusted with camphor and starch powder.—Dr. ROUTH asked whether Dr. Boulton's patient was not of an age when prurigo vulvæ is liable to occur.—Dr. BOULTON replied in the affirmative.

Dr. DEWAR read notes of a case of Jaundice, with Perforation of the Duodenum. The patient was an artist, aged sixty-one. The jaundice came on rather suddenly some weeks after a chill, the symptoms being pain and vomiting. The stools were clay-coloured, and the urine brown. There was never any colic, and no evidence of malignant disease about the liver. There was tympanites, with some ascites. The gall-bladder could not be felt externally, and the hepatic dulness was slightly diminished. Four months after the first appearance of the jaundice, and without any apparent cause, some pain came on in the hepatic region, and death occurred in twenty-four hours from perforation of the duodenum, in the centre of a thickened and inflamed patch in the neighbourhood of the opening of the common duct. The duct was quite impervious, blocked by organised deposit; and the inference was that the case was one of duodenal catarrh, extending up the common bile-duct, and leading to its thickening and obstruction.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Etiology of Summer Diarrhœa.

AT a meeting of this Society, held at 1, Adam-street, Adelphi, on Friday, February 20th, president Dr. Bristowe, Dr. G. B. LONGSTAFFE read a paper entitled "Some facts bearing on the Etiology of Summer Diarrhœa," of which the following is an abstract:—All are prepared to admit that many circumstances may predispose to diarrhœa, such as the character of food, foul air, bad water, high temperature, overcrowding, &c.; but it is at least not improbable that there exists some special or specific cause, at present unknown, which must be superadded to one or more of the predisposing causes. This specific cause may be a meteorological condition, a peculiar form of pollution of air or water, some animal or vegetable matter in a state of change, or even a living germ. The method of inquiry employed by Dr. Longstaffe necessitates the limitation that when diarrhœa is mentioned it must be understood that fatal diarrhœa is meant, because the arguments to be brought forward are all derived from the statistics of death collected in the Registrar General's office. It is important to obtain satisfactory replies to the three following questions—where, when, and how does it kill? The average death-rates of the ten years ending 1879 show that the average summer diarrhœa death-rate over the whole of England and Wales is 2½ per 1000, in the fifty other towns of the Registrar-General a little below 3 per 1000, while nearly 1 per 1000 higher than that of the twenty largest towns of England. The death-rate of all the rest of the country—that is, of the registration districts not included in these seventy towns—is 1½ per 1000. Diarrhœa in the summer

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is, therefore, twice as fatal in the fifty towns, and more than twice as fatal in the twenty towns, as it is in the country districts. When the death-rate of the several towns is investigated, very striking differences come to light. Thus the death-rate in Leicester is over 8 per 1000, Preston 7 per 1000; next to Preston come Salford, Leeds, Hull, Yarmouth, Bolton, Liverpool, and Birmingham. The London rate is almost exactly the same as those of the fifty towns. When the seventy towns are arranged in the order of their summer diarrhœa death-rate, the twenty towns at the top of the list are found to have an average rate of 5·2, while the twenty towns at the other end have an average of only 1·8. What factor in common have the twenty towns comprising one group, which being absent in the twenty towns comprising the other group, causes the latter to have a diarrhœa death-rate of little more than one-third that of the former? Density of population is not the common factor; the geological system upon which a town stands appears to exert no influence, although porosity of soil may be of importance. Elevation above or proximity to the sea is without effect. Mortality from diarrhœa is below the mean from the beginning of October to the end of June, while it very greatly exceeds the average during July, August, and September. From Dec. 1st to May 31st, the deaths from diarrhœa in London are practically constant, averaging between fourteen and fifteen per week; three weeks after the mean temperature of the air rises above 50° F.—i.e., about June 1st—the deaths begin to get more numerous, and a fortnight after the temperature exceeds 60° F. the deaths begin to exceed the mean in London 52 per week. The greatest number of deaths occur in the first week in August, and the mortality appears to be due to some function of the temperature. Diarrhœa is most fatal in years with hot summers, especially if they be at the same time dry, and is least fatal in cold summers, especially if they be at the same time wet. The number of rainy days appears to be at least as important as the amount of rain that falls. The temperature of the water of the Thames has a closer relation to the mortality from diarrhœa than the temperature of the air. The temperature of 62° F. is more critical than that of 60° F. All attempts to express the diarrhœa mortality as a function of temperature *only* have failed. Diarrhœa is therefore probably a communicable zymotic disease, which thrives best during hot weather. From fifteen to twenty-five years of age the death-rate from diarrhœa is only ·04 per 1000 living at that age; from five to fifteen years of age it is a little greater, and from twenty-five to fifty-five only ·1 per 1000. From two to five years it is ·6 per 1000; over fifty-five years, 1·2 per 1000; during the second year of life 5·1 per 1000, and during the first year, 17 per 1000 living at that age. These figures are derived from the means of the years 1847—78. Dr. Longstaffe concludes that there is a specific poison of diarrhœa which makes its appearance in the summer months, and that bad water, fruit, artificial feeding, &c., may be excluded as causes. There only remains then bad air, either (*a*) as a locally-bred miasm, or (*b*) sewer air. He suggests that the exciting cause of summer diarrhœa is intimately connected with the process of putrefaction, however and wherever arising; but that in a large proportion of the cases the infective material has its source in the public sewers, and is introduced into the system through the lungs.

Reviews and Notices of Books.

Clinical Researches on the Therapeutic Action of Chloride of Ammonium in the Treatment of Hepatic Disease. By W. STEWART, M.D. London: Smith, Elder, and Co. 1879.—This is an interesting contribution on a subject with which English practitioners are but too little acquainted—the treatment of hepatic affections taking origin in tropical climates. With increase of our colonies and the rapid means of transit, the number of invalids returning home for treatment annually increases, and the practitioner who wishes to escape occasional mortification should make himself conversant with some of the main points of the chief tropical diseases that may be thus casually brought under his notice. Chronic dysentery, abscess of the liver, and the hepatic and splenic engorgement so frequently met with in old cases of malaria, are apt to cause considerable anxiety and worry unless the medical man has paid some previous attention to this class of case. We therefore hail with satisfaction a work of this kind, which is a record of clinical observations made with regard to the action of chloride of ammonium in certain hepatic affections common to the tropics. Dr. Stewart's work is brief and to the point, and is thoroughly clinical in its character. Practitioners will find it not only an interesting work for present reading, but a useful one for their bookcases, to refer to whenever a patient suffering from tropical hepatitis, chronic or acute, may by chance come under their care.

Student's Primer on the Urine. By J. T. WHITTAKER, M.D. London: J. and A. Churchill. 1880.—This is a painstaking little work, but it is hardly fair to call it a "primer" on the subject, for the beginner would require considerably more information on certain points before he could make much use of it. The author details plainly enough what happens, but he does not explain the why. This we hold to be an essential point in all elementary teaching. The book is likely to prove useful to advanced students and practitioners, who may want to refer for particulars as to the application of some particular test. The illustrations of urinary deposits, casts, &c., etched by the author, are well done, and are certainly the best feature of the work.

The Essentials of Bandaging, &c.; with a Chapter on Surgical Landmarks. Illustrated by 134 Engravings on Wood. By BERKELEY HILL, M.B. Lond., F.R.C.S., Professor of Clinical Surgery in University College, Surgeon to University College Hospital, and Surgeon to the Lock Hospital. Fourth Edition, revised and much enlarged. London: Smith, Elder, and Co. 1880.—The only possible objection that the most captious critic can make to each succeeding edition of Mr. Hill's book is one that equally applies to nearly all books—namely, that it tends to grow obese. The last edition contains one hundred pages more than the second, and that edition was "revised and enlarged." Though we may regret that this useful guide has almost grown out of pocket-size, we cannot indicate a single page that could be safely omitted. An excellent chapter on "Surface Guides and Landmarks," revised by Mr. Rickman Godlee, occupies sixty-four of the one hundred additional pages, and is a distinct acquisition. The description of Professor Lister's mode of antiseptic dressing has been rewritten by the same well-informed pen. Dr. Sayre's method of applying the plaster-of-Paris jacket for disease of the spinal column has been introduced into this edition. In every respect Mr. Hill's little book is worthy of unreserved commendation. Until by long practice the dresser or surgical assistant has learned enough to do without it, he should make it his constant companion.

A Manual of Minor Surgery and Bandaging for the use of House-Surgeons, Dressers, and Junior Practitioners. By CHRISTOPHER HEATH, F.R.C.S., Surgeon to University College Hospital, &c. Sixth Edition. London: J. & A. Churchill. 1880.—It can be necessary in only exceptional cases to review any work which has reached a sixth edition, and this book, so well and favourably known to the younger members of the profession, is no exception to the rule. This edition appears to be brought well up to date, and will be found a very safe guide for those who have the care of surgical cases.

A Handbook of Therapeutics. By SYDNEY RINGER, M.D., Professor of the Principles and Practice of Medicine in University College, and Physician to University College Hospital. Eighth Edition. London: H. K. Lewis. 1880.—It would be hard to say whether a zealous teacher and busy practitioner, who has conscientiously edited seven editions

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of a large octavo volume on a progressive subject in about as many years, is more to be congratulated or pitied. The sixth edition of Dr. Ringer's well-known handbook appeared at the end of the year 1877, the seventh in 1879; and here we have the eighth at the beginning of 1880. Under these circumstances, except to confirm the author's statement that he has "endeavoured to include the various new facts that have come to light during the twelve months that have elapsed since the issue of the last edition," we have little more to do than heartily to commend the latest edition to our readers.

The Art of Perfumery, &c. By G. W. SEPTIMUS PIESSE, Ph.D., F.C.S., Analytical Chemist, author of "Chemical, Natural, and Physical Magic." Fourth Edition. London: Longmans, Green, and Co. 1879.—Whether the lavish use of perfumes by the ancients on their persons and in their houses was intended to gratify an exquisite sense of smell, or to counteract the alternative predominance of evil odours, may be a debateable question. But whatever may have been its reason, the practice dates from remote antiquity. Mr. Piesse, in the introduction to his interesting and practical work, gives a brief sketch of the history of the use of perfumes. He thinks it probably began in religious observances. Frequent mention is made of fragrant gums, woods, fruits, &c., in most of the early historical records, both sacred and profane. The Egyptians, the Chinese, the Hebrews, the Greeks, and the Romans have all left behind evidence of the general use of cosmetics and perfumes. Nor can the moderns be accused of neglecting them, if we may trust Mr. Piesse's statement that the annual products of Paris alone exceed in value two millions pounds sterling. To those who desire to learn the history of perfumery, as well as to those who wish to become practically acquainted with the art of making perfumes, of obtaining odours from plants, of raising fragrant herbs, of preparing cosmetics, washes, tooth-powders, &c., we gladly recommend Mr. Piesse's book, which has acquired wide reputation, having been translated into German, French, and Italian, and been twice reprinted in America.

Note-Book of Solubilities, arranged chiefly for the use of Prescribers and Dispensers. By JOHN EAGLE. London: H. K. Lewis. 1880.—A handy little volume of this kind was much wanted. Prescribers often feel at a loss as to the best menstruum for dissolving some of the less familiar drugs, and will be glad to have this little work by them to refer to when in doubt and difficulty. Patients, too, will feel grateful, we are sure, if prescribers will make use of it, for it often happens that they have to swallow a very nauseous dose, from want of consideration by their physician in this matter. The contents are well arranged for reference, and the book is well printed and neatly got up.

Analytical Chemistry: a series of Laboratory Exercises. By W. DITTMAN, Professor of Chemistry in Anderson's College, Glasgow. London and Edinburgh: W. and R. Chambers. 1880.—A useful elementary work for beginners. The appendix is especially suited for medical students, giving a summary of some of the organic substances that come more particularly under their notice, as, for instance, the tests for the alkaloids, sugars, and some of the chief urinary constituents. Indeed, we should like to see this appendix enlarged in a future edition, and a table of the reactions of the proximate principles, and some of the important products of their decomposition, given more fully.

Mr. ARTHUR ROLAND has, in the series entitled "Farming for Pleasure and Profit," an interesting volume on "Poultry Keeping," in which he strives to show how that branch of rural enterprise may be carried out without loss, and even with profit. The little work will be welcomed by the many who indulge in the home pleasures of country life.

NAVAL MEDICAL REFORM WARRANT.

II.

SURGEONS.—*Half-pay of the Navy; Non-effective Pay of the Army.*—In the Navy it is compulsory, whereas in the Army it is only exceptional. If it were abolished in the Navy, then the necessity for inequalities of full-pay between the sister services would cease with it, and the same scale would serve for both. So long as that is not effected, the principle of increase by four yearly for five yearly periods should be applied to half-pay as well as to full-pay, which would entitle the naval surgeons to the following rates:—

TABLE IV.

Ranks.	Full-pay Service.	Per Diem.		Per Annum.		
		s.	*d.*	£	*s.*	*d.*
Staff-surgeon	After 14 years	13	6	246	7	6
,, ...	,, 18 years	20	0	365	0	0
Fleet-surgeon	,, 20 years	20	0	365	0	0
,, ...	,, 22 years	22	6	410	12	6
,, ...	,, 26 years	25	0	456	5	0

Army surgeons being entitled to the same sums after fifteen, twenty, twenty-five, and thirty years respectively.

RETIRED PAY.—*Compulsory Retirement.*—This is a question of no secondary importance, since it becomes the great boon, after the turmoil and fluctuations of active-service life, when hopes of progress have ceased, and nothing remains to the grey-headed officer beyond the social position and the ease he may have secured to himself and family as the results of his labours. It is therefore only right that those of the same profession, who have devoted their best abilities and long service to the State, should receive equal pecuniary considerations at about the same ages. The great difficulty in effecting this uniformity depended in past years on the different time-value between the continuous service of the army and the non-continuous service of the navy, interrupted as it was by periods of half-pay. Thus, if we assume twenty-two years for both at entry, the army surgeon serving continuously completed twenty years' service at forty-two years of age, while his *confrère* in the navy rarely did the same under forty-five years; and twenty-five years, completed in the army at forty-seven, would bring up the naval medical officer to fifty-one or fifty-two years of age. Beyond this, the conditions on which the maximum of retired pay was obtainable are further in disfavour of the navy surgeon, by reason of later age for compulsory retirement, which still stands at sixty, while fifty-five has been that for the army surgeon. Since March, 1873, by Order in Council, the latter has been enabled to retire, on medical certificate, after twenty-five years' service, at forty-seven years of age, on £365 a year, and that sum was secured on his compulsory retirement at fifty-five years of age. By the Navy Order in Council of the 6th July, 1866, the age of sixty was fixed for the compulsory retirement of Staff Surgeon—now Fleet Surgeon—ranking with Surgeon-Major of the Army, retired compulsorily at fifty-five.

In March, 1870, a comprehensive scheme for the retirement of all naval civilian officers came into force; it was complicated in its details, and on a sliding scale; but, while affording to all alike the great benefit that half-pay time was to be counted as two-thirds of full-pay service, it was unjust to surgeons in fixing their maximum at £400 instead of £450, as in the case of other civilian officers of equal ranks. This inferiority was deeply felt by the Fleet Surgeons, so that great dissatisfaction was expressed; and four years elapsed, of momentous import in keeping down the admissions to the service, until by Admiralty Circular, dated 6th March, 1875, that disability was removed, by placing them on the same scale of retirement "as Chaplains and Naval Instructors, Secretaries and Paymasters, their maximum to be £450 instead of £400."

The new Army Warrant grants to all Surgeons-Major the retired pay of £456 5*s.* at fifty-five years of age, and thus all that is requisite to equalise the services is, that Fleet Surgeons shall have the same sum at the same age of fifty-five years, recommended for their compulsory retirement by the Admiralty Committee of 1865, on the evidence then laid before it.

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Voluntary Retirement. — This is of a very different character from the compulsory, in being a privilege when carrying emoluments for past services with it, and therefore the authorities have on their side a right to place such checks or limits to it as may be thought expedient for the time being.

For the naval surgeons the privilege was allowed, after twenty-five years of full-pay service, on the half-pay scale, by the Order in Council of 13th May, 1859. In 1866, by Order in Council of 6th July, one-half of the full-pay on which the officer was then serving or had last served, was granted to those of twenty years' service. In 1875, by Order in Council of 4th February, these terms were improved so far as to allow 21*s.* a day, or £383 5*s.* a year after twenty-five; and 15*s.* a day, or £273 15*s.* a year, after twenty years' service, limited to ten retirements per annum, under Admiralty approval of the individuals.

In contrast with this there is now the 22nd Article of the Army Warrant of 27th November, 1879, ordaining that "a medical officer, after completing ten years' service, may be permitted to retire on the gratuity or pension laid down in Article 47, when it shall be deemed expedient by our Secretary of State." The said 47th Article ordains that after twenty years' service (forty-two years of age) the retiring pay of a surgeon-major shall be £365; after twenty-five years (forty-seven years of age), £410 12*s.* 6*d.*; and after thirty years (fifty-two years of age) £456 5*s.* The service reservation being made in Article 23rd—namely, "any officer who shall voluntarily retire before the age of fifty-five years shall be liable to be called upon to serve in a case of national emergency, in a rank not lower than that from which he shall retire, until he shall complete the age of fifty-five."

The active relative positions as to retired pay existing between the executive medical officers of the army and navy may be appreciated from the following table, No. IV. These positions are evident enough under ten and above twenty years' service, but the services of an actuary are requisite to reduce the comparative values of gratuities of the one service and the pensions of the other to similar terms. It may be observed that the system of gratuities now adopted in this case for the army resembles that of commutations given to the whole list of retired naval officers in 1870.

TABLE V.

ARMY.

BY PENSIONS (P), OR GRATUITIES (G).

	Full-pay Service.	Compulsory. £	*s.*	*d.*	Voluntary. £	*s.*	*d.*	
By Order in Council, Nov. 27th, 1879.	Under 5 years	109	10	0	—			
	,, 10 years	146	0	0	—			
	Above 10 years	—			1250	0	0	(G)
	,, 15 years	—			1800	0	0	(G)
	,, 18 years	—			2500	0	0	(G)
	,, 20 years	—			365	0	0	(P)
	,, 25 years	—			410	12	6	(P)
	,, 30 years	—			456	5	0	(P)

NAVY.

BY PENSIONS.

	Full-pay Service.	Compulsory. £	*s.*	*d.*	Voluntary.	£	*s.*	*d.*
By Order in Council, Feb. 22nd, 1870.	Under 5 years	109	10	0				
	,, 8 years	146	0	0				
	Above 11 years	182	10	0				
	Under 14 years	200	15	0	By Order in Council, Feb. 4th, 1875.			
	,, 17 years	237	5	0				
	Above 18 years	255	10	0		£	*s.*	*d.*
	,, 20 years	301	7	6		273	15	0
	,, 25 years	—				383	5	0
	,, 30 years	450	0	0		—		

(It may be noted that, computing loss of time on half-pay, the army full-pay periods of fifteen, eighteen, twenty, twenty-five, and thirty years, are equivalents of about thirteen, sixteen, seventeen, twenty-one, and twenty-five years, respectively, of naval full-pay service.)

Beyond this scale, the newly-created army rank of Brigade Surgeon, carrying with it increased rates of retired pay —£501 17*s.* 6*d.* after twenty, and £541 10*s.* after twenty-five years' service,—will demand adjustment as towards Fleet Surgeons. Curiously enough, the first step in this direction was a concession, on recommendation of the Admiralty Committee, by Order in Council (16th Article) dated 16th July, 1866:—"As a special reward to Staff (now Fleet) Surgeons, owing to the comparatively small numbers of the inspectorial ranks ..... after twenty-five years on full-pay, to be allowed £1 a day on being compulsorily retired at sixty years of age, or by medical survey."

The new army grade with its increased retired pay is only the corollary of the principle established in the navy, and all that remains for the Admiralty to do will be to expand their own principle up to the scale of pay now laid down by the War Office for Brigade Surgeons.

Again, retired officers of the navy are sensitive on the point that their army equals have still remaining to them several appanages of the army, the analogues to which in the navy are not reserved for themselves. For instance, there are Chelsea Hospital, its schools, the military colleges, prisons, and station hospitals, that may give increased pay and a social status of some value to retired army surgeons. In relation to this point, the retired naval surgeons grieve to see Greenwich College and schools alienated from the naval medical list, and placed in the hands of a civilian, and the naval prison at Lewes similarly held; and they naturally inquire, why should not these and the reversions of all appointments to the coast-guard, and under the Contagious Diseases Acts, which are specially Admiralty appanages, be open in good faith to themselves?

ADMINISTRATIVE RANKS. — *Pay: Full, Non-effective, and Retired.* — Amid the accomplished changes there are none more striking than this feature of the new Army Warrant, which it will suffice to present in its simple form, which allows only a single rate of pay in each kind for each rank.

TABLE VI.

ANNUAL SALARIES AND PENSIONS.

Ranks.	Full. £	*s.*	Non-effective. £	*s.*	Retired. £	*s.*
Surgeon-General	1003	15	730	0	730	0
Dep. Surg.-Gen.	730	0	638	15	638	15

It must not be forgotten that in the Navy these grades are as liable as the executive ranks to periods of compulsory half-pay. Indeed, it is not impossible to sacrifice more time in this way in the grade of Inspector-General than had been done during a previous service of twenty-six years. Having pointed out the principles, the rates of increase, and the requisite changes in the varieties of pay—full, half, and retired—of the naval medical service, we respectfully commit these questions for consideration.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Worcester.—Dr. Strange gives a favourable report of the state of health of the city during the greater part of last year. The death-rate was 21·17, as compared with 24·26 in the previous year, and was the lowest observed during the six years he has held office. The infantile mortality was also diminished, forming only *one-third* of the total deaths, instead of nearly two-fifths as in previous years. From his observation, Dr. Strange lays down the dictum that, as regards Worcester, and probably also towns of similar character, it is not true that the proportion of deaths of infants under one year of age to every 1000 births is a true test of the sanitary condition of a town or neighbourhood.

Poole.—Mr. Lawton reports a death-rate of 20·79 per 1000 in the borough for 1879, and a birth-rate of 35·46. The mortality among infants under one year is given at 22·69 per cent., and among children between the ages of one year and five years at 19·74 per cent. With reference to this high rate of mortality, he states, on the authority of the registrar, that a very large proportion of young children are "insured."

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The Halifax Combination.—Dr. Britton prefaces his report with some observations on the local character of medical officers of health's reports. It has been objected, he states, that the officers of *combined* districts do not report on their districts as a whole, but in detail as to their several parts, thus largely depriving their reports of interest for the public generally. Dr. Britton defends this particular practice, first, on the ground that they are not prepared for the public generally, and, next, that they are framed in strict accordance with the *orders* of the Local Government Board as to reporting. We question the second element of the defence, and do not admit the first, but we entirely agree with Dr. Britton that the essential value of the report depends on its local bearing. Some medical officers of health of combined districts do preface their reports with a general report on the state of their district, without prejudice to the local reports, and with advantage, in showing the health connexion between the several districts of the combination; and these preparatory reports, we have good reason to know, are read with as great interest in the district as outside. We have never heard these reports objected to as inconsistent with the central authority's notions at Whitehall. The public generally may claim some share of interest in these more comprehensive reports, as it is only by them that they can hope to master the sanitary doings of combined districts. Dr. Britton's report for 1879 excellently serves the purpose for which he designs it—namely, the information of the several local authorities in it with regard to their particular districts.

Sunderland.—Dr. Yeld's report for 1879, as medical officer of health to the Port Sanitary Authority, admirably indicates what the work of such an officer should be, and is a good example of reporting. Dr. Wallace's report, as medical officer of health for Greenock, for the five weeks ending the 3rd January, notes thirteen cases of typhus removed to hospital. The annual report of the medical officer of health for Sittingbourne, Mr. N. G. Sutton, indicates good work done there. Dr. Seaton's annual summary for Nottingham, 1879, contains several very interesting and instructive facts. Particularly he notes, in respect to scarlet fever, of sixty cases removed to the Sanitary Authority's Hospital, thirty-seven were first cases taken from households containing many susceptible children within a short time of the onset of the disease. At the same time the bedding and other infected articles were disinfected by exposure to a dry heat at a temperature of 246° F. "The excellence of the results attained by this early isolation, combined with disinfection, may be judged of from the fact that only in one instance did a second case occur, and this was under circumstances which made it extremely probable that the infection was taken from some other source." He gives also some most interesting facts as to poisoning from arsenical wall-papers in his district. The annual report (1879) of the medical officer of health of the rural sanitary district of Stoke-upon-Trent shows that effective sanitary work of much promise for the future is being done there. The annual report of the medical officer for Lincoln, Dr. Harrison, proves that the city has still much to do before it can be regarded as having even approximately secured a good sanitary state.

Analytical Records.

"MALTINE" PREPARATIONS.

(MALTINE MANUFACTURING CO., GT. RUSSELL-ST. BUILDINGS, LONDON.)

WE have received two of the above-named Company's preparations — namely, Maltine with Phosphates, and Maltine with Cod-liver Oil and Pancreatine. Both these preparations exhibit in an eminent degree the starch-dissolving power of diastase; in fact, a teaspoonful of the maltine is capable of converting instantaneously a surprising amount of stiff starch paste into a thin limpid liquid.

"Maltine with Phosphates" contains a considerable amount of earthy and alkaline phosphates and of phosphate of iron, and will no doubt be found serviceable in rachitic and similar affections. It has a pleasant malt taste, and is easily taken by children.

"Maltine with Cod-liver Oil and Pancreatine" is a preparation of considerable merit. It contains much cod-liver oil, the flavour of which is fairly masked by the taste of the maltine, the pancreatine being added on account of its emulsifying and digestive properties.

SALINE ESSENCE OF PEPSINE.

SALINE ESSENCE OF PANCREATINE.

(MESSRS. SAVORY & MOORE, 143, NEW BOND-STREET, W.)

Superficially examined, these preparations would pass muster as fair samples of ordinary ketchup; yet they contain powerful digestive ferments in large quantity and in a most active state—the essence of pepsine readily digesting nitrogenous or albuminous matters under the proper conditions; the essence of pancreatine acting powerfully both upon starch and albumen.

These are thoroughly reliable preparations. Care must, of course, be taken that they are not mixed with *hot* food, &c., as the fermentative power of both pepsine and pancreatine is readily destroyed by heat.

PULVIS THYMOL ANTISEPTICUS FOR TOILET AND NURSERY USE.

(H. & T. KIRBY & CO., 14, NEWMAN-STREET, OXFORD-STREET.)

To judge from the large number of new preparations containing thymol, this camphor seems to be coming rapidly into favour. It certainly has a good many advantages over the majority of older antiseptics, and these advantages are very clearly brought out in Messrs. Kirby and Co.'s preparation.

This is a sort of "Violet Powder," and possesses not only absorbing, but disinfecting and aromatising properties. It has a pleasant odour, and is well got up.

WIESBADENER THERMALWASSER.

(INGRAM & ROYLE, QUEEN VICTORIA-STREET.)

The well-known and powerful mineral water of Wiesbaden has now been introduced into England. We have submitted some of the water to partial analysis, and find the chlorides of magnesium and calcium in abundance. It is, of course, a mild aperient, and will be found valuable to many who are unable to visit the charming health resort where Nature's manufacture is carried on.

SELLERS' COAL-TAR SOAP.

(J. SELLERS, FARRINGDON-ROAD.)

A smooth and pure soap without any of the disagreeable odour of coal-tar. It is pleasant to use, so pleasant, indeed, that no one would suspect that it contained any remedial agent. It is well adapted for use in the nursery and elsewhere.

FLUID MEAT (PEPTONIZED MEAT).

(PREPARED BY AND UNDER THE SUPERINTENDENCE OF MR. S. DARBY FOR SAVORY AND MOORE, NEW BOND-STREET.)

This is a flesh-forming food, greatly superior in nutritive value to common beef-tea, which possesses but little plastic value. It deserves careful trial in cases of impaired digestion and great exhaustion.

ROSBACH WATER, BOTTLED AT THE ROSBACH SPRINGS, NEAR HOMBURG.

(THE ROSBACH WATER COMPANY, LIMITED, 35, FINSBURY-CIRCUS.)

This appears to be an excellent table water. It is pleasant in taste, and very pure as regards organic matter, and it contains just enough magnesia to give it the character of a mild corrective. Mr. Wanklyn's analysis shows 12·6 grains of magnesium carbonate per gallon. No doubt it will establish itself as a favourite.

PATENT MALTED NURSERY BISCUITS.

(HILL AND SON, BISHOPSGATE-STREET, LONDON.)

The introduction of malt into biscuits for nursery use is a great improvement. The biscuits are delicious in flavour, and very easy of digestion. They may be used either with hot water or milk. We also find that they make excellent nursery puddings.

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THE LANCET.

LONDON: SATURDAY, MARCH 13, 1880.

WE have nothing to say on the subject of party politics. THE LANCET is a professional journal, and our concern is with professional subjects. Taking this standpoint, and leaving our readers to follow out the lines of their own personal convictions in matters of general policy, we would take the opportunity of insisting strongly and urgently on the need of direct representation for medical science in Parliament. Unfortunately for the profession and, as we think, for the country, there are few medical men in the House of Commons, and these few too frequently cease to cherish professional obligations and interests when they mingle in the strife of party contentions, or even discharge the routine duty of legislation. This is the more to be regretted because there is scarcely a question of home, or even foreign, policy discussed in Parliament which does not either immediately or collaterally involve the interests of Medicine as a science or its professors as a body. The subject is not permitted a voice in the Upper House; it is, therefore, incumbent on those who represent it that its claims should be pressed in the Lower. There is nothing selfish in this plea, because the interests of Medicine are the interests of health, and no community can be really and permanently prosperous which is not healthy.

We do not ask electors to waive their political opinions, or even to subordinate considerations of principle to professional interests; that would be a lack of fidelity which no honest man could tolerate at a great political crisis such as that through which we are passing; but surely there must be many members of the medical profession who have both leisure and the means to take a share in the business of this country. The legal and military vocations are excessively represented in both Houses. Why does it happen that the medical has scarcely a spokesman? There are "Doctors" in the House of Commons, but not Doctors of Medicine. The medical men number only four—Dr. BRADY, Dr. LUSH, Dr. CAMERON, and Mr. MITCHELL HENRY. It may be argued that members of our profession are too busy for the assumption of legislative duties. That is not a valid excuse. There *are*, as we have hinted, many who might easily devote the leisurely years of mature life to this form of public service, and at once win honour and "do good." Until some step is taken in this direction, we fear it will be vain to hope that the voice of the profession can be heard in Parliament, or the influence which it is desirable to give to medical considerations in the counsels of the nation begin to be felt. Whenever the choice of a representative in Parliament can *honestly* fall on a medical man, we shall rejoice to see a member of the profession returned. More than this we cannot say, because, as we have strongly insisted, political considerations of *principle* must, in a crisis like the present, be paramount.

The members of our profession now in the field seeking re-election are—Dr. BRADY for Leitrim, Dr. LUSH for Salisbury, Dr. CAMERON for Glasgow, and Mr. MITCHELL HENRY for Galway. The candidates for seats who have not yet entered Parliament are—Dr. B. W. RICHARDSON for West Kent, Dr. FARQUHARSON for West Aberdeenshire, and Mr. BICKERSTETH for the Universities of Edinburgh and St. Andrews. If, as we trust may be the fact, other candidates should enter the field, the claims urged by these gentlemen for the support of their medical brethren as electors will be stronger than those of any lay candidate; although they should not, under any circumstances, be allowed to override political principle. The medical elector must be a citizen *first*, and as such he is bound to consider the interests of the country. After that he will be promoting the public welfare by doing all that in him lies to secure the return of a representative who can not only endorse those views of general policy which he deems to be expedient for the country, but bring the principles of public health clearly and forcibly before Parliament, not simply for the advantage of medical men, but for the advancement and good of the country.

THE dissolution of Parliament at this particular moment, in a very unexpected way, is a very great inconvenience and misfortune. Amongst other harm that it has done and will do is this—that it puts a sudden stop to the work of committees, and of course the work of the Select Committee on Medical Bills, which had begun in earnest, is no exception. We have reason to know that Sir WILLIAM JENNER would have been asked to give evidence on the 12th inst. It is no secret that Sir WILLIAM'S heart on this subject beats synchronously with that of the profession at large, and that he feels keenly the exclusion of his brethren from all representation in a body which gets its large funds and its great importance from the practitioners of the country, but which has distinguished itself by want of sympathy with them, and a determination to have nothing to do with them beyond the reception of fees. We may trust, however, that Sir WILLIAM'S evidence is only postponed, and not lost to the cause of medical reform. We have already pointed out that there is some danger of the time of the Committee being unduly absorbed in the reception of evidence on one side. Of the fourteen witnesses examined last session, no less than eight were members of the Medical Council. The Registrar of the Council was another. When the question again arises, as we confidently trust it will arise in the new Parliament by the appointment of a new Select Committee, it will be our duty, and the duty of all earnest promoters of medical reform, to urge on the Committee the taking of evidence from gentlemen whose professional and general reputation, and whose freedom from the bias given by officialism in corporations, will give them just weight. The examination of such witnesses will satisfy the Committee that the demand for representation proceeds not alone from general practitioners, but from consultants who think the profession greater than any of its little corporations.

The evidence of Professor GAIRDNER and of Professor STRUTHERS will be found in another column. The general burden of it is now familiar to our readers, but we shall take a fit opportunity of discussing it in more detail than is now possible, only remarking now that it is more and more

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clear to us that the Scotch Universities owe it to themselves and to their great reputation for having served the profession of medicine in past generations, to find some way of removing from themselves all appearance of obstructing a movement for raising the *minimum* standards of examination for admission into the profession.

So far as the medical aspects of the question are concerned, the Bill for the purchase of the Metropolitan Waterworks, and the establishment of a Trust for the supply of water to the metropolis, now before Parliament, gives no promise of immediate betterment of the supply, and little hope for the near future. The Trust would take over the works of the existing Companies as they stand, also their officers, as far as would be requisite for carrying on the works, and such works would have to be accomplished, as aforetime, in accordance with the present law relating thereto. The sources of supply, the active agents, and the works remaining the same, it is hardly likely that, whatever may be the effects produced by the substitution of a single governing body acting in the public interest for several Companies acting in their own interest, the new body, if formed, will soon be in a position to deal with the question of the purity of the water-supply, as medically considered. Indeed, Mr. Secretary CROSS, in introducing the Bill to the House of Commons, except that reciting the objects of the measure, the first-named of which is "the supply of pure and wholesome water for drinking and other domestic purposes," made no reference to the direct medico-sanitary aspects of the matter, but dealt almost wholly, as was no doubt natural at that stage of the business, with its economical aspects. He laid especial stress upon the reduction of expense which would be brought about by the unification of the governing body and by the consolidation of the administrative staffs. He urged also the advantages which would arise from the combination of the several works as one work, in securing a proper distribution of water throughout the area over which the mains extend, for general purposes and in view of a constant supply; also for public purposes, such as the watering of streets and extinguishing of fires, and for manufacturing and other general uses. In fact, as regards the *quantity* and eventually the *cost* of the water-supply, the Bill gives great promise, but as to the *quality*, it affords little hope of material improvement for some time to come.

We have nothing to do here with the financial aspects of the Bill, upon which doubtless its acceptance or rejection by the House will depend. But already somewhat extravagant notions of its medico-sanitary aspects appear to have been getting afloat—not unnaturally, perhaps, seeing how it is framed,—and these aspects require consideration. The Bill, in the recital of its objects, places first "the supply of pure and wholesome water for drinking and other domestic purposes." Then follows the summary of those purposes which relate to the quantity of the supply for public and general uses, to which reference has already been made. Giving a foremost place to "purity and wholesomeness" reads pleasantly when the inhabitants of the metropolis generally are being once more unsettled on the subject by the evidence tendered at the inquiry concerning the so-called Lower Thames system of sewerage. We are again condemned to listen to detailed accounts of the filth poured into the Thames above the intakes of the several Water-companies' works taking water thence, and by the considerable floating population of the upper parts of the stream; and we know that what is true of the Thames in this respect is true also of the Lea. Of these facts there is no doubt, and they stick to the mind, furnishing an argument against the use of the water of the streams for drinking and domestic purposes which neither the chemist nor the microscopist nor the statistician can materially modify, and which is disregarded in practice solely from sheer necessity. When, therefore, it is proposed to legislate in this year of grace for, among other things, "a supply of pure and wholesome water" for the metropolis, it behoves us to know what is really meant by the term if we would escape a fool's paradise. And, first, let it be remarked that the words are by no means new in legislation as to the metropolitan water-supply. The Act of 1852 had for its primary object "to make provision for securing the supply to the metropolis of pure and wholesome water." This alone will disabuse us of attaching any extravagant notions as to the meaning of "purity" and "wholesomeness" in the present Bill. Purity and wholesomeness, so far as the Thames was concerned, were in 1852 deemed to be secured by the removal of the intakes of all the Water Companies taking water from the river to points above Teddington Lock, and, in common with the Companies who took water from other streams, by "effectual" filtration. And the words in the Bill of 1880 appear to mean the same, and no more than in the Act of 1852. Still, we are in a somewhat better position now than at the earlier date. Since that time not a little has been done, and more is being done, to divert sewage from the Thames and the Lea above the intakes of the Water Companies, and the quantity of filth now passing into the stream is less than formerly. But much remains to be done in this direction before water from the Thames above Teddington Lock, seen through the mind's eye, will cease to provoke disgust. Then there have been considerable improvements in the method and mode of filtration adopted by the greater number of the Companies, but in this direction there is also much to be done, at least as regards the filtration of the water in certain of the Companies' works. Whether "dust"-sifting is permitted to be carried on in the neighbourhood of a Company's filter-beds, as was certainly the case in one instance not long ago, we are not prepared to say; but the fact is worth noting in passing with reference to the question of purity and wholesomeness.

We may take it that for some time to come the new Trust, if created, would, in so far as the purity and wholesomeness of the water-supply of the metropolis derived from the Thames and the Lea are concerned, be restricted in its efforts to diminishing the fouling of the streams above their intakes, securing more effectual filtration of the water, and preventing accidental pollutions by the near contiguity of offensive trades likely to taint the water, such as "dust"-sifting, in their reservoirs and filter-beds. A single public body ought to be in a position to carry out these requirements in a much more efficient manner than could be compassed, or ever expected from, private companies. To the limited extent here indicated we may, perhaps, reasonably look for an increased purity and wholesomeness of the water supplied to the metropolis from the Thames and Lea. We

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may look also for some security against the repetition of such disasters as occurred in the east of London in 1866, when by a heedless temporary distribution of impure water through the mains of the principal Water Company supplying the district, a shocking outburst of cholera, the disease being present at the time, was determined. These would be no slight gains, but they would fall far short of securing such purity and wholesomeness of the water-supply from the Thames and Lea as would meet with approval in the strict medical sense. This is a matter, however, in which we are at the mercy of necessity, and in which the medical element cannot be dissociated from other and even more pressing considerations. Taking the question of the water-supply of the metropolis as it stands, the Trust proposed to be formed would certainly tend to a considerable improvement of the supply in its medico-sanitary sense, and would probably prove eventually to be an important step towards the securing of a supply, always longed for, nor unfrequently devised, but up to the present unattainable, which should in purity be free from even sentimental objections.

THE amalgamation of the administrative departments of the Army and Indian Medical Services has, as might have been anticipated, caused a great amount of excitement among the officers of the latter service. We have received numerous letters on the subject, some of which we have inserted in our columns, and we confess that, although we do not go so far as some of the remonstrants, we think there is a strong case made out for a reconsideration of the new arrangements. Among other documents, we have received a pamphlet entitled, "Brief Notes regarding the Indian Medical Service; its history, services, present position, and future prospects, with suggestions for redressing its grievances." The pamphlet states the case of the department briefly, clearly, and so temperately as to merit consideration and careful study on the part of the authorities. It begins by pointing out the difference between the retiring pensions of the officers of the Army Medical Department under the new Warrant, and those of the Indian service; but this scarcely bears upon the question of administrative amalgamation; it may be a good reason for a revision of the Indian pension scale, but nothing more. The next subjects discussed are the various duties and employments devolving upon the Indian medical officers, including, in addition to the ordinary military service, professorships in the medical colleges and schools, the various medical posts at the Presidency and other large towns, civil surgeoncies of districts, and vaccination superintendents; to which must be added civil non-medical duties, such as inspectors-general of gaols and governors of central prisons, assay masters, the higher posts of the opium department, and a few appointments, as political agents and executive officers. These are all, doubtless, situations involving considerable responsibility, but they also carry with them adequate remuneration. It is justly claimed that the duties have, as a rule, been discharged efficiently and faithfully. The pamphlet asserts that "any system that attempts to supersede [the present organisation] by dividing the service into distinct civil and military branches must either result in a great national disaster, or, if an adequate reserve be retained for the Army proper, it will entail unnecessary and ruinous expenditure on the already overburdened finances of India." This, however, is a point on which there may probably be very considerable difference of opinion. It very briefly notices the general services rendered to the State by the medical officers from the time when the first concession of land for the establishment of a factory was granted by the Emperor of Delhi to Dr. BOUGHTON, with a subsequent confirmation and enlargement of the grant to Dr. HAMILTON, down to the present times, when the Telegraph Department, the Post-office, and the Forest and Gaol Departments have been organised and brought up to their existing efficient condition by medical officers. The special scientific services rendered by the department are next briefly adverted to, especially as regards tea, gutta-percha, and cinchona, and the valuable contributions made by Indian surgeons to the great progress of medicine and its collateral sciences. Under this head we find one of the very few statements to the perfect accuracy of which we take exception. It is said that owing to the great success achieved in the prevention and improved treatment of tropical disease, one large Assurance Company has reduced its rates for Indian risks to the same level as that for parties residing in Europe. Now, if we are correctly informed, the office which did so has ceased for some years to take lives on these terms. It is, however, in our opinion, justly claimed "that the labours of the officers of the medical service have been an unmixed blessing to the peoples of India." The war services of the department are also shortly noticed, and the niggardly manner in which rewards, honours, and decorations have been conferred on it is commented upon. Of 680 officers now serving, only one is decorated with the Companionship of the Bath, and one with the Star of India!

With such claims from past services it is natural that the medical officers should complain of the suppression of three appointments of Surgeon-General and six of Deputy Surgeon-General, and the consequent loss of chances of promotion; that they should decry the injustice of the post of principal medical officer in each of the presidencies being filled by officers of the British service; and that they should strenuously exert themselves to have this order of things reconsidered and altered. The redress claimed in this pamphlet appears to be that such Surgeons-Major as do not elect to remain in civil employ should be permitted at once to retire with the pension to which they are entitled for length of service and an extra pension of £250 per annum, to which they would in due course become entitled when they attained the rank of Deputy Surgeon-General. It is stated that if this were done, and surgeons employed in place of these surgeons-major, an annual saving of £50,000 would be effected. This, however, might not improbably present a different result if the question of the value of the annuities, present and prospective, were to pass through the hands of an actuary. The pamphlet appears to confine redress to the grievances of the senior surgeons-major, but the prospective loss of promotion of the junior officers of the department merits equal consideration. In some of the letters which have reached us the suggestion has been made that the appointments of Surgeon-General and those of the Deputy Surgeons-General should be filled up alternately from the two services. But this seems open to the objections that it would tend to keep up a jealous

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and unpleasant feeling between the two departments, and that the officers of the Army Medical Department might consider that if these appointments were to be shared on such a principle, so ought those of the more lucrative posts of Presidency Surgeon, &c.

We cannot see any good reason why the two departments should not be amalgamated on the same principle as the other scientific corps, the Artillery and Engineers, have been. The experience gained in carrying out that amalgamation would, no doubt, enable the authorities to avoid some of the causes of discontent, which were then developed, and to take such measures as would at least mitigate the inconveniences, and remove the sense of injustice and want of due consideration which appears at present to be the cause of much angry feeling and dissatisfaction. If the option of retirement with compensation for the loss of prospective promotion were offered to the senior surgeons-major, we see no reason why an efficient amalgamation should not be organised. As precedent is all-important in such matters, we would point to that made by Lord CRANBROOK in his Warrant of 1876 for the British Medical Department, when the administrative officers were granted compensation on actuarial calculations for the loss they sustained by the alteration in the age for compulsory retirement.

Annotations.

"Ne quid nimis."

VACCINATION.

IN the House of Commons on Monday, Mr. Sclater-Booth appealed to Dr. Cameron, who had in charge a Bill on the subject of vaccination, which raised points of some complexity and difficulty, whether he thought it expedient to proceed with the measure under existing circumstances. He could assure the hon. gentleman that the question of the advantages and disadvantages attendant on the use of animal lymph, which had been long engaging the attention of the Local Government Board, were receiving fresh illustration by experiments now going on. Dr. Cameron said he thought it was pretty evident that his Bill had little chance of becoming law this session, and therefore he would not proceed with it.

UNSEAWORTHY SAILORS.

THE question of loss of life at sea is once more engaging the attention of Parliament, and further measures for the protection of the sailor will doubtless ere long be enacted. But whilst everything is being effected to guarantee the safety of crews, it must not be forgotten that there is another side to the question, and one that in all discussions on the subject has been apparently overlooked—viz., the risk to the shipper, the passenger, and the insurer, from the shipment of "unseaworthy crews." In our columns of the 28th ult. Dr. Ralfe, the Senior Physician of the Seamen's Hospital, drew attention to this point. He says, "It is often difficult to induce sailors suffering from chronic diseases to make a sufficiently long stay in hospital so as to effect a cure. As soon as the more urgent symptoms have subsided, and they think they can pass muster before the shipping agent, they engage for another voyage. As may be expected, there is a speedy return of urgent symptoms, and the men become incapable of performing the duties for which they were engaged." It may readily be understood that under such circumstances the ship may become short-handed and may often be brought into great peril. Indeed, the worse the weather the greater probably will be the break down on the part of the weak members of the crew. What is wanted is a better system of registration and medical inspection of all crews on the vessel leaving port. It should be made incumbent on all captains, at the end of the voyage, to give each member of the crew a certificate plainly stating the condition of the man's health during the voyage, the number of days he was on the sick list, and the nature of the disease for which he was invalided, and no shipping agent should be allowed to engage a man for a fresh voyage without the production of this certificate. In addition to these measures, which shippers and insurers would, for their own interests, do well to insist on; the Board of Trade should pay more attention to the sanitary and hygienic arrangements on board vessels, especially those engaged only for trading purposes. Of late there has been a manifest increase in the cases of scurvy admitted at the hospitals of our maritime ports, while outbreaks of typhoid fever among crews from shipping bad water, is of no unfrequent occurrence. Lastly, the public should be encouraged to support those institutions which, like the Sailors' Homes, provide him with comfortable and wholesome lodging whilst on shore, thus lessening the temptation to debauchery and riot, or, like the Seamen's Hospital, which afford him a refuge when stricken with disease, and in which he may remain till the medical officers consider him sufficiently restored to health and strength to resume his occupation.

NEPHRECTOMY.

THE subject of extirpation of the kidney was under discussion at the last meeting of the Royal Medical and Chirurgical Society. A lengthy paper describing the history of the operation, and containing an account of a case of cancer of the kidney, removed by abdominal section, was read by Mr. Arthur Barker. Although the operation in this case was in itself successful, the patient unfortunately succumbed on the third day, apparently from cardio-pulmonary thrombosis. It was admitted, however, that the cause of death was not quite manifest, and in the course of the debate Dr. Hilton Fagge expressed his mistrust of the occurrence of pulmonary thrombosis, a point upon which he was diametrically opposed by Sir Joseph Fayrer. Mr. Knowsley Thornton gave details of a case of hydronephrosis successfully removed by abdominal section, and Mr. Clement Lucas spoke of a case, now under his care, in which he had removed a pyonephrotic kidney through the loin. In the present state of the question it seems hardly possible to lay down definite rules as to the choice of the operation, whether it be better to remove the diseased organ through the loin or through the abdominal cavity. Obviously the latter method, which has certain advantages in affording more space for the operator, and in displaying to view the renal vessels and ureter, is inapplicable for cases where the kidney is much bound down by adhesions, as in cases of long-standing suppurative disease. The question raised by Mr. Holmes as to the justifiability of interference with rapidly growing malignant renal tumours, although undoubtedly one of great importance, was fairly met by Mr. Barker's reference to Professor Martin's case. In this case the growth was successfully removed without any recurrence a year after date, and it surely seems as justifiable to interfere in these cases as in cases of malignant growth in other parts of the body. If the operation be performed early enough, before the cancer is disseminated, the prognosis is as favourable as in most cases of removal of cancer, since the safety of the operation is insured by antiseptic precautions. In Mr. Barker's case the operation was performed under difficulties, the patient was much debili-

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tated from the continual hæmaturia, and on the day of operation suffered much from vomiting, which must further have reduced her strength. It is quite open to question whether the operation itself did materially hasten death. In such and similar cases the surgeon has primarily in view to avert death, but also to relieve pain and suffering, and he should not be daunted by the formidable character of the operation if he is assured that he can perform this without undue risk. Abdominal surgery is extending its limits, since ovariotomy has pointed the way in showing how much can be done with safety in this important region.

THE ARTISANS' DWELLINGS ACT.

IT is much to be regretted that so well-intentioned a measure as is the Artisans' Dwellings Act should have contained clauses which render its working simply disastrous to the pockets of the ratepayers.

The Act, as it at present stands, directs that accommodation shall be provided for the displaced families *actually upon the site* which is marked out for demolition and reconstruction. Now it is obvious that builders of artisans' dwellings can only afford to give a certain moderate sum for their ground, and accordingly, as is well known, the Metropolitan Board of Works have been obliged to sell ground which cost them over £700,000 for the comparatively paltry sum of £170,000, and have thus saddled the metropolitan ratepayers with a debt of over half a million sterling. Had the land which is to be subjected to improvement been offered for sale at its proper value for mercantile, trading or other purposes, it is possible that a profit might have been made, and that a handsome sum might have been realised towards the erection of those dwellings, the need for which is the main object of the scheme. Alterations have lately been made, or are about to be made, in the Artisans' Dwellings (Scotland) Bill, which will permit of the erection of dwellings on sites slightly different from that which is the object of the improvement scheme, and thus our shrewd neighbours will avoid that difficulty into which we have heedlessly run. Meetings of ratepayers have lately been held in various parts of London, and resolutions have been passed to the effect that Torrens' Act should be rigidly enforced before having recourse to Cross's Act. By Torrens' Act there is conferred a power of removal of nuisances, and, if necessary, of demolitions of dwellings which are proved to be a nuisance. Torrens' Act has never yet been put thoroughly in force, and even if it were the powers of reconstruction which it gives seem to be practically *nil*. What seems really to be required is the repeal of certain clauses of Mr. Cross's Act, a repeal which the new House of Commons will doubtless speedily effect.

RECOVERY FROM OPIUM-POISONING.

THE recovery of an infant after a large dose of opium is so rare as to deserve notice. An instance lately brought before the Académie de Médecine is one of the most remarkable on record. A teaspoonful of "laudanum de Sydenham" was given to a child three weeks old, in mistake for syrup of chicory, which had been prescribed for constipation. The mistake was made at 9 A.M., and was immediately discovered and an emetic given without effect. M. Nicolas, who records the case, saw the child soon afterwards, and ordered sixty grammes of a decoction of galls, and coffee in abundance. The first symptoms presented themselves two hours later, and consisted in somnolence and evidence of nausea, accompanied by tonic convulsions, after which the child passed into a state of prostration or rather of complete inertia, which continued during the day. The convulsive attacks were brought on by every attempt to administer a liquid by the mouth, and gradually became more frequent and severe. Even the heart ceased to beat during the syncopal condition which succeeded the attacks of convulsion. As long as they continued there was neither vomiting nor action of the bowels, nor was any urine passed during the first twelve hours. During the attacks of syncope, artificial respiration was kept up. Twenty times the child was thus apparently kept from immediate death. At 7 P.M. the somnolence appeared to diminish; the child opened its eyes and looked around. The next day witnessed a marked reaction; the pulse rose to 180, and in the afternoon a little milk, with a few drops of brandy, was swallowed. The following morning the child was sufficiently recovered to take the breast, and on the fourth day was well.

EMPLOYMENT OF STREET CHILDREN.

THERE seems to be a strong feeling in favour of legislation to limit the hours during which young children may be allowed to sell newspapers and matches in the streets. Doubtless there is need for some restrictions in this respect, but we are not prepared to accept without qualification the presumption that if the employment of the children who now sell evening papers in the streets were prohibited, "they would go to bed in proper time." The fact of their having beds to go to probably to a large extent depends on their earnings during the hours devoted to labour. However desirable it may be to order the lives of the poor on the bases of expediency, we must not overlook the fact that bread-winning is the first necessity; and those who desire to legislate for the well-being of the many must not draw their suggestions exclusively from the habits and circumstances of the few. With the majority of poor families it is a necessity of bare existence that each member should contribute to the common fund. Before we proceed to cut off every means of earning a livelihood, and to close every avenue for the collection of supplies, it will be indispensable to provide improved facilities, and to open up new ways of self-support. Attendance at a Board school is not the only object of child-life. We are compelled to fall back on the prosaic maxim that he who would live must eat, and bread is not to be won without work.

THE DRY-EARTH SYSTEM AND ITS FOUNDER.

HARDLY has the grave closed over the honoured remains of the Rev. Henry Moule, M.A., when the system of filth-disposal, which in its present form he founded and did so much to promote—namely, the "dry-earth system,"—has again been brought prominently before the public in the columns of *The Times*. *Apropos* of certain observations of that journal on the difficulties attending the disposal of the sewage arising from the water-carriage system of filth-disposal, Dr. Thos. Hawksley urges anew the advantages which would be obtained from a more general use of the dry-earth system in towns and country places. No municipality, or commercial company acting for a municipality, has, however, as yet (unfortunately) seen its way to any general adoption of the system. That in after years its merits will be more widely acknowledged and acted upon in this country, and its founder's enthusiasm in the matter justified in the event, we feel little doubt. Mr. Moule died on the 3rd of February last, in the seventy-ninth year of his age, after having held the Vicarage of Fordington, in Dorsetshire, half a century. He was a man of indefatigable energy, and the elaboration and advocacy of "the dry-earth system" was only one of very many useful ways in which that energy found vent, without affecting his unwearied activity as a parish priest. His death has left a gap in his parish and neighbourhood which will be long before it is filled up, and the dense crowd which assembled round his grave testified to the affectionate regard in which he

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had been held. It is deserving of note, with reference to Mr. Moule's sanitary labours, that a representative of the Medical Department of the Local Government Board, Dr. F. H. Blaxall, was present at the funeral.

THE MEDICAL SOCIETY OF LONDON.

THE 107th anniversary of the above Society was held at the Langham Hotel on the 8th instant, under the presidency of Dr. Cockle. The gathering was a large one, and included the President-elect, Mr. Gant, the President of the College of Physicians and Surgeons, of the Medico-Chirurgical and Clinical Societies, and other leading members of the profession. The toast of the "Medical Corporations" was responded to by Mr. Luther Holden, who expressed an opinion that the preliminary tests for candidates might be advantageously increased in severity. Professor Tyndall replied on behalf of the Learned Societies in an eloquent speech, vindicating the right of experimentation in the pursuit of medical science. The health of the President was proposed in felicitous terms by Dr. Richardson, and the company separated at a late hour after a most successful réunion, enhanced by the vocal and instrumental efforts of Mr. Anderson Critchett, Dr. Forbes Winslow, Dr. Cooper Key, Dr. Smyth, Dr. Stirling, and Mr. Hammond.

"SHEEP ROT."

FOR some time a great mortality has prevailed among sheep, and the destruction reported is something appalling. The malady is popularly known by a very old Saxon name, "rot," and is in reality due to the presence in the liver and hepatic canals of numbers of the Distoma hepaticum, a trematode entozoon, as well as the Distoma lanceolatum, also a member of the same order. These entozoa, from their resemblance to the fish called "flukes," have received the same name, and have a particular predilection for the biliary apparatus, whose function they more or less destroy, and thus lead to the slow death of the sheep or other animals they may infest. After wet seasons, animals which have been pastured on tainted land are certain to suffer, from their having ingested with the herbage the ova of the Distoma. Pastures are tainted by "fluke"-infested sheep, which pass the mature worms or their ova with the fæces, and these lodge on or are washed into the ground. The worms, of course, die, and the ova within them are liberated; and these, together with the free ova, appear to have not only a strong vital resistance to meteorological alternations, but also the good fortune to find a ready and acceptable intermediary host in the Limnæus minutus, a little mud-snail common everywhere, and particularly on wet land. This snail becomes possessed of a number of ova in its interior, and during damp weather it crawls from its breeding place in the ground up the stalks of grass and herbage, and is swallowed by the sheep or other herbivorous animals when they are grazing. Received at first into the stomach, the ova undergo partial development, and then find their way into the biliary canals. If their number is considerable, when they have attained their full growth they dilate and obstruct these canals, the walls of which become considerably thickened. During their development the secretion of bile becomes gradually diminished, and that fluid is viscid, like mucus, and altered in colour; at the same time the parenchyma of the liver becomes atrophied from the compression the "flukes" exercise upon it, and it may even become disorganised. Hence results icterus, disturbance in nutrition, anæmia, dropsy, and a general cachectic condition.

Sheep are not the only victims which suffer from the Distoma, for during the present mortality hares, rabbits, deer, and horses are said to have become infested, and died. The Distoma hepaticum has long been known to exist in the horse and ass, when they were allowed to pasture on unclean land during wet seasons.

Salt appears to be an excellent and well-known prophylactic agent, and even a curative one when the disease has not made much progress. This beneficial action of sodium chloride has been known almost from time immemorial, and the freedom from "rot" of sheep which have been pastured on salt marshes has been also recognised for centuries.

The flesh of sheep which have been affected with this verminous disease cannot be said to be positively dangerous as food, though it must be greatly reduced in nutritive properties, as well as in quality. The human being may receive and harbour the Distoma, a fact worthy of remembrance. The present mortality is likely to render sheep scarce and expensive in this country for some time, and still further darken the prospects of our agriculturists.

ISLINGTON AND OUTBREAKS OF SMALL-POX.

THERE must surely be some mistake in Mr. Murphy's otherwise interesting report as to the outbreak of small-pox in St. Pancras. He describes the first cases in his parish as being infected by cousins living in Islington, where, he says, sixteen cases are known to have occurred in November. We have before us the Report of the Sanitary Condition of St. Mary, Islington, for November, and there is not the slightest allusion to the disease or its prevalence in Mr. Tidy's report, which is of a very formal and brief character. After the experience of 1876, it is to be presumed that the local sanitary authorities would treat small-pox cases with vigilance and give early public warning. But we repeat that in the report for November, in which Mr. Murphy says sixteen cases were known to be in Islington, there is not a word on the subject. In the table of deaths one death is ascribed to small-pox. We commend this subject to the attention of the Islington vestry and its medical officer.

THE NEW MEDICAL REGISTER.

THE Medical Register for the year 1880 is now out. It is a larger volume by 137 pages than the Register of the previous year; though, strange to say, it contains fewer names by 48. The number of persons in the Medical Register for 1880 is 22,516. In 1876 there were 22,713. Neither is there additional matter in the volume to account for its greater bulk; but the whole aspect of the Register is improved; there is more margin, and more space between the names. We believe that great pains have been taken to increase the accuracy of the Register. But this must await the criticism of time; and we shall be curious to know from any aggrieved persons, if there be any such, the nature of the inaccuracies.

ANOTHER DEATH FROM CHLOROFORM.

A DEATH from this anæsthetic took place on the 25th ult. at the South Infirmary, Cork. It appears that the deceased, a man about fifty years of age, was admitted into the infirmary on the 20th February, for a dislocation of the hip, sustained three weeks previously. Two attempts at reduction, under chloroform, had been made before admission without avail. Having been placed on the operating table, the heart and pulse were carefully examined, chloroform was administered, and in about five minutes, without any struggling, he appeared to be ready for operation; but before the limb was touched alarming symptoms presented themselves, the countenance changing suddenly, while the pulse ceased. Electricity was at once applied, the lower limbs elevated, and every means of resuscitation employed, including artificial respiration, for nearly an hour, but without success. The quantity of chloroform used was

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about two drachms, and the quality of the drug was above suspicion. No post mortem was made, the coroner, on being communicated with, not considering it necessary. Every precaution seems to have been taken in this lamentable case; and it is remarkable in this, as in other instances, how small a quantity of chloroform may prove fatal.

SLAUGHTER IN THE STREETS OF LONDON.

DURING the fifty-three weeks of 1879 there were, according to the Weekly Returns of the Registrar-General, no less than 236 men, women, or children killed by injuries received by horses or vehicles in the streets of London. The average number of such fatal street accidents in the eleven preceding years was 215; they rose from 192 in 1869 to 237 in 1878. These fatal accidents are increasing at a greater rate than the population. Vans, waggons, and drays are the greatest offenders, and killed in 1879 no less than 74 persons, carts being debited with 57 deaths. Cabs caused 36 deaths, tramcars 18, omnibuses 17, and carriages (presumably private) 13. The large proportional excess of fatal accidents caused by tramcars when compared with omnibuses is worthy of note; the deaths caused by these vehicles, which had averaged 11 in the six years 1873-8, increased to 18 last year. When we consider that 2387 persons have been killed in the streets of London since the beginning of 1869, when these accidents were first specially reported in the Weekly Returns, it is impossible to repress a doubt whether all that is possible is done to protect the pedestrian from the dangers due mainly to the reckless assumption on the part of drivers that the roadways are their own, and that foot-passengers venture thereon only at their own risk. If further facts are required to prove the dangers of the streets, we may add that, in addition to the fatal accidents reported by the Registrar-General, 3399 persons were, within the knowledge of the metropolitan and city police, more or less severely injured in the streets of the metropolis during last year by horses or vehicles. It is impossible to say how far this number understates the true total of persons knocked down and shaken and bruised, if not more seriously injured, in the streets of London during 1879.

SANITARY PROGRESS IN ENGLAND.

LAST year was the ninth of the current decade 1871–80, and the Registrar-General in his Quarterly Return for the last three months of 1879 gives some valuable statistics which afford most satisfactory evidence of improving sanitary condition in England. It has always been a favourite argument of the opponents of sanitary expenditure that, in spite of the extent of such expenditure during the past thirty years, the English death-rate has remained stationary. It is impossible to deny that the rate of mortality in England and Wales was comparatively stationary during the thirty years 1841–70, as the annual rate averaged 22·4, 22·2, and 22·4 per 1000 respectively during the three decades of that period. When, however, the rapid increase of aggregation to town centres which took place during that period is taken into account, even a stationary death-rate may be accepted as evidence of sanitary progress. It may be admitted, however, that the sanitary expenditure of those thirty years, much of which was misdirected, did no more than counteract the evil effect of the rapid growth of urban population, especially in the mining and manufacturing districts of England and Wales. The Public Health Act of 1872, however, has proved a new starting-point for sanitary progress, and the Registrar-General shows that during the nine years of the current decade 1871–79, although the aggregation to towns has been all but fully maintained, the death-rate has shown an actual decline. Whereas during the preceding thirty years the annual death-rate had averaged 22·3 per 1000, it declined to 21·6 during the nine years ending December last. This fractional decline in the death-rate means more than the figures at first sight appear to signify. The Registrar tells us that it "implies that, during the past nine years, more than 150,000 persons have survived in England and Wales, whose deaths would have been recorded had the average annual rate of mortality in the previous thirty years been maintained." This decline of mortality also means that in equal numbers living only 97 persons have died during the past nine years to each hundred in the preceding thirty years. Looked at from a different point of view, this decline, if maintained throughout the lifetime of a generation, signifies that the mean duration of life has been increased by about a year and a half. The statistics of the past nine years afford abundant facts which corroborate the evidence of improved sanitary condition afforded by the general or crude death-rate. Infant mortality, measured by the proportion of deaths under one year to births, has not exceeded 148 per 1000 in the past nine years, against 152 in the ten years 1841–50, and 154 in each of the two following decades, 1851–60 and 1861–70. Zymotic fatality has shown a similar decline, and more especially the rate of mortality from fever, principally enteric. The annual death-rate from fever averaged 1·11 per 1000 in 1865, since which it has declined with but slight fluctuations, and in 1879 it did not exceed 0·30 per 1000. The annual death-rate from this cause, which was equal to 0·91 and 0·88 per 1000 in the two decades 1851–60 and 1861–70, fell to 0·51 in the nine years ending December last. It is impossible to doubt that real sanitary progress has been made during the past nine years. This progress, however, has been very unequally distributed. It has been most marked in our largest towns, and smallest in the more recent urban aggregations in the mining and manufacturing districts. Earnest and well-directed sanitary effort has yielded good results, and if the pretence of sanitation which alone exists in so many of our smaller urban sanitary districts could be galvanised into life by an efficient central health authority, health-progress in England would soon assume still larger and more satisfactory proportions.

MEDICO-SANITARY NOTES FROM RUSSIA.

THE ravages of diphtheria still occupy very largely the attention of the journals. The disease is noted especially in the governments of Kharkow, Saratow, Voronege, Tambow, and Poltava. The latter government is looked upon as the real nursery of the malady. The epidemic broke out in Poltava first in 1876, and showed itself in that year in seven districts, 5910 cases being reported, of which 1837 proved fatal. In 1877 nine fresh districts were attacked, and the cases increased to 9858; the deaths 4445. The next year, 1878, the number of districts invaded amounted to thirteen, the cases to 14,018, and the deaths to 5774. In 1879 fifteen districts were attacked, the cases numbering 15,762, and the deaths 5703. At the end of this year, indeed, the disease had spread over the whole of the government, and extended into neighbouring districts of Kharkow.

Famine appears to be increasing in the Caucasus, extending from the Black Sea to the Caspian, and in the districts bordering Asia Minor. The severe cold of the winter has added to the misery of the suffering populations, and heavy snows among the mountains have impeded operations for relief. The dearth also in Poland, along the line of the Vistula, is giving rise to much uneasiness.

In a paper read before the Medical Society of St. Petersburg, Dr. Prissetkow said that few cases of typhus appeared among the Turkish prisoners at Plevna. The disease broke out and began to extend largely on the march towards Russia. The President of the Red Cross Society in 1877–78, M. Richter, states that the Society had but 3150 beds, distributed in five hospitals, at the most active period of the war.

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The military hospitals, he says, were simply ambulances, and quite unequal to the increasing wants of the army at the time. The evacuation of the wounded became a matter of necessity, and had to be pushed forward with feverish energy. It was not uncommon to see the sick and wounded die on the journey. The failure of hospital accommodation compelled the slightly wounded to seek succour in the interior of the Empire. He notes also the great deficiency and imperfection of the carriages for the wounded, the loss to the service from there being no sufficient means to deal with the slightly wounded near the seat of war, and so enable them to return early to the ranks, and the mischief arising from the crowding of the serious cases of sickness and of wounds in parts of Bulgaria.

RELENTING, BUT STILL CRUEL.

THE weather is less severe than it was, but it is not on that account to be trusted. Those who leave off winter clothing will do so at the serious peril of "colds." Probably in the whole circle of the seasons there is not a more treacherous time than the present. The temperature is, for the most part, genial, and the sun condescends to shine; but the winds are cold and the afternoons chilly, even more so than the evenings. It will be more prudent, for some weeks to come probably, to bear the weight and inconvenience of what is called "warm attire," than to risk the danger of unaccustomed exposure. Habitual exposure, the result of training during the vigorous periods of life, will be *natural*, and therefore innocuous; but exposure such as is dared with exhausted strength and a depressed tone of the system, after a long and dreary winter, can neither be excused nor explained except on the principle that impatience under the ills we have often tempts the short-sighted and unwary to face greater dangers—unsuspected because unappreciated.

LOCAL GOVERNMENT AREAS.

A BILL has been brought into the House of Commons by Lord Edmond Fitzmaurice for the appointment of a Commission for the alteration of the areas of Local Government in certain cases, and for the rearrangement of the boundaries thereof. The objects sought to be effected by the commission are, so to arrange areas that no poor-law parish or union shall extend over the boundary of any county; no poor-law parish to be divided into isolated parts; no poor-law parish to be of so small a size, or have any parts so situate, as to render the administration of the relief of the poor in, or the local government of, such parish, or part or parts thereof, inconvenient; every highway parish to be coincident in area with some poor-law parish; and every highway district to be coincident in area with some rural sanitary district.

ST. MARY, NEWINGTON.

THE twenty-third annual report of the proceedings of the vestry of the parish of St. Mary, Newington, just issued, contains the report of the medical officer of health, Dr. Iliff, for the year 1878. This report, interesting in itself as showing the details of sanitary work, admirably conducted, in a great metropolitan district, has attached to it, as a sort of appendix, an essay on small-pox and vaccination. Written with great thoughtfulness, and in most temperate language, it deals with the great issues which have recently been so much before the public and the profession, and seeks to place these issues in a readily comprehensible fashion before the vestry to which the report is addressed, and before the parishioners generally. The report is as happily written as timed, and we trust that the vestry will see the importance of detaching it from the more general sanitary subjects with which it appears, and publishing it in a separate form for the information of the public generally.

THE NATIONAL BOARD OF HEALTH, U.S.A.

A BILL "to increase the efficiency of the United States National Board of Health" has been introduced into the Senate and House of Representatives, and is to the following effect:—It provides that upon the official publication by the President of a report by the National Board of Health, or in the intervals of its sessions, its Executive Committee, showing that any place in the United States is dangerously infected with contagious or infectious disease, the transportation of goods or persons from such a place into a State other than that within which such place is shall be unlawful, the persons guilty thereof liable to prosecution, and the goods transported to seizure and destruction. This prohibition to continue until the President shall have declared the place no longer dangerously infected. The Bill farther provides that the commanding officers of all merchant vessels entering any port of the United States from any foreign port or ports situated betwixt the parallels of 30° south latitude and 40° north latitude, or upon the Mediterranean Sea, shall produce and deliver to the Customs officers of the port of entry a bill or bills of health, signed by the consul, vice-consul, or other consular officer of the United States. The Bill also provides for the appointment of a medical officer, under certain circumstances, and the delegation of exceptional powers to an executive committee.

CORTICAL LESIONS OF THE BRAIN.

M. FRIPIER, in a memoir published in 1877, showed that the paralysis which follows the removal of the sigmoid gyrus in the dog endures as long as the animal lives. No dog experimented on recovered the normal condition. He now states (Académie des Sciences) that the same lesions caused a persistent diminution of general sensibility. The special senses are probably affected only after the convulsive crises, and when the lesion was very extensive. Among the physiologists who have studied the disturbances consecutive to the lesions of the cortex, some deny that sensory troubles result, admitting only loss of motility. Others, finding diminution of sensibility, have gone so far as to attribute the motor weakness to the loss of tactile sensibility (Schiff), or to the loss of the muscular sense, or to a psychical paralysis. Fripier concludes from his experiments (1) that the permanent trouble of movement must be attributed to a persistent paralysis; (2) that the loss of sensibility, as incontestable as that of motility, occurs, but plays no part in the disorder of movement; (3) that the functional troubles occasioned by the diminution of sensibility are identical in animals and in man, that they consist solely in the loss of the sense of touch and of the notion of the position of parts, in a more or less marked degree, and that they never produce ataxy of movements.

THE HEALTH OF TOTTENHAM.

THE Tottenham Sanitary Association has issued its sixth annual report, and in it gives a most satisfactory account of the improved and improving health-condition of the village. When the Association was formed the sewers of Tottenham were unventilated, the water-supply (at bottom excellent) was supplemented and mingled with water from very dubious sources, and its streams and water courses were very foul. These things are rapidly becoming matters of the past, and more efficient detailed sanitary administration has been established throughout the village. As the sanitary condition of the place has improved there has been a marked decline in the mortality from the principal zymotic diseases, and there seems reasonable ground for the belief that when the next census comes to be taken, and the population, considerably increased in recent years, is accurately known, Tottenham, as it should do, will hold an excellent position as

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to its mortality statistics among suburban places. The Local Board appears to be doing its work fairly well, and certainly none the worse that the Association appears to be largely influencing the elections. The report has a graceful allusion to the loss sustained by the country at large by the retirement of Dr. Farr from the post of Superintendent of Vital Statistics in the General Register Office.

THE SELECT COMMITTEE.

AT its meeting on Monday the Select Committee proposed to meet on the 12th inst., when it was hoped that Sir William Jenner would be able to give evidence. No idea, of course, was entertained of the clap of thunder that was to be heard an hour or two later in the shape of an unexpected intimation of dissolution. This "policy of decomposition" will not be permanently injurious. The Committee will do no more work at present, and it will meet, if it meets at all, only to break up.

THE PROPOSED ARCTIC EXPEDITION.

WE have received a communication from Commander Cheyne, in which he protests against the assumption that he undervalues the great importance of using lime-juice in Arctic expeditions. We gather that the Commander would not have omitted lime-juice from the necessaries carried in the boats on the last expedition if he had been in charge.

GRANULAR KIDNEY.

BY invitation of the Pathological Society, Dr. Saundby of Birmingham will, at the next meeting on the 16th inst., exhibit a series of microscopical preparations and drawings to illustrate the histology of granular kidney.

THE following members of the medical profession were presented to Her Majesty at the Levée held at Buckingham Palace on Wednesday:—Dr. Samuel Wilks, on appointment as Physician-in-Ordinary to their Royal Highnesses the Duke and Duchess of Connaught, by his Royal Highness the Duke of Connaught; Dr. John Watt Reid, on appointment as Director-General of the Medical Department of the Navy, by the Secretary of State; Brigade-Surgeon Kidd, on promotion, by the Adjutant-General; Dr. Wykeham Hawthorn Lydall, Surgeon Central London Rangers, by Major Mark B. F. Miller; Surgeon Saville, North Somerset Yeomanry Cavalry, by Lieutenant-Colonel the Earl of Cork and Orrery.

THE Associazione Protettorice degli Animali in Genoa had prevailed upon the Syndic General Parodi to prohibit the transfer of unclaimed dogs to the "university shambles," as they called the experimental laboratory, and so compel the abandonment of all physiological demonstrations whatever. But the municipal assessor has just succeeded in submitting the prohibition to a committee, which now decides that "physiology cannot be taught without experiments on living animals, and that the regulation prohibiting the transfer of unclaimed dogs to the experimental laboratory must be rescinded." So the professor of physiology resumes his demonstrations, and Genoa her place as a preparatory school of medical practice.

IN reference to the reported outbreak of diphtheria in the Ludlow Union Workhouse Schools, we are informed that the disease first manifested itself on the 17th ult., and continued to spread till the 28th, since which date no fresh case has occurred. The number of inmates of the workhouse is 180, but the disease has been confined to the children, of whom 31 out of 47 have been attacked. There have been 2 fatal cases, in each of which laryngitis supervened. In 1 there was a considerable scarlatinal eruption on the arms and chest. Amongst the conjectures as to the origin of the outbreak, is that the disease was communicated by letters received from Macclesfield, where the malady had been prevailing. Each case as it occurred was immediately removed into a separate building, and sulphur fumigations were adopted, as well as every available medical treatment, together with a special dietary.

THE committee appointed by the Admiralty to consider the rank, pay, and position of the medical officers of the navy, will consist of the following gentlemen:—Admiral A. H. Hoskins (President); the Director-General of the Navy Medical Department; the Deputy Accountant-General; Fleet-Surgeon Fegan, C.B., M.D.; Staff-Surgeon Woods, M.D.; Surgeon Tyndall; a representative of the Treasury, and Mr. Garnell, who will act as secretary.

SURGEON-MAJOR H. W. BELLEW, C.S.I., Bengal Medical Service, who has been employed on special political duty in Cabul since the renewal of hostilities subsequent to the Cavagnari massacre, has been recalled to India by the Government, and his services placed at the disposal of the Punjab Government. Dr. Bellew was for many years Civil Surgeon of Peshawur, and lately acted as Sanitary Commissioner of the Punjab.

THE successful candidate for the Radcliffe Travelling Fellowship is Mr. Wm. Wansbro' Jones, B.A. Oxon., B.Sc. London Univ., student of St. Thomas's Hospital. Mr. Jones was educated at Clifton College, graduated with first-class honours at Oxford, and has obtained two medical scholarships at St. Thomas's Hospital. The decision of the examiners has to be formally ratified by the electors.

BRIGADE-SURGEON JAMES HANNAN has been appointed to officiate as Deputy Surgeon-General of the Allahabad Division, *vice* Deputy Surgeon-General J. A. Hanbury, M.B., transferred to the Reserve Division Afghan Field Force at Peshawur.

THE Government of India have adopted the combined invalid-table and reading-desk invented by Surgeon-Major J. B. Hamilton, Army Medical Department, for use in the hospitals in India. A description of this useful invention has already been given in our columns.

IN consequence of the fourth Friday in the month being Good Friday, the next meeting of the Clinical Society is fixed for the 19th inst. Papers announced for this evening (March 12th) and not read will take precedence on March 19th.

THE training-ships at Devonport are reported to have been visited by a serious outbreak of measles. Twenty-three cases were removed in one day from the *Impregnable*, and many less severe cases remained on board.

AT the Newcastle-on-Tyne Infirmary, on March 9th, Dr. Heath successfully tied the right common carotid and the right subclavian arteries of a patient suffering from an aneurism of the innominate artery.

SURGEON-GENERAL WILLIAM GODFREY WATT, Principal Medical Officer at Malta, is about to retire on half-pay after long and distinguished service.

DR. JOHN THOMAS BANKS has been appointed Physician to the Queen in Ireland, in the room of the late Sir Dominic Corrigan, Bart.

THE Executive Committee of the General Medical Council is summoned for Thursday, the 18th inst.

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THE Indian papers last mail report an outbreak of cholera of a severe type at Igatpuri, a station on the G. I. P. Railway. Twenty Europeans are stated to have succumbed to the disease in one day.

The *Gazette* announces the appointment, by the Queen, of Dr. William Kirkwood, Mr. Robert Butler, and Dr. W. Malcolm Grey Maclure, as members of the Legislative Council of the Bahama Islands.

Fleet-surgeons John Cotton, M.D., and James Nicholas Dick, have been promoted to the rank of Deputy Inspectors-General of Hospitals and Fleets.

THE Local Government Board will be represented in the House of Lords by the Earl of Onslow.

MEDICAL REFORM.

THE COMMITTEE ON THE MEDICAL ACTS.

THIS Committee reassembled on Monday last at the House of Commons. The new Chairman, Lord George Hamilton, not being present, the chair was taken by the Right Hon. W. E. Forster.

Professor STRUTHERS of Aberdeen was the first witness examined. He said, in answer to the Chairman, that he was Professor of Anatomy in the University of Aberdeen, and Fellow of the Royal College of Surgeons, Edinburgh, and had been teacher of anatomy in Edinburgh and Aberdeen upwards of thirty years. He had also been a Visitor of Examinations for the Medical Council, and in these various capacities he had been deeply engaged in matters concerning medical legislation.

The CHAIRMAN asked the witness his opinion as to the proposal for a conjoint examination.

Professor STRUTHERS replied that he thought the evils of the present system were two in number: first, the want of security to the public arising from half qualifications; and, secondly, the inconvenience to the student of having to go to three corporations for a complete qualification. They did not, however, apply to universities at all. The Scotch universities conferred a complete qualification, and the student was not put to the inconvenience of having to go to several bodies. The existing evils could be remedied by requiring a complete qualification before registration, and by a joint examination by the corporations of each division of the kingdom without interfering with the universities at all. At present there were 376 medical students in the University of Aberdeen. The course of study was longer than that proposed by the English joint scheme, and longer than that of the corporations. The course required by the universities was four years, including four winter sessions. The corporations had only three winters and two summers, and the student might spend one year as an apprentice. The length of the winter session at the university was five months, and of the summer session three months. The examination was a more searching and thorough one than that of the corporations. The professors of anatomy and physiology devoted themselves entirely to teaching, and hence there was a more thorough education given in the fundamental sciences than was given in London, where the professorships were regarded as mere stepping-stones to practice. As an illustration he might mention that Sir James Paget had thrown up his professorship, while Mr. Syme taught to the last, and other distinguished men were teaching still. It was impossible to remedy the weak point of the London and English Schools through the Medical Council. The only effectual remedy would be to pass an Act of Parliament changing them into new institutions, like the Scotch universities. There were outside examiners in connexion with the Scotch universities who sat with the professors at the examinations. The standard of education could not be lowered, because under the Act of 1858 the commissioners would have to apply to the Privy Council for permission to make any change, and the other universities had the power of remonstrance and protest. He did not consider the conjoint board system called for as far as the universities were concerned, because they had means of giving a complete medical education. He was not prepared to admit that there were advantages to be obtained by the general profession from the one portal system. It was not true, as had been stated, that in Scotland there were more students graduated than registered; the reverse was actually the case. He desired to repel all the allegations that had been made in reference to the examinations in Scotland generally, and in Aberdeen in particular. No examinations could be more careful and searching than those in the Aberdeen University, and the result was that its students were often to be found at the head of the list in the Indian competition.

The CHAIRMAN asked what was the disadvantage of a student who had passed a thoroughly searching examination submitting himself to a less searching one?

Professor STRUTHERS said that it was interfering with a system which was working well. He believed that the Scotch corporations had a very good minimum standard. The effect of the conjoint board system, proposed by the Bill, would be to lower medical education in Scotland. There had been a general misunderstanding of their position in Scotland, the idea being that they were thoroughly opposed to conjoint boards. Everything depended upon what kind of conjoint board was proposed. If they had a board that ignored the higher education of the universities the result would be that the teachers of schools would commence as conjoint board teachers, and a system of grinding, which was now extinct in Scotland, would be established. In London, the great place for grinders, the standard of education was low, the students not caring for the higher qualifications. There ought to be a definite recognition in the Bill of the rights of the universities in some such words as had been referred to by Mr. Simon. If a conjoint system were established, students who had passed the scientific examinations of the university should be admitted to the conjoint board on the payment of a fee not exceeding five guineas. They had no objection in Scotland to receive inspectors at their examinations, so long as the students were not required to pay for them. It was a remarkable fact that, according to the English scheme, the universities supplied no examiners, showing the very slender connexion between the English universities and medical education. He approved of the suggestion of the Duke of Buccleuch that conjoint board examiners should sit alongside the university examiners. Like Professor Turner, he was in favour of the adoption either of the Duke of Buccleuch's amendment or of the other suggestion that the theoretical scientific examination should be conducted by the universities and the practical examination by the medical boards—either of which would, to a great extent, remove his objection to the conjoint scheme. He was not to be understood as supporting the scheme of a conjoint board; but if any national advantage was to arise from it, the universities would not stand in the way, provided their scientific examinations were exempted, so that the students might not be unnecessarily harassed. He thought if the London corporations would do as the College of Physicians and the College of Surgeons of Edinburgh had done in arranging a conjoint examination, that would be all that was necessary. It was a very selfish proceeding to endeavour to thrust the English system upon Scotland. The cry for it had been got up by the London corporations, and it had not been put to the practitioners of England at all. The conjoint system had been tried in Germany, and had not succeeded. There were now twenty examinations in that country. The State examination, which was virtually an examination at each university, was remarkably like the Scotch system, though perhaps not so thorough. The central government each year nominated the examining body, appointing the professors and a certain number of practitioners to sit with them. There were no examining bodies in the universities. He objected to the clause in the Bill rendering affiliation to a corporation compulsory. If it were left open it would be sought as an honour; but if it was compulsory it would not be regarded as conferring any distinction, and it would be resisted, and, indeed, become an object of ridicule. The clause was a sham, because if the corporations were to have a right to compel men to affiliate, they ought also to accept the women; and he knew that the College of Surgeons would rather close its doors than do that. It was an extraordinary enactment that the corporations were not to demand fees for

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affiliation. He thought it an iniquitous regulation that a student who was required to have only one diploma should have to pay for the support of three corporations. He saw no necessity for a uniformity of fees in different parts of the country. According to the English scheme, the student had to pay thirty guineas for his examination, and that was to maintain three corporations, five guineas going to the museum of the College of Surgeons. The museum was no doubt a noble and an unequalled one, but he saw no reason for making a poor Scotchman or Irishman pay towards its support. The power given to the Medical Council to alter the third schedule was a very important one, and the sanction of the Privy Council ought to be obtained in order to alter it. He could not say there was a very strong feeling in Scotland in regard to the constitution of the Medical Council, but he himself thought that the Scotch universities were not sufficiently represented, while the corporations had an unfair proportion of representation. The day had come when Apothecaries' Companies should cease to be licensing bodies at all. He was formerly of opinion that the representation of the general practitioners was advisable, but at present he did not think it was likely to do very much good. The Medical Council was at present quite large enough. If there was to be a conjoint board system, the Medical Council should, in his opinion, be elected by the branch councils of the three kingdoms. This plan would save a little the *amour propre* of some of the existing bodies. If the principle of direct representation was a right one to apply to the General Council, it was also a right one to apply to the branch councils. His opinion had partly changed on the subject, but if there was any direct representation, he thought the body of the profession had a right to claim that one-half of the Council should be elected by them.

By MR. ARTHUR MILLS.

So far as Scotland was concerned, he thought the proposals of the Bill would rather tend to lower medical education. That was one of the objections to the Bill. He was formerly in favour of direct representation on the Medical Council; but when he saw a man like Sir James Paget coming forward in the face of a petition from 10,000 practitioners, and saying that he thought it was not a good system, he was greatly impressed with such an opinion. It was difficult to say that because the funds of the Medical Council were provided by the general practitioners that that was an argument in favour of direct representation. He should not like to see the medical profession placed under the heel of a bureau. The branch councils might be enlarged a little, at least in Scotland, and then they would elect a General Council, perhaps a little smaller. He should not like to see a small Council, because it would be dangerous. There was a good deal of agitation in the journals as to giving the profession representatives; but if practitioners had to pay a fee of 2*s.* 6*d.* to register their vote he did not think that one in a hundred would do so.

By Sir TREVOR LAWRENCE.

There was not a better joint examination anywhere than in Edinburgh. He was opposed to the conjoint scheme as proposed by the English Board, and he had only suggested amendments under protest. The medical profession in Scotland did not desire reform. He knew of no profession so well educated as the Scotch general practitioners, and any disparaging remarks that had been made by witnesses would refer to the state of affairs twenty years ago. Since 1850 the Scotch universities had taken high rank.

Sir TREVOR LAWRENCE.—In the place of the conjoint scheme would you prefer that the Medical Council should have power to take away their privilege from bodies that did not conduct efficient examinations?

Professor STRUTHERS said that the Scotch universities would have no objection to any powers. The Medical Council had only a power as to the minimum; they had no power over the higher qualifications, and the Scotch universities were so far above the minimum that it really did not concern them. He would object to the Medical Council having power over the higher qualifications, because then the English universities and all the corporations would combine against the Scotch universities. He was not against direct representation.

By Dr. CAMERON.

His university gave no medical degrees unless the candidate had passed all examinations for the surgical degree. The Universities Commission recommended that it should be a double degree of graduate of medicine and surgery, and there could be no objection to that. In St. Andrews University there had only been one or two candidates within the last twenty years. There was no medical school; but St. Andrews was allowed by the Commission of 1858 to give ten degrees in a year to practitioners of fourteen years' standing. This was to be after examination. The cost of the Scotch qualification was about £20. It would be an advantage to the public that no unnecessary expense or monetary impediment should be put in the way of good men getting degrees.

By Dr. LYON PLAYFAIR.

I do not think that the fact of the fee being twenty guineas in Edinburgh as against thirty guineas in London would tempt men to go to Scotland to take their degrees, especially when the cost of travelling is taken into consideration.

Professor GAIRDNER, of the Medical School at the University of Glasgow, was next examined. He said that the number of medical students who had matriculated at the Glasgow University had continually increased from 1861 to the present time. In 1861 the number was 283, at present 560; and the increase was common to all Scotch teaching universities. It had been accompanied in Glasgow by a considerable increase in the means of teaching, both practical and scientific. That increase was not caused by any diminution in the stringency of examination. From 1874 to 1879 there were 845 candidates for the first professional examination; 456 passed, and 389 (44·7 per cent.) were remitted. In the second professional examination the number of candidates was 568; 375 passed, and 193 (34 per cent.) were remitted. In the third professional examination there were 414 candidates; 334 passed, and 80 (19·3 per cent.) were remitted. He had been alarmed at the proportion of rejections at the first examination, and it was only by looking carefully into the matter that he had been led to acquiesce in its justice. The outside examiners hardly ever complained of the laxity, but almost always of the stringency of the examinations. There were now four examinations, and at every stage the students would be tested, and sent back if they were not efficient.

The CHAIRMAN inquired if it was possible that a student who had been plucked by another examining board should go to Glasgow with much chance of success.

Professor GAIRDNER said it was utterly impossible, because the student would have three or four examinations to pass. He was surprised that Dr. Acland had shown so much ignorance on that point, because he ought, as President of the Medical Council, to have been able to contradict it absolutely, since the regulations at Glasgow as much precluded such an occurrence as those at Oxford. The clinical examinations at Glasgow had been inspected by the Medical Council and favourably reported upon. Each professor at the university was a specialist in his own subject, and with each professor there was a non-professional examiner, who exercised a perfectly independent judgment. The witness repudiated the notion of the existence of anything like a "Dutch auction," and expressed his opinion that a conjoint board would greatly deteriorate the efficiency of not only the Glasgow universities, but all the universities in Scotland. It would tend to lower the prestige of the degrees by taking away from them their old Parliamentary privilege of conveying a licence to practise. At present the students were distracted during their whole course with the idea that they would have to pass elsewhere another examination conducted by a different set of men, and probably upon totally different principles. If on national grounds it was considered desirable to have a conjoint board, the conjoint board examiners ought to go to Glasgow and act in concert with the examiners there, which he considered would be a better arrangement than the suggested division of the scientific and the practical examinations. The latter plan trusted the universities up to the last point, and distrusted them just where it was most important that the students should have confidence in their teachers. He should object to anything which would lead students to forego a university education. The English system induced the student to give the go-by to the fundamental sciences, which in Scotland were considered very important. A student destined for practice in England would probably be expected to join one of the English colleges; in order to do that he would have to pass the English conjoint board and then would arise the question, "Why send him to

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Scotland and make him pass through an expensive university examination?" The result would be that such a student would not be sent to any Scotch university. A student would not be affiliated in either of the three divisions in the kingdom unless he had passed the conjoint board of that division. If it were proposed to alter that arrangement, as laid down in the Bill, he believed all English corporations would oppose it, since they did not want to receive men who had not passed the conjoint board in England. His (Dr. Gairdner's) objection would be very much diminished if, after passing the conjoint board in Scotland, the student could join any of the corporations in Scotland or England. He had no very strong view on the subject of direct representation. There was a good deal of reason in the demand, and if the machinery were not very cumbrous he should not object to it, but he shrank from the idea of periodical agitations and canvassing. He did not think there were any particular evils arising from the profession not being represented. The proper work of the Council was medical education and registration, and if it confined itself to that it was quite large enough—if anything, too large. It might be an advantage if the Council could be made smaller, while preserving its representative character. The representation of the Scotch universities was monstrously inadequate as compared with that of the English universities, which were much less interested in medical education. If the Scotch universities were to be represented in solidarity, he thought the better plan would be to give them as many members as might be considered right, and let all the four universities concur in the appointment. There was a unanimous feeling in Scotland against the admission to the register of persons possessing a single qualification. For thirty years there had been no instance in Scotland of men being sent out without a complete examination in all the departments.

The CHAIRMAN inquired if there was any conflict of interests between the corporations and the universities in Scotland?

Professor GAIRDNER said they had no doubt their several interests, but he did not think they were in reality opposed. If well conducted they would strengthen each other. Notwithstanding various disputes between the two bodies, he believed that the pre-eminence of the Edinburgh University was greatly due to the influence of the College of Surgeons, and *vice versâ*. Students in the College of Surgeons were required to pass examinations in medicine and surgery. There was no civilised country except England where it had been habitual for a man to practise with a licence in surgery without being examined in materia medica and midwifery. Mr. Simon himself had never been examined in those subjects.

By Lord GEORGE HAMILTON.

It would be utterly extravagant for a student to pay £30 for a qualification which he practically had in his degree. Every unnecessary expense would tend to prevent men entering the profession, and that would lead to quackery outside.

By Mr. MITCHELL-HENRY.

The diploma of the College of Surgeons of England could be obtained without an examination in midwifery, and there were hundreds of persons now practising who had never passed such an examination. He saw no harm in having seven licensing bodies in Scotland if the licences were properly inspected by the Medical Council. He did not believe that there was any competition downwards. The whole tendency during the last twenty or thirty years had been upwards. The system of permitting bodies which gave education also to give a licence to practise was a valuable part of a student's discipline, and was a wholesome arrangement. There could be no objection, however, to the appointment of any number of examiners to co-operate with the teachers.

By Mr. WHEELHOUSE.

The Faculty of Physicians and Surgeons in Glasgow, like all other corporations, granted a diploma without residence, but he could not say whether it granted its diplomas on inadequate grounds. They were granted after two or three examinations. He should be inclined to support a somewhat similar scheme to the *Staats Examen* in Germany, with one examination conferring one degree carrying a licence to practise. That would of course cut at the root of all conjoint schemes.

By Dr. PLAYFAIR.

Corporations in Scotland had voluntarily formed conjoint boards already, but they retained the power of giving separate diplomas. Every practitioner, he thought, should have a double qualification. He had no objection to the Medical Council nominating a number of extra-academical examiners greater than would be required, and the University Court making a selection from the list.

By Dr. CAMERON.

He did not know that the College of Physicians of Edinburgh granted last year 115 licences in medicine, but all their licences represented examinations in every department. The Faculty of Physicians and Surgeons of Glasgow last year granted thirty-four licences. They ranked as surgical qualifications, but those who obtained them had to undergo a complete examination. No remission of the rule was made except in the case of persons who had been examined by some other licensing body. He should be glad if the universities would recognise each other's examinations up to a certain point. The chief reason why English medical students went to Scotland was that they could get their M.D. degree without being graduates in arts. The great English universities had failed in their duties to the medical profession by not looking after the schools. If it was proposed to appoint assistant examiners for Scotland, to act with the university professors, the Government ought to pay the expense, instead of throwing it upon the poor students. He had no objection to its being made statutory that the universities should not give single qualifications.

By Sir TREVOR LAWRENCE.

In an extending science like medicine and surgery it was a great advantage to have a number of licensing bodies, provided they were kept up to a proper standard.

By Mr. MILLS.

The fees for graduation were the same in all the Scotch universities. There was no English university which exercised the same kind of discipline and control over the entire circle of medical teaching that the Scotch universities did. His objection to direct representation was that it would cause excitement and disturb the profession in their proper work.

By Mr. LOWE.

The education and training were of more importance than placing the mint mark on the students at the end of their studies. He did not believe it possible to secure equality and uniformity.

The Committee then adjourned to Friday.

ARMY MEDICAL SCHOOL AT NETLEY.

THE thirty-ninth session of the Army Medical School was brought to a close on the 8th inst. The meeting took place as usual in the lecture theatre, that and the adjoining parts of the hospital buildings having entirely escaped from the effects of the recent fire. The gentlemen who have been attending the courses of instruction assembled at noon, and shortly afterwards the staff of the hospital, the professors of the school, and a large number of visitors took their seats on the platform. Among the latter were Lord Bury, K.C.M.G., Under-Secretary of State for War, who came from London to deliver the prizes to the successful competitors; Sir W. Muir, K.C.B., Director-General of the Army Medical Department; Sir John Commerell, V.C., K.C.B., one of the Lords of the Admiralty; Inspector-General Dr. Reid, Director-General of the Medical Department of the Navy; the Principal Medical Officer of Haslar Hospital, the Principal Medical Officer of Portsmouth Garrison, Surgeon-Major Ewart of the India Medical Board, together with many officers and gentlemen from the neighbourhood. After the names of the candidates for commissions in the Royal Navy and Indian medical services in the final order resulting from the combined marks gained by these gentlemen at the London and Netley examinations had been read by Professor Maclean, he explained that the names of the probationers in the Army Medical Service would not be read, as by recent orders they were to retain the same positions in the list as they held before coming to Netley, and that this list had been already published. Other official reports were read, and then Lord Bury gave

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an address to the assembled candidates. In his discourse his lordship referred to the organisation of the school by his friend the late Lord Herbert, and its subsequent progress, to the changes which had taken place in the medical department of the army during recent years, and especially dwelt on the advantages which had been conferred on its officers by the new Medical Warrant, and indirectly, he believed, on the army at large. He warmly congratulated the candidates who had just completed the final steps necessary for obtaining their commissions in the various branches of the public medical service, and after some other observations on the careers which were now opening to them, asked the gentlemen who had been named as the winners of the several prizes to step forward. With a few kind and flattering observations to each gentleman, his lordship handed to them their respective honours. Mr. A. H. Keogh, of the Army Medical Service, carried off both the Herbert prize and the Martin memorial medal; while Mr. G. Kirker, of the Royal Navy, took the Parkes medal for practical hygiene. The visitors subsequently adjourned to the officers' mess-room for luncheon.

The number of candidates during the session has been very large—viz., 96. Of these 72 were probationers for the British service, 16 for H.M.'s Indian Army, and 8 for the Royal Navy. We publish elsewhere a list of the successful candidates for the Indian Army and Royal Navy. We have already published the names of the gentlemen who competed last December for commissions in the British service.

TESTIMONIAL TO DR. FARR.

SINCE the publication of our last issue, the following names have been added to the committee which is being formed for the purpose of raising, among his friends and admirers, a testimonial fund for presentation to Dr. William Farr, F.R.S.

Earl Granville, K.G., F.R.S.
Lord Houghton, F.R.S.
Lord Aberdare.
The Right Hon. Sir Stafford Northcote, Bart, M.P.
The Right Hon. W. H. Smith, M.P.
Thomas Brassey, M.P., President of the Statistical Society.
John Walter, M.P.
William Spottiswoode, President of the Royal Society.
John Hainworth, F.R.S., Master of the Society of Apothecaries.
William Clode, Secretary, Registrar-General's Office.
J. de Cappelain, Highgate.
Professor W. T. Gairdner, M.D.
Professor Frankland, F.R.S.
Thomas Stevenson, M.D., F.R.C.P.
J. Napier Higgins, Q.C.
R. Druitt, M.D., F.R.C.P., F.R.C.S.
G. H. Philipsen, M.A. M.D., F.R.C.P.
Cosmo G. Logie, M.D., F.R.S.E., Deputy Surg.-General.
W. A. Greenhill, M.D. Oxon.
D. B. Balding, F.R.C.S., Coroner for Hertfordshire.
J. T. Clover, F.R.C.S.

It is proposed shortly to call a meeting of the committee, of which due notice will be sent to its members, for the purpose of appointing an executive committee; a preliminary subscription list will soon after be published, which will include all those subscriptions already promised, and any that may be in the meantime notified to Mr. Noel A. Humphreys, of the Registrar-General's Office, Somerset House, W.C.

HEALTH OF LARGE ENGLISH TOWNS.

NINTH WEEK OF 1880.

THE rate of mortality in our large towns continues to decline. In twenty of the largest English towns, estimated to contain in the middle of this year seven millions and a half of persons, or nearly one-third of the entire population of England and Wales, 5408 births and 3181 deaths were registered last week. The births exceeded by 223, whereas the deaths were 94 below, the average weekly numbers during 1879. The deaths showed a further decline of 41 from the decreasing numbers returned in recent weeks. The annual death-rate in the twenty towns, which had decreased from 37·0 to 23·1 in the four preceding weeks, further fell to 22·1 last week. During the past nine weeks the death-rate in these towns averaged 26·9 per 1000, against 25·8 and 27·0 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 17·5 in Bradford, 18·8 in Bristol, 19·0 in Birmingham, and 19·4 in Portsmouth. The rates in the other towns ranged upwards to 22·9 in London, 24·6 in Liverpool, 25·5 in Nottingham, and 28·5 in Plymouth. The death-rate in Plymouth has now shewn a marked excess during many weeks, owing mainly to an exceptional fatality of measles.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had slowly declined from 637 to 467 in the four preceding weeks, were 466 last week; they included 209 from whooping-cough, 99 from scarlet fever, 74 from measles, and only 29 from fever, mainly enteric. The annual death-rate from these seven diseases averaged 3·2 per 1000 in the twenty towns, and ranged from 0·4 and 0·7 in Portsmouth and Wolverhampton, to 4·9 and 9·7 in Hull and Plymouth. Whooping-cough showed the largest proportional fatality in Salford, London, and Plymouth; measles in Plymouth, Hull, and Nottingham; and scarlet fever showed increased prevalence in Sheffield. Of the 13 deaths referred to diphtheria, 5 occurred in London, and 3 in Manchester and Salford. Fever, principally enteric, caused 14 deaths in London, and 5 both in Liverpool and in Sheffield. Eight more fatal cases of small-pox were recorded in London, and one in Bristol, but not one in any of the eighteen other large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily increased from 80 to 163 in the five preceding weeks, further rose to 185 on Saturday last; 49 new cases of small-pox were admitted to these hospitals during last week, against 58 and 48 in the two previous weeks. The Highgate Small-pox Hospital contained 12 patients on Saturday last, 10 of whom were suffering from small-pox.

The fatality of lung diseases showed a further decline last week. The deaths referred to diseases of the respiratory organs in London, which had declined from 1557 to 459 in the four preceding weeks, further fell to 390 last week, and were 86 below the corrected average in the corresponding week of the last ten years; 258 resulted from bronchitis, and 91 from pneumonia. The annual death-rate in London last week from diseases of this class was equal to 5·6 per 1000, and corresponded with the death-rate from the same diseases in Liverpool.

Correspondence.

"Audi alteram partem."

FUSSY SANITATION.

To the Editor of THE LANCET.

SIR,—In the third leader of your last issue the following passage occurs:—"There are probably, as medical officers of health will tell us, not a few things in which the law may be amended in order to strengthen their hands in dealing with infectious diseases, but if we are to give regard to history it is highly necessary that in so strengthening them the Legislature should not at the same time foster that wild fear of contagion that has been the bane of administrative efforts in all great epidemics. Yet there is reason to fear that the evil here referred to is being brought about amongst us."

Upon this text I, as an old sanitarian, having the additional advantage of a great many years of active practice amongst all classes of the people, and, therefore, the opportunity of observing the progress of the public opinion on medical and sanitary subjects, would venture to make a few observations.

In the first place, I do not think that those remarks of yours, with the caution they convey, are made a day too soon. With a Government in power which may any day recur to the dogma of *sanitas sanitatum, omnia sanitas*, it behoves all who have the real progress of sanitary science at heart to see that that science will not be brought into con-

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tempt, or its cultivators made ridiculous, by the vagaries of individuals or the ignorant fears of the public. That there is danger of these results the proceedings of certain municipal authorities, as well as the published wishes of a few sanitarians, I think sufficiently prove.

Now, Sir, in the course of forty years I have watched the progress of public feeling with regard to infectious and contagious diseases very closely. From the most complete ignorance and apathy with regard to their incidence and mode of propagation which prevailed half a century ago, and which were contemporary with, or probably caused by, the enormous decline in the ravages of small-pox which resulted from the firm establishment of vaccination as a national measure, the public mind has passed through various phases towards its present active, observant, but somewhat terrified aspect. Occasionally panic-stricken by the occurrence of threatened epidemics of such direful diseases as cholera, relapsing and yellow fevers, plague, &c., it has almost invariably, when the danger passed away, relapsed into its normal state of unreasonable trust in good luck or of simple stupid apathy. Within the last few years, however, a better state of mind has prevailed. The establishment throughout the whole of the kingdom of a body of medical officers of health, discharging difficult duties with great tact and success, has given confidence to the public mind in the advantages and benefits of sanitary science which it never before possessed. Results have been brought under the cognisance of municipal bodies which neither ignorance nor incredulity has been able to gainsay. The Government also is firmly impressed with the idea that, with some imperfections and sins of omission and commission, medical officers of health are everywhere strengthening its hands by valuable reports, and by excellent work justifying, in the highest degree, their appointment.

If such be the valuable standpoint to which we have attained, enabling us to work upon the Government, the sanitary authorities, and the public mind, according as circumstances may arise, does it not behove all sanitary officers to beware how they push valuable principles too far, or let zeal outrun discretion? More than all, is it not advisable to avoid the danger of splitting up into hostile camps, or calling in the public to decide upon points on which they have no sound knowledge? Yet this is what is to be feared as likely to come to pass anent the question of the registration of contagious diseases. Some municipalities have already sought and obtained most extensive powers, which must have been suggested to them either by their own medical officers of health, or by other sanitarians. The question is, Are these powers salutary, and such as can be worked without too much friction against public feeling, and are they not likely to cause other evils whilst professing to remedy one or two? I am not quite certain that all those authorities which have obtained these powers with regard to infectious diseases, have already provided themselves with hospitals in which the sick of those diseases can be isolated, but I do know that some are contemplating the acquisition of such powers in the absence of any such provision. Ought it not, in common sense, to be made compulsory for any power to have all cases of infectious disease reported to its sanitary officers, to provide beforehand sufficient accommodation for isolating them when necessary? What is the use of the medical officer knowing that scarlet fever or diphtheria is to be found in a certain house unless he has the clear right to enter that house and remove, if necessary, the sick person to a hospital provided for such cases? The want of compulsory provision of hospitals for the infective sick is one of the greatest blots upon the present Sanitary Acts, and therefore I cannot but think that the Parliamentary Bills Committee of the British Medical Association have neglected to use an obvious and logical argument for their provision when they were insisting, and in the main rightly insisting, upon the provision of some better means whereby the sanitary officers may be made acquainted with the occurrence of such cases than at present exist. I know that it is argued by some that, as the law now is, the medical officer of health has no power to enter a dwelling to satisfy himself as to the existence of infectious disease, and no power, except in a few cases, to remove the sick to a hospital when he has discovered it. If this is the true reading of the Act, then another provision is required—namely, one which shall give the medical officer power so to enter, and also power to remove cases which cannot properly be treated and provided for at home, with reasonable safety to others, to a proper hospital. For myself I hold, and practise accordingly, never having met with rebuff or opposition, that that power *is* given by the present Acts. "All persons ill of any infectious or contagious disease, not having proper lodging or accommodation, may be removed to any hospital already provided for such cases by the authority." The word "accommodation" must have reference to the nature of the case. But how can such cases be ascertained unless the medical officer have power of entry, and who is to be the judge of what constitutes "proper lodging and accommodation" but himself?

The uselessness of an extended registration of cases of infectious disease will be apparent to anyone accustomed to work the Sanitary Acts, unless, concurrently with such registration, definite instructions are laid down to guide the officer in dealing with such cases, or, at least, that be made clear in the present Acts which to the minds of some medical officers I know is now not clear. The weight of opinion appears to be against making the medical practitioner the medium of communicating the fact of the existence of a case of zymotic or contagious disease to the authorities; but it is recognised as his duty duly to inform the person in charge of any such case as to its nature, leaving the reporting the case to the authorities to be done by him. It is argued that, if the medical man were obliged to report direct to the authorities, it would lead to his not being called in in cases where secrecy was desired. But would things be much better if the parent, or person in charge of the sick, were obliged himself to report the case immediately on receipt of a certificate from the medical attendant? Would there not be the same temptation to dispense with the services of a medical when he would be only the *indirect* instead of the *direct* medium of communication of the fact to the authorities? I think so; and therefore, if the preservation of the public from the spread of these disorders is to be held to be the paramount aim of legislation, it appears to be almost indifferent which party, the medical attendant or the occupier of the premises, makes the necessary communication.

But expediency is not a safe guide. Professional morality must be the first consideration, and that morality demands that every medical man who discovers his patient to be labouring under any dangerous infectious disease should warn the patient himself, or the person in charge of him, and point out the proper steps to be taken to avoid the spread of the disease. This, we know, every conscientious medical man does now. He would be neglecting an obvious duty were he not to do so. Moreover, the medical attendant has the best means of knowing whether such infected person "be without proper lodging and accommodation," according to his case, and whether removal is demanded in the interests of the other inmates of the house or the public. Medical men are at present in the habit of reporting *bad* cases of this kind to the medical officer of health. It is only necessary to make it *incumbent* upon them, on payment of a proper fee, to give immediate notice of *such* cases without waiting to see if the person in charge will be public-spirited enough to do so. In these cases the medical officer of health would have a clear right of entry, and it would also be his duty to have the patient removed from any room or house where his presence would be dangerous to others.

If there be any weight in these observations—which, by the way, are the result of ample experience as a medical officer of health—it follows that the recommendations of the Parliamentary Bills Committee of the British Medical Association, though of much value, go too far, or not far enough. Too far, as you, Sir, or I think, inasmuch as by making the registration of *every* case of infectious disease compulsory, bringing them *all* under the cognisance of the sanitary authority, that feeling of dread and panic so much to be deprecated when epidemics arise, would be intensified, to the injury of the public good and the hindrance of sound sanitation. They do not go far enough, I think, inasmuch as they allow a loophole by which such registration may be avoided. The medical man would be shunted when his certificate was dreaded, or, if called in, his certificate would in many cases be put into the fire, unless it was known that *he* might give the information to the authority.

Of course, the seventh section can only be intended to be used in great emergencies. I can only say that such emergencies *might* justify the *scare* it would give to the whole public. But were provisions for carrying out *temporary* orders as to some contagious disease to be affixed to the church doors, the inhabitants of that town or district would find themselves well isolated from their neighbours and customers for an indefinite time.

In conclusion, I would point out, as I have already stated,

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that the public mind is rapidly being enlightened as to the incidence and nature of infectious disease. That whilst it is advisable to increase that light, and direct it to proper efforts, it is quite equally desirable that the foolish panic and cowardly dread of this kind of disease now prevailing should not be fostered and pampered by two fussy legislation. Something must be trusted to education, and the diffusion of the knowledge of sanitary science amongst all classes, the poor especially. The time will come when the public will render intelligent aid to the authorities in these matters; whilst if their ignorant fears be now played upon to a greater extent than necessary, they will take refuge in evasion or opposition to even reasonable measures.

I am, Sir, your obedient servant,

WILLIAM STRANGE, M.D.,

Worcester, March 1st, 1880. Medical Officer of Health.

"THE CORONER'S FUNCTION."

To the Editor of THE LANCET.

SIR,—The scheme propounded in your leading article on the "Coroner's Function," for combining certain State duties under the office of the Medical Officer of Health, is one which commends itself as being both practicable and as meeting many anomalies and deficiencies which now prevail in the varied administrations of the medical world.

I venture to add to your suggestions; and to draw from a similar proposal which I made in 1878 at the North Wales Poor Law Conference (see Report for that year), and in a paper published in the August (1879) number of the "Sanitary Record." Whilst advocating combined sanitary districts, it was proposed also to combine allied offices under the medical officers of health; and it was shown that by this combination sanitary work would be more efficient, and also that the present salaries attached to these various offices would yield a handsome income to an independent officer without further assistance from rates. The offices which it was proposed to combine under the medical officer of health are those of the "certifying factory surgeon," the "superintendent registrar of births and deaths," and that of "coroner." Each of these offices works in a manner in duplicate and anomalously, either with the functions of the Medical Officer of Health or with some other Court of Inquiry. Thus the Public Health Act, 1875, section 91, brings small factories only under the supervision of the medical officer of health, leaving the large ones under the certifying factory surgeon. And yet the medical officer of health is required by the Local Government Board General Order of Nov. 11th, 1872 (section iv., paragraphs 10, 14), to inquire into processes of trade, and to report upon appropriate means to prevent injury to health therefrom. Again, the medical officer of health is by the same general order (paragraph 14) called upon to deal statistically with the mortality in his district, his data being gathered from copies of the registers supplied him at the cost of the sanitary authority by the sub-district registrars. The superintendent registrars are not called upon to deal with the information their registers afford, and do but transmit the sub-district returns to the Registrar-General, and, as occasion may require, supply duplicate certificates to such persons as may require them. Obviously by combining these two offices with that of the Medical Officer of Health an administrative and pecuniary economy would be effected.

The Coroner's office, if its utility has not altogether ceased, is certainly in need of reform. At the present time important inquiries conducted in this court are for the most part repeated in either the police courts or by the Board of Trade. And for the less important inquests, a personal inquiry, conducted as by the procurator fiscal in Scotland, would meet every requirement, to which should be added, to complete the designs of the Registration Enactments, a similar inquiry into every uncertified death.

By collecting together under one administrator the scattered forces which have been called into existence for the protection of life and health, a greater proficiency will pertain to each office. By this means, and in the manner you, Sir, indicate, skilled medico-legal functionaries will fill the offices of the Medical Officer of Health. Ample work and remuneration are at hand from existing sources in limited and workable districts; and the whole should be under the control of a Minister of Health.

I am, Sir, your obedient Servant,

Denbigh, Feb. 25th, 1880. J. LLOYD-ROBERTS.

THE TREATMENT OF ACUTE RHEUMATISM.

To the Editor of THE LANCET.

SIR,—Dr. Barton's wise remark about "the search for new remedies" is exceedingly well timed, and his brief record of his large experience exceedingly interesting; but his results would acquire a new value if he could only see his way to put them into a statistical form. The obvious answer to Dr. Barton's astonishment at my omission to mention iodide of potassium and opium is, that the scope of my paper was necessarily limited, and did not include either of these drugs.

Dr. Jacob states that "subsequent observers (to Dr. Fuller) have failed to secure by alkalies a like success." No doubt many have so failed, and I have distinctly said so; but, on the other hand, many eminent physicians have recorded most gratifying successes. Have the failures not been due in some measure to the lack of that care and assiduity which characterised Dr. Fuller's practice? Many surgeons fail to obtain the same brilliant results with the antiseptic treatment of wounds as my esteemed teacher, Professor Lister. But do they follow his practice rigorously in all its details? The percentage of cardiac complications in *all* the groups of cases of acute rheumatism treated by the salicylate of soda, to which Dr. Jacob refers, is greater than in Dr. Fuller's practice, with the single exception of the German group, which is less than a fourth of the number of Dr. Fuller's cases, and so may contain fallacies from which a large group is more likely to be exempt.

The error into which I have fallen in reading Dr. Pollock's "Notes on Rheumatism" is one which I greatly regret, but which I cannot regard as unnatural. I read his excellent *brochure* without prejudice of any kind, and I came to the only conclusion regarding his therapeutic leanings that seemed possible—namely, that he is a strong partisan of the new method of treatment. This being so, I examined his appendix in the hope of finding an exceptionally brilliant record of experience. I found, instead, "three fatal cases in a total of sixteen." I am always glad to hear of a low rate of mortality, and I need hardly express my pleasure in finding that the total was between sixty and seventy. Still, even this proportion of fatal cases is too high, in my opinion, to entitle anyone to speak of salicylate of soda in the unqualified terms employed by Dr. Pollock.

Dr. Whipham's explanation is gratifying; but he must remember that the mention of "no cardiac lesion" was made in the note of October 25th, while the cardiac affection to which I referred is spoken of in the notes of October 26th and 27th and November 4th. However, even admitting that I was led astray by the notes of his case, the question at issue is not seriously affected.

I had three objects in view in writing my paper:—1st. To show that the virtues of the new method have been vastly overrated, and its dangers greatly underrated. 2nd. To prove that the published results of other methods should not be despised. 3rd. To draw the attention of the profession to the importance of distinguishing clearly between continued and relapsing cases. It stands to reason that if a group contains a large proportion of relapsing cases, the average duration of rheumatic symptoms and the average residence in hospital must be greater than in a group which contains a small proportion of such cases. This consideration should be kept in mind in estimating the value of the statistics of St. George's Hospital and the Dundee Royal Infirmary.

I am, Sir, your obedient servant,

Dundee, Feb. 28th, 1880. ROBERT SINCLAIR, M.D.

THE STAMPING OUT OF RINGWORM.

To the Editor of THE LANCET.

SIR,—The profession is much indebted to Dr. Alder Smith for his valuable contribution to the subject of the treatment of ringworm, which has appeared in your columns lately. We have been taught some useful facts as to remedies, especially the mode of applying them, and the extent to which they may be pushed.

Even with the supervised and vigorous treatment which Dr. Smith's opportunities permit, ringworm, excepting in a few recent cases, is shown to take months to cure, while

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some cases may be said to be incurable. What degree of such vigorous treatment or supervision do the bulk of hospital patients receive? It is well known that children with ringworm are not, as a rule, admitted to hospitals, but treated in the out-patient department. As a consequence the cases drag on month after month, until, tired of one hospital, the parents try another, or possibly go the round. Probably long before this the case has drifted into "the diffused form," in which the ordinary appearances of ringworm are absent; the child is considered to be cured and sent to school. In this way ringworm is spread, and if the matter were inquired into, it is not unlikely that many schools, and especially school-board schools, would be found to be hot-beds of ringworm.

The point urged, then, is that our present hospital system of treatment of ringworm is utterly unsatisfactory, and, in many instances, mere waste of time and drugs. The remedy which naturally suggests itself is systemised intelligent aid from nurses and attendants at out-patient departments, so that methods might be properly carried out. (The parents of children rarely have the time, inclination, or ability to treat them.) But much more good might be done in the direction of stamping out the disease by some special system of medical supervision of school-board schools.

I remain, Sir, yours, &c.,

ALFRED SANGSTER, M.B.,
Physician in Charge of Skin Department,
Charing-cross Hospital.

Feb. 12th, 1880.

IS INSANITY CAUSED BY DRINK?

To the Editor of THE LANCET.

SIR,—The question raised by Dr. Mortimer-Granville in his letter appearing in THE LANCET of the 21st ult. is, I think, by no means an unimportant one.

I have now been specially engaged in the treatment of mental affections for a period of some thirty-six years. In the course of my practice I have met with many cases of insanity in which there was the propensity to take stimulants in excess; but in every case in which I had the means of obtaining reliable information as to the history of the patient I have been able to trace the mental disease as existing before the intemperance.

I am, Sir, yours faithfully,

JOSEPH SEATON.

Halliford House, Sunbury, March 8th, 1880.

EXTENSION OF THE FUNCTIONS OF MEDICAL OFFICERS OF HEALTH.

To the Editor of THE LANCET.

SIR,—I have read with pleasure your able leading article of last Saturday on the various subjects about to occupy the consideration of the present Parliament, which more or less affect the medical profession—to wit, the Coroner's Bill and the Lunacy Laws; and while agreeing with you that the duties under these laws devolving upon a public officer should be put upon the medical officers of health, I fail to see how these gentlemen as now appointed can, satisfactorily to themselves, perform them.

As you state there will be, in all likelihood, a considerable alteration in the laws, and if the medical officers of health are to be called upon to undertake more onerous duties they must of necessity be entirely relieved from private practice; and to accomplish this it will be necessary in many cases to enlarge the area of districts, in order that an adequate salary can be given.

Again, besides sanitary duties and those proposed under the Coroner's Bill and the Lunacy Laws, there are others that might, with all propriety, be handed over to the medical officer of health—namely, those of inspector of retreats under the Habitual Drunkards Act, and of certifying factory surgeon.

To enable them to perform the duties mentioned above, I can see no other course that can be followed than for the Government to appoint the medical officers of health, and pay them such salaries as they can comfortably live upon, and then Government might repay itself in seven years, by making a levy upon the various authorities to whom the medical officer of health lent his aid.

The corps of medical officers of health ought to be under a chief who would have power to regulate appointments and remove officers from one station to another, as it does in the other branches of the public service, and it might have various grades or ranks, with corresponding rates of pay, according to service and ability. No one should be allowed to remain in this service who has attained the age of sixty-five years.

Feeling certain that it is only by such an arrangement that the proposals mentioned in your last impression can be carried out, and having been a medical officer of health ever since the Public Health Act came in force, I am induced to send you this communication.

I enclose my card, and remain yours faithfully,

Feb. 24th, 1880. PUBLIC OFFICER.

EDINBURGH.

(From our own Correspondent.)

DURING the past fortnight Dr. Thomas Keith has performed three ovariotomies in the Royal Infirmary, all being of special interest. One was a semi-solid tumour, which had existed for two years in a patient who had been thrice pregnant during that period. There were no adhesions. A second was a case of burst cyst. The patient was in a poor state of health; she had been in hospital for some time, suffering from pleurisy and chest disease, when the sudden rupture of the cyst called for operative interference. The third case was one of a girl about fourteen years of age, who had never yet menstruated. There were some anterior adhesions. Remarking on this case, Dr. Keith stated that he had seen an ovarian tumour in a seven months fœtus; that such growths might be met with at any period of life, and that he had himself operated on patients where age varied from nineteen to over seventy years. The burst cyst was removed in the ward and the other two cases in the large theatre. The usual antiseptic precautions were adopted. It is much to be regretted that the light in the theatre is so faulty that Dr. Keith fears he must be compelled to cease operating there until some new mode of illumination be devised.

Among many other major operations, there have been two lateral lithotomies. In one case a large discoid stone was removed by Professor Spence, and in the other a small uric acid calculus, by Mr. Chiene, from the bladder of a man whose general state of health contra-indicated crushing. In both cases the rectangular staff was employed, the incisions, however, being made in the ordinary fashion. The patients are doing well.

In a discussion which took place at the Medical and Chirurgical Society on the reading of a paper on "Death during the Administration of Chloroform," it appeared to be the general opinion of the surgeons present that this anæsthetic was, on the whole, the best. That in cases of danger it was necessary to see that the glottis was open, and to begin artificial respiration (Silvester's) at once. Special stress was laid upon the point that the pulling forward of the tongue forcibly did not open the glottis in some cases, and Mr. Bell directed attention to a case of his own, in which he had overcome this difficulty by pushing his finger down to and opening the larynx. Professor Annandale spoke of a death which happened at the conclusion of an operation for hernia, and in which, as revealed by post-mortem examination, some vomited food had passed into the bronchi and choked the patient. Dr. Fonlis preferred ether to chloroform and Howard's mode of artificial respiration to Silvester's. Dr. Duncan remarked that in performing artificial respiration the feet of the patient should be secured, as this prevented him from being pulled off the table during the manipulative procedure. Dr. Watson drew attention to the title of the paper, and stated that many deaths took place during the administration of chloroform, not from it. He had seen a case of death from epilepsy while chloroform was being administered.

Professor Fraser's lecture on "Alcohol, its place and function," delivered at the request of the University and New College Temperance Society, is about to be published. Dr. Fraser expressed himself as favourable to the moderate use of stimulants, and had more hope in the advance of education and knowledge as a means of checking the abuse of alcohol than in abstinence.

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PARIS.

(From our own Correspondent.)

IT has transpired that the Minister of Public Instruction wishes to create a new chair of Practical Morbid Anatomy at the Faculty of Medicine, and that he intends to bestow it upon the well-known microscopist, M. Cornil. No objection can be made to the selection, and, indeed, upon the creation of a new chair. The minister has the privilege of appointing its first occupant; but it is contended that the chair itself is both undesirable and unnecessary, inasmuch as it will lessen the importance of those of Pathological Anatomy and Theology, now occupied by MM. Charcot and Robin, at present affording the teaching which it is proposed to inaugurate. Of the two professors, M. Charcot has the more reason to be displeased with the project, as his teaching would be reduced to a course of theoretical lectures. But it is quite possible that this difficulty will be smoothed over by the creation of another new chair, one of Nervous Pathology, which will gratify the life-long aspirations of the Salpétrière professor, and so extricate him from the anomalous position he has so long occupied.

It is proposed to create a "disinfecting staff" in Paris analogous to that which now exists in London, and which is intended to combat the dissemination of infectious disease. The officials entrusted with these functions would be allowed to use the most stringent measures, and these would seem justified by certain facts lately brought to light, and particularly by the extreme prevalence of small-pox in one of the quarters of Paris, that of the *Quinze-vingts*.

The Faculty of Medicine of Paris has always been notorious for its internal dissensions, and it has lately had a little difference of opinion with the provincial schools. The question at issue is one which is now on its trial both in England and France—that of medical decentralisation. The provinces claim that the *Concours d'agrégation*, which now takes place in Paris for the whole of France, should be held in the different universities to which candidates aspire. This has been opposed, on the ground that the existing state of things secures a high standard and a fairness of examination, which would be compromised by local favouritism if the competitions were held in provincial towns by provincial professors. And although it is not denied that a diligent provincial student may become a very competent practitioner, it is generally thought that some sojourn is advisable in the brain-forcing atmosphere of a great city to develop the qualities which are necessary to a professor.

A clause in the Ferry Education Bill, of which *l'article* 7 has become so famous, enacts the abolition of *inscription* fees for higher education. In consequence of this, a medical curriculum in France, which has always been cheap enough, will become absolutely gratuitous. As regards the other branches of higher education, this measure may be free from objection, but it is surely not to the public interest the needy should be tempted to join the ranks of a profession so overcrowded and ill-paid as that of medicine.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council, held on Thursday last, after the transaction of preliminary routine business, Mr. Bellamy and Mr. M'Carthy were elected members of the Board of Examiners in Anatomy and Physiology, in the place of Mr. John Wood and Mr. Hulke, who had resigned in consequence of being appointed to the Court of Examiners in Surgery.

The report of the Committee on By-laws relating to fees was considered at length, and with some exceptions was approved and adopted, subject to confirmation at the next meeting, when Mr. Simon will discuss the whole question of the finances of the College.

The President made a statement relating to the proposed International Medical Congress, and it was resolved that the President for the time being shall be the delegate from the College.

The recommendation of the committee on examinations in anatomy and physiology, to appoint a substitute examiner in anatomy and in physiology from among the Fellows who have already served on the Board, in the event of any examiner being through illness or any other unavoidable cause unable to take part in any examination of the Board, was adopted.

Medical News.

NAVAL MEDICAL SERVICE. — The following is a list of successful candidates for commissions in this service, with the number of marks gained by them in the combined London and Netley examinations held on March 8th :—

	Marks.		Marks.
G. Kirker	5440	G. A. Baukier	3955
T. D. Gimlette	4350	J. A. MacMunn	3671
W. Tait	4329	J. Brunt	2876
J. Crowley	4320	M. Mackenzie	2821

INDIAN MEDICAL SERVICE. — The following is a list of successful candidates for commissions in this service, with the number of marks gained by them in the combined London and Netley examinations held on March 8th :—

	Marks.		Marks.
G. W. P. Dennys	4964	A. C. Thompson	4368
J. W. W. Macnamara	4920	F. Burness	4326
H. O. Stuart	4768	G. J. Ward	4294
J. C. Marsden	4552	F. C. Reeves	4153
J. Sykes	4503	J. L. Poynder	4012
J. M. W. Stewart	4450	J. Hoey	3831
J. F. Tuohy	4393	A. G. Collington	3755
A. R. Campbell	4375	C. A. Daubney	3628

APOTHECARIES' HALL. — The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on March 4th :—

Waterhouse, George Beardmore, London Hospital.

The following gentlemen on the same day passed the Primary Professional Examination :—

Henry Arthur Fotherby, Guy's Hospital; Matthew Carrington Sykes, St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS.—At the preliminary or arts examination for the diplomas of Fellowship or Membership of the College, which was brought to a close on Friday last, there were 387 candidates—viz., 106 for the Fellowship, and 281 for the membership.

THE Board of Guardians of the Croydon Union have conferred upon Mr. Alfred George Roper, F.R.C.S. Eng., lately medical officer of the union, an annuity of £100.

ALDERMAN SIR S. H. WATERLOW, M.P., and Sir John Lubbock, M.P., have each subscribed £25 towards the erection of a Saunder's Memorial (Children's) Ward in connexion with the West Kent General Hospital.

THE coroner's jury returned a verdict of "Accidental death" in the case of Mr. E. O. Jones, of Carmarthen, to whose melancholy decease by drowning we referred last week.

A FIRE attended, it is to be hoped, by comparatively little damage, broke out in the central block of Netley Hospital on the 4th inst. The flames were speedily subdued by seamen and marines landed from the *Hector* guardship, in conjunction with the hospital staff.

THE foundation-stone of an addition to Rochester Hospital, to be built at a cost of £2,242, in commemoration of the 800th anniversary of Bishop Gundulph, the founder of the institution, was laid last week by the Bishop of St. Albans. The new building is intended for out-patients.

LONGEVITY.—The following rare examples of old age have been recorded in the obituary column of a contemporary during the last fortnight — viz., twenty-five females have died at ages ranging from eighty-five to ninety-nine, amounting in the aggregate to 2205 years, giving an average of eighty-eight years and over two months to each. In the same period the deaths of twenty-one males were announced, whose ages ranged from eighty-five to ninety-eight, giving a total of 1846 years, with an average to each of nearly eighty-seven years and eleven months. One of the males, Mr. Benjamin Tribe, who had attained the age of ninety-five, was a member of the medical profession, long a resident at Chatham, and who passed his examination at the Royal College of Surgeons sixty-seven years ago, being then twenty-eight years of age.

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VACCINATION GRANT.—Mr. J. C. Roberts, of South Peckham, has received a Government grant of £37 11s. for successful vaccination (third time).

BRISTOL GENERAL HOSPITAL.—The annual meeting of the friends of this institution was held on the 8th inst. The report stated the income for the past year to have been £11,438, and the ordinary expenditure £8398, in addition to £1137 for the erection of a new laundry, &c. The committee have with regret to call attention to the falling off of the annual subscriptions, which it appears have been decreasing for years past. This state of things is a discredit which the wealthy citizens of Bristol should feel in honour bound to remove without delay.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Rev. John Cartwright, of Durham, bequeathed £3000 to the Durham County Hospital, and £2000 to St. Thomas's Hospital, in addition to moneys (amount not stated) in two banks. Miss Jane Steele, of Clifton, has bequeathed £1000 to the Bristol Royal Infirmary, £1000 to the Bristol General Hospital, £200 to the Bristol Dispensary, and £200 to the Bristol Dispensary for cure of complaints of the eye. The Folkestone Dispensary and Infirmary has received £500 from Dr. Bowles, and £100 under the will of Mr. James Kelcey. The Kent and Canterbury Hospital has received £300 under the will of Mrs. Jane Tomlin, of Northdown, Thanet. The London Hospital has received £100 from "T. A." Mrs. James Packe has given seventy-five guineas to the Charing Cross Hospital. The Hospital for Women has received £50 from "A. L." Mrs. Ellen Penn, of the Cedars, Lee, has given £100 to the Royal Kent Dispensary.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ALLEN, A. H., F.C.S., has been appointed Analyst for the Borough of Doncaster. 12s. 6d. each analysis.

BEATON, D., M.D., L.R.C.S.Ed., has been reappointed Medical Officer for the Ryde District of the Isle of Wight Union.

BISSHOPP, J., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Tunbridge Wells Provident Dispensary, vice Ticehurst, resigned.

BRADY, G. S., M.D., M.R.C.S.E., has been reappointed Medical Officer to the Sunderland Hospital for Sick Children.

BUCKLE, J., M.R.C.S.E., L.S.A.L., late House-Surgeon at the Brighton Children's Hospital, has been appointed Resident Medical Officer to the Western Branch of the Brighton and Hove Dispensary.

CASTLE, H. T., M.D., L.R.C.S.Ed., has been reappointed Medical Officer for the Shorwell District of the Isle of Wight Union.

COATES, W. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Tunbridge Wells Provident Dispensary.

FOSTER, W. F., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer for the Arreton District of the Isle of Wight Union.

GILL, J., M.D., L.R.C.P.Ed., L.F.P.S.G., has been appointed Physician to the Stratford-upon-Avon Infirmary.

HENRY, G. F., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Resident Medical Officer to the Bury St. Edmunds Friendly Societies' Medical Association.

HOFFMEISTER, W., M.D., L.R.C.P.L., M.R.C.S.E., has been re-appointed Medical Officer for the Cowes District of the Isle of Wight Union.

MEERES, C., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer for the Brading District of the Isle of Wight Union.

MURPHY, J., M.D., B.A., has been appointed Surgeon to the Sunderland Hospital for Women and Children, vice Smith, resigned.

PHELPS, W., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer for the Yarmouth District of the Isle of Wight Union.

POWELL, J., L.S.A.L., has been appointed Medical Officer to the Kentchurch District and the Workhouse of the Dore Union.

SAVILE, R., M.D., M.R.C.S.E., has been appointed Medical Officer for the Nafferton District of the Driffield Union.

SIMPSON, W. S., L.R.C.P.Ed., L.R.C.S.E., has been appointed Medical Officer to the Workhouse of the Pontefract Union, vice Atkinson, resigned.

STAMFORD, W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Tunbridge Wells Provident Dispensary.

STICKLAND, S., L.R.C.S.Ed., M.R.C.S.E., has been appointed Medical Officer for the Godshill District of the Isle of Wight Union.

STORY, Mr., of St. Mark's Ophthalmic Hospital, Dublin, has been appointed an Examiner in Ophthalmic Surgery in Trinity College, Dublin, vice Rainsford.

TUTTIETT, F. B., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer for the Whippingham District of the Isle of Wight Union.

WALMSLEY, F. H., M.D., M.R.C.S.E., has been appointed an Assistant Medical Officer to the Leavesden Asylum for Imbeciles.

WATERWORTH, E. A., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer for the Carisbrooke District of the Isle of Wight Union.

WELFORD, G. E., M.D., M.R.C.S.E., has been reappointed Medical Officer to the Sunderland Hospital for Sick Children.

WOODWARD, G., M.D., M.K.Q.C.P.I., F.R.C.S.I., has been appointed Medical Officer for the First District of the Ware Union.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On the 6th inst., at Ripsingale, Lincolnshire, the wife of George Norris Adams, M.D., of a son.

BATEMAN.—On the 2nd inst., at Whitchurch, Oxon., the wife of Francis Bateman, M.B. Lond., of a daughter.

CASSIDY.—On the 29th ult., at the County Asylum, Lancaster, the wife of Dr. D. M. Cassidy, of a son.

CAUSTON.—On the 29th ult., at Pomona-place, Hammersmith, the wife of William H. Causton, M.R.C.S.E., of a son.

DUCAT.—On the 4th inst., at Gloucester House, St. Paul's-road, Highbury, the wife of Andrew D. Ducat, M.D., of a daughter.

FAIRBANK.—On the 29th ult., at Monksey House, Windsor, the widow of the late Dr. Fairbank, prematurely, of a daughter.

MARRIAGES.

BUTLER—DIPLOCK.—On the 26th ult., at Christ Church, Turnham-green, Chiswick, Joseph M. J. Butler, of Saffi, Morocco, and of London, Chevalier and Consul of Portugal and of Brazil, to Esther Martha, eldest daughter of Thomas Bramah Diplock, M.D., of Arlington House, Chiswick.

SCHOFIELD—JACKSON.—On the 26th ult., at Barnsbury, Robert Harold Ainsworth Schofield, M.A., M.B., F.R.C.S., second son of the late Robert Schofield, of Rochdale, to Elizabeth Jackson, youngest daughter of the late Sidney Vaughan Jackson, of Ballina.

DEATHS.

BATEMAN.—On the 29th ult., at Whitchurch, Oxon., Francis Henry, the beloved son of Francis Bateman, M.B. Lond., aged 13 months.

BRAMWELL.—On the 26th ult., at Nottingham, Charles Crighton Bramwell, M.D., in his 53rd year.

CORNISH.—On the 7th inst., at Taunton, Jane, the wife of Charles Henry Cornish, F.R.C.S., Mayor of Taunton, aged 67.

MACALDIN.—On the 2nd inst., at Tavistock-square, London, James Jasper Macaldin, M.D., in his 69th year.

MAGINNISS.—On the 28th ult., at Camden-road, of apoplexy, after a few hours' illness, Robert Maude Maginniss, B.A., M.D., within a fortnight of attaining his 26th year.

RICHARDSON.—On the 23th ult., at Baker-street, Portman-square, Mark Richardson, M.D., late of the Bengal Medical Service, in his 75th year.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

BOOKS ETC. RECEIVED.

G. BELL & SONS, London.
The Constitution of the Earth. By R. Ward.

DAVID BOGUE, London.
The Secret of a Good Memory. By Dr. J. Mortimer-Granville.

J. & A. CHURCHILL, London.
Cooley's Cyclopædia of Practical Receipts.
Indian Notes. By F. R. Hogg, M.D.
Diseases of the Testis. By S. Osborn.

KEGAN PAUL & Co., London.
Chapters from the Physical Geography of the Earth. By Arthur Nicolls, F.G.S.

LONGMANS, GREEN, & Co., London.
The Stoics, Epicureans, and Sceptics. Translated from the German of Dr. E. Zeller by O. J. Reichel, B.C.L.
Path and Goal. By M. M. Kalisch, Ph.D., M.A.
Transactions of the Obstetrical Society of London.

MACMILLAN & Co., London.
The Emotions. By James M'Cosh, D.D.

J. VAN VOORST, London.
Water Analysis. By E. Frankland, Ph.D., F.R.S.

House and Home. Vol. II.—Fraser's Magazine.—Ueber die Todeswisachen nach Verbrennungen. Von Dr. L. von Lesser.—Ueber Wundbehandlung mit Besonderer Berücksichtigung der Lister'schen Methode. Von Dr. A. V. Puky.—Dickens's Dictionary of Continental Railways. (C. Dickens.)—Fifteenth Annual Report of the Sanitary Commissioner with the Government of India. (Office of Superintendent of Government Printing, Calcutta.)—Sanitary Organisation of Nations. By H. I. Bowditch, M.D.—Reclamations et Réponses. By Dr. Alvarenga.—Fisk. (Bartlett & Co.)—Chorohy Nazzadu Oddechowego Sucholy i gruzlica. Opracowal Dr. St. Poniklo.—Sunday Magazine; Good Words. (Isbister & Co.)—The Classified Directory of the Metropolitan Charities. (Longmans.)—Remarks on the Mode of Admission to our Medical Charities. By Dr. Thorburn. (Ireland & Co., Manchester.)—Paquelin's Thermo-Cautery. By Dr. Wilson, Baltimore.—Address by Dr. F. N. Manning.—Twenty-third Annual Report of the Proceedings of the Vestry of St. Mary, Newington. (G. Morrish.)—Dr. Watts on the Successful Treatment of Asthma. (Simpkin, Marshall, & Co.)—Report on the Revision of the U.S. Pharmacopœia. Compiled by C. Rice. (New York:)—Leprosy. By W. Munro, M.D. (Heywood, Manchester.)—Time. (York-street, Covent-garden.)—Brief Notes regarding the Indian Service.—The Contemporary Review. (Strahan & Co.)

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, March 11th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp. Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Mar. 5	30·02	W.	54	51	..	60	46	..	Cloudy
,, 6	30·18	S.W.	51	43	..	55	49	..	Overcast
,, 7	30·00	S.S.W	54	51	..	55	52	..	Cloudy
,, 8	30·50	N.E.	43	40	..	50	40	0·09	Overcast
,, 9	30·27	E.	44	43	..	58	40	..	Overcast
,, 10	30·13	S.W.	49	47	..	59	42	..	Foggy
,, 11	30·48	S.E.	44	41	..	56	40	..	Foggy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE FRENCH SANITARY SOCIETY.

THE Société Française d'Hygiène was founded on the 7th of May, 1877, and since that date we have on several occasions called attention to the good work it has performed. Nevertheless, up to the 31st of December, 1879, the receipts of this Society amounted only to £794, with which, however, a great deal has been accomplished. No less than 89 honorary members, 228 foreign corresponding members, and 396 French members have been enrolled. The latter are required to pay only a small fee, and yet the Society can boast of a surplus. The entire expenditure for the three years amounted to £754, and of this sum only £110 was required for working expenditure; all the rest was spent in publicity and in spreading sanitary knowledge, books, pamphlets, newspapers, lectures, &c. This also includes £22 spent in vaccinating persons who would otherwise have escaped control in this respect. Prizes have been awarded for popular pamphlets on various practical subjects, and the best essays were widely circulated among the classes in most need of information. A chemical laboratory has also been established, and the *Journal d'Hygiène*, the organ of the Society, is now published three times a month. Altogether the Society may be commended for its careful economy of the resources it enjoys, and there can be no doubt that it is gathering strength.

Scrutator.—Yes. From the Queen's printers.

CROTON LINIMENT FOR FITS.

To the Editor of THE LANCET.

SIR,—I began to attend a baby, about two months old, on Nov. 25th last. For about a month it had about twenty fits a day without any apparent cause. From Dec. 27th, the course of the case was thus:—

Dec. 27th	.. ..	19	fits.
,, 28th	.. ..	20	,,
,, 29th	.. ..	20	,,
,, 30th	.. ..	15	,,
(On above day head painted with croton liniment.)			
Dec. 31st	.. ..	21	,,
Jan. 1st	.. ..	12	,,
,, 2nd	.. ..	12	,,
,, 3rd	.. ..	6	,,
,, 4th	.. ..	12	,,
,, 5th	.. ..	17	,,
,, 6th	.. ..	5	,,
,, 7th	.. ..	5	,,
Jan. 8th	.. ..	4	fits.
,, 9th	.. ..	5	,,
,, 10th	.. ..	5	,,
,, 11th	.. ..	5	,,
,, 12th	.. ..	9	,,
,, 13th	.. ..	4	,,
,, 14th	.. ..	3	,,
,, 15th	.. ..	3	,,
,, 16th	.. ..	2	,,
,, 17th	.. ..	1	,,
,, 18th	.. ..	1	,,
,, 19th	.. ..	0	,,
,, 20th	.. ..	0	,,

While I am writing you, might I ask if anyone would kindly tell me a means of preventing the ungainly precipitate that ensues on the insertion of liq. ferr. dialysat. in a mixture?—Yours faithfully,

March, 1880. PRACTITIONER.

THE CHOLERA IN 1849.

MR. D. DAVIES, medical officer of health for Bristol, in a lecture last week at the Medical School, Tyndall's-park, speaking of the epidemic of cholera which visited this country in 1849, remarked in reference to his experience at St. Peter's Hospital:—

"On the third day his colleague Joseph Williams died after twelve hours' illness. In about a fortnight the disease was subdued, after destroying about 140 lives in the house. He quoted the figures from memory. Such was the cholera in those days when the pythogenic hypothesis, pure and simple, ruled in high places, and they were told that simple cleanliness, temperate habits, and warm clothing were sufficient guarantees against the disease. If he sometimes spoke with rancour of the pythogenic theory, it was because he witnessed its miserable failure, at every point, to make any impression on cholera. In spite of soap and water, lime, washing, and physic of all kinds in abundance, 2000 died in Bristol of cholera in 1849; while in 1866, although attacked at thirty different points, the deaths were only 29. Observation of the disease in 1849 had taught him how to meet it. If Asiatic cholera should appear in a district, they should immediately forbid the use of all water drawn from wells in the vicinity of any human habitations. If there was not a supply of water, they should employ a number of carts to carry sufficient water from a distance from some deep spring or other source above the reach of human contamination. They should not trust to analysis for the purity of the water. Water might contain cholera germs when analysis might have pronounced it pure."

TOBACCO-SMOKING.

To the Editor of THE LANCET.

SIR,—As much has appeared in your columns lately on tobacco-smoking, perhaps my own experience, which is that of a smoker of upwards of fifty years, may be interesting.

I began to smoke probably between the ages of seventeen and eighteen, any sort of tobacco I could get. Before the age of twenty-one I was at sea, smoking Trichinopoly or Ghinsurah cheroots, which are strong. After being nearly six years at sea, I went out to Bengal, where after a short time I took to Manillas, smoked regularly until my fortieth year, when on my return from furlough I gave it up *at once*, and did without it for fully a year and a half. Then being ordered to Burmah, I again began; continued with Manillas until my return home in 1863, when I took up with a good sound, but not very strong mixture, to which I have been constant ever since, and of which I consume about half a pound a month. I have hitherto enjoyed wonderfully good health. My work was often very hard, and exposed me much to sun and wet. I have not found smoking tend to drinking. I have all my life been a moderate man, a pint of beer at dinner and one glass of brandy-and-water at night being all that I wished for, and for the last two and a half years I have been a total abstainer; this I began from necessity, and continued as an experiment, and am at least in as good health as when taking stimulants. I am now (above seventy), sound in wind and limb, and my digestion and heart are, I may safely say, above the average. Now, does smoking do any good? I am not sure. I think men are better not to give way to it, for it is an indulgence, and is to many disagreeable; but I think it has some advantages. I find it soothing when I have been annoyed. I fancy that it aids digestion after a meal, and if kept long without a meal it helps to lessen the craving for food; but, like many other things good in moderation, this also must be used moderately. I have seen digestion grievously impaired, eyesight almost destroyed, and the nerves almost ruined by excess.

Yours faithfully,

March 6th, 1880. TOBACCO.

Acting Surgeon.—The qualifying examination must be passed. A letter addressed to the Director-General of the Army Medical Department, 6, Whitehall-yard, S.W., will obtain the information desired on all the points mentioned.

HELMINTHOLOGY.

To the Editor of THE LANCET.

SIR,—Had "Helminta" referred to the "Medical Digest," sections 932 and 935, he would have found many more suggestions than those offered by your numerous correspondents, and among others one that has proved of immense value—viz., the injection of half an ounce of warm salad oil, when the child is nearly asleep, allowing it to remain all night. This plan, combined with santonine at bedtime and iron during the day, seldom fails to effect a speedy cure in the worst cases.

Yours &c.,

RICHD. NEALE, M.B. Lond.

Boundary-road, South Hampstead, March, 1880.

B. W. W.—We will answer our correspondent's question with reference to the best kind of stove for bedrooms next week.

Mr. M. Davies.—See THE LANCET of Jan. 11th and 18th, 1873; and of Dec. 18th, 1876.

ALOPECIA.

To the Editor of THE LANCET.

SIR,—Can any of your readers suggest any cause or the treatment for unusually rapid alopecia of the whiskers? No specific history. Scalp well nourished and well covered, though premature grey.

Yours &c.,

Feb. 1880. W.

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IODIC PURPURA.

AT a meeting of the Medical Society of the College of Physicians in Ireland, held on the 3rd inst., Dr. G. F. Duffey read a most exhaustive paper on the "Purpuric Eruption which occasionally follows the Administration of Iodine," and detailed a case which occurred in his practice. Arising sometimes during the exhibition of the iodide of potassium, it appears almost invariably to select the front of the legs as its peculiar site, seldom passing above the knees. During the discussion which ensued it was casually mentioned that M. Fourneaux, of Paris, had recommended claret as a vehicle for the administration of iodide of potassium when prescribed in large doses, and that thus all the injurious effects of iodine would be prevented.

A Constant Reader does not say to what L.M. he refers. He will find particulars in the Medical Directory.

Dr. Kerr had better write direct to Corbyn and Co., High Holborn.

"COLD AND DEATH."

To the Editor of THE LANCET.

SIR,—I have been very much interested in the able leader, under the above title, which appears on page 842 of the second volume of THE LANCET for 1879, and I feel deeply obliged to its writer. That a body-heat of 98·4° to 98·6° F. is both a sign and effect of health is beyond controversy, and it is equally beyond all doubt that this standard is to be maintained under all climatic influences. As certain points connected with this subject have occupied my attention, I will endeavour, with your permission, to make a few brief remarks on such of these as strike me forcibly, and from which, it appears to me, some reliable deductions are capable of being effected. Although difficult to trace, yet they are not indiscoverable if we only will *see* matters which at first sight appear beneath notice. The question comes to be how the *normal* temperature is to be retained under the all-varying circumstances of everyday life. Health, like everything else, is one of different degrees, and scarcely five per cent. of individuals of the same age and sex can be said to possess the same degree of health, by which I mean bodily health, though not with mental disease.

The following are rough extracts from some notes made on observations on my own person in an experimental mode of life during last summer, which was an unusually hot one, and during this winter, which is an unusually cold one, in India. It was conducted for twenty-two days in the former and eighteen in the latter, and I have drawn averages of fifteen days in both, because prior to this experimentation I had for these number of days made observations on similar points. A record of the body-temperature, that of the external air, pulse, respiration, urine, and stools was made. Before any experimental change, the average body-temperature was found to be 98·6° in the morning and 98·8° in the evening in hot weather; while in the cold it was respectively 98·3° and 98·4°. On two occasions it was taken at 3 P.M., the hottest part of the day in the hot weather, and found once to be 98·10°, and again 98·9°; the average quantity of urine was 48 oz.; the bowels were moved once per diem; the general health was good. The diet was ordinary nourishing diet; the quantity of alcohol taken consisted of a pint of ale at lunch and a quart for dinner. A tepid bath was taken at about 10 A.M. The experiment consisted of taking a cold bath three times a day—6 A.M., 1 P.M., and again at 5 P.M. The diet remained the same, but four ounces of brandy were added to what alcohol was before taken in the shape of beer; the mode of life as to exercise, work, &c., remained almost precisely the same. The average quantity of urine now voided in twenty-four hours was calculated to be 50 oz. The morning temperature before the first bath was found to be 98·5°, and the evening temperature before the third bath was 98·6°. The bowels moved on an average three times in every two days. During a week of the hot weather experiment (not counting the above time) the baths were continued three times a day; the diet and other things remained the same, except that the alcohol was dropped *in toto*. With the exception that the bowels were moved once a day, there was no great difference to be made out from the observations taken. Now, in the cold weather my average temperature, without any alteration in the *modus vitæ*, morning and evening respectively, seems to be 98·3° and 98·5°. During this time I was called out to a case at 1 A.M. I then took my temperature immediately on getting out of bed; it was 98·1°. On returning after about an hour it was again taken, and found to be 98·4°. The quantity of urine was 60 oz., and the bowels were moved once a day. The diet was the same as in the hot weather; but now one pint of ale only was taken, with one brandy-and-soda, in the four-and-twenty hours. One cold bath was taken. During experimentation, which consisted of taking a warm bath twice a day, with no alcohol in the same diet, other things the same, the average temperature both morning and evening remained the same, 98·5°. The most important point in this, to which I would draw attention, is the addition of four ounces of butter and two of sugar to the otherwise *same* diet. The quantity of urine showed an average of 61 oz., and the bowels were moved on an average twice. On one day six ounces of butter were taken, and the bowels acted three times, but not loose.

To my mind—and, no doubt, in that of the editorial writer—it appears that we must look to the healthy body under average circumstances equally as much as to cases of disease, wherefrom safe conclusions as to hygiene can be drawn so as to be of practical utility.

Yours truly,

India, Dec. 1879. JOHN C. LUCAS.

SCLEREMA.

IN connexion with a case shown at the last meeting of the Pathological Society by Dr. Stephenson, the following account, taken from the *New York Times*, may be interesting, though, of course, it must be received with the caution always necessary to be observed in respect of medical communications from non-professional sources:—

"The most extraordinary case of sclerema, or petrifying of the skin, known in medical history was made the subject of a medical clinic in Cleveland on Jan. 31st. The case was that of a child brought here from New Philadelphia, and it is becoming literally a petrified child. The flesh is cold and hard almost as marble, and while the child, which is nearly three years old, continues to live it can only freely move its lips and eyes. It has none of the warmth and pliability of human flesh, and sleeps with its eyes open, presenting a most ghastly spectacle. Until six months ago it was in perfect health. This is the thirty-fifth case discovered, and an important one, inasmuch as no instance has heretofore been known where the entire body was affected. The child must die, as complete petrification of the skin will ensue."

Paterfamilias.—Certainly.

ON THE ERGOTISATION OF WHEAT DURING THE YEAR 1879.

To the Editor of THE LANCET.

SIR,—The peculiarly sunless year of 1879 has, amongst other things, brought about an amount of ergotisation in the wheat crops that is, as far as I can learn, quite unprecedented. With the details of this subject I will not trouble your readers beyond mentioning the fact that the absence of sun favours the production of ergot in wheat in two ways—first, by making the wheat late in point of time in flowering, so as to approximate the flowering of the wheat with the maturation of the Claviceps sporidiæ more nearly than usually happens; and secondly, by retarding the process of fertilisation of the wheat, for it is at this time that the ovule becomes affected with the ergot-producing fungus. I have examined several samples of last year's wheat, grown in the vicinity of King's Lynn, and have found almost all those which were grown in the marshland or fen district contaminated by a considerable percentage of ergots, some more and some less. Upon the health of the general public I believe this will have no appreciable effect, because of the large quantity of foreign corn consumed by us. But in certain districts it is the custom for the labouring families to live a great part of the winter, at any rate as long as it lasts, upon the corn gleaned by them during the harvest, which they have threshed and dressed for themselves in the most primitive manner. In many of the samples I have seen that have been threshed and dressed by the most improved agricultural implements, a great number of ergots were not removed, so that a family subsisting for several weeks upon corn gleaned from a district in which ergot is abundant this year, and which had been threshed by a flail and winnowed by a current of air, would stand a poor chance of escaping some of the constitutional effects of ergot.

From the conversation I have had with agriculturists upon this subject, they one and all ignored the idea of these foreign bodies being ergots at all until they were demonstrated to them, the little black bodies being mistaken for the excreta of birds or of rats or mice. Not being aware of the presence of the ergots, nor of their poisonous nature, many samples find their way to the mill'er in a condition that the farmer could very considerably improve by more careful dressing.

Your obedient servant,

King's Lynn, Feb. 16th, 1880. CHARLES B. PLOWRIGHT.

Dr. Sinclair, (Moulmein.)—The work of Brierre de Boismont, published by Renshaw, contains several cases of the kind. We regret we cannot find room for the communication.

W., (Beckenham.)—Declined.

A Subscriber.—The question is not a legal one.

A PECULIAR MEDICAMENT.

To the Editor of THE LANCET.

SIR,—As the following may interest some of your readers, I take the liberty of forwarding it for insertion in your journal, should it suit you to give it space.

Living in Canada, in the vicinity of a Chippewa-Indian settlement, I am frequently asked for spirits to prepare various nostrums, in which they place much confidence. On one occasion an old fellow made his appearance with his bottle, which he requested me to fill. It already contained some curious-looking substance. This, on inquiry, proved to be the testicle of a beaver. The Indian explained to me that, when mixed with spirits, the concoction was a cure for certain kinds of headache. I related this circumstance to a friend, who shortly after wrote to me that he lit upon a passage in Juvenal, which showed that the pharmacy of the North-American Indian was the same as was practised in the first century of the Christian era. The passage is from Sat. xii., lines 30 to 36, and when translated reads as follows:—"A man with an overladen ship, when his hold was nearly full of water, essayed to come to terms with the winds by throwing part of his cargo overboard, imitating the beaver, who voluntarily makes himself a eunuch, desiring to escape with the loss of a testicle, for which the hunters are pursuing him; with such medicinal qualities does he know that his groin is endowed."

Yours faithfully,

THOMAS SIBBALD.

Eldon Hall, Georgina, Ontario, Canada, Jan. 10th, 1880.

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A. Bacterium.—The questions proposed for the Boylston Medical Prize for the year 1880 are: (1) Antiseptic Treatment. What are its essential details? How are they best carried out in practical form? (2) Diphtheria, its Causes, Diagnosis, and Treatment. The prize is one hundred and fifty dollars. Dissertations must be transmitted, post paid, to Dr. D. H. Storer, 182, Boylston-street, Boston, U.S., on or before the first Wednesday in April next.

INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—On Thursday, Feb. 26th, Dr. Playfair asked the Under-Secretary of State for India if the Government of India contemplated reducing the present fixed number of the higher grades (deputy surgeons-general) of the Indian Medical Service, and of reserving the higher grade (surgeon-general) in each Presidency for members of the British Medical Service only; and, if so, whether it was the intention to offer increased pensions to the senior officers as a compensation for the serious change which would thus be made in their prospects. Mr. E. Stanhope replied that the appointment of surgeon-general—i.e., the head of the Medical Department—at the three Presidencies would be held by an officer of the British Medical Service; that the Government of India had offered to the three surgeons-general and the six deputy surgeons-general of the Indian Medical Service, whose appointments have been done away with, or who have been displaced by officers of the British Medical Service, their retirement on the extra pension of their grade. But, Sir, what is to be done for the surgeons-major of the Indian Medical Service who have completed twenty years' service and upwards, who had a right to expect promotion to the higher grades, and whose prospects now are simply ruined? Is this guaranteeing to them their rights and privileges as they were promised in the Henley clause of the Act of Parliament? I submit no greater insult or injustice could be done to any body of men. Why not do away with the Indian Medical Service entirely, either by amalgamating it with the Army Medical Department, or by offering increased pensions, or a sum of money in addition to the ordinary rate of pension to which each officer may be entitled (such rates of pension to be those granted in the recent Warrant for the Army Medical Department, and all leave being counted as service from the date of entering the service)? This has been done to officers in the Indian Staff Corps of the rank of lieutenant-colonel. Those officers who were in the service before the Indian mutiny I believe could claim compensation from the Secretary of State for India if their case were taken into a court of law; but the more expedient course to adopt is, I think, to bring pressure upon the Secretary of State for India in Parliament, and to make known the present position of the service to the different medical schools, when the professors would advise young men not to enter the service, but to join the ranks of the British Medical Service. It is indeed high time this was done; for on examining the pass-lists of gentlemen who have recently entered the British and Indian Medical Services, published in THE LANCET of Feb. 28th, it will be seen that those who have passed for the Indian Service are a better stamp of men than those who have entered the British Service—i.e., if we can judge from the number of marks the successful candidates in each service obtained. Fifty-two gentlemen competed for twenty-three appointments in the Indian Service, and forty-eight were reported qualified. Twenty-five gentlemen, therefore, although qualified, were unsuccessful in obtaining appointments, and I congratulate them that they did not obtain them, for I hope at the next examination they will compete for the British Medical Service.

In THE LANCET of Feb. 21st the pensions of the two services are given, and it will be seen that those of the Indian Service are much smaller than those of the British. One mistake, however, appears in the pensions of the Indian Medical Service, for there is no such rank in the Indian Service as brigade surgeon, as mentioned in THE LANCET. The following are the pensions:—

Army Medical Department.

Surgeon-major after 20 years' service	..	£365	0	0	a year.
If a brigade surgeon ,, ,,	..	501	17	6	,,
Surgeon-major after 25 ,,	..	410	12	6	,,
,, ,, 30 ,,	..	456	5	0	,,
If a brigade surgeon ,, ,,	..	547	10	0	,,

Indian Medical Service.

Surgeon-major after 17 years' service	.. .. ..	£220	a year.
,, ,, 21 ,,	.. .. ..	292	,,
,, ,, 24 ,,	.. .. ..	365	,,
,, ,, 27 ,,	.. .. ..	456	,,
,, ,, 30 ,,	.. .. ..	550	,,

But as all leave in excess of two years in twenty years' service and three years in twenty-five years' service counts against service for pension, scarcely any man becomes entitled to his pension at the time it would otherwise become due. I know some surgeons-major of twenty-four and twenty-five years' service who are entitled only to the lowest pension—i.e., £220 a year,—because their health has compelled them to take leave of absence on medical certificate, and they have in consequence been unable to serve the necessary time in India for the pension to which they would be entitled had not their health given way.

I trust you will give the case of the officers of the Indian Medical Service your serious consideration, and do what lies in your power to get their present unenviable position brought prominently before Parliament and the teachers and professors of the various schools through your influential journal.

Yours faithfully,

March, 1880. JUSTICE.

Mr. John Service.—1. We cannot promise an early insertion of the paper. 2. Among the German Clinical Lectures lately published by the Sydenham Society will be found one upon the Feeding of Infants. Dr. Wm. Roberts's forthcoming lectures at the College of Physicians are to be upon the other subject upon which our correspondent is seeking information.

Physic.—The poster is very bad.

Mr. J. S. Window may obtain the information he desires by application to his usual medical attendant.

"HINTS FOR THE HUNTING FIELD."

To the Editor of THE LANCET.

SIR,—Will you allow me to make a few remarks and some corrections on this subject, which appears in your issue of to-day?

With regard to the "grip," I maintain that it should be so far as is possible entirely with the knees, and not in conjunction with the side of the leg any further than can be avoided. You often see a bad rider hammering along with his trousers rucked halfway up his leg, and a goodly amount of sock appears below them and the top of his boot. This is because he "grips" his horse with his leg, which is ever shifting, and therefore no steady seat can be thus acquired; but the trousers of the man who "grips" with the knee will hang perfectly straight, even though he wear no straps. Were a person upon leaving his stable for a day's hunting to start with a good tight "grip" with knee and leg, and continue the same through a long day, I should imagine he would be fairly done up at night, but this is not necessary. A safe seat depends as much upon *balance* as upon "grip," and the "grip" should be tightened and relaxed as will be found necessary; but that it should be safe, and enable one to acquire a good seat, it *must* be with the knees.

How one is to "prepare to fall easily" is not made very clear in your impression; but the fact is that men who are really good horsemen, and have ridden since they were five or six years of age, are probably a little more active in and *out* of the saddle than others.

The stirrup-iron, in my opinion, should be large, because if it be tight enough at any point to grasp the boot, and one is riding well "home," in the case of a fall the result may be serious, but this seldom occurs with good riders. Spring stirrups should be used, and upon no account should the spring which is attached to the iron for fastening the stirrup-leather be put up, because if the opening be left open, the stirrup and leather may come off; but I must say I never heard of a man who was dragged along in the stirrup being fortunate enough to part with his boot, nor do I believe it possible, however the boot is made, that the "foot may be readily withdrawn."

With regard to tight girthing, a horse with good oblique shoulders, and a groom to put the saddle where it ought to be, the girths will be far enough from the organs of respiration; but if the horse has not good shoulders, your girths must be tight.

I feel that the *Field* would perhaps be the more suitable medium for this discussion; but I could not allow the remarks in your journal to pass unnoticed.

I am, Sir, yours truly,

Hyde, Cheshire, March 6th, 1880. FRED. PEARCE.

MEDICAL CHARGES.

To the Editor of THE LANCET.

SIR,—You would much oblige if you would publish in a corner of your correspondence sheet the following memo. of account, and I would ask any of your readers to put a fair and usual charge. The patient lives in a first-class house, rent probably £200 to £250 a year, and drives carriage and pair in good style. Visits special are those in which immediate attendance is requested and rendered.

July 20.—Vis. spl. Pil. 8.
21.—Vis. spl. M. 8.
Vis. evg. Inject. morphia.
22.—Vis. Haust. ij. M. 8.
Pil. 30 (gr. ij. quin. sulp.)
23.—Letter of patient's case to consultant.
24.—Vis.

I should say that my patient objected to my putting down the last items. The facts being as follows:—On the morning of 23rd I received a note from patient's wife in the usual friendly way, saying that her husband wished to consult Dr. ——. I, of course, at once wrote to Dr. ——, and, having on the morning of 24th received his reply, I at once called on my patient, as it has always been my habit to do in similar circumstances.

Your obedient servant,

March 5th, 1880. EXTRA-URBAN PRACTITIONER.

MEASLES DEVELOPED TWICE IN A MONTH.

To the Editor of THE LANCET.

SIR,—I believe the following case to be unusual.

I attended a young married woman with fully developed measles, and put her off the list on Jan. 24th, quite well. She went away for change, and returned on Feb. 14th. On the 17th I was asked to see her, and found her with a full crop of measles again, from which she has since recovered.

I should say there has been an epidemic of measles here: about 400 cases in a population of rather over 2000.

Yours faithfully,

Looe, Cornwall, March 1st, 1880. G. KERSWILL.

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COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Gowers, London; Dr. Duckworth, London; Mr. C. Baden, London; Dr. Kane, New York; Mr. Hosegood, Swinton; Mr. Startin, London; Dr. Kerr, Leytonstone; Dr. G. Budd, Edinburgh; Mr. Whalley, Edinburgh; Mr. Robinson, Birkenhead; Mr. Smith, London; Mr. Davies, London; Surgeon-General Longmore, Netley; Dr. Murphy, Sunderland; Dr. Walmsley, London; Mr. Critchett, London; Mr. Matravers, Melksham; Dr. Neale, London; Dr. Stevenson, London; Dr. M'Calman, Ilsley; Mr. F. W. Cosy; Mr. Wyatt, Kingsdown; Mr. Elliott; Mr. Paramore, London; Mr. Roche Lynch; Mrs. Tatham, Oakhill; Mr. Williams, Swansea; Mr. Allan, New Wandsworth; Mr. Sutton, Sittingbourne; Mr. Worsley, Preston; Mr. Dawson, Manchester; Mr. Crerar, Maryport; Mr. Meymott, Ludlow; Mr. Bull, Newcross; Dr. Saundby, Birmingham; Mr. Edwards, Bala; Dr. Dowse, London; Mr. Pearce, Hyde; Dr. Hughes, Dinorwic; Mr. Daniell, London; Mr. Lucas, Newark-on-Trent; Dr. Ross, Kamptee, India; Mrs. Wilson, Inverness; Dr. Reid, Temby; Mr. Moulding, Liverpool; Mr. Blair, Leeds; Messrs. Halrick and Co., Glasgow; Mr. King, Leighton Buzzard; Dr. Bisse, Mahanoy City, U.S.A.; Messrs. Paul and Co., London; Mr. Andrew, Stockport; Messrs. Evans and Co., Wrexham; Dr. Jones, Netley; Messrs. Burgoyne and Co., London; Messrs. Burgess and Co., London; Mr. Gawood, York; Messrs. Richardson and Co.; Dr. Coates, Sirhowey; Mr. Snell, Stamford; Messrs. Clowes and Nash, Norwich; Mr. Williams, Talgar; Mr. Scott, Manchester; Mr. Gurner, London; Mr. Fisher, Kendal; Mr. Dunman; Mr. Greenwood, Liverpool; Dr. Creighton, Cambridge; Mr. Edwards, Faversham; Mr. Stilliard, Birmingham; Messrs. Harrison and Brass, Elgin; Dr. Ormerod, London; Mr. Clifton, St. Leonards-on-Sea; Dr. Webb, Wirksworth; Mr. Gardiner Brown, London; Mr. Van Voorst, London; Dr. Douglas, Sunderland; Dr. Wylie, Stewarton; Mr. Allsop; Mr. Hayden, Tunbridge Wells; Mr. Dixon, Newcastle-on-Tyne; Mr. Seaton, Sunbury; Mr. Dixon, Newcastle-on-Tyne; Mr. Praeger, Houghton-le-Spring; Dr. Caird; Mr. Louis Greg; Mr. J. Henry, Edinburgh; Mr. Kilner, Bury St. Edmunds; Mr. Sydney Smyth, London; Dr. Holmes, Bromyard; Mr. Leaver, Stratford-upon-Avon; Mr. J. C. Renton, Glasgow; Mr. Heeley, Stoke Devonport; Mr. F. M. Brown, Wansford; Mr. Austin; Mr. Ayres, Deptford; Mr. Kemp, London; Dr. Tatham, Salford; A Subscriber, Egham; C.; J. S. W., Abersychan; Tobacco; Private, R.V.; A Constant Reader; Extra-urban Practitioner; M.D., Hastings; Spithead; F. T., Devizes; Subscriber; F. W.E.; M.R.C.S.; Medicus, Forest-gate; Mr. R. F.; Scrutator; Surgeon, R.N.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Bryan, Littlehampton; Mr. Hayward, Bristol; Mr. Macnamara, Uxbridge; Dr. Webb, Wirksworth; Mr. Breeze, London; Mr. Knott, Worcester; Dr. Pritchard, Teynham; Dr. Hartree, Strantown; Mr. Adams, Rippingale; Dr. M'Carthy, Darlington; Mr. Hammett, Taunton; Mr. Ross, Alderney; Mr. Fulton, Toronto; Mr. Ridges, Wolverhampton; Mr. Pearce, Southampton; Mr. Elkins, Bedford; Dr. Taylor, Cardiff; Messrs. Maclachlan and Co., Edinburgh; Mr. Price, Edinburgh; Mr. Hewes, Halstead; Mr. Farrar, Bradford; Mr. Henry, Sherborne; Dr. Flood, Dublin; Mr. Slingsby, London; Mr. Hughes, Woodbridge; Mr. Wood, Bromsgrove; Dr. Donaldson, Glasgow; Mr. Hippisley, Leicester; Mr. Beverhoudt, Elvington; Messrs. Beatty and Son, Sunderland; Messrs. Gabriel and Trope, London; A. B.; N. B.; N. A.; L.R.C.S., Newbliss; Medicus, Walthamstow; Kappa, Durham; X. Y., Southwark; Medicus, Edinburgh; R. B., Glasgow; Cymro; N. B. G., Coatbridge; W. H., Birmingham; M.D., Hastings; X. Y. Z.; Hermes; M.D., Manchester-square; Surgeon; Medicus, Peterborough; Alpha, Edinburgh; C. H., Holloway; &c.

Camberwell and Peckham Times, Rock, L'Union Médicale, Liverpool Daily Post, Surrey Advertiser, Brighton Guardian, Manchester Examiner, Shield, Church of England Temperance Chronicle, Los Avisos, Hertfordshire Mercury, College and Clinical Record, Bristol Mercury, Journal of the Society of Arts, Isle of Wight Journal, Bournemouth Visitors' Directory, Carlisle Patriot, Warehousemen's and Drapers' Trade Journal, Croydon Advertiser, &c. &c., have been received.

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Agent for the Advertising Department in France—

M. BERTHIER, 104, Boulevard St. Germain, Paris.

Medical Diary for the ensuing Week.

Monday, March 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Comparative Anatomy of Man."

MEDICAL SOCIETY OF LONDON.—8½ P.M. The President (Mr. Gant) will deliver an opening Address.—Dr. Ord, "On a Case of Thoracic Aneurism treated by Electrolysis, and Observations on Thoracic Aneurism."

Tuesday, March 16.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

ROYAL INSTITUTION.—3 P.M. Professor Schäfer, "On the Physiology of Muscle."

STATISTICAL SOCIETY.—7½ P.M. Surgeon-General T. G. Balfour: "Vital Statistics of Cavalry Horses."—Professor Leone Levi: "A Survey of Crimes and Offences in England and Wales from 1857 to 1878."

PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Specimens illustrating the Histology of Granular Kidney; Section of Secondary Tumour after Removal of Breast; Epithelioma of Penis; Melanosis of Finger; Aneurism of Mitral Valve; Aortic Aneurism opening into Right Auricle; Ulcer of Stomach; Section of Molluscum Contagiosum; Microscopic Sections of Elephantiasis and Photographs of the same from Shanghai; Horny Growth from Lower Eyelid; Skin Disease, probably Lichen Ruber (living specimen); Drawings of Cancer; Morphœa in process of rapid Recovery (living specimen); &c. &c.

Wednesday, March 17.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Comparative Anatomy of Man."

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Lumleian Lectures: Dr. W. Roberts: "Researches on the Digestive Ferments and the Preparation and Use of Artificially Digested Food."

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.—7½ P.M. Council.—8½ P.M. Mr. Francis Fox, "On Irregularities of the Teeth and their Surgical Treatment."

Thursday, March 18.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On recent Chemical Progress."

HARVEIAN SOCIETY.—8½ P.M. Mr. A. J. Pepper, "On a Case (and prepared Specimen) of Malignant Disease of the Hip."—Mr. Knowsley Thornton, "On the various Methods of dealing with the Pedicle in Ovariotomy."

Friday, March 19.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Comparative Anatomy of Man."

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Lumleian Lectures: Dr. W. Roberts: "Researches on the Digestive Ferments and the Preparation and Use of Artificially Digested Food."

ROYAL INSTITUTION.—8 P.M. Evening Meeting.—9 P.M. Professor Tyndall: "Goethe's Farbenlehre (Theory of Colours)."

CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Thos. Smith: (1) "Spontaneous Gangrene of the Thumb and Fingers of the Right Hand"; (2) "On two Cases of Cystic Hygroma."—Dr. de Havilland Hall, "On a Case of Intrathoracic Sarcoma."—Mr. Nettleship, "On two Cases of Sympathetic Ophthalmitis, setting in three weeks after Excision of the other Eye."—Dr. F. Taylor will show a Case of unusual Transmission of Cardiac Bruit by the Lung.

Saturday, March 20.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. Saintsbury: "Dryden and his Period."

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THE

Gulstonian Lectures

ON

EPILEPSY.

Delivered before the Royal College of Physicians,

BY W. R. GOWERS, M.D., F.R.C.P.,

SENIOR ASSISTANT-PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

LECTURE II.—PART II.

I HAVE placed together, in the next group, the bilateral sensations in the limbs and certain general sensations which seem to the patient to be universal. Of the attacks beginning simultaneously in the limbs of both sides, the commencement was in the arms in 11 cases. In 4 it was by a sensation only—numbness, tingling, or pain; in 7, by twitching or cramp, with or without tingling. In most cases the commencement was in the hands as a whole, as might be anticipated from the wide distribution of the discharge. In 12 cases the attacks commenced simultaneously in both legs. In half of these the aura began in the feet, as a tingling, trembling, or creeping sensation. Two of the cases of this group were distinctly due to chronic alcoholism. Auræ referred to the trunk, and not distinctly visceral, are very rare; and the sensation is almost exclusively felt in the back—pain or a sense of trembling in the spine. The frequency with which there are hystero-epileptic convulsions in these cases differs very strikingly according to the seat of the aura. All the cases with a spinal aura were epileptic, and so were almost all these in which the attacks began in both arms, only 1 of 14 having been hystero-epileptic. But of 11 cases in which the aura was referred to the feet, in only 4 could I be certain that the attacks were epileptic; in 3 they were certainly hystero-epileptic, and in 4 their exact character was doubtful.

The other auræ, grouped together as general, tremor, startings, jerkings, malaise, faintness, were described in 51 cases—one-tenth of the whole. General tremor or shivering, present in 13 cases, was associated in 3 with pain in the head. General starts or jerkings, the aura in 10 cases, were never associated with pain in the head. In several of the cases the fits occurred during sleep; the patient was awakened by the starts or jerks, and then passed into the fit. General sensations were described as preceding the attacks in 15 cases: a feeling of general illness or malaise, of general powerlessness, of general heat (in 3 cases), of general cold (in 1 case). A sense of faintness, which the patient could not localise, was the aura in 13 cases, and was associated with sweating in 1 case and with giddiness in 3. Almost all the cases commencing with tremor or starting were purely epileptic; whereas among those which commenced by faintness, one-third, and of those commencing by other general sensations, one-half, were hystero-epileptic.

The next group of auræ are those which I have associated as referable to the region of the pneumogastric nerve, including the respiratory part of the spinal accessory. It is not suggested that they have any special relation to this nerve as such. Some of them begin or pass beyond it, but the pneumogastric is the nerve to the organs in which visceral auræ are most frequent, and the majority of these auræ are confined to its functions. These warnings were described in 106 cases.

The commonest form is the so-called "epigastric aura," a sensation referred to the pit of the stomach, present in one-half (51 cases). In a third of these it was actual pain; in half it was a vague, indescribable sensation; in the remainder it was described as a feeling of "burning," of "coldness," of "trembling," of "something there," or of "winding up." In most cases it was referred to the epigastric region generally; in a few it was a little to the left; in none to the right. In 2 it commenced lower in the abdomen; in several it was referred to both the epigastrium and the lower part of the sternum. Whenever the sensation was actual pain, it remained at the epigastrium until consciousness was lost. In many of the cases in which the sensation was vague, it was described as "rising up through the chest" to the throat or head. The passage to the head was usually followed by immediate loss of consciousness; that to the throat by a sensation of choking. The latter reminds us of the well-known sensation in hysteria, and in many cases of genuine epilepsy the sensation appears to be exactly the same as the globus hystericus. Not only so, but I have seen a case of tumour of the pons in which the epileptiform convulsions commenced with the same sensation, described as a "ball rising up from the stomach to the throat, and stopping the breath."

In 18 cases in which there was no sensation at the epigastrium, the warning was the choking feeling only. In 2 of these there was also coughing. In 7 cases the attacks commenced by some other sensation in the throat. One patient would suddenly exclaim that her throat was sore, grasp it with her hands, and fall in the fit. In 6 cases there was a sensation of dyspnœa or suffocation, referred to the chest and not to the throat. In 5 cases there was some other sensation in the chest, vague in 2, "burning" in 3.

These auræ felt in or ascending to the chest and throat, appear to be the expression of a disturbance in the sensori-motor processes connected with the respiratory function of the pneumogastric. I need hardly remind you that spasmodic actions form part of the normal action of the respiratory centre as they do of no other, and must be reproduced in higher and associated centres. The epigastric pain which remains limited to the epigastrium appears to be related exclusively to the gastric division of the vagus. Accordingly we find that in 14 cases there was described, as part of the aura, another sensation referable to the same function—nausea, evidently such after most careful questioning, and accompanied in several cases by actual retching. In 1 case sudden, intense hunger was described. Other symptoms, often associated with gastric disturbance, accompanied the pneumogastric aura in some cases, as pain in the head and giddiness, the latter especially when there was actual nausea.

Another organ within the innervation of the vagus is the heart, and cardiac sensations constituted the aura in 16 cases, pain in 2, a vague sensation in 3, and palpitation in 11.

Hystero-epileptic attacks occurred in a larger proportion of the cases in this than in any other group—one-fourth. They constituted one-fifth of these with an epigastric aura, or with chest dyspnœa, one-half of those with a throat aura, and one-third of those with a cardiac aura.

The next group comprehends the cases, 90 in number, in which the attacks commenced with a sensation of giddiness, vague or definitely vertiginous, or with the fact of rotation. As a rule, when a sensation merely, the direction could not be ascertained, but of 5 cases the sensation was of turning to the right in 2, and to the left in 3. Of 15 cases with actual rotation, the movement was to the right in 5, and to the left in 10. In nearly all the convulsion was bilateral. In bilateral fits the discharge is never quite equal on the two sides, as proved by the common deviation of the head, and the rotation and vertigo seem to be the expression of this inequality. Almost all the cases were epileptic, one-sixth only being hystero-epileptic. In most consciousness was very easily lost.

Sensations referred to the head preceded the fits in 50 cases. In 21 the sensation was actual pain, mostly general or undefined, in a few frontal, in very few vertical or unilateral. It was rarely associated with any other aura. In 29 cases the sensation was other than pain, usually vague, in a few definite—described as "blood rushing to the head," "coldness," "burning," or a dim sense of heaviness or pressure. In some cases it was associated with distinct vertigo, and in others the cephalic sensation itself was closely allied to vertigo. In one patient, for instance, the sensation was always described as "two circles within the head moving rapidly in opposite directions, and seeming to get alternately nearer and farther off," until consciousness was lost. In one or two cases a cephalic sensation was associated with an auditory aura, in none with a visual sensation. In one-fourth of the cases with this aura the convulsions were hystero-epileptic, and the proportion was nearly the same whether it was a mere sensation or actual pain. Sudden somnolence preceded the fit in 5 cases, all purely epileptic. Sudden inability to speak constituted the warning in 9 cases, of which 2 were hystero-epileptic.

The aura was psychical in 25 cases, an emotion in 10, an idea in 15. The emotional auræ in all took the form of

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fear—vague alarm or intense terror. Associations with other auræ were rare, the only combinations being with a sensation in the legs and with pain or other feelings in the head. In no case was it combined with an epigastric sensation. In every case the fits were purely epileptic, although in some they were slight. This is remarkable, since, as we shall see, manifestations of terror are common in hystero-epileptic attacks. The occurrence of this aura bore no relation to fright as a cause of the attacks. Its comparative rarity may excite surprise. No case was reckoned in which the sensation was not mentioned spontaneously by the patient. In most, perhaps in all, cases with a deliberate onset, a natural feeling of alarm is produced by the warning, and if the patient is asked if he has a feeling of fear, he always replies in the affirmative, but this can evidently not be reckoned as a true emotional aura. Of the 15 cases in which the attacks were preceded by a mental state, in 12 they were purely epileptic, in 3 hystero-epileptic symptoms occurred. In most cases no other description of the aura could be given than that "an idea seems to come into the mind." In one case, that just mentioned as commencing by a sensation in the great toe, followed by a desire to micturate and a feeling of turning over and over, this was succeeded by the idea of being in heaven, seeing persons and hearing a question asked. The subsequent fit was certainly epileptic. Several patients described a feeling analogous to that which Dr. Hughlings Jackson has designated "voluminous," apparently similar to that said to be experienced during the act of drowning, a sudden recollection of many past events. Another occasional aura was a sense of strangeness—familiar objects suddenly seemed unfamiliar, and then the attack came on. In one case whatever was taking place before the patient would suddenly seem to be wrong—i.e., morally wrong,—and then he lost consciousness.

The last group of auræ are those referred to the special senses and their organs, which were present in 119 cases. Two-thirds of these (84) were referred to the organ or sense of sight, one-fifth (26) were auditory, 9 olfactory or nasal, and 1 gustatory.

Sensations of smell preceded the fit in 7 cases, all purely epileptic. In most cases the sensation was of an unpleasant smell. One patient described it as a smell like matter; another such as is caused by burning dead bodies; another as like rotten eggs; another compared it to Tonquin beans. The only associations noted were with a visual aura (2 cases) and with a feeling of suffocation (2 cases). A true gustatory aura is among the rarest forms of warning, and was met with in only 1 case. It was described as a taste between sour and bitter, and was referred to the back of the tongue.

The warnings referred to the organs of vision may be divided into five classes: a sensation in the eyeball itself; diplopia; an apparent increase or diminution in the size of objects; loss of sight; distinct visual sensations. A sensation in the eyeball was present in 7 cases, 5 purely epileptic. The eye to which it was referred was in 1 case on the same side as the first motor symptom of the fit; in 1 on the opposite side. It is probable that the centre for common sensation in the eyeball is connected with that for vision. This is suggested by the phenomena of photophobia due to the fifth nerve. In one patient, fits commencing with a pain in the eye were followed by red vision; and in a case of cerebral tumour, presently to be mentioned, a visual sensation and pain in one eye were associated as the aura of the fits. Double vision preceded the attacks in 5 cases. Two were cases of hystero-epilepsy, and the diplopia may have been due to the convergent strabismus so common in hysteroid states. In 2 of the cases, however, the attacks were epileptic. In 1 the diplopia was associated with aching in one eye and an apparent magnification of objects. The apparent increase or diminution in the size of objects is a rare and curious aura. It is apparently connected with increase or diminution in the sensitiveness of the visual centre, which produces the same effect on the consciousness as the stimulation of a larger or smaller area of the retina by a larger or smaller image. Loss of sight preceded loss of consciousness in 26 cases—18 purely epileptic, 4 co-ordinated. It was commonly complete and simultaneous in the two eyes. In 1 case it was said that the sight of the right eye went before the left, followed by rotation of the head to the left. The loss was preceded by a visual sensation in 2 cases, by an auditory sensation in 1, and in 1 case loss of hearing followed the loss of sight. The only frequent associations were with vertigo in 4 cases, and with rotation of the head in 2.

The aura was a distinct visual sensation in no less than 46 cases (35 epileptic, 3 with hystero-epileptic symptoms, 8 doubtful). The sensation in 9 cases was that of light, not colour—sparks, a ball of light, a flash, or a glare. In 17, colours were seen; and 15 patients were able to give some account of the colours. In 7, only one colour was seen, and this was always either red or blue—the former described five times, the latter twice. No other colour was ever seen alone. Combinations described were—red and blue twice; red, blue, and purple once; red, blue, and green once; red and green once; blue, green, and yellow twice; red, blue, and yellow once. Thus not only were red and blue the only colours seen alone, but they were both present in half the cases in which other colours were seen, and in no case were both absent. Taking the cases together, the order of frequency of the several colours is—red (eleven times), blue (eight times), green (three times), yellow (three times), and purple (once). It is evident that this order does not correspond to the physical relations of colour, as shown, for instance, by their grouping in the spectrum; nor does it correspond in any way to the areas of retinal perception. Red, seen most frequently, has one of the smallest retinal fields; but green, seen much less frequently, has a still smaller field; while the field for yellow, seen as rarely as green, is one of the largest, and is nearly the same as the field for blue, which is one of the colours mentioned most frequently, But the order does correspond, not exactly, but in a very suggestive manner, to the degree of visibility of colours. Cohn[1] found that the order in which spots of colour, one millimetre in diameter, can be seen in direct sunlight at different distances is—beginning with that which can be recognised at the greatest distance—red, next blue and green (equal), next yellow, and least violet. This is evidently not far from the order of development in epilepsy.

In 14 cases the aura was a highly specialised visual sensation, a visual idea. In 2 cases this succeeded a simple visual sensation. One patient, in attacks of *petit mal*, first saw a number of red and white dazzling stars, and then an old woman, and other objects which she could not remember. This is of course rather an attack than an aura. But another patient first saw always bright lights—red, green, yellow, and then, the lights continuing, she saw a girl, and tried to get to her to ask what the lights meant, and then fell in the fit. In the first of these cases the less specialised preceded the more specialised sensation, a sequence to which Dr. Jackson has drawn attention, as suggesting that the more special sensation is the result of the loss of control from the discharge causing the less special sensation. But in the second the more and the less specialised sensations occurred together, and in other cases an equally special sensation, a visual idea, constituted the sole warning of the fit, and must be ascribed to the discharge itself. Two patients had visions of an old woman, and in 3 ugly faces were seen, and in 2 "various people;" in 1 "animals." Two patients described an aura consisting of visions of objects and places familiar long ago, a visual sensation analogous to the psychical aura I have mentioned. In one patient the fits were preceded by a vision of "beautiful places, large rooms," &c.

Associations of the visual aura are comparatively rare. In 3 cases the conjoined aura was in the limbs, and, as already mentioned, in all these the aura in the limb commenced by a sensation. One of these was the case in which a flash was seen as soon as a pain, which commenced in the arm, reached the middle of the thigh. When the visual sensation was unilateral the side in several was the same as that on which the limbs were involved. Thus, in 1 case, some fits commenced with the appearance of a blue star before the left eye, which grew larger and larger until consciousness was lost, and other fits began in the left arm, and others in the left leg. In another patient a bright light referred to the right eye was associated with loss of speech. In these cases the sensation may have been rather referable to one side of both fields of vision than to one eye. Epigastric sensations were associated in 3 cases, and in 3 an auditory sensation. The sensations in one patient were very complex and numerous, and, as I shall have to refer to it again, it may be well to relate the case in some detail. The patient was an intelligent man, twenty-six years of age, and all his attacks began in the same manner. First there was a sensation in the left hypochondriac region "like pain with a cramp"; then, this sensation continuing,

[1] Brit. Med. Jour., Oct. 4th, 1879.

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a kind of lump seemed to pass up the left side of the chest, with a "thump, thump," and when it reached the upper part of the chest it became a "knocking," which was heard as well as felt. The sensation rose up to the left ear, and then was like the "hissing of a railway engine," and this seemed to "work over his head." Then he suddenly and invariably saw before him an old woman in a brown-stuff dress, who offered him something which had the smell of Tonquin beans. The old woman then disappeared, and two great lights came before him—round lights, side by side, which got nearer and nearer with a jerking motion. When the lights appeared the hissing noise ceased, and he felt a choking sensation in the throat, and lost consciousness in the fit, which, from the description, was undoubtedly epileptic. He had also attacks of *petit mal*, which consisted of a vision of a dull-red ball to the right in the lower part of the field. Thus here we have first a pneumogastric (visceral) sensation which becomes intermitting and sound-like as it ascends towards the ear, until it is finally an intermitting hissing, perhaps the least specialised of all the auditory sensations. This is accompanied by a visual sensation of very high specialisation—a visual idea associated with an olfactory sensation. This gives place to a much less specialised sensation, the two lights, and as the visual centre becomes invaded by this discharge that in the auditory centre ceases. Finally, the aura terminates with the completion of the pneumogastric sensation—a sense of choking. I shall have to refer to this case again in my next lecture, and will now merely point out that the more specialised visual sensation preceded the less special, and therefore cannot have been due to "loss of control" by preceding discharge; it was evidently due to the discharge itself. The phenomenon of *two* lights before the eyes is one of great rarity among the auræ of epilepsy. Lastly, the association of intermission of the sound with a jerking movement of the lights is worth remark. The only autopsy which I believe has been published of a case in which the visual warning existed, is one which I recorded about a year ago. The fits were preceded by a flash of light or pain in the eye, and micropsy, and were due to a tumour in the occipital lobe, which had extended forwards as far as the visual centre in the angular convolution.

To pass to other forms of auditory warnings, noted in 26 cases. In 6 there was an auditory loss, a sudden sense of stillness analogous to the sudden loss of sight already mentioned. In 1 case the two were associated; for a moment all was silent, then all was dark, then consciousness was lost. In a case in which the sensation began in the tongue and passed to the arm and leg, sight was lost after the arm was involved, and hearing after the sensation was felt in the leg. In 1 case some attacks were preceded by an auditory sensation, "singing in the ears," others by an auditory loss.

Auditory sensations preceded the fits in 21 cases. In 4 it was a sensation of an explosion or crash; in other cases the sensations described were the "sound of a drum" (twice), a "whiz" (twice), a "hissing" (twice), a "ringing" (twice), a "rustling," a "rushing sound," and a "sound of thunder." All these may be regarded as the lowest forms of auditory sensation. In 3 cases the sensation was more special—an auditory idea. One patient always heard the words "c-o-n with a con" repeated several times, and then came the fit. In 2 cases music was heard.

The most frequent associations of the auditory aura were with a visual aura (in 7 cases), and an olfactory aura (in 2 cases). In 2 cases it was associated with a sensation beginning in the left hand, and other combinations noted were with auræ beginning in both legs, in both arms, with vertigo, an epigastric sensation, and nausea. In the 3 latter we may trace the normal association of the auditory centre. In several cases in which a visual and auditory aura were combined, the two corresponded in character—i.e., in their degree of specialisation. For instance, one patient described a red light and a rushing sensation like water. The patient who heard the words "c-o-n with a con" saw a girl standing by her who was saying them, and a patient who saw "beautiful places, large rooms, &c.," heard at the same time "beautiful music."

The association of the visual and auditory warnings is well explained by the contiguity of their centres as determined by Ferrier. The angular gyrus, in which is the visual centre, is continuous with the superior temporo-sphenoidal convolution, in which is the auditory centre.

I am aware of no published post mortem of a case in which an auditory aura preceded the fits, but in a case of cerebral tumour of Dr. Hughlings Jackson's (which I had the opportunity of watching with him for some years, and which he kindly permits me to mention), a sound of bells ringing, referred to the left ear, preceded left-sided fits in an early period of the disease. After death we found a tumour outside the opposite optic thalamus. It was extensive, but had evidently commenced between the thalamus and the upper temporo-sphenoidal convolution.

Dr. Hughlings Jackson has suggested that the senses are not equally represented on the two sides of the brain, and that the more special the sense the more unequal is its bilateral representation, the more does it preponderate on the right side. The facts of this series of cases give only a partial support to this view. We have seen that attacks commencing by a sensation in the arm began twice as frequently in the left arm as in the right. Nevertheless, all the cases commencing by a sensation in the tongue were right-sided. In none of the cases with an olfactory aura was there any indication of the side which led in the fit. In most of the cases with an auditory aura the sensation was referred to both ears. In 6 cases, however, it was referred to one ear, twice to the right (left side of brain), and four times to the left (right side of brain). But in 10 cases in which visual sensations commenced the fit, in which there were indications of the leading side, there was no difference between the two, in 5 the fits began on the right, and in 5 on the left side, and we must regard the visual as perhaps the most special of all the senses.

Among the other symptoms of the attacks of epilepsy in this series of cases, time permits me to mention only one or two points. The first of these is that pallor of face, although frequent in the early stage of epileptic fits, is also entirely absent in a considerable number of cases. I have watched many attacks, both slight and severe, in which there has been absolutely no change in the appearance of the face until cyanosis came on from interference with respiration.

A typical fit consists of first tonic and then clonic spasm. It has been customary to separate the periods marked by these two forms of spasms, and assign them to different causes. But close observation will show that there is no abrupt transition from one to the other. The clonic spasm is developed by interruptions in the tonic spasm, and these interruptions may be detected by the hand before they are visible to the eye. The clonic spasm is, indeed, only a condition of tetanus in the physiological sense of the word. Slight intermissions probably exist, but are too frequent to be recognised. As they become less frequent they increase in degree, until they become complete. The muscular contractions are thus separated; as the fit ceases they do not become slighter but less frequent, and the last jerk is often as intense as any which preceded it. In partial epileptiform seizures the spasm is usually clonic throughout, and I have seen, in rare instances, tolerably severe attacks in which all the spasm was clonic. The significance of these facts will be considered in the next lecture. There is one class of epileptic attacks in which there is only tonic spasm—general rigidity. They constitute, however, a special group, and are on the side of epilepsy towards hystero-epilepsy.

In the spasm of an epileptic fit flexion predominates slightly over extension, and more in the distal than in the proximal parts of limbs, at least in the arms. The hands are said to be usually tightly clenched. Sometimes this is the case, but a much more common position is with the wrist strongly flexed, and the fingers in the interosseal position, that is, with the metacarpo-phalangeal joints flexed and the others extended, the thumb being within the fingers, and all close together. It is an exaggeration of the posture seen in tetany.

The cases which present co-ordinated spasm as part of the attack, and which may be somewhat loosely grouped together under the name of hystero-epilepsy, are of much interest on account of their practical importance, and on account of the attention which has lately been directed to them. These forms of attack present many variations, and as seen in this country differ somewhat in their character from that which they present abroad. Attacks of these forms have long been described as hysterical. But their severity, their epileptoid aspect, have led to their being designated by such terms as hystero-epilepsy, hysterical epilepsy, and Dr. W. Roberts has lately proposed to call them hysteroid. They have unquestionably close relations with epilepsy. They own for the most part the same causes, near and remote, are, as we shall see, pathologically connected with epilepsy, and,

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as stated in the first lecture, many of them have almost certainly been included in all published statistics of epilepsy. They have also relations with insanity as well as with hysteria in its simpler forms.

The cases which have come under my notice may be grouped into four classes. The first and most frequent is that which resembles the most closely the description of hysteria major given by Charcot. A patient suddenly falls, apparently unconscious, and, sometimes after a brief period of tonic rigidity, sometimes instantly, presents more or less violent co-ordinated movements, extreme opisthotonos, wild movements of the limbs, which are sometimes jerked quickly, regularly or irregularly, more often thrown about. Often the opisthotonos alternates with simple tonic spasm, in which the arms are stretched out at right angles to the trunk, in the attitude designated by Charcot "crucifiement." The eyes converge strongly, or are rolled up, or directed to one side or the other. They never diverge. Often the paroxysms of violent movement alternate with manifestations of the most intense terror. The eyes are fixed on some imaginary object, as with a look of horror the patient half rises or tries to shrink away. In a moment convulsive movements of frenzied intensity succeed. The head is dashed about with such violence as often to inflict serious bruises, and the back is arched with such rapidity and force as almost to make the patient bound off the bed; the attempts to restrain the movements increase their violence. The more restraint used the more is needed, and these are the attacks in which the friends of a patient sometimes tell us that "six persons have to sit on him to keep him down." The violent paroxysms often alternate with periods of tranquillity, in which, however, peculiarities in tone and aspect tell those accustomed to these attacks that the fit is not yet over, and presently a fresh paroxysm of terror or furor comes on, and if not cut short by treatment the condition may go on for hours. The end is usually sudden, often with a deep sigh. These attacks vary infinitely in severity and character. When slight they resemble, and are, indeed, identical with the attacks properly called hysterical. When severe they resemble epileptic mania rather than hysteria, and might indeed be called attacks of compressed mania. In slighter paroxysms the patients may talk wildly. One patient always counted backwards with extreme rapidity. In some cases, especially in children, the patients scream loudly throughout; these are the "screaming fits" of which the friends speak. In severe seizures a curious condition is often observed, which may be called therio-mimicry. The noises and actions of animals are strangely imitated. The patient mews like a cat, or, much more frequently, barks like a dog. This is evidently in part mimetic, although some patients who present the symptom are, in the intervals between the attacks, as far as possible removed from any absurdity. But it seems to be, in part also, the manifestation of some strange animal instinct which we possess in a latent or modified condition, like our canine teeth. A frequent characteristic is the tendency to bite, which may exist apart from any other imitation of animals. It renders the task of attending to these patients in the attacks not wholly devoid of danger. Not only do they bite, but they do so in a curiously animal manner. I have seen a lad of sixteen take the corner of his pillow between his teeth, and shake it exactly as a cat does a mouse, or as the lion shook Livingstone. We are reminded by the barking and biting of some of the symptoms of hydrophobia, and one effect of the poison of rabies in man appears to be to develop a condition identical with hystero-epilepsy, and the convulsions of hydrophobia are always more or less co-ordinated in character. Such symptoms as I have described may probably succeed a true epileptic fit. They may also succeed attacks of *petit mal*. But the co-ordinated convulsion may also, as I have seen, commence in the first moment of the attack. The tonic rigidity, which often initiates these seizures, is different from the condition in a true epileptic fit, although apparently nearly the same as that which Charcot has described as the epileptic stage of these fits.

In women suffering from these attacks I have occasionally found ovarian tenderness, and by ovarian pressure I have often made the patients feel ill, and caused choking sensations in the throat, but I have never succeeded in producing an attack. Nor, of many gentlemen who have practised ovarian compression at the Salpétrière, and tried it on the hystero-epileptics at Queen-square, has anyone, as far as I am aware, been more successful. Now and then I have arrested a fit by ovarian compression, but the arrest has appeared to be due merely to the pain caused, and not to any special influence, and in such cases the attacks could be cut short much more readily by faradisation of the skin. In one of the most severe cases of hystero-epilepsy which I have seen, Dr. Wilson of Surbiton found that at first ovarian compression had no effect; after many repetitions, in different attacks, it did arrest them, but even then less readily than compression at the epigastric region. Another point of difference from the disease as it occurs abroad is that, in the natives of this country, it is never, so far as I have seen, accompanied by any erotic manifestations. Such attacks occur in girls of any age over seven, in women under forty, in boys not at all rarely, and occasionally in adult men. Some of the severest attacks which I have seen have been in men between twenty and thirty-five. They frequently come on during sleep.

In the co-ordinated attacks just described opisthotonos is frequent. A second variety presents, as its predominant characteristic, spasms of the opposite variety, emprosthotonos. The trunk is flexed, so that the head and thighs are in contact. This form occurs chiefly in boys, and is usually very uniform in its occurrence, all the attacks being similar. One patient, a woman, whose attacks came on in the night, always woke up from sleep with a sensation of this spasm, although there was in reality merely general tonic rigidity.

A third variety presents co-ordinated spasm in the legs of regular rhythm. During the attack the legs are alternately drawn up and pushed down, the patient being commonly on her back. If on the floor she may be gradually propelled, head foremost, from one side of the room to the other. Several cases which I have seen have presented singular uniformity in the character of the spasm. All were females. Identical convulsive movements in the legs have been observed in hydrophobia.

A fourth variety of attack is characterised by extreme difficulty of breathing, not the rapid breathing sometimes observed in hysterical patients, but intense respiratory spasm. They are the "choking fits" of adults. It is no doubt an extreme degree of the disturbance, which in slighter measure causes the globus hystericus. Since this variety is rare, I may describe briefly an example of it. The patient was a quiet, well-conducted girl. She was unconscious of any warning, but an observer could note a slightly frightened expression and restless movement of the eyes just before an attack; then she would suddenly fall, and instantly begin labouring for breath. If placed on a chair, she could sit up, but the agony of dyspnœa was extreme. Her head was thrown back, her mouth half open, her arms held out before her with fingers separated; the muscles of inspiration were thrown into violent action, and a choking noise in the throat accompanied each laboured breath. From time to time there was an ineffectual attempt to swallow, and she would strike the upper part of the chest with violence, as if trying to shake something down. Her face rapidly became flushed, then dusky, and the dyspnœa increased, until she seemed on the point of suffocation. By closing the mouth and nose, and so producing actual apnœa, the spasm could generally be stopped, but her aspect was wild and she spoke strangely, and in a few minutes passed into another similar paroxysm. Even if placed under the influence of chloroform the dyspnœa returned as the effect of the anæsthetic passed away, and if not stopped by means to be described in the next lecture, such attacks would go on for hours. It is instructive to compare the features of such an attack with the other well-known forms of respiratory spasm—the globus hystericus, the epigastric-throat aura of epilepsy, the paroxysms of laryngismus stridulus, and the respiratory spasm, which constitutes so prominent a feature in the symptoms of hydrophobia. The relation which attacks of the co-ordinated class bear to epilepsy and to hysteria is a subject on which various opinions may be and are held, and to which I hope to refer briefly in the next lecture, in considering the pathology of these diseases.

MR. ROBERT MORGAN, Local Government Board Inspector, attended at Penistone on the 10th inst., and took evidence as to the dissolving of three separate local board districts, and merging them in the rural sanitary district of the Penistone Union. The districts are Denby, Gunthwaite, and Hoyland Swaine.

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Clinical Lecture
ON A
CASE OF ULCERATIVE ENDOCARDITIS WITH EMBOLISM OF THE BRAIN.

BY HENRY THOMPSON, M.D., F.R.C.P.,
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MARY T——, aged forty-eight, was admitted under my care July 31st, 1877. I am almost entirely in the dark as to her antecedents. She was unable to tell her own tale coherently, and there was no one to make good the shortcomings of her life history, of which nothing is known except that she denied ever having suffered from acute rheumatism. Respecting her last illness, I am indebted to Mr. Leadon for the following notes:—

On the 24th of July the patient complained of pain in the region of the liver and of uneasiness after taking food. On the 28th Mr. Leadon was called to see her at home. She was then complaining of incipient retching and vomiting and of obscure pain felt everywhere, but especially in the stomach and over the left side. Her skin was hot to the touch, her tongue furred, her pulse 120, and her respirations 30. Nothing definite was discovered on examination of the lungs; there was, however, a compound apex murmur, systolic and presystolic, with a concomitant thrill. The abdomen was slightly tender on pressure, but in no degree tense; there was gurgling in the right iliac fossa, but no fever spots existed anywhere; the bowels were relaxed and the motions black, but she had been taking iron; the area of the splenic dulness was decidedly increased, and there was some pain in this region; urine of specific gravity 1024, non-albuminous.

July 29th.—The vomiting has been controlled by bismuth and hydrocyanic acid. Pulse 120; respiration 30; temperature 106. She has been shivering for some time. Wandered during the night, but is quite sensible now. Expectorates a good deal of frothy muco-pus. No fresh physical signs. Appears to be utterly prostrate.

31st.—Pulse 126; respiration 38; temperature 106·8°. Tongue dry and brownish in the centre; bowels still relaxed. Physical signs as before. Received into the Middlesex Hospital this day. On admission, she is described as a dark-complexioned, well-nourished woman, with a pulse of 136, a temperature of 105°, and a breathing-rate of 44. Face flushed, skin hot, tongue moist at the margins, with a foul, dark fur on the dorsum; lips and gums sordid; abdomen slightly swollen, tympanitic, painful in parts and generally tender over the entire surface. The area of the splenic dulness is enlarged, but the spleen itself cannot be felt below the ribs, nor is there any tenderness here. There is, however, tenderness in the right hypochondrium where the liver-dulness falls as far as an inch beneath the ribs in the mammary line. Gurgling may be detected here and there, but it is not limited to the right ilio-cæcal fossa. There are no fever spots. Coarse, sonorous râles may be heard posteriorly, but the percussion note is fairly good everywhere before and behind. Slight occasional cough, but no dilatation of the nostrils. Her whole appearance is one of profound apathy and indifference to her condition; she delivers her answers slowly and with much hesitation; they are not always rational. No motion, no vomiting. At 6.30 P.M. temperature 104·6°, and at midnight 99°; range for the day 7·8°. Ordered a draught containing nitro-hydrochloric acid, also quinine ten grains, to be repeated in twenty minutes; whisky four ounces daily.

August 1st.—Slept well, but perspired profusely throughout the night. This morning she only complains of deafness, which may have been due to the quinine. No action of the bowels. Urine of specific gravity, 1020, non-albuminous. At noon temperature 105·4°, the maximum for the day. She is shivering again, but not violently. She is stupid and will not swallow; she cannot speak so as to be understood; she will, however, make a feeble effort to protrude the tongue when told to do so. Cough on the increase, although it is most abortive and executed with much straining. A compound murmur, chiefly presystolic, may be heard at the heart's apex, accompanied by a thrill. Left face blank; the right lateral furrow deeply indented; tongue deflected to the left. Apparently she possesses slight if any power of movement in the left limbs. Sensibility much impaired over the entire left half of the body, including the trunk. The eyes deviate to the right side. The left cheek bulges during expiration. Ordered tincture of digitalis five minims, with tincture of aconite two minims, every second hour. An ointment containing belladonna and iodide of potassium to be applied to the præcordia. At 4.30 P.M. she was sweating abundantly, and at 7 P.M. the temperature fell to its minimum, 98°, yielding for the day a range of 7·4°. At 9 P.M. she appeared to be more helpless than ever. She tries to speak when spoken to, and to put out the tongue when desired, but cannot accomplish either act.

2nd.—Passed a restless and rambling night. No change in her general aspect this morning. Anæsthesia almost absolute; left conjunctivæ impassive to stimuli. Over the entire left half of the scalp, face, neck, chest, abdomen, and limbs, deep punctures may be made with a needle without exciting any evidence of sensation, although the wounds bleed readily. Reflex action, however, may be easily provoked by irritating the sole of the foot. The pupils are about normal in diameter, equal, and equally sensitive to light. The eyes still deviate to the right; she will move them leftwards as far as the median line, but no farther. The head also inclines to the right, and cannot be pushed across to the left without producing pain. She will answer questions rationally, and her utterance is fairly distinct, but she is constantly wandering wide of the mark in her speech, and dwelling upon matters foreign to her present circumstances. All her passages are involuntary. Often she beats her chest rapidly with her right hand over the præcordia, but does not appear to suffer from any pain or discomfort there. At 9.30 P.M. pulse 144, respirations 64, temperature 104·2°. She is now perspiring freely, and seems hot and flushed. During sleep both eyes are incompletely shut, the unclosed interval, however, is about the same on the two sides. At 11 P.M. the thermometer reached its maximum point, 104·6°, the minimum for the day being 98·4°; range 6·2°. Ordered solution of iodine to the shaven scalp.

3rd.—Temperature 103·4°, pulse 96, respiration 52. Lies in a state of profound sopor. At twelve noon she is almost comatose, breathing heavily. At 1 P.M. temperature 105·3°. The compound murmur is now chiefly systolic at the apex, where the heart's impulse and the first sound are both strongly expressed. At 3.30 P.M. coarse laryngeal râles may be heard at some distance from the chest; the breathing is more embarrassed, and at times the patient appears to be almost choked. At 4.30 P.M. temperature 103°, pulse 150, respiration 60. At 5.30 P.M. temperature 105·4°, pulse incalculable, respiration 60, shallow, irregular, often coming to a stand-still, interrupted by a fit of choking. At 7 P.M. temperature 106·3°. At midnight it stood at 106·9°, when the pulse marked 160 and the respiration 80. Maximum temperature 106·9°, minimum 101·6°, range 5·3°. Two leeches applied to the right temple; digitalis and aconite omitted.

4th.—At 1 A.M. temperature 107°; at 10 A.M. 105·4°. Wholly unable to swallow; nutritive enemata rejected; coma continues. At 1 P.M. temperature in axilla 107·2°; at 3 P.M. in rectum 109°. She was then dusky and pulseless. At 3.15 P.M. she died, with a temperature in the rectum amounting to 110·4°. Range for the day 5·4°.

After death, at 4.15 P.M., temperature in rectum 109·2°; at 5.15 P.M. 107·2°.

Autopsy. (Abridged from the report of Dr. Copland.)—Head: There was excess of fluid within the sub-arachnoid cavity. The vessels of the pia mater were full of blood. Lymph was found exuded on the inferior aspect of the cerebellum and at the base of the brain, especially around the chiasma and in the interpeduncular space. The right middle cerebral artery was swollen and plugged from its origin onwards, so that it felt like a piece of cord. From this some black clot extended into the right anterior cerebral artery and into the terminal branches of the middle cerebral trunk. The territory supplied by the plugged vessel was completely softened, so that in raising the brain the organ fell asunder between the optic thalamus and the corpus striatum. The precise limits of the softened mass were not ascertained until vertical sections were made after hardening in spirit. The softening was then found to involve the whole of the corpus striatum in both its nuclei, with

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the exception of the lamina presenting in the ventricle. It was found also to involve the island of Reil and the anterior part of the optic thalamus. Moreover, the morbid change spread far into the circumjacent white matter and convolutions, but nowhere was it noticed above the level of the corpus callosum. Posteriorly, only the investment of the optic thalamus was softened, and not the body itself. There were no inflammatory lesions of any moment around the seat of softening, which was grey and curdy.—Thorax: Pericardium natural. Heart flaccid. Both sides, but chiefly the right, full of fluid blood and soft clot. Pulmonary and tricuspid valves normal. Endocardium of left auricle much thickened. Projecting into the auricle a polypoid mass of vegetations sprang from the margins of the mitral valve. Similar excrescences of smaller size occupied the posterior wall of the auricle. All the vegetations were loose and fragile, and in the neighbourhood of one of these a small ulcerated spot was discovered on the posterior cusp. The chordæ tendineæ were greatly thickened, and the apex of the papillary muscle of the septum—the largest of the musculi papillares—was converted into fibrous tissue. The mitral orifice barely admitted the tips of two fingers. Wall of left ventricle mottled and friable. Both lungs highly congested. At their posterior bases they were slate-blue coloured and collapsed.—Abdomen: The spleen measured five inches and a half by three inches and a half. It was pale and soft, and in its upper part presented a small wedge-shaped mass of a yellow colour surrounded by a zone of hæmorrhage. Liver large, dry, and glistening on section; lobulation ill-defined; consistency elastic, not friable. Cortical substance of kidneys swollen and pale, contrasting markedly with the medullary portion, which was congested. Surfaces slightly uneven and soft. No embolus in either organ. The uterus was retroverted.

Gentlemen,—Ulcerative endocarditis is a disease always characterised by enormous overgrowth of valvular vegetations; it has no necessary connexion with coexisting rheumatism, although, as a rule, the heart has suffered already from long-standing unsoundness. Its consequences are embolism or blood-infection, or both together. It is always accompanied by severe constitutional symptoms, usually described as those of intense pyrexia, but often possessing characters of peculiar type, and differing in some respects from the symptoms of violent fever in general. I have said the disease *may* involve blood-infection. In one sense it is always infective, for when the entire blood-stream flows bodily over an ulcerated surface, it can hardly fail to imbibe some taint of corruption, and to develop some degree of the fever of septicæmia. In the higher sense of the term it is not always infective; in other words, it does not always give rise to acute septicæmia, or to gangrene, suppuration, or other form of dangerous and degraded secondary change, for these alone are the proper products of infection, as I should understand it. I am bound, however, to warn you that by many authorities ulcerative and infective endocarditis are regarded as commensurate and synonymous terms. Nor is this all. Pathologists have brought to light the so-called material of infection, the presumed blood-poison itself, in the several shapes of micrococci, vibriones, bacteria, leptothrix-filaments and the like—a motley assemblage of molecular organisms which may be briefly designated microzymes. Clustered around the valves, or imbedded within the coagula of the heart, these infinitesimally small beings drift away in the blood-current along with the detritus of the clot or the vegetation, and either found colonies in emboli of their own making, or else roam at large, in perpetual motion; in either case spoiling the purity of the wholesome blood. This state of things bears the name of "mycosis endocardii." Unfortunately no one can tell where these strange beings are born, whether *within* the heart or *behind* the heart in the course of the circulation, whether they are indigenous or exotic, central or peripheral in origin. Cases are on record which one would unhesitatingly refer to an extraneous source. On the other hand, there are undoubted examples where no distant point of departure was *discovered*, but in this connexion it must be borne in mind that the same thing is true of unequivocal pyæmia. Over and over again, you know, in pyæmia we find no aboriginal focus of infection, whether anything of the kind exist or not. In all my own more recent cases, three in number, post-mortem examination revealed nothing to warrant the assumption of an extraneous source. You cannot fail to see the importance of the question at issue in this matter. Can the heart spontaneously become the hotbed of a living mortal poison, or must it wait until the carriers of the poison are engendered elsewhere, and thence conveyed to the centre in the mature or in the embryonic form through the medium of a morbid lesion, or from first to last by way of the natural pores and passages of the body? The question, you see, most materially concerns the doctrine of abiogenesis, or the generation of life from no-life. In one respect the issue is unimportant. Whether or not the heart be in any sense the native soil of these mysterious molecules, at all events it is said to be a nursery ground wherein they grow, increase, and multiply at a fearful rate. In my own cases I cannot be sure that they had any existence at all during life, although in one they were discovered after death.

(To be concluded.)

A CASE OF MELANOTIC EPITHELIOMA OF THE PENIS; AMPUTATION; REMARKS.[1]

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FOR the following case I am indebted to Mr. G. Macnamara of Uxbridge, who kindly placed the patient under my care while I had the charge of Mr. C. Macnamara's wards in July last:—

Ed. R——, aged seventy-five, labourer, a thin old-looking man, stated that he had enjoyed good health and noticed nothing wrong with his penis till about five years before, when a small black spot appeared on the glans penis. It gradually increased in size, and lately other similar growths had sprung up around the first. For a few months past he had experienced difficulty and pain in micturition, but with this exception had been free from pain; there had been no hæmorrhage. No history of cancer or tumour in the family.

On admission the penis presented four or five raised black nodules the size of peas, ranged along the corona, while further forward on the dorsum of the glans was a much larger black fungating mass which quite obscured the glans. Two or three smaller tumours of the same colour were seen higher up the penis, not projecting from the surface. There was no enlargement of the inguinal or lumbar glands; no evidence of any growth in the lungs. Thickly scattered over the man's back were a number of pendulous warts and little molluscous tumours, nearly all of which were deeply pigmented if not quite black; these, the man stated, had existed all his life.

On July 9th, ether having been given, I amputated the penis. Drawing the skin well forwards I ligatured the organ as tightly as possible close to the pubes, and then passed a metallic bougie along the urethra as far as the ligature. Transfixing the penis close to the ligature above the urethra, which was stretched over the bougie, I cut forwards for about an inch, and then, after withdrawing the bougie, cut out through the urethra. I then placed the loop of a wire écraseur round the corpora cavernosa and severed them. Slitting up the flap of urethra along the *floor*, I turned it up over the face of the corpora cavernosa and stitched it in position. There was a little bleeding from the angle between the urethra and the corpora cavernosa, which was easily stopped by the thermo cautery. The man was almost entirely free from pain during convalescence, his only trouble being retention of urine, which necessitated the use of the catheter for ten days. He left the hospital well on July 29th, and continues well up to the present time.

1. The first point of interest in this case is the *nature of the growth*. *A priori* reasoning did not help much in determining this question, for while very nearly all melanotic tumours are sarcomata, the form of malignant growth met with most often on the penis is epithelioma, and the man's age and the presence of the warty growths on the back further increased the probability of its being of this nature; but again the absence of any apparent lymphatic affection after five years' growth was unusual in cancer of the penis. The bulk of the tumour was so friable that it was impossible to prepare it for the microscope, but my friend Dr. Heneage Gibbes has prepared sections of the more superficial parts,

[1] Read before the Medical Society of London, March 1st, 1880.

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which show well its structure and mode of growth. (Several specimens were exhibited at the meeting.)

Looking at the surface of the growth, the superficial epithelium is seen to send down processes, some of them very large, which penetrate a considerable distance into the deeper tissue. At their lower or deeper end some of these processes become more or less pigmented, and in places the pigmented tissue reaches almost to the surface. The deep ends of these processes are evidently in an active state of germination, for they stain with hæmatoxylin more deeply than the rest, and many cells are seen to be vacuolated. Dr. Gibbes examined this part under a high power, and found many nuclei convoluted and in an active state of division. Some of these processes can be seen to break up into more slender processes of similar cells, becoming less flattened and more pigmented, like those forming the bulk of the tumour. The continuity of the pigmented tissue with these ingrowths of epithelium can thus be traced. Groups of cells with a concentric arrangement can here and there be traced, but they are not numerous, while in some of the deeper and more pigmented parts, what look like broken-down blackish "nests" are found. Between the epithelial ingrowths a small cell or fine fibrous growth exists. The pigment consists of fine brown granules, some of which is between the cells, others again filling the cells, and some in irregular, apparently non-cellular masses. The pigmentation can be readily traced to begin around and spread from the bloodvessels. The deeper parts of the sections show nothing but a pigmented granulated débris. Several large lymphatics are met with in the sections.

In his lectures on Surgical Pathology (third edition, page 722), Sir J. Paget states that he has "once met with a melanotic epithelial cancer. It grew in the deeper part of the cutis and in the subcutaneous tissue, under a dark pigmentary nævus or mole, in a woman who had many similar moles on various parts of her body. A thin layer of the cutis, with its covering of dark epidermis, extended over the cancer, and was slightly raised by it. The epithelial shape and texture of the cancer-cells were well marked, but most of them contained melanotic matter. In some a quantity of brownish molecular matter was either diffused or collected about the nucleus or its place. In some, with similar molecular matter, there were two, three, or more brown corpuscles, from the size of mere molecules to that of blood-cells. Materials like those within the epithelial cells existed, also, more abundantly as an intercellular substance." This case is especially interesting, as it appears to have so closely resembled mine in the development of pigmented warts or moles in other parts of the body. Other pigmented true carcinomata have been met with. Thus Mr. Nettleship (Path. Soc. Trans., xxix., p. 233) mentions in the description of a carcinoma of the orbit that "pigment-granular degeneration" was going on in different degrees in the several growths; to a large amount in one of the growths. Billroth, in his Surgical Pathology and Therapeutics, writes: "Some carcinomata are brown or black, but still melano-carcinomata are rare. Most soft melanomata are sarcomata." Cornil and Ranvier (Manual of Pathological Histology) mention a melanotic variety of carcinoma, and state that "it is much rarer than melanotic sarcoma." Such are the few scant references to melanotic cancers in our text-books; in none of them can I find a detailed description of a melanoid epithelioma.

The fact that the superficial epithelium can be traced growing down and becoming pigmented and continuous with the tissue of the deeper parts of the tumour determines that this growth is an epithelioma. As already mentioned, the association of epithelioma with warty growths is a well observed fact. This tumour has clinical as well as pathological peculiarities. The first is its benign character; it had existed five years without any sign of lymphatic injection or secondary growth. Epithelioma of the penis usually injects the inguinal glands early, and runs a rapid course if not checked by early amputation. And the common melanotic tumours, the sarcomata, diffuse themselves very rapidly and widely over the body. In connexion with the pigmentation it may be well to notice that the skin of the penis is normally darker than that of the trunk generally, while the fact that most of the warts on his back were brown or black showed that there was a general tendency to pigmentary degeneration of epithelium in this man. And indeed I am inclined to look upon the pigmentation as a real degeneration, for soon after the cells become pigmented they break up entirely into a granular débris, and several "nests" were seen undergoing the same degeneration. May not this account for its benign character? Mr. Nettleship's case, already mentioned, was remarkable for the length of time between the recurrences—five and fourteen years. Mr. T. Holmes has described a case of melanosis of the penis in which the urethra is the part mainly affected; the specimen is in the St. George's Hospital Museum, and is figured in his smaller work on Surgery; in structure, however, it is sarcomatous.

2. *The methods of amputation* usually adopted are removal by a single circular sweep of a knife, or by an écraseur, or by the method I employed, which was, I believe, introduced by the late Mr. Hilton. The first is the simpler plan, but the hæmorrhage may be troublesome, and was carefully to be avoided in operating upon such an old and infirm patient as mine. The resulting cicatrix involving the urethra usually produces a very troublesome stricture of its orifice. The écraseur prevents all hæmorrhage, but not the subsequent stricture, which is likely to be very severe if the galvanic écraseur be used. Hilton's plan is easy of performance, for the outline of the urethra is very evident when that tube is stretched over a bougie, and thoroughly prevents any stricture, while if the penis proper be divided with a wire écraseur, all hæmorrhage is also obviated, and the flap of the urethra folded up over the face of the stump unites very readily and quickly with the corpora cavernosa. Whatever method be employed it is necessary to remove a good deal of skin, and for this purpose to draw upon the skin before making the section, for if not the penis retracts under the pubes at the bottom of a funnel of skin, and is dealt with with difficulty.

A

CONTRIBUTION TO CLINICAL HÆMOMETRY.

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(Concluded from p. 399.)

B. CHRONIC DISEASES.

Diabetes Mellitus. — I. William T——, aged thirty-four. First symptoms noticed two months before admission. Thirst, increasing weakness, loss of flesh, constipation, dry skin, frequent micturition. No fever. Pulse 60. Urine: eight to ten pints per diem; sp. gr. 1040; sugar abundant.

Obs. 22. Three days after admission.

N=6,240,000; G=0·65.

Obs. 23. Fifteen days later. Has been improving on a suitable dietary, with an occasional purgative.

N=5,770,000; G=0·49.

II. Sarah K——. First symptoms noticed one month before admission. Dry skin. Constipation. Urine saccharine; ten to twelve pints; sp. gr. 1040.

Obs. 24. Four days after admission.

N=7,540,000; G=0·54.

In both of these cases a decided excess of red corpuscles was observed; and though their individual value was low, it was not sufficiently low to balance the increase in their number. The result is such as might have been expected. The copious flow of water through the kidneys would tend to lessen the proportion of fluid in the blood, and thus to make it appear richer in formed constituents. Previous observers have arrived at very contradictory results in this disease, finding the blood sometimes much richer, sometimes much poorer, both in corpuscles and hæmoglobin. These discrepancies may possibly be due to the blood having been examined at different stages in the course of the malady. At an early period, when the loss of water is very great and the general health continues good, we might anticipate a relative hypercytosis and hyperchrosis; later, when pulmonary or other complications had undermined the en-

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tire fabric of the constitution, we might expect to find the red corpuscles diminished both in number and in value.

Internal Cancer. — I. George A——, aged fifty-nine. Intrathoracic cancer, with effusion of sanguinolent serum into left pleural sac. Scirrhous nodules in skin over epigastrium; corresponding axillary glands much enlarged. No hæmoptysis. Thin and somewhat cachectic in appearance. Chief complaint is of dyspnœa. No fever. Duration of disease before admission about six months.

Obs. 25. On admission. N = 5,740,000; G = 0·66.

Obs. 26. Two weeks later. N = 4,230,000; G = 1·00.

II.—George H——, aged thirty. Carcinoma of liver, pancreas, mediastinal and lumbar glands. Very rapid course. First symptoms noticed three weeks before admission. Extreme marasmus, with slight jaundice of skin and conjunctivæ; anorexia; constipation. No sweating. Death five days after admission.

Obs. 27. N = 4,590,000; G = 0·5.

The above results, not unnaturally, excited some surprise, being diametrically opposed to those arrived at by Leichtenstern, Malassez, and others, as well as to our own anticipations. Previous observers have invariably found a rapid and considerable fall, both in the number of corpuscles and in the hæmoglobin, to be associated with the development of cancer in internal parts. When the disease gives rise to hæmorrhage, this will, of course, modify the composition of the blood directly. It is plain, however, that the most extreme cachexia from the rapid development of malignant disease need not of necessity entail any marked impoverishment of the blood—at any rate, as regards its most important constituent. In our two cases, if this was indeed reduced in amount, its reduction must have been accompanied by a proportionate diminution in the fluid part of the circulating medium.

Graves' Disease.—Ellen L——, aged seventeen. Characteristic symptoms first noticed three months before admission. Amenorrhœa six months. Severe palpitation with occasional throbbing headache and vertigo. Pulse 136; no fever. No exophthalmos. Heart's action excited with systolic blowing murmur over præcordia.

Obs. 28. Fourth day after admission.

N = 6,170,000; G = 0·44.

Chronic Gout; Kidneys affected.—Agnes H——, aged forty-two. Began in right great toe nine years ago; recurred annually for six years; during last three years has hardly passed a month without a paroxysmal exacerbation. Many joints involved. Chalk-stones about finger-joints and in pinnæ. Urine pale, sp. gr. 1011, albumen $\frac{1}{10}$. No other complications. Febrile movement insignificant.

Obs. 29. Eighth day after admission.

N = 5,160,000; G = 0·58.

Chronic Renal Disease; Hæmorrhages; Uræmic Symptoms John S——, aged twenty-nine; intemperate; jaundice three years ago; cough, dyspnœa, œdema of extremities, six weeks; free epistaxis on two occasions during week previous to admission; slight anasarca; subnormal temperature; full, throbbing pulse; headache; sleeplessness; subsultus; urine pale, sp. gr. 1010, albumen $\frac{1}{4}$; slight dulness and crepitation over left apex; trifling hæmoptysis; gums grew spongy and bled. Died four weeks after admission.

Obs. 30. Ten days before death. N = 1,940,000; G = 0·39.

In three cases of Bright's disease examined by Leichtenstern, a decided diminution in the amount of hæmoglobin was observed. This was most marked in a case of granular atrophy of the kidneys. The second of our observations illustrates an extreme form of the anæmia which may result from this affection.

Cardiac Disease.—Eliza P——, aged twenty. Has suffered from heart-symptoms occasionally for years. No history of rheumatism. Seven months ago had œdema of feet and slight hæmoptysis. On admission: very pale; loud mitral murmur with a systolic hæmic bruit at the base and venous hum in the neck. No fever or albuminuria. No pulmonary complications or dropsy.

Obs. 31. Six days after admission.

N = 2,790,000; G = 0·36.

Obs. 32. Nineteen days after admission.

N = 5,050,000; G = 0·51.

During her stay in the hospital she took iron.

The mere existence of valvular insufficiency does not necessarily entail impoverishment of the blood. The complete filiation of the *anémie cardiaque*, described as a special form of anæmia by some French writers, is still unknown. It is usually associated with mitral regurgitation and dilatation of the heart in young subjects. Mechanical interference with the circulation will not account for it; indeed, some observers go so far as to say that a high degree of stasis in the venous system is associated with hypercytosis and hyperchrosis. That this is not always so has been proved by Leichtenstern. He examined the blood in two cases of anasarca with cyanosis due to cardiac failure and found it decidedly poorer in hæmoglobin than normal blood.

C. STATES IN WHICH THE BLOOD IS EITHER THE PRIMARY SEAT OF THE MORBID PROCESS, OR, AT ANY RATE, THE THEATRE OF ITS MOST CONSPICUOUS MANIFESTATIONS.

Anæmia after Hæmorrhage. — I. Eliza B——, aged fifty. Symptoms of gastric ulcer for two years. Sudden faintness, followed by profuse hæmatemesis (two quarts?); subsequent melæna. Six days later, when admitted, very pale, with bloodless lips. Blowing murmur over heart. Pulse 80, small and compressible; temperature normal. Bowels confined.

Obs. 33. Eleven days after the hæmorrhage, and six after beginning iron: N = 3,130,000; G = 0·54.

II. Fredk. L——, aged forty-five. Sixteen months ago, after suffering for some time from gastric symptoms, he vomited a large quantity of blood. The bleeding was followed by delirium and great weakness. He has vomited blood more than once since then, but the loss has never been so great as it was on the first occasion. For five months the hæmatemesis has not recurred. On admission, very pale, with paroxysmal gastralgia; no fever; no albuminuria.

Obs. 34. On admission: N = 4,330,000; G = 0·26.

Obs. 35. One month later. Has been taking iron for sixteen days. N = 6,960,000; G = 0·33.

Although anæmia, from loss of blood, is the simplest—the most typical—form of that condition, our information respecting it is still far from complete. If the above observations are to be trusted, hypochrosis occurs as well as hypocytosis; possibly, however, as a secondary result of the impairment of the nutritive functions due to the removal of a large proportion of corpuscular elements from the blood. In the order of recovery, the hypocytosis apparently takes precedence of the hypochrosis. A series of observations on the state of the blood after accidental hæmorrhage from wounds in perfectly healthy individuals is greatly wanted. The researches hitherto made (chiefly in reference to the practice of venesection) are not of a kind to be utilised for our present object.

Simple Anæmia.—Lavinia H——, aged twelve. Symptoms ascribed to overwork at school. Had been taking medicine (probably iron) for six weeks before her admission.

Obs. 36. Seven days after admission:

N = 4,940,000; G = 0·35.

Chlorosis. — I. Rose C——, aged twenty. Catamenia always scanty; occasionally absent. Aspect chlorotic. Aggravation of all symptoms during the last four months. Anorexia; constipation. No symptoms of gastric ulcer or other complications. Hæmic murmurs over heart; venous hum in neck. No fever. Has not taken any medicine for six or eight weeks.

Obs. 37. Four days after admission:

N = 4,460,000; G = 0·29.

Obs. 38. Seventeen days after admission: Feels much stronger, though there is no marked improvement in her colour. Cardiac murmurs inaudible. Has been taking one to two drachms of the so-called dialysed iron daily, with an occasional aloetic pill. N = 4,370,000; G = 0·43.

II. Eliza D——, aged nineteen. Amenorrhœa two months. Always pale; has grown much paler of late. During the past month has suffered from œdema of the extremities, feebleness of voice, and dyspnœa on exertion. Aspect characteristic. Mucous membranes blanched; systolic murmur over præcordia; venous hum in jugulars. No organic mischief in lungs, kidneys, or elsewhere. Temperature 98°; pulse 84; respiration 18.

Obs. 39. Six days after admission:

N = 2,510,000; G = 0·45.

Obs. 40. Fourteen days after admission:

N = 3,600,000; G = 0·34.

Obs. 41. Five weeks after admission:

N = 5,150,000; G = 0·28.

During her stay in the hospital the improvement in her symptoms was rapid and decided. She took twenty minims of dialysed iron four times a day.

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III. Annie R——, aged twenty-one, has been gradually getting pale and weak for two years. Menses very scanty, but not suppressed. No organic disease. Aspect chlorotic; occasional dyspnœa and palpitation; systolic murmur over heart, and venous hum in neck. No fever.

Obs. 42. Five days after admission.

N = 4,130,000; G = 0·28.

Obs. 43. Fourteen days after admission.

N = 5,990,000; G = 0·37.

The improvement in her appearance and symptoms was striking and rapid. She was treated with Blaud's pills (sulphate of iron and bicarbonate of potash).

These few observations quite bear out Duncan's statement as to the lack of agreement between the hypocytosis and the hypochrosis in chlorotic anæmia. The two coexist, but their proportion to each other is variable and uncertain. This want of harmony between them is especially marked during convalescence under iron. The influence of the remedy appears to be exerted in the first place on the number of the corpuscles, while their functional value remains at its original level, or may even sink below it (Obs. 39 to 41). The numerical increase proceeds very rapidly at first, and then more slowly; at this stage the corpuscles begin to grow richer in hæmoglobin. Substantially the same result was arrived at by Dr. Gowers in two very interesting cases of anæmia in young women, in which the corpuscles were repeatedly counted while iron was being administered (*Practitioner*, July, 1878). He points out that the "primary effect of the administration of iron may be an increase in the globules out of all proportion to the increase in the hæmoglobin, and that the rise in the latter may be accompanied by an actual decrease in the number of globules." These results are especially noteworthy in the face of the very different conclusions at which both Hayem and Malassez have arrived on this subject. The former, after asserting that "in chronic anæmia of whatever kind there is always a want of agreement between the number of the coloured elements and the colouring power of the blood, the latter being more invalidated than the former," goes on to lay it down as a general principle that the action of iron is the same in all forms of anæmia, whether curable or incurable; "it always augments the richness of the corpuscles in hæmoglobin, but their number does not follow a parallel course; it varies but little, and not unfrequently undergoes actual diminution." In another place he alludes to a fatal case of progressive anæmia, in which the number of red corpuscles had fallen as low as 414,062 per cubic millimetre, their individual value being also much reduced. Under iron these elements actually grew much richer than in health, attaining the extraordinary value of 1·34; but their number steadily continued to decrease until it reached a point no longer compatible with life. Malassez tells of a case of anæmia (due either to lead-poisoning or to visceral cancer) in which the administration of iron was followed by an increase in both the number and the value of the corpuscles; but their value rose much more quickly than their number. When the medicine was stopped both elements began to sink, but the colouring power of the blood sank faster than its globular richness.

It is hard to reconcile these contradictory results. It may be that there exists a fundamental distinction between different forms of anæmia in their relation to iron, the metal influencing the hypocytosis primarily in one set of cases, while its primary effect is on the hypochrosis in another. But the time is not ripe for even a provisional hypothesis. More facts are needed. A comparative study of the blood in cases of chlorosis, progressive idiopathic anæmia, Addison's disease, and malarial anæmia, would probably throw much light on the question. As regards chlorosis, all that we are at present justified in asserting is, that the normal ratio between the number of the corpuscles and their functional value ceases to be maintained; that while hypocytosis and hypochrosis coexist the latter is always in excess of the former; that under the influence of iron the increase in the number of corpuscles usually precedes the increase in their individual value, though both factors are affected by the remedy. It is interesting to note that the patient's symptoms are always relieved when the number of corpuscles attains its normal level, even though their individual value show no corresponding improvement. This is what might have been expected. The addition of a certain quantity of hæmoglobin to the circulating fluid will clearly be more useful to the organism if it be distributed among a larger than if it be concentrated in a smaller number of elements. The former arrangement, by offering greater facilities for the transfer of oxygen, will be the more economical of the two.

As regards diagnosis, the numeration of the corpuscles in conjunction with chromometry may be of service in chlorosis in more than one way. It may enable us to recognise the first beginnings of the malady, before its presence is suggested by visible changes in the colour of the skin and mucous membranes. Again, it may serve to distinguish cases of unusual pallor in young women, without any actual lessening either of the corpuscles or the hæmoglobin, from true anæmia. In such cases the routine administration of chalybeates is not merely useless, it is positively injurious, giving rise to headache, digestive disturbance, and other undesirable symptoms.

VIVISECTION, AND ITS USE IN THERAPEUTICS AND HYGIENE.[1]

BY DR. CH. RICHET (PARIS).

IT is often of advantage to reopen questions which are practically settled; for although with the majority of medical men the utility of vivisection is thoroughly admitted, yet by a section of the public, and especially the English public, it is held to be not only cruel but useless. We shall not consider the question of cruelty, but simply discuss the advantages that have been gained for man by animal vivisection. We desire to judge vivisection by its practical results. Science has different ends from medicine. Medicine aims at curing disease; physiology at learning function. The former seeks to allay pain or ward off death; the latter to unravel the innumerable mysteries of nature. Because a discovery cannot be turned to direct profit in the art of healing, it is not the less important. It is as if a mathematician, before solving a problem, were to ask himself what gain he would have by knowing its solution. Someone has wittily said that the composition of a new dish is of more value than the discovery of a star. But such witticism must not be seriously taken. The end of science is truth, and it is quite legitimate to conclude that vivisection is justified if by it we know more of the function of an organ. Apart from this, let us see what are its useful and practical results. Have we gained by experiment the means of curing one or two diseases of man or of assuaging pain? If this can be answered in the affirmative, then vivisection is absolutely lawful. The partisans of *humanity* in science should acknowledge that the pain of man is a greater ill than that of an animal, and that we should not hesitate to inflict suffering on dogs or frogs if thereby we can save the life of one human being or relieve his sufferings.

The first place must be given to the discovery of the *circulation* of the blood. Galen, who made many experiments on animals, was the first to demonstrate that the arteries contained blood. He laid bare the artery of a living animal, and intercepted the blood-flow in its course by means of two ligatures placed a short distance apart, and then, opening the artery, found blood, and not air, as Eristratus taught, filling the vessel in the included portion. Harvey, taking up and working out the grand idea of Michael Servetus, established by irrefutable experiments the fact of the circulation, and he begins (chap. i. and ii.) by speaking of the experiments he had made on animals. He opened the chest of living animals, cut into the pericardium and saw the heart contract, in warm as well as in cold-blooded animals—serpents, frogs, toads, snails, crabs, &c. He also observed what takes place in the arteries and veins going to the heart. These admirable experiments established the theory of the circulation, which is now uncontested and incontestable. It was not by observations on the anatomy of the veins or the examination of cardiac ectopia (as in the case of Count Montgomery), but by experiments on dogs, frogs, serpents, and fish, that he discovered the way in which the blood goes

[1] This is a full and careful summary of a paper contributed specially to our columns by M. Richet.

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to and returns from the heart. It would be absurd to discuss the question that this discovery is without importance in therapeutics. There is no physician or surgeon who does not avail himself of the knowledge of this fact in observing morbid phenomena, and in applying his remedies.

A certain number of people die from loss of blood—on the battle-field, after operations, after parturition, and to save them transfusion is necessary. Lower in 1664 first showed that this could be done with impunity. His experiments on the dog were repeated by Denis, and the results he gained by vivisection led him to make attempts on man. It has taken its place in therapeutics, and has saved many lives. It will save many more. Experiment alone will teach us precisely what quantity of blood is necessary and what is harmful; and if over-sensitiveness forbids animal suffering for this end, then the experiments would have to be made on human beings.

One of the most poisonous of gases is carbonic oxide. It is evolved by burning charcoal in a confined space. The mode of death from its inhalation has been known only through vivisection. Oraja, Portal, and Claude Bernard have shown that carbonic oxide combines with the red corpuscles and renders them unfit to absorb oxygen; and the therapeutical bearing of this is, the avoidance of conditions leading to its inhalation, and the attempt at prevention of death in one poisoned by it by means of artificial respiration, the inhalation of oxygen, and transfusion of blood.

In *respiration* great discoveries were made through vivisection by Lavoisier, Regnault, Reiset, Claude Bernard, and Paul Bert, who have in succession shown that death may take place, either from deficiency of oxygen or excess of carbonic acid. The amount of carbonic acid in the atmosphere that is fatal has been estimated. Are such researches without value for the life of man? Next to man himself, the question can only be solved by experiments on animals. All that we know in hygiene of the quantity of air necessary to support life is the result of experiments on dogs and rabbits. Sometimes a precise knowledge of the conditions of respiration has served to prevent men from perishing. Paul Bert has shown that an animal suddenly transferred from compressed air to the open dies rapidly from the sudden liberation of gases in the blood. Men who work under water at great depths should therefore be brought up very slowly, and similarly certain accidents to aeronauts may be avoided by the inhalation of oxygen.

In *digestion* the utility of experiment is manifest. There are two methods by which we may learn the conditions of gastric digestion, and collect its secretion—viz., by observation of gastric fistulæ produced by chance in man, and by artificial fistulæ in animals. The first has only been possible in three or four instances, but the study of the effect of food on the gastric secretion in dogs and cats has been largely observed. When we think of the common occurrence of dyspepsia, of the relief given by pepsin, acids, and alkaline waters, we should remember that this treatment is due to the suggestion of physiologists who have studied the effects of such substances on the gastric juice, and the relief so obtained is not bought too dearly at the expense of the mutilation of these animals.

Remarkable experiments have added to our knowledge of *nutrition*. Dogs and cats have been submitted to varied alimentation, and the quantity of food necessary for man has thereby been deduced. It has been proved that on a diet of gelatin alone animals die; that when the food contains no nitrogen they waste and die; that fat, sugar, and starch taken alone are insufficient to support life. Certainly an animal dying from inanition for want of proper or sufficient food may excite compassion, but I should hold this pain sufficiently recompensed if I had been able to find the quantity of aliment necessary to maintain the health of one of our own kind. From such experiments the normal diet of adult man may be computed, and it is on these facts of the physiologist that the daily rations of our soldiers and sailors are computed. The advantages gained far outweigh the disadvantages.

As to the *nervous system*, how many experiments and how much pain have been inflicted on animals! But how much suffering has been spared to man! The great discovery of Charles Bell and Majendie is due to experiment. No one can dispute the importance of this discovery in therapeutics. Therapeutics is the art of relieving as well as of healing. Often the physician is powerless to give a remedy for a disease. Cancer, rabies, typhus, are plagues which cannot be directly combated; but pain can be assuaged; and how should we succeed in this if we knew not that the nerve-cords were the seat of pain. Before the experiments of Majendie and Legallois we did not know that the nerve was the agent for transmitting painful impressions from the periphery to the centre. It is now so notorious that one is almost ashamed to think of former ignorance. In obstinate neuralgias nerve-section leads to nearly immediate relief. Like the circulation of the blood, the duality of nerve-function comes into nearly all treatment of diseases; and it is impossible to think that we could relieve our patients if we were in ignorance of these facts as surely as we can in knowledge of them. The experiments of Fritsche, Hitzig, and Ferrier in proving the existence of portions of the cerebral cortex as centres of movement have been already put to account by surgeons in the relief of paralysis due to pressure of certain convolutions. Thanks to the scientific analysis of those vivisectors, we can pass from the effect to the cause, and assign to paralysis a central lesion at a well determined spot, so that trephining at this spot may cause the paralysis to disappear.

Of the most undoubted methods of treatment of nervous or muscular affections electricity stands foremost. Galvani—the discoverer of dynamic electricity—experimented on frogs; and since his time numberless *savants* have not scrupled to make martyrs of innocent animals for the like gain. They have taught us to estimate the effect of the electric current on nerve and muscle. The muscle, whose nerve is divided, rapidly becomes fatty and incapable of function. Electricity prevents this change. In former days patients whose motor nerves were destroyed by disease or injury were condemned to remain permanent paralytics. Frequent galvanisation is now applied to prevent this paralysis—keeping the muscle alive until the nerve regains its function. In a very large number of nervous diseases—neuralgia, paraplegia, ataxia, hemiplegia—excellent results follow electrical treatment. The numerous patients relieved by this admirable therapeutic agent have no call to speak ill of such vivisectors as Galvani, Aldini, Volta, Majendie, Marshall Hall, Remak, Du Bois Reymond, and many others, since it is to their discoveries that the relief of their ills is owing. Would Galvani have made his discoveries had he refrained from dissecting frogs? Would the electric current have been applied to atrophied limbs if it had not been found that the action of this current in dogs was salutary and not dangerous?

Experimental pathology is a relatively new science (it dates from Hunter). Without doubt it has a great future before it, so long as we do not fear to make animals suffer for the sake of man. There are many examples of this. Uræmia, due to retained urinary secretion, has been studied on dogs whose kidneys have been removed or ureters tied. The knowledge of the fact that the phenomena of certain nephrites are due to the accumulation of urinary materials in the blood has led to the correct treatment of these affections (as bleeding, baths, milk régime). The treatment of sympathetic ophthalmia by section of the ciliary nerves of the diseased side has been shown to be advantageous by experiment, and the results yielded by experiments on dogs and rabbits have been applied to patients. Ophthalmologists have been led to correct treatment of cataract, to iridectomy, by experiments on animals. The experiments on the formation of callus, on pseudarthrosis, on osseous grafts, on regeneration of bone by periosteum, are of chief importance in surgery, and although the subject has not yet been fully worked out, the results of experiment, combined with those of clinical observation, are such as to encourage its continued study by vivisection. Trophic muscular changes due to section or wounds of nerve-trunk are explicable since we have known the precise function of nerves to the parts they supply. The famous experiment of Claude Bernard on the great sympathetic and the rabbit's ear has led to the establishment of the vaso-motor theory—a theory which plays so large a part in the medicine and surgery of the present day. The treatment of the majority of skin diseases rests as much on a knowledge of the cutaneous circulation as on the empirical methods of the older physicians. Brown-Séquard, who has made so many painful experiments on dogs and guinea-pigs, has given to medical science most useful ideas relating to epilepsy and tetanus. We know now that a peripheral excitation of a nerve may lead to excitation of the spinal cord, and to convulsions or generalised epileptic attacks. The treatment of such peripheral epilepsies is thus indicated, and the epileptic seizure has been stayed by suppressing the nervous excitation proceeding

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from the altered peripheral nerve. Experiments made upon wounds of the chest have led to the adoption of their correct treatment (e.g., by occlusion of the wound).

The researches still to be made are numberless. A certain number of sensitive people think these studies of no interest, because they do not lead immediately to practical results. For them etiology, pathogeny, pathological anatomy, and physiology, even diagnosis and prognosis, are of small importance. They only know one thing, and that is the therapeutical outcome, and they condemn experiments which do not at once yield this.

But even on this ground experiment has been useful. Therapeusis has and does profit by experiment. It is true that the discovery of some valuable remedies has been a matter of chance—e.g., quinine, mercury, opium, even chloroform; but we only know certainly the action of these drugs from an analysis of their physiological properties, their action on the heart, lungs, and liver, on secretion, on nutrition. At any rate, we do not wish to experiment on man, at the risk of poisoning him, when animals can be employed. A certain number of drugs of recent discovery have been made known to us only through the physiologist. The discoveries of Hunter and Majendie established the laws of absorption, and a drug can only be safely given if it is known how it is absorbed. The properties of chloral, the use of which has become so common, were first demonstrated in animals. The combination of chloroform and morphia, in increasing the anæsthetic effects of each singly, was first shown by Liebreich, and to Claude Bernard and Nussbaum we owe the experiments by which this double medication has been introduced into medical science. Apomorphia, pilocarpin, and a large number of alkaloids extracted from poisonous plants, have replaced the empirical employment of aqueous or alcoholic extracts. Is it not a gain to replace old pharmacopœial preparations by those which are chemically defined, whose action on organs and functions is well known? Experimental therapeutics is a science with a future before it, promising still greater benefits than it has already given.

In legal medicine, in toxicology, the study of the causes of death from poisons, and the means to combat these by appropriate antagonistic poisons, it is necessary to have recourse to experiment. If in an empty protest of humanity we deprive *savants* of the right to submit living animals to experiment, we shall go back beyond the days of Galen, who sought on pigs, birds, and monkeys to learn more of the functions of the human organism. If all those who have been relieved—verily made to live again—by modern medicine and surgery could speak, they would confound those who load vivisection with calumny, and they would hold that their own life and sufferings weighed more in the balance than the sufferings of those animals which have been sacrificed in laboratories to the lasting benefit of man.

HUMAN AND ANIMAL VARIOLÆ: A STUDY IN COMPARATIVE PATHOLOGY.

BY GEORGE FLEMING, F.R.C.V.S.,
ARMY VETERINARY INSPECTOR.

(Continued from p. 348.)

WHAT we might call the *casual evidence* as to the non-identity between human variola and cow-pox, and their being two distinct diseases of a group, is still further increased by other facts which may be mentioned. The individuality of contagious maladies is perhaps never more strongly marked than when we find two affecting the same person or animal, and running their course concurrently, the various phases of the one being passed through entirely independently of the evolution of the other. Such instances are far from infrequent in the practice of the physician and veterinary surgeon, and from my own experience I could relate several. But I refrain from doing so, as additional testimony of this kind is not required at this period of the nineteenth century, I hope. But in the discussion now undergoing consideration, such evidence should be borne in mind when we mention the fact, that cases are recorded in which people already infected with small-pox, and who had been vaccinated when so infected, have had the eruptions of the two diseases apparent at the same time, each preserving its special characters, undergoing its different changes, and terminating exactly as if it were totally independent of the other, and had not the slightest influence in modifying or checking its course. And more than this, Hallé is reported to have employed the lymph from vaccine vesicles developed under these conditions, to vaccinate healthy children, and has only produced the pock of vaccinia—never small-pox. In one of Chauveau's experiments, in which a horse was inoculated with the virus of human small-pox, which gave rise to local effects, and was also inoculated with vaccine lymph, evidence of the two morbid actions operating coincidently was undeniable, and afforded one more proof that a certain lapse of time must ensue before the preservative influence of vaccination comes into play.

However strong and abundant clinical and casual evidence may be, it is not always completely convincing, unless supported by experimental demonstration, when it is then irresistible. This evidence is also fortunately at hand, and in a most exhaustive and complete form; and it is very remarkable that with the exception of one speaker at the Conference (Dr. Cameron), its existence does not seem to have been known to those present; at least this may be inferred from the circumstance that it was never alluded to, save in the one instance mentioned. That my surmise is not very wide of the truth may be taken for granted, when we read of one gentleman saying, in reference to the experiments conducted by my friend, Professor Chauveau, of the Lyons Veterinary School, and briefly summarised by Dr. Cameron, that "it seemed strange that men should, at the present time, go abroad to France, to the futile and speculative experiments of a Frenchman, and take possession of the inferences he entertained." Such language betokens either ignorance of, or an utter failure to appreciate, the value of the results of these experiments; but then this speaker asserted that he had successfully inoculated a large number of cows with small-pox virus, and produced vaccinia, which gave him abundant vaccine lymph!

In France, as in some other European countries, the origin of cow-pox had long been a fruitful subject for discussion and speculation, and more than once it had provoked warm debates at the Paris Academy of Medicine. In 1863, M. Bouley, then director of the Alfort Veterinary School, had re-discovered at Paris the "horse-pox" of Dr. Loy of Pickering—in reality, the "grease" of Jenner, Sacco, and others, who believed in the equine origin of cow-pox. But M. Depaul, who had also with Bouley studied this *vaccinegenous* disease of the horse, was inclined to follow the example of Baron and his followers, and to conclude that it and all other eruptive disorders occurring in animals, and possessing analogous characters, were nothing more nor less than human variola. So it was that he included sheep-pox, and the aphthous disorder of animals known as foot-and-mouth disease, in the list of disorders having their common source in small-pox. The influence which he and Bouley possessed divided the Academy into two camps, and the result was recourse to experimentation, which happily led to the conclusion that this equine eruption was capable of producing cow-pox in the cow and vaccination in mankind. But the burning question as to the identity of small-pox and the diverse varioliform affections of animals remained as undecided as before; no new facts of a reliable kind were brought forward, and there was nothing to talk about save the well-known contradictory circumstances which had been so often employed before, but which were brought into debate with all the oratorical ability and scientific ardour for which that renowned body is remarkable. Viewing it as a purely experimental matter, as a question which could only be decided by true facts, the Society of Medical Sciences of Lyons appointed a commission to carry out this inquiry. The commission was composed of Drs. Boudet, Delore, Dupuis, Gailleton, Horand, Lortet, Meynet, and Viennois, and the veterinary professor Chauveau. The latter was the President of the Commission, and on him chiefly devolved the task of experimenting on the animals. A man more competent for the onerous duty imposed upon him could not be found in Europe; his reputation in the world of medical science stands very high as a most accomplished physiologist and experimental pathologist, the results of whose experiments may be received as absolutely trustworthy. Drs. Viennois and Meynet were secretaries, and the three drew up the final report, which was presented in 1865. On March 5th, 1866, the French Academy of Sciences

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awarded the Montyon prize, value 2500 francs, to Chauveau and his two colleagues, Viennois and Meynet, and gave honourable mention to the other members of the commission. This award was made on the recommendation of a commission appointed by the Academy, and constituted by such men as Claude Bernard, Serres, Velpeau, Cloquet, Joubert, Flourens, Rayer, Milne Edwards, and Longet, who gave their opinion as to the great interest and value of the Lyons investigations. This commission, aware that the medical profession had been divided in opinion as to whether, if human variola were inoculated on the cow, it could be so modified as to produce true primary vaccinia, or whether variola was so foreign to the bovine species that its inoculation in cattle was impossible, alludes to the ability of Chauveau, and to the results of his labours, which demonstrated that the truth lay on neither side. These results proved that human variola could be inoculated on the cow and horse with the same certainty as vaccinia; but they also showed, contrary to what takes place in the human subject, that the primary effects produced by inoculation with the two viruses were absolutely different. Thus, with the ox, the small-pox virus only determines a local eruption of papules, often so small that they would pass unperceived if one were not warned of their existence. Hence the mistake made by some experimenters, who have denied that small-pox could be inoculated on bovines. The vaccine virus, on the other hand, engenders the typical pustular eruption, with its large characteristic *boutons*.

Analogous differences are observed, continue the Academy Commissioners, on animals of the equine species. These differences are still more manifest in the same animal inoculated simultaneously with the two viruses: the two eruptions are then developed simultaneously without appearing to influence each other, and preserve their special characters. But the two viruses are not less capable of acting one on the other, and so reciprocally neutralising each other—just as in man—when inoculated successively on the same animal. In fact, human small-pox generally fails on vaccinated animals, while the vaccine virus as commonly fails on those which have been previously submitted to variolous inoculation. In no case had Chauveau and his colleagues seen the slightest tendency to *rapprochement* between the characters of the two eruptions in the horse and ox. In attempting to cultivate the variolous virus on these two species, they have even discovered that it cannot become acclimatised in them, and that, with the ox in particular, it becomes impotent at the second or third generation; while the vaccine disease is propagated indefinitely from one individual to another. With regard to the inoculation of man with this variolic virus which had been transiently (*passagèrement*) implanted in the organism of animals, this only engenders small-pox, neither more nor less, just as does the variolous virus obtained direct from the human species. The eruption is sometimes discrete and benignant, sometimes confluent and serious—at times normal, at other times abnormal. But in all cases the disease preserves its property of infecting healthy individuals by miasmatic contagion (infection); and its virus, even when taken from an almost absolutely local eruption, never gives more, in bovine animals, than the papular eruption which ordinary human variola produces in these creatures.

The Academy of Sciences Commissioners conclude their verdict as follows:—"The experiments, the results of which have been just mentioned—experiments as remarkable by their number as by their distinctness (*netteté*) and concordance—appear, therefore, proper to solve the debatable points in view of which they were instituted. In establishing that vaccinia and variola, notwithstanding the features which assimilate them in animals as in man, are, nevertheless, totally independent of each other; that their viruses form two distinct individualities; that the two affections thus constitute two different, immutable species, which cannot be transformed one into the other; that, consequently, to seek to produce vaccinia from variola would be to pursue a dangerous chimera, which would revive all the dangers of inoculation of by-gone days—in establishing facts of such great importance, the experiments directed by M. Chauveau have rendered an incontestable service to science and to medical practice."

Such was the opinion expressed by the representatives of the Academy of Sciences with regard to the Lyons experiments, and after reading the account of them, and knowing well the very trustworthy character and great professional ability of M. Chauveau, I think no doubt whatever can be entertained as to the justness of that opinion. And, besides, it must be remembered that an Italian Medical Commission, which carried on similar experiments and investigations at Turin from 1871 to 1874, came to the same conclusion that Chauveau did—that human small-pox cannot be converted into cow-pox when the virus is transferred to bovines, but always preserves its original character.

The advantages and opportunities the Lyons Commission could avail themselves of were very great. The magnificent veterinary school of that city was placed at their disposal, with as many horses as they required for experiment, as well as lodging and food for the other numerous animals they employed in their investigations. The 160 cows and bulls, and 40 pigs at the Imperial Agricultural School of Saulsaie, were at their service; as well as about 100 cows and numerous sheep and goats at a large farm near Lyons. For experiments on the human species, the *service des vaccinations* at the Hôpital de la Charité, presided over by Drs. Berne and Delore, as well as a member of the Commission—M. Horand—was made available. The experiments were conducted with the greatest care and deliberation, and were very numerous; the observations on them were drawn up by Dr. Horand. They were divided into two orders or sets; one order of experiments with vaccine virus, another with that of human small-pox. Each of these again was arranged in series, and each experiment in the series is described in detail in the report.

The variola experiments are those which have most interest and importance for us, so far as the identity of small-pox and vaccination are concerned, though those with vaccinia have a more or less direct bearing on these, as well as on animal vaccination. More especially is it necessary to refer to the results of the first group, in order to refute the statement made at the London Conference that the small-pox matter was merely deposited in a little pouch in the cow's skin, and then re-transferred to the human subject, to whom it gave small-pox. Quite cognisant of what had already been achieved in this direction, the greatest circumspection was observed in guarding against fallacious conclusions; and the perfect knowledge possessed by Chauveau of the nature and habits of animals, their structure and diseases, as well as of experimental methods, was certainly an advantage of which few if any previous investigators could boast.

In order to study variola inoculated on the bovine species, twelve animals were selected which were known not to have had cow-pox. Of these nine were cow- or bull-calves, two were recently-calved milch cows, and one a six-year-old pregnant cow. They were all inoculated with small-pox matter between December and April, the material being obtained from four people affected with small-pox, and who had never been vaccinated; it was always employed very fresh. The inoculations were made at the vulva in the females, and perineum and scrotum in the males, and exactly in the same way as in vaccinating—the punctures being sometimes sub-epidermic, at other times quite subcutaneous. In none of the animals were there observed the slightest general phenomena—no disseminated eruption, fever, loss of appetite, or diminution of the lacteal secretion. With regard to the local phenomena, they were so trifling that in a first series of experiments they were inappreciable; hence the error of some of the preceding experimenters, who concluded that cattle could not be successfully inoculated with small-pox virus. But other experiments proved this to be a fallacy; and a drawing accompanying the report shows the perineal region of a bull-calf, on the left side of which five sub-epidermic variolous inoculations had been made, and the effect of which had arrived at its *summum* of development. There were small, red, slightly-prominent papules, from two to four millimetres in diameter, and slightly conical, in the centre of which the inoculation-puncture could be distinguished. These papules commenced to develop on the second day, and on the fifth had arrived at the dimensions shown in the drawing. On the twelfth day they had completely disappeared, after furnishing at the seat of puncture an extremely small, darkish crust. This course was not observed, however, in all the twelve inoculated animals; but it was remarked that the deep punctures did not furnish more evident results than the sub-epidermic ones. The former, though made with a cannulated needle highly charged with virus, only gave rise indeed to an eruption in which the papules were not so red or circumscribed as in the latter, and frequently could only be distinguished in the skin by passing the finger over them.

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Some deep inoculations were made by passing the virus through a wound several millimetres in extent, made by a lancet. The results were no more marked.

The apparent absence of a specific character in the papular eruption produced by inoculating the small-pox virus, might have led to the belief that it was merely inflammation produced at the seat of puncture. For instance, the first animal inoculated was a calf, which was inoculated at the vulva. A number of small papules appeared, and it was imagined that a very characteristic eruption of cow-pox was about to be developed; but instead of developing into pustules, they rapidly disappeared without leaving any trace of their existence, and then the result was considered negative, and the animal put to one side. But being desirous, some time afterwards, of producing cow-pox by means of vaccine lymph of Neapolitan origin, this calf, being at hand, was vaccinated from a magnificent pustule raised on another calf which presented a very fine vaccinal eruption. On the eighth day the inoculation had quite failed, greatly to the astonishment and regret of the Commission, as, relying on its success, they had not provided themselves with any more lymph, and had to send for another supply. Thinking the inoculation had not been properly performed, when the new lymph came it was tried again with the utmost care, but another failure resulted in this calf, while with other two animals—a horse and a calf—vaccinated at the same time, there was a beautiful eruption. The Commission were now compelled to admit either that the small-pox inoculation had produced a specific eruption capable of protecting the animal from vaccinia, that it had been previously affected with that disease, or it had no receptivity for the vaccine virus. At that time only about eight bovines had been vaccinated, and it was not certain whether this species would contract the cow-pox in this way. The experiments were continued, altogether ten animals were variolised, and then vaccinated some days afterwards; but six had no vaccinal eruption whatever, three had rudimentary and ephemeral pustules, and one only showed a regular and characteristic cow-pox. Considering the readiness, as was afterwards found, with which true cow-pox, human vaccinia, and horse-pox could be inoculated, and that the former could only be produced very exceptionally when the animals had been previously variolised, the conclusion arrived at by this important chance discovery was that variolisation exercises a neutralising influence on the development of vaccinia; and that the slightly-marked eruption, so undecided in character, caused by the inoculation of small-pox virus on bovines, is of a specific nature—in this species presenting, with the cow-pox, the same relations that variola and vaccinia do to each other in the human species.

(To be continued.)

SUDDEN AND UNEXPECTED DEATH FROM RUPTURE OF A VESSEL IN THE CERVICAL PORTION OF THE SPINAL CORD.

BY FREDERICK PAGE, M.D. EDIN.,
LECTURER ON MEDICAL JURISPRUDENCE IN THE UNIVERSITY OF DURHAM, AND SURGEON TO THE HOSPITAL FOR SICK CHILDREN, NEWCASTLE-UPON-TYNE.

DURING an indisposition of some five days' duration, a delicate girl, aged nine years and eleven months, suddenly died, as an eye-witness described, "choking." The history of the case is very imperfect. The child's stepmother was a most peculiar woman, from whom no reliable information could be obtained, and the father saw little of the child in consequence of his being away from home all day, and often for part of the night. The girl was a seven months' child, and had been delicate from birth, though she had no medical advice for eleven months previous to her death. For a considerable time she had suffered at irregular intervals from attacks of indisposition, lasting some few days, and leaving her debilitated, but otherwise in her usual health. During these attacks she always complained of stiffness of the neck, of pain, sometimes very severe, along the upper part of the spine, and she kept her left arm still because she felt pain on moving it. She was prostrate, and alternately hot and cold. She did not vomit, never had convulsions, nor any kind of fit. On a Saturday she was in her usual health, and took a long walk. On Sunday she was ailing. On Monday she stayed away from school, and was confined to the house, complaining of pain and stiffness in the neck and left shoulder. She refused her food, and was thirsty. She was much the same on Tuesday. On Wednesday afternoon she was put to bed, and on Thursday morning she seemed to be much better. At 4 P.M., just after her bowels had been moved, she suddenly died without being seen by a medical man.

Autopsy, twenty-four hours after death.—The body was thin, but not emaciated. The muscles of the arms were much less plump than those of the legs. Froth was issuing from the mouth. There were no marks of injury. Nothing was found to account for death in the belly, chest, or skull. In the substance of the spinal cord, at the lower part of the cervical region, a considerable infiltration of blood was found, and on section a clot about the size of a horse-bean escaped. The blood was infiltrated into the anterior and lateral tracts of the cord more than into the posterior portion. The cord around the infiltration was soft. The membranes and the vertebræ appeared to be quite healthy. There can be little doubt, I think, that this child was the subject of chronic disease of the spinal cord, which gave rise to the peculiar periodic attacks from which she suffered, and that the immediate cause of death was paralysis of the muscles of respiration from pressure upon the origin of the phrenic and other nerves. The blood proceeded from a vessel in the cord, ruptured, probably, by the effort of emptying the bowels.

The causes of death, and particularly of unexpected deaths, are well worthy the most careful consideration; and my object in placing the above case upon record is more to direct attention to a rare and peculiar explanation of sudden death than to enlarge upon the many features of interest which I think the case cannot fail to possess for the physician and the pathologist.

A CASE OF INTERFERENCE WITH NAIL-GROWTH DURING ILLNESS.

BY GEORGE THIN, M.D.

IN the volume of Lectures on Dermatology delivered in the Royal College of Surgeons of England in 1876-77-78, by Mr. Erasmus Wilson, reference is made (p. 78) to cases reported by Dr. Beau, of arrested nail-formation associated with illness. The publication of a certain number of cases in which the dates of appearance and disappearance of the depression in the nails are authentic may be useful, and I therefore give the following details regarding one that has come under my notice.

A middle-aged man was seized with severe colic-pains in the end of August, was confined to bed for a week, during which time he ate very little and suffered much from retching. It was only at the end of the third week that he regained his usual appetite.

Shortly afterwards I had occasion to observe that in every nail of both hands the groove described by Dr. Beau was to be plainly seen—a well-marked depression nearly a millimetre broad extending across the nails. When I first saw the depressions they had advanced nearly to the middle of the nails. I observed their progress forwards with interest, and found that they had not completely disappeared at the points of the nails until the first week of January.

Thus, from the date of the illness until the final disappearance of the corresponding depression in the nails there was a period of four months, and this is the fact which I think is worthy of being put on record.

Queen Anne-street, W.

ON TONGA.

BY C. BADER,
OPHTHALMIC SURGEON TO GUY'S HOSPITAL.

THE results obtained from Tonga by Drs. Ringer and Murrell (see THE LANCET, March 6th, page 360) fully coincide with mine. I have notes of cases of brain and kidney disease in which tonga alone succeeded in removing pain. I shall, however, confine myself to reporting the effects upon the eye. Some months ago, when commencing

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experiments with tonga, I had the notion, the result of conversation with patients from the Fiji islands, that the drug might have a specific effect upon nerves which are instrumental in pain.

Of the three preparations—Tonga in a bag, the watery extract, and the alcoholic extract (prepared by Messrs. Allen and Hanburys, 37, Lombard-street, E.C.)—I found the alcoholic extract alone reliable. When dropped into a healthy eye it seemed to increase the power of accommodation—to approach the nearest point of distinct vision—without affecting the size of the pupil (though in some cases, taken in large doses internally, it caused great dilatation of both pupils). It acted beneficially in several cases of asthenopia. The sister in the Eye wards gave it with great benefit to a man suffering from painful rheumatic iritis. Several patients, with intolerance of light, were rapidly relieved.

A most striking effect was obtained upon diminished tension of the eyeball. Two months ago a lady consulted me for intense pain in the right eyeball, with marked decrease of tension (T—2), intolerance of light, and watering, the pupil and cornea being clear, with some conjunctival redness. The intense pain had deprived her of sleep for several nights. Some of the alcoholic extract of tonga was dropped into the eye at 2, 5, 7, and 9 P.M. The following day all intolerance of light had ceased, and she had passed a good night, free from pain. She stated that the drops caused no pain, but a sense of warmth, and that the pain in the eye subsided gradually; their use was continued for several days. Remarkable was the rapidity with which the tension of the eyeball became normal and remained so.

All cases of neuralgia (supra- and infra-orbital branches of the fifth nerve), with swelling of the temporal veins during the attack, were benefited. In these a teaspoonful of the extract in half a tumbler of water, and two or three more at an interval of half an hour until the pain subsided, were given.

Finsbury-circus.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

UNIVERSITY COLLEGE HOSPITAL.

THREE CASES OF TUMOUR OF THE ANTRUM OF HIGHMORE.

(Under the care of Mr. CHRISTOPHER HEATH.)

WE are indebted to Mr. Silcock, surgical registrar, for the following interesting notes:—

CASE 1. *Collection of Inspissated Pus in the Antrum simulating a Morbid Growth.*—A. E——, aged forty-three, housewife, was admitted on June 3rd, complaining of pain and swelling of the left side of the face. There was an ill-defined swelling over the region of the left upper jaw, and the angle of the mouth on that side was drawn downwards. The swelling was both hard and tender; the skin over it appeared unaffected. In the mouth there was a tense, elastic, and tender swelling over the left half of the hard palate, displacing the alveolar process downwards. Slight discharge oozed from a small opening in the mucous membrane opposite the last upper molar tooth, the swelling being softer about this spot than elsewhere. The left nostril was blocked, its external wall being pushed inwards, and the patient complained of some discharge from it. The neighbouring lymphatic glands were not enlarged, and with the exception of occasional pain in the tumour, the patient suffered no inconvenience, her general health being excellent.

She had noticed the swelling for about two years, and its commencement was attributed to exposure to cold. At times the swelling increased, and became more troublesome, especially after prolonged overwork. No history of syphilis could be obtained, and her family history was good.

On June 5th Mr. Heath made an incision through the upper lip in the median line, prolonging it into the nostril of the affected side. The alveolus and hard palate having been divided with saw and bone forceps, a way was made into the latter, and a pultaceous offensive mass, about the size of a hen's egg, was turned out with the finger. On microscopical examination this was found to consist of fatty débris, granular pus cells, and acicular crystals. As the larger portion of the left half of the hard palate was partially loosened and absorbed it was removed with the forceps. The cavity of the wound was stuffed with a strip of lint to prevent any hæmorrhage, and the edges of the incision in the upper lip brought together by hare-lip pin suture.

The patient made an uninterrupted recovery, and was discharged from the hospital on June 22nd.

CASE 2. *Soft Fibroma of Antrum.*—J. P——, aged twenty, domestic servant, was admitted on July 1st, 1878. She stated that she first noticed a swelling of the right side of the face in 1874. The swelling never entirely subsided, and gave her more or less pain. In 1877 a swelling appeared in the roof of the mouth, accompanied by copious and offensive discharge. At this time the patient suffered from toothaches, referred to the right upper molar teeth, which were consequently extracted. Relief was thus obtained for a month or so, but the tumour gradually increased in size, and at the time of admission the pain had become much more severe, and was almost constant. There was likewise a uniform swelling of the right side of face, the malar bone and adjacent parts of the superior maxilla feeling fuller than the corresponding parts of the left side. In the mouth the growth involved the right upper alveolar process, the second molar being in the centre of the swelling, and quite loose; its inner margin corresponded with the inner edge of the alveolar process; externally it merged into the swelling of the antrum, and was here soft, elastic, and irregular. On examination with the finger, the posterior nares were found to be free; there was no discharge from either nostril, nor any evidence of implication of the right orbit, or of the neighbouring lymphatic glands. The heart was slightly hypertrophied, and a presystolic murmur was audible, but other organs apparently healthy. Her general health was fair.

On July 3rd an incision was made into the antrum from beneath the lip, and a mass of new growth was turned out with the finger; but a rapid recurrence having taken place, the whole of the upper jaw was removed on July 17th. The bleeding occurring during the operation was arrested, partly by ligature, and partly by Paquelin's thermo-cautery. The edges of the incisions (one through the upper lip into the right nostril, another begun near the inner angle of the orbit, and carried down by the side of the nose around the ala, so meeting the first) were brought together with hare-lip pin and silk sutures, and painted over with collodion.

Examination of the parts removed showed that the growth was limited to the antrum, and had been completely extirpated. It was of a pale yellow colour, and almost gelatinous in consistency. Microscopically it consisted of wavy interlacing bands of fibrous tissue, in the midst of which a few spindle-shaped and round cells were visible.

With the exception of slight hæmorrhage from the cavity of the wound on July 25th, the patient made an unretarded recovery, and was discharged from the hospital on August 21st.

She was seen on October 25th, appearing in excellent health; beyond a little sinking in of the right cheek scarcely any trace of the operation was visible.

She was again seen in May last, and with the exception of some inconvenience arising from badly-fitting artificial teeth and palate, was free from pain, and in good health.

(The notes of the third case will be given in a future issue.)

LEEDS GENERAL INFIRMARY.

CASES OF NERVOUS DISEASE, PRESENTING OPHTHALMOSCOPIC PHENOMENA.

FOR the following notes, continued from page 366, we are indebted to Dr. E. H. Jacob, late resident physician.

CASE 9. *Cranial Tumour; Optic Neuritis.*—H. N——, aged twenty-five, admitted Nov. 10th, under the care of Dr. Allbutt. She had never been very strong, and had suffered frequently from intercostal pain. Six years before admission, while running, she had a fall, after which she was insensible for some minutes. A few days later she

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found a difficulty in playing the pianoforte with her right hand, and this she never completely recovered from. Three years before admission she began to be deaf of the right ear, and twelve months later severe headaches came on, during which the sight was much affected. She "fainted" occasionally, but never had a regular fit. She had a continued feeling of weight in the head, with frequent severe pain accompanied by vomiting of clear fluid. Vomiting occurred nearly every day. There was occasional pain in the shoulders and the left side. She was fairly nourished; face rather flushed; pupils dilated but equal; tongue clean and protruded slightly to the right; appetite good; bowels regular; she slept badly, on account of the pain in the head. The catamenial functions were regular; the sight was much impaired; she could count fingers at about a foot distance; there was no strabismus; there was optic neuritis in somewhat late stage, going on to atrophy. Hearing was much impaired, especially in the right side; with the left ear she could hear a watch on contact, and nearly equally well if placed on the temple; there was much wasting of the extensor muscles of the right hand, especially the muscles on the outside of the thumb; the metacarpal bone stood out almost uncovered in front; she could not fully extend the fingers; there were slow spasmodic twitchings of both hands, more marked in the right thumb; the grasp of both hands was feeble, but felt about equal, though she said the right was the stronger. Occasionally she gave slight sudden starts; these occurred several times while her eyes were being examined with the ophthalmoscope. Ten grains of iodide and bromide of potassium were ordered, as well as an occasional chloral draught.

On Nov. 26th she had had less pain in the head since admission, and had experienced much relief from the chloral. The pain came on in paroxysms generally between 7 and 9 P.M., accompanied by tinnitus and blindness. She was ordered five grains of quinine every day at 5 P.M. This produced some improvement for two or three days. On the 7th of December she had had much pain for two days, with some epistaxis; and on the 8th she was in severe pain all day, slightly relieved by a draught of chloral and nepenthe. In the afternoon she had a slight convulsive attack. Next day she lay in an unconscious state, occasionally moaning. Pulse 100, regular; breathing also regular. Movements of right thumb continued. On the 24th she was very restless in the night, and had much pain; the deafness had increased; the movement of the thumb had ceased. On Jan. 4th she had a strong convulsive seizure lasting about eighty minutes, followed by great exhaustion. On the 10th she seemed rather better, and there was some return of sight and hearing for a short time in the morning. She had less pain, but still complained of tinnitus. On the 23rd she had another convulsive attack, after which she lay insensible, moaning frequently.

Her state varied considerably. Sometimes she could hear a loud voice; at other times she was quite deaf, and was insensible. On Feb. 7th the right thumb began to quiver as at first, and on the 19th she was discharged, at the request of her relations, but little improved.

Dr. Jacob adds that, by the kindness of Mr. Seatchard of Boston Spa, he had had an opportunity of examining this patient on Oct. 15th, 1879. She remained in nearly the same condition for about six months after leaving the infirmary, and then began to slightly improve. When last seen she looked pretty well in the face and was fairly nourished, but had rather a dazed expression. The pupils were undilated. She could see a hand about two feet from her face, and could walk a little, but was very weak on the right side. The right thumb still quivered, but the muscles were not more wasted than they were seven months before. Optic neuritis was still well marked. The edges of the discs were raised and woolly, of a very white colour, but there were a few large vessels. She could only hear a loud noise in her left ear. She was cheerful, but suffered from occasional paroxysms of pain at the back of the head, and there was a slightly boggy feel on the scalp over a small area above the occipital protuberance. She had slight difficulty in swallowing, but her appetite was good.

Remarks.—The great remissions of symptoms observed in this and in many other cases of cerebral tumour are remarkable. Once after the patient left the infirmary she had a very severe paroxysm of pain, which laid her up for more than a week. The convulsive movement and atrophy of the muscles of the thumb evidently point to a corresponding atrophy of the brain-centres for these muscles; and should the case soon come to a fatal termination, it may allow of the accurate determination of the locality of these centres, which as yet have only been indicated by experiments on animals. The severe attacks of symptoms are perhaps due to transient accession of encephalitis, in an analogous manner to the attacks of pleurisy in the course of phthisis.

(The series will be concluded in a future number.)

CHESHIRE COUNTY ASYLUM, MACCLESFIELD.

A CASE OF CANCER OF ŒSOPHAGUS; PERFORATION OF THORACIC AORTA AND DEATH FROM HÆMORRHAGE; REMARKABLE LATENCY OF SYMPTOMS.

(Under the care of Mr. JAMES NEIL.)

E. H——, aged forty-five, a female patient, had been an inmate of the asylum for nearly two years. Her mental condition was one of partial dementia. Some months before her death she fell gradually into feeble health, without having any symptoms pointing to local disease. Laterly she became very hard to please with her food, and was often sick after eating. She spoke little at any time, and it was more by signs than words that she, on a few occasions, indicated that she had pain in her back. She became thinner, and her aspect was very cachectic.

On the morning of Oct. 24th, 1879, about eight o'clock, she vomited nearly two ounces of blood. Soon afterwards she fainted. In a short time she recovered consciousness, and expressed a desire to go to stool. She was assisted to do so, and voided per rectum about a quart of dark-coloured fluid blood, mingled with small masses of fæces. On lying down again in bed the flow of blood from the rectum recommenced, and continued till eleven o'clock. At that hour the general surface was blanched. The sclerotic was of a pearly white. The respiration was interrupted and sighing. Restlessness and tossing of the limbs were very marked. These symptoms continued till she died about three hours after the first vomiting of blood.

Necropsy, seventy-two hours after death.—Body rather emaciated. Commencing decomposition was shown by a dark-green colouring on the pit of the stomach, and along the short ribs on the left side. On section, the recti abdominis muscles were found to be well advanced in decomposition; soft, and of a dark-greenish colour. The heart and blood-vessels were almost empty, only one or two very small clots being found in the cardiac chambers. About two ounces of serum lay in the pericardium. The heart-muscle was in a state of advanced fatty degeneration. Each pleural cavity contained a small quantity of sanguineous serum. On raising the right lung, a circular adhesion about an inch in diameter, situated behind the root of the bronchus, was ruptured, disclosing a cavity in the posterior mediastinum, from which a small quantity of grumous fluid escaped. On removing the heart and lungs, the œsophagus was found to be the seat of cancerous disease involving the middle four inches of its length. The anterior half of its circumference was entirely destroyed, its place being mechanically supplied, and the continuity of the œsophageal tube preserved, by the reflected pleuræ, the root of the lung, and the posterior surface of the pericardium. The muscular fibres of the back wall of the œsophagus could be traced with difficulty through the upper half of the diseased portion and no farther. The disease seemed to be spreading downwards, and a ridge of new cancerous growth separated the lower border of the ulcer from the sound part of the œsophagus. The aorta was firmly adherent to the diseased tissue above it, and a perforation through its coats communicated with the tube of the œsophagus. The opening admitted the handle of a scalpel. It was not a cleanly eroded hole, but a curved valvular slit through the coats of the vessel. A thin layer of fibrin lay on the aortic endothelium around the opening. The stomach was full of blood-clot. The mass was moulded to the shape of the stomach, and was removed entire when the stomach was slit up. The intestines were anæmic, and their mucous lining was stained with blood-pigment. A small quantity of fluid blood was found in the upper part of the small intestine. The other viscera were quite drained of blood.

Remarks by Mr. NEIL.—This case exemplifies in a striking manner that latency of the subjective symptoms often seen among the insane. The disease must have existed for

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months, yet there was no complaint of pain, and no dysphagia till the very last, and but little then. The patient seemed to have small difficulty in swallowing the little food she could be induced to take. A suspicion of malignant disease was entertained, but the symptoms were too indefinite to support even a probable guess at its exact seat. Frequent attacks of menorrhagia seemed, indeed, to point to the uterus rather than the œsophagus as the affected organ.

The case might have had an earlier and disastrous termination had the disinclination for food been attributed to the mental state alone, and the feeding-tube been resorted to.

It may be noted that the green colouring, the first external sign of decomposition, appeared, not as usual in the iliac fossæ, but on the pit of the stomach, and over the false ribs on the left side. These were the situations where the stomach, full of effused blood, lay in contact with the abdominal wall.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Impacted Fish-bone in Gullet, wounding the Heart.—Acute Nephritis in Typhoid Fever.—Rapid and almost universal Paralysis with Recovery.—Fracture through Temporal Bone.—Femoral Aneurism, Ligature of External Iliac Artery.

THE ordinary meeting of this Society was held on the 12th inst., the President, Dr. Greenhow, F.R.S., in the chair. A peculiar and rare case of "general" paralysis rapidly recovering under antisyphilitic treatment was related by Dr. Buzzard; and the subject of the use of the carbolised silk ligature in the treatment of aneurism was raised by Mr. Clutton.

It was announced that the next meeting would be held on that day week, the 19th.

Dr. Carrington showed a case of Hydro-meningocele; Dr. Crocker one of Herpes Iris; and Mr. Spencer Watson one of Eyeball Tension treated by Sclerotomy. Dr. Buzzard also exhibited microscopical specimens of diseased Spinal Cord, from the case narrated by him at the last meeting of the Society.

Mr. EVE read notes of a case of Impacted Fish-bone in the Œsophagus, penetrating the Diaphragm and Pericardium, and wounding the Heart. The patient, a costermonger, aged fifty-nine, felt pain in his throat the day after he had been supping off fish. He went to a hospital, where a probang was passed, and on leaving he felt severe pain in the chest. He walked home with difficulty and took to his bed. He began to suffer from vomiting, and died suddenly on the third day. A lance-shaped fish-bone was found lodged in the œsophagus a quarter of an inch above the cardiac orifice, passing upwards and forwards through the diaphragm and pericardium, and producing a lacerated wound on the posterior surface of the heart. The pericardial sac was distended with blood. Mr. Eve thought this one of the calamities of surgery, believing that the probang had pushed down the bone, and caused the oblique impaction. He referred to a case related by Mr. Durham where the stomach was similarly perforated; and stated that there was a preparation in St. Bartholomew's Hospital Museum where the aorta was nearly severed by a fish-bone. Mr. Eve suggested the use of the laryngoscope in indicating the position of such bodies impacted in the larynx.

The PRESIDENT communicated notes of a case of Typhoid Fever with Acute Nephritis and Profuse Hæmaturia without Dropsy. A porter, aged twenty-one, was admitted into the Middlesex Hospital under Dr. Greenhow's care, on Nov. 25th, 1879, the fifth day of a fever, which set in with considerable severity, the second day of the attack being marked by vomiting, cough, and slight sore-throat; and in the night he began to have painful micturition, and noticed that his urine was almost black in colour. On admission, pulse 108; temperature 103·2°; urine sp. gr. 1012, of a deep red colour, from admixture with blood, containing albumen—one-half, numerous blood-globules, blood and epithelial casts. He was very prostrate, and suffered from muscular pains. There was impaired resonance with bronchial breathing and scanty crepitation at the apex of the right lung, but no râles elsewhere. The cardiac second sound was reduplicate. Abdomen was tympanitic, and there were tenderness and gurgling in the right iliac fossa. The liver and spleen were not enlarged. There was no diarrhœa nor rose-spots. Cold sponging was ordered and a fluid diet. At 9 P.M. pulse 126; temperature 104·6°. The illness ran a rapid course, prostration increased, the pulse-rate ranged between 100 and 130; the temperature 97·6° to 104·8°. Restlessness and delirium, passing towards the close into somnolence with occasional subsultus in arms and legs, were observed. The tongue became dry and fissured. The urine continued to be blood-stained, but the amount of blood and albumen diminished. The abdominal distension persisted, and characteristic diarrhœa appeared on the 27th, continuing till death, which took place on December 8th, the thirteenth day of his illness. The autopsy revealed mitral thickening and enlargement of the heart, and marked pulmonary hypostasis. Two or three sloughing ulcers occurred at the lower end of ileum, and one in the healing stage, Peyer's glands and solitary follicles being elsewhere swollen. Liver and spleen greatly swollen and softened. Kidneys, weighing twelve and fourteen ounces respectively, were intensely gorged; their secreting tubules were filled with swollen granular epithelium, and between the tubules there was small-celled infiltration. Dr. Greenhow remarked that he had not met with a similar instance. Albuminuria, when it occurs, is usually a late event in typhoid fever; according to Liebermeister, not until the fever has reached its height; and Murchison says it rarely appears sooner than the third week, and is due either to congestion or to parenchymatous degeneration, not as due to acute nephritis. Dr. Murchison also says that when copious hæmaturia occurs it is generally associated with other hæmorrhages. The only parallel instance to the present case Dr. Greenhow had found on record was a reference by Liebermeister to two cases of uræmia from acute parenchymatous nephritis in the Basle hospital, in 1872, soon after admission, and during the height of an attack of typhoid fever. The most careful inquiry failed to elicit any history of previous disease in the present case; so that it seemed as if the trivial cardiac hypertrophy and mitral thickening were due to the very intense nephritis. The points then of chief interest were the concurrence of typhoid fever with such intense nephritis, the entire absence of dropsy, and the severe and rapid course of the disease.—Dr. CAYLEY said that of late years in the London Fever Hospital there had only been one case of typhoid fever complicated with acute nephritis, which came on during convalescence from the fever. Two years ago a patient in the same hospital had profuse hæmaturia, but Dr. Cayley had never seen a case with so rapid a course as that described by Dr. Greenhow. The presence of a healing ulcer would suggest that the period of the fever was later than was apparent.

Dr. BUZZARD read notes of a case of Rapid and almost universal Paralysis, involving the four Extremities and both sides of the Face, Respiration and Deglutition; Recovery. The patient, a sparely-built man forty-four years of age, when admitted under Dr. Buzzard's care at the National Hospital, presented double facial palsy. His face was devoid of expression; he could not whistle nor frown, and the saliva dribbled from his mouth. There was also complete palsy of the external rectus of each eye. The tongue was tremulous, but not wasted. He could not swallow solids, except with difficulty; but fluids did not regurgitate. The sterno-mastoids were flaccid. Respiratory movements were upper thoracic, and they were not aided by the sterno-mastoids. There was some loss of control over the sphincter ani. As to the limbs, he could just move his arms sufficiently to feed himself, but otherwise they were powerless, though not wasted. He was unable to stand, and there was great muscular flaccidity in his legs. The patellar tendon-reflex was absent in both legs.—*Cutaneous Sensibility.* Over both sides of face there was loss of tactile sensation, but heat and cold were differentiated. On the extremities there were defined areas of anæsthesia.—*Smell.* Assafœtida and sumbul could be recognised by right nostril, not by the left.—*Sight.* Muscæ; diplopia; fundus oculi normal.—*Hearing.* Normal.—*Taste.* Neither sugar nor salt could be perceived on either side of tongue. He suffered from sharp pain in the right thigh. The urine contained no albu-

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men. The history of the case was as follows:—A month previously his face was noticed to be drawn to the right. Then he began to have sensations of "pins and needles" in the hands and feet; then his legs failed him. Next he lost power in swallowing, and, lastly, his arms got weak. There was no history of a blow or other injury, or exposure to cold, nor of any throat affection, nor of his having been in the vicinity of anyone suffering from sore-throat. When twenty-four years of age he contracted syphilis, but had no marked manifestations of the disease. He was given ten grains of iodide of potassium every four hours. Improvement soon set in, and about a fortnight after admission he was ordered mercurial inunctions, the dose of the iodide being increased to fifteen grains. Ten days later the anæsthesia was much diminished, and a considerable amount of power had been regained; and in about another ten days he was able to walk. When discharged three months after admission he could walk fairly well; but the patellar tendon reflex was still absent. A note three weeks later stated that he could then walk three or four miles, and that there was decided patellar reflex in the right leg. Dr. Buzzard remarked that this seemed to be one of the cases of "acute ascending paralysis," without muscular atrophy, first described by Landry, which in the majority of instances terminated in asphyxia from paralysis of the respiratory muscles. Erb, who remarks that the disease may progress downwards from the bulb, says that as a rule there is a very slight disturbance of sensibility, so marked a feature in this case. The lessened muscular excitability was also peculiar. Dr. Buzzard compared the case to one he had brought before the Society in 1874, which he believed to have been syphilitic in origin. The spinal origin of the disease was evident from the absence of patellar reflex, the widespread paralysis, and the diminished irritability to the induced current. If it were a myelitis it must have involved the posterior as well as the anterior cornua, or it might be produced by some thickening or exudation in the pia mater. In the case he had previously recorded he thought the symptoms might have been produced by a pachymeningitis, but he rather doubted this from subsequent experience. He had had two other similar cases. In all but one there was a strong history of syphilis. The rapidity with which they all recurred under antisyphilitic remedies was in favour of their being due to that disease.—Dr. ALTHAUS asked if there was any anæsthesia of the mucous membranes supplied by the fifth nerve.—Dr. S. MACKENZIE said the case was a most peculiar one. There must have been some lesion in the cord itself. About ten years ago he had seen two cases of sudden and severe universal paralysis, both fatal. One was a case of a young girl, who after severe headache was attacked with vertigo and brought to the London Hospital partially insensible and completely paralysed. Drs. Ramskill, Sutton, and Hughlings Jackson examined the case. Sensibility was retained, there was no change in the optic nerves, the extremities were livid. She was bled to thirty ounces, with temporary relief. After death no gross change was found in the nervous centres. Another case, about the same time, was that of a man who was suddenly seized with paralysis in all his limbs, followed by tonic spasms, almost tetanic in character. Here again no change was found after death. He mentioned these cases to show to what an obscure class they belonged, and how difficult it was to decide the seat and nature of the lesion. Indeed, it was very difficult with our present knowledge to determine what lesion would account for all these symptoms.—Dr. MAHOMED had seen a somewhat similar case with Dr. Broadbent some years ago. It was not so severe a case as Dr. Buzzard's. A young man was taken suddenly ill, with intense vertigo, great weakness, and almost constant hiccough. For two or three weeks previously he had suffered from headache. He became more or less paralysed in the lower limbs; his face was expressionless and the pulse irregular. The case is published in Dr. Broadbent's lectures on "Syphilitic Nervous Diseases." The patient recovered rapidly under anti-syphilitic treatment; but for weeks afterwards he had disordered sensation—e.g., when in a cold bath one-half of his body felt hot and the other cold, and *vice versâ*. One marked feature was the intensely offensive character of the urine as soon as passed. There was no retention, and it appeared as if the urine underwent some chemical decomposition shortly after its excretion. The fundus oculi in this case was normal.—Dr. BUZZARD, in reply, said that the anæsthesia of the skin of the face was most complete, but he had no note of the condition of the mucous membranes. He asked Dr. Mackenzie if there was any reason to suspect syphilis in his cases, which apparently belonged to the same category.—Dr. MACKENZIE said there was no evidence of syphilis in either of them.—The PRESIDENT remarked upon the analogies presented by the case with those of severe diphtherial paralysis, of which he related an instance where there was complete palsy of limbs, face, and tongue. Although there seemed no doubt that Dr. Buzzard's cases were due to the syphilitic poison, yet it was interesting to note their similarity to those due to diphtheria.

Mr. EVE read notes of a case of Fracture extending through the Temporal Bone. A boy, aged thirteen months, fell off a bed and struck his head against a mangle. On admission to St. Bartholomew's Hospital he was insensible, vomited, and there was bleeding from the right ear. The next morning there was a profuse discharge of clear watery fluid from the ear, which continued until he died, on the third day after the accident. At the post-mortem examination lymph was found effused in the subarachnoid space over the whole surface of the brain, but most abundantly over the right hemisphere. A fracture passed vertically through the squamous portion of the temporal bone and the petrous bone, cutting across the external and internal auditory meatuses, and ending at the foramen lacerum posticus. A coloured injection thrown into the external auditory meatus passed out through the internal meatus, issuing from within the sheath of the nerve, thus demonstrating that the watery discharge in this case was the cerebro-spinal fluid.

Mr. CLUTTON read notes of a case of Femoral Aneurism; Ligature of the External Iliac Artery; Cure.—A patient, aged forty-six, was admitted into St. Thomas's Hospital on December 9th, 1878, with an aneurism of the right femoral artery, of about the size of a walnut, immediately below Poupart's ligament. It had been noticed three or four months. There was no history of syphilis or injury. There was slight arterial degeneration, but no marked affection of the heart. He was placed under the influence of iodide of potassium and a restricted diet. Every variety of pressure was tried with the exception of compression of the abdominal artery, but all failed. Accordingly the external iliac artery was ligatured antiseptically by Mr. Clutton on January 11th, 1879, with a thoroughly carbolised silk ligature, of which the two ends were cut short. A catgut drain was then inserted, and the wound closed with silver sutures. Pulsation in the tibial arteries returned in three days. As the temperature never rose above normal, and there was no oozing, the dressing was not changed for a week; the wound was then found completely closed; pulsation, however, could be felt in the sac. At the end of another week the dressing was removed for the second time, and the wound found soundly and firmly healed. Pulsation in the aneurism, however, continued till Feb. 15th (five weeks after the operation), when the patient was suddenly seized with pain in the right groin. Shortly afterwards the aneurism was found quite solid, and never again pulsated; but on February 23rd, exactly six weeks after the operation, there were slight pain and swelling in the wound, and a few days afterwards a thimbleful of sero-purulent fluid was discharged from the centre of the cicatrix. This little opening continued to discharge only sufficient fluid to keep a scab of about the size of a split pea adherent to the centre of the scar. In this condition he left the hospital on March 15th, with the caution carefully to watch for a little loop of silk. On May 22nd, four and a half months after the operation, he came to the hospital with the silk loop in his hand, and the wound again soundly healed without any scab. Mr. Clutton remarked that, considering the number of silk ligatures which are now often used in a case of ovariotomy in this manner, and the few, if any, that have subsequently appeared by suppuration or otherwise, it did not seem at first sight too much to expect from antiseptics, that the silk might become encapsuled in the tissues around the artery as efficiently as had been the case in the peritoneal cavity. In the present case, too, the ligature was not placed amongst the muscles of a limb, where a certain amount of movement must take place, but in the abdominal cavity, thus differing only from the ligature of the ovarian pedicle in its position with regard to the peritoneum; in the case of the artery the ligature is in the subserous tissue; in the case of the ovarian pedicle it is lying on the endothelial surface of the peritoneum. He thought that in this fact was to be found the explanation of this apparent discrepancy.—Mr. EVE had

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examined the pedicle of an ovarian tumour one year after operation, and found the ligature disappeared all but the knot. What fibres remained were infiltrated with leucocytes, which he imagined probably absorbed the silk.—Dr. BARCLAY, referring to the early treatment of the case, said that in his own experience restricted diet had no effect in aneurisms; rest and a generous diet were the chief measures he relied on.—The PRESIDENT said that Dr. Barclay had raised an important question, for his views were opposed to those put forward by Mr. Tufnell and others. He himself had just seen a patient with intrathoracic aneurism who had been on restricted diet for four months, and having seen the case six months ago he could say that no extension of the aneurism was apparent. He hoped that Dr. Barclay would bring forward some cases on this point, in order that the subject might be debated.—Mr. CLUTTON, in reply, said that it seemed on microscopical examination as if some of the silk fibres had disappeared. In Professor Lister's cases, where ligatures were examined some months after their application, none of the silk was found to have been absorbed, although it had been somewhat disintegrated. In ovarian cases the material exuded tended to organisation and not to suppuration, as occurred in the cellular tissue.

The Society then adjourned till the 19th inst.

MEDICAL SOCIETY OF LONDON.

President's Address.—Thoracic Aneurisms treated by Galvano-puncture.

AT the meeting on the 15th instant the newly elected President, Mr. J. F. Gant, delivered an address. After thanking the Fellows for the honour done him, he spoke of the catholic aims and practical character of the Society. He dwelt on the value of debate in challenging new facts and criticising hypotheses based on imperfect observation; remarking that the suggestive work written by Dr. Whewell on the "History of Scientific Ideas" might well be supplemented by a treatise on the "History of Scientific Errors." He believed that many of the quasi-facts of pathology had been grounded on erroneous inferences from physiology, whereas pathology was in a sense but a part of physiology. Accuracy of observation was hampered by the complexity of the phenomena of disease, and the modifications necessarily induced by treatment. The modern tendency was towards the more exact diagnosis of diseased states, which he illustrated by the discrimination of the forms of morbid condition underlying a white swelling of the knee, the differentiation of the continued fevers, and of the varieties of pulmonary phthisis. In therapeutics the analysis of complex diseases was of great service, enabling the practitioner to adopt a rational line of treatment, and to estimate the value of his remedial agents. In surgery the conditions of disease or injury appropriate for this or that line of treatment were of much importance—e.g., the selection of cases of joint disease suitable or unfit for excision; the question whether in a case of compound fracture or dislocation, recourse should be had to primary or secondary amputation; or the comparative merits of alternative methods of treatment involved the pathological conditions which should determine the choice of one or other procedure. Many such comparisons admitted of yet further inquiry—e.g., the treatment of aneurism by compression or ligature; herniotomy with and without opening the sac; the treatment of internal hæmorrhoids with prolapsus by ligature or cauterisation. The respective merits of lithotomy and lithotrity in particular circumstances had not yet been decided, especially since Bigelow's method of litholapaxy had placed litlrotrity more on a level with lithotomy. The various methods of treating urethral stricture illustrated the same point. The simplification of surgical treatment; the consideration of new methods, and especially the value or need of the Listerian method of antiseptic surgery, were matters still open to examination. In conclusion, Mr. Gant said—"I need only remind the Society of its high functions, as a court of scientific and practical inquiry for the advancement of medicine, in its widest acceptation, ever remembering, also, the legal maxim—that 'it is the province of reason to sit in judgment upon evidence, and the perfection of reason to form a right judgment.'"

Dr. W. M. ORD read a paper on a case of Aneurism of the Aorta treated by Galvano-puncture, with some observations on thoracic aneurism. The aneurism was of the globular kind projecting strongly forward in the angle between the right clavicle and the sternum. It was very thin-walled, and as the skin was tense over it, though as yet nowhere adherent, the danger of the occurrence of adhesion and rupture externally was imminent. In the operation, which was performed by Mr. Mason, two needles, partially sheathed with sealing-wax, were introduced into the tumour at different points and then connected with the negative pole of a Foveaux's battery, the circuit being completed by the application to the skin of a sponge connected with the positive pole. Six cells of the battery were used at first, and the number was gradually increased to twenty-two, which, causing too much distress, were reduced to eighteen. About forty minutes after the commencement of the operation signs of cauterisation appeared around the needles, and their insulation was found to be destroyed by the current. They were soon afterwards withdrawn. Sloughs subsequently formed at the punctures, but were superficial and came away within a fortnight, leaving healthy surfaces. The tumour became distinctly firmer during the operation, and continued to increase in firmness afterwards, undergoing also a distinct reduction of bulk in all dimensions. The patient also improved in health for a month, and it was proposed to repeat the operation when symptoms of occlusion of the innominate artery appeared, and he died on the forty-ninth day after the operation. The aneurism was, after death, found to be partially coated internally with a thick, firm clot, thicker at the punctures than elsewhere, forming a valuable protecting pad within the very thin walls of the sac. A process, which if it had continued would probably have proved curative, had clearly been established. The blocking of the innominate was due apparently to thrombosis, not embolism, a fresh clot projecting from the mouth of the vessel into the sac. In regard to the operation, the paper pointed out that the object at first proposed was attained in the prevention of further outward progress. The failure of the insulation was clearly due to the medium used. Vulcanite, as recommended by Dr. Duncan, is the best—perhaps the only suitable—material. The use of ergot in the treatment of aneurism was then discussed. Dr. Sibson had made many experiments on this subject, many of them in conjunction with the author; with the aid of the sphygmograph and cardiograph it could be shown that arterial tension was generally increased and the pupils dilated after the administration of ergot, and that in many aneurisms a temporary reduction of the sac and range of movements of the sac was effected. These statements were illustrated by several cases, in all of which the use of ergot had been attended with great relief of all symptoms referable to pressure of the sac on surrounding parts. But it could not be shown that ergot had exerted in any instance a curative influence, so that it could only be regarded as a valuable palliative, an adjuvant to more effective treatment. The diagnosis of aneurism, as illustrated by cases under the author's care, was then partly considered. The value of the sign of pulsation, and the means of diagnosing the pulsation of aneurism from that of solid tumours in the chest or its walls, and from pulsations produced by adhesions and displacements of the heart, were then discussed. Next, the contraction of the pupil of one eye, often observed in thoracic aneurism, in relation with paralysis of the cervical sympathetic. And, lastly, the destructive inflammations of lungs and pleura frequently arising in aneurism were considered in relation to their causation, pressure upon pneumogastric and pulmonary plexuses being regarded as the probable cause of the most destructive forms of inflammation, and the question of pressure on ganglia of roots of special nerves being a cause of pleurisy in some cases was raised.—The PRESIDENT referred to a similar case treated by him by galvano-cautery, in which a fatal result ensued. There was no autopsy.—Dr. HUGHES BENNETT believed the unfortunate issue of most of the cases so treated to be due to the serious nature of the disease itself, and the fact that this method was only resorted to after other modes of treatment had failed, and he advocated an earlier resort to galvano-puncture in aneurism. At the present time he had under his care at Westminster Hospital a case of thoracic aneurism, which was so far doing well. He employed steel flat-headed needles insulated by glass, and he advised the use of a rheostat for regulating the current, as it allowed of the employment of strong currents with apparently little or no injury.—Dr. DE HAVILLAND HALL asked Dr. Ord why he

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gave digitalis. Would it not tend to lead to greater distension of the sac by increasing the force of the cardiac systole?—Dr. HEYWOOD SMITH said that in a case of thoracic aneurism now under his care he had been advised by Dr. A. Clark not to give ergot, lest the heightened arterial tension in the small arteries should prejudicially affect the tumour.—Dr. ORD reminded the Society of the method of treatment which had been successful in some cases, advocated by Mr. Tufnell of Dublin. He agreed that it would be well to resort earlier to galvano-puncture than was usually the case, and Dr. Duncan considered insulation of the needles by glass to be useless, owing to its liability to break. Digitalis was given to strengthen the action of a weak heart. It had been shown by Dr. Sibson that diminution in the size of the sac followed the use of ergot, and he suggested in explanation of this a possible moderating action on the ventricular systole.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

AT the meeting of this Society on February 18th, after the annual address given by the President (W. A. N. Cattlin, F.R.C.S.), Mr. HAMILTON CARTWRIGHT opened a discussion "On the means of Diagnosis afforded by an Examination of the Teeth and Mouth in the doubtful cases of Constitutional Disease." He desired to show how some knowledge of dental lesions might be of the greatest service to practitioners of medicine and surgery, whilst at the same time the qualified surgeon practising dentistry might give valuable aid to his *confrères* in many dubious cases. The first subject he wished to draw the attention of the Fellows to was that of neuralgia connected more specially with the head and neck, which he divided into supra-orbital, infra-orbital and facial, mental and cervico-facial. His contention was that there is no such disease as idiopathic neuralgia; that a cause for it is invariably to be found, whether it be in connexion with the impressions created on the nervous centres by the ovum in the womb, or by the diseased tooth. He then combated the theory, that in ordinary cases there is any degeneration of the posterior roots of the spinal nerves, proving his hypothesis by many examples of sudden and complete cure on the removal of an exciting cause of pain. Though the teeth were very frequently the originators of a spurious kind of neuralgia, he thought that they were very often unjustly blamed and sacrificed. In speaking of the *loci* of neuralgic pain he hazarded the theory that the symptoms of neuralgia were in no small number of instances owing to pressure on the main branch of a nerve caused by exostosis around the edges of the foramina through which they pass. He then gave the means of diagnosing between pain due to dental causes, and that caused by lesion of the nervous centres, or by that of special nerves, maintaining that by a process of elimination it was easy to prove whether the teeth were at fault or not. He then alluded to the subject of gout, showing that there was a special condition of the teeth and oral mucous membrane by which the disease might be diagnosed, and even anticipated in hereditary cases. He then entered upon the signs of syphilis seen in the mouth, as those of rickets, phthisis, and dyspepsia, concluding an exhaustive discussion with the signs of scrofula and struma in the glands, laying great stress upon the fact, that a lack of knowledge of the elements of dental surgery, such as might be acquired in any general hospital, frequently was the cause of glandular abscesses being treated as scrofulous, and which were entirely owing to causes connected with the teeth.—The PRESIDENT thanked Mr. H. Cartwright for the clear and able manner in which he had brought forward a very interesting subject, and quoted several published cases to support Mr. Cartwright's theory that the local cause of facial neuralgia was often to be found in a remote part, and *vice versâ*. He instanced the case published by Sir Charles Bell, in which an ulcer of the stomach had caused facial neuralgia, and others mentioned in Sir Henry Halford's Essays, in which osseous deposit on the crista galli of the ethmoid bone had produced the same effect. Perhaps the most interesting cases he could refer to of pain in remote parts produced by irritation of the pulp or nerve of a tooth, was one published by the late Mr. Shercombe, in which severe spasm of the uterus was clearly traced by experiment to the exposed pulp of a tooth. He thought facial neuralgia was more frequently to be traced to the gouty diathesis and an anæmic condition of the blood than Mr. H. Cartwright supposed, although cases of neuralgia from constitutional causes were by far the most rare, and Dr. Fothergill had shown that they were common in malarious districts.—Mr. FRANCIS MASON dwelt upon the importance of distinguishing syphilitic from other diseases of the cavity of the mouth, and remarked that the commonest form of secondary eruptions in that cavity was found in a raised whitish patch, somewhat indented from contact with the teeth, and situated inside the cheek near the angles of the mouth on both sides. He believed that in the true syphilitic sore-throat such patches were observed either over the tonsils, or extending as crescentic elevations on the soft palate. If the tongue were affected the patches were chiefly on the sides of the organ, and indented from contact with the teeth. He believed that this peculiar raised condition, due to the effusion of lymph, so characteristic of true syphilis, was much more commonly to be observed than the deep excavated ulcer. He further remarked that it was customary at the present day to attribute all cases of exfoliation of the palate and nasal bones to syphilis. His own experience led him to believe that in by far the majority of such cases there was no history whatever of true syphilis.—The PRESIDENT assumed that Mr. Mason attributed necrosis of the bones of the nose and other parts more to the abuse of mercury than syphilis, although he had not actually said so.—Mr. MASON agreed that the awful destruction of the bones of the face and soft parts, as occasionally seen in former years, but now, happily, illustrated only in our museums, was due not to syphilis, but most probably to the wholesale administration of mercury for its supposed cure. Lastly he urged the importance of making a correct diagnosis, and instanced some cases in which the mere eruption of a wisdom tooth had been mistaken for syphilitic sore-throat, and had been treated accordingly.—Mr. EDGELOW considered that neuralgia had always some positive cause, and narrated a case that had come under his notice at St. George's Hospital in which exostosis of the fang of a tooth had caused severe pain in the hand, which subsided at once on the extraction of the tooth.—Mr. RANGER stated that in two cases which he had recently met with at St. Thomas's the same result followed. The first case was that of a young man who suffered extreme pain in the right arm and down to the hip-joint. He found a lower bicuspid very much decayed, and on destroying the pulp with arsenic the pain ceased almost immediately. The other case was that of hysteria in a girl, when on removing a lower bicuspid, much decayed; the same result followed.—Mr. HAMILTON CARTWRIGHT briefly replied.

CAMBRIDGE MEDICAL SOCIETY.

Deficiency of Bone at Vertex of Head.—Cases of Undescended Testicle.—Relation of Local to General Tuberculosis.

AT the meeting on Friday, March 5th (Professor Humphry, M.D., F.R.S., Vice-President, in the chair), Mr. WHERRY brought forward a patient with Deficiency of Bone at the Vertex of the Head. The patient is a man, aged sixty-two. There are irregular deficiencies in the skull-cap, the largest of which is on the left side of the sagittal suture, and measures two inches and a half in the long diameter. The edges are irregular, and the gap is crossed in the middle by a narrow bar of bone, apparently belonging to the outer table. There is no scar in the skin, nor any sign of inflammatory thickening. The depth of the hollow is greatest on the side nearest to the suture. The inner table cannot be felt to be perforated at any spot. Venous blood fills the gap when he is made to stoop; the swelling is felt to bulge under the hand, and fluctuation may be made out under the bridge of bone that crosses the gap. The blood that can be made to enter the hollow is presumably in communication with the veins of the diploë. The lesion may be taken to be absorption of the outer table. There is a slight depression in the left frontal region, which also feels as if it were occupied by veins. He has had tenderness of the scalp for twenty years, and he has observed the present deficiency becoming gradually larger. His memory is somewhat impaired, and he suffers from headache to such a degree that he has given up his work

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as a cellarman. He is the father of nine children, the first six of whom are alive, and there is no suspicion whatever of syphilis. He has, besides, a lobulated tumour, the size of an egg, near the tuberosity of the right upper jaw, and extending towards the hard palate; also double hernia. Mr. Wherry pointed out that the deficiency of bone in this case was different from that in another class of cases where the inner table was first absorbed by pressure of the Pacchionian bodies, and subsequently more or less of the outer table. He quoted a case of the latter kind reported by Meschedes in Virchow's *Archiv.*, vol. lvii., 1873; the deficiency, as in the present case, existed in the parietal bone, to the left of the sagittal suture; it was found, after death, that the inner table had disappeared, and part of the outer, and the cavity was occupied by a sac filled with blood-clot and communicating with the longitudinal sinus by an irregular opening. The patient had suffered from melancholia and epileptic fits over a period of thirty-one years; the case was regarded as one of varix of the longitudinal sinus.—Dr. HUMPHRY had had his attention directed for a long time to these cases of deficiency in the outer table of the parietal bone, but he had formed no opinion as to their origin. He had referred, in his "Treatise on the Human Skeleton," to the specimens of the deficiency that he had seen in museums; one had been placed in the Cambridge Museum by the late Professor Clark, in which there was a deficiency in the outer table of the parietal bone of each side, with no evidence of disease preceding. In the Museum of St. Thomas's Hospital there was a similar specimen catalogued as "Successful healing after Trephining," and it so happened that the exactly corresponding piece of bone in the parietal of the other side was sawn out. He had observed the other day, in the index to a German work, a reference to "senile atrophy of the parietal bone," which might be the same condition under another name.

Mr. CARVER gave an account of two cases of Undescended Testicle in well-developed young men. In the one case the half-sized left testicle lay just within the external ring, which was open. The scrotum of that side was represented by a small sac, the size of a cherry, into which the testicle could readily be brought. Some fluid remained in the sac after the testicle was returned through the ring. A horse-shoe truss was recommended to be worn in such a way as to keep the testicle from ascending through the ring. In the other case the external ring was closed, and the scrotum of that side undeveloped. The testicle had been apt to come down in childhood; it had appeared in the canal again at the age of fifteen, and two or three times since (when the truss had been laid aside), and its presence in the canal gave rise to violent pain of a sickening character, which an ice-bag relieved instantaneously.—Dr. HUMPHRY pointed out that the testicle is the only organ of the body which changes its place, and it appeared that it did not acquire its proper function unless the change of position occurred. The undescended testicle, in one of the museum specimens, contained only sperm cells. In some animals the periodical activity of the function was associated with appearance of the testicle outside the abdomen.—Mr. CARTER remarked that it was a common belief among grooms that a horse, in which only one testicle had descended, and that had been removed, might still be fertile with the undescended testicle.

Dr. CREIGHTON showed the organs and microscopic specimens from two cases illustrating the relation of Local to General Tuberculosis. In the first case the primary disease was cystitis (the interior of the bladder being covered with strips of caseous epithelium, like shreds of lymph), and caseous thickening in the pelvis and calyces of one kidney, the whole length of ureter intervening being enormously dilated, and its walls thickened and caseous. Both lungs were full of grey translucent miliary tubercles, and were otherwise perfectly healthy. The other kidney was also sound, but contained a very few small white tubercles, at wide intervals, in its substance. Sections of a small projection of substance in the pelvis of the primarily affected kidney, being the apex of a pyramid with a thick coating of caseous epithelium, showed, under the caseous surface, the characteristic embryonic connective tissue, and, here and there, the giant-cells of tubercle. The tissue so made up extended uniformly over the whole affected surface. The caseous layer on the surface contained opaque necrotic masses corresponding in their size and isolation to giant-cells. The lungs contained precisely the same tissue elements in the form of the small miliary nodules. The miliary tubercles are secondary, and their structure is simply a mimicry of the primarily diseased tissue, just as the structure of nodules in the liver, secondary to a cancer of the stomach or rectum, is an exact mimicry of the diseased structure in its primary seat. The second case was one of bronchiectasis, with caseous peribronchitis and broncho-pneumonia, for the primary disease, confined to one lung; and, for the secondary disease, grey translucent miliary tubercles both in the sound lung and also in the primarily diseased lung, and in the immediate neighbourhood of the caseous bronchiectasis. In the deeper and not yet caseous layer of tissue that formed the thick walls of the dilated bronchi, embryonic connective tissue and giant-cells were found. The occurrence of the same structure in the miliary tubercles of the functionally sound lung is attributable to infection and to mimicry of the primary diseased tissue by the secondary. In the case of cystitis and pyelitis, the primary disease would doubtless be referred to the category of inflammations, the product becoming caseous; but in the case of bronchiectasis there would be a disposition to call the disease tubercular in its primary as well as in its secondary form. The modern school of French pathologists claimed that they had resuscitated Laennec's pathology of pulmonary phthisis. They found the same structural elements in common phthisis of the lung, the "infiltrated" tubercle, as in the miliary tubercle. But they analysed the so-called infiltrated tubercle into nearly the same factors as Virchow, twenty-five years before, had resolved it, the chief of these being *peribronchitis caseosa*, and next to that caseous catarrh of the epithelium both of the bronchi and of the alveoli. Laennec, on the other hand, said (as quoted by Niemeyer): "Pulmonary phthisis is a constitutional disease; it can never develop itself out of acute or chronic pneumonia, or take its rise from a bronchial hæmorrhage or from a neglected or protracted cold." The structural features of the local or primary tuberculous tissue are not very different from those of anæmic or fungous granulations, which arise as a sequel to inflammation. Dr. Creighton referred to and showed the specimens illustrating two papers in the *Journal of Anatomy and Physiology* for January, 1879, in which he had pointed to the giant-cells found in the deeper layers of the placenta as the physiological type of the giant-cells of tubercles and granulations. In the placenta they had an obvious vaso-formative significance, and it happened, even in the normal placenta, that when they failed to form themselves into new bloodvessels, they suffered a necrotic or caseous break-up. Precisely the same giant-cells occurred in granulations and tubercles, and, on the pathological evidence alone, it had been concluded by Brodowski, Ziegler, and others that they stood for pieces of abortive bloodvessels. In the well-marked class of scrofulous subjects, the products of inflammation, whether granulation-tissue in the strict sense only, or also in an extended sense, are apt to fail in attaining to that rich vascularisation which all granulation-tissue requires if it is to heal well; and the occurrence of giant-cells was the evidence and the index of the feeble power of the new tissue to provide itself with blood. The tissue in which they occurred differed from simple inflammatory tissue only in degree and not in kind. It might be conveniently called tuberculous; the name which had been from the earliest times universally assigned to what was in reality the secondary disease, might be extended to the primary or parent source of the disease. It was due to the remarkable principle of structural mimicry, which was somehow part of the essence of infection, that the miliary nodules, occurring in an organ functionally healthy, were made up of exactly the same kind of tissue as had grown up, for sufficient reasons, in the local disease. The mimicry of infection is best seen in tumour-infection. The lungs were especially liable to be the seat of infection from caseous centres, just as they were the favourite seat of infection from sarcomatous tumours. The question had been complicated by the circumstance that the lungs are themselves also the most liable of all organs to those caseating inflammations from which the miliary infection springs.

VACCINATION GRANTS.—The following gentlemen have received Government grants for efficient vaccination in their respective districts:—Dr. M. Coote, of the Nos. 2 and 3 districts of the Ashby-de-la-Zouch Union, £11 12*s.*; Mr. Edward Cheeman, Hanlister District of Knighton Union, £6 12*s.*

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Reviews and Notices of Books.

Paracentesis of the Pericardium: A Consideration of the Surgical Treatment of Pericardial Effusions. By JOHN B. ROBERTS, A.M., M.D., Lecturer on Anatomy in the Philadelphia School of Anatomy, &c. Philadelphia: J. B. Lippincott & Co. 1880.

IT is perhaps surprising that while tapping the pleura or peritoneum is so generally practised, and has been the subject of quite an extensive literature of its own, the operation on the pericardium has received but little attention. This has no doubt arisen partly from a fear of the evil consequences that might be expected to follow surgical interference with the heart or its serous covering, and partly from the fact that the cases calling for such active treatment are not of frequent occurrence, and are too often complicated with other such serious lesions that the operation holds out but small hope of cure. Dr. Roberts has considered the whole subject in a very impartial manner in the book before us, and has laid clearly before his readers both the immediate and subsequent risks of the operation. In a table of sixty cases in which the operation has been performed, the author includes all of which he has been able to get a satisfactory record, so that the material for forming an independent opinion is also provided. The operation can never, perhaps, take rank among the more brilliant feats of surgery, although certainly one of its boldest triumphs, for, as we have just stated, while in many cases it may serve to prolong life and give ease, in only some of these will a permanent cure be possible, the complicating conditions in others being too serious to permit of it. Dr. Roberts recommends that the operation be performed in the fifth interspace, about two and a half inches from the middle line of the sternum, and rejects altogether, and we think with good reason, the plan urged and practised by some, of entering the pericardium close to the sternum, to the inner side of the internal mammary artery. The danger to be feared and avoided is that of wounding the pleura, heart, or mammary artery. The pleura and artery are out of the way of harm if the puncture is made where Dr. Roberts advises. The heart may be adherent, and, therefore, liable to be wounded, and it is difficult or impossible to determine this beforehand. We would urge, therefore, that a preliminary puncture be always made with the fine needle of a hypodermic syringe; it could do no harm, and would at once demonstrate the presence of fluid if it exist.

A Description and Explanation of the Method of Performing Post-mortem Examinations. By Professor RUDOLPH VIRCHOW. Translated from the second German edition by Dr. T. P. SMITH. London: J. & A. Churchill. 1880.

THIS second edition of a most useful manual from the pen of a master differs from the first in the addition of notes of one or more cases illustrative of the method followed in the examination of the body, and some further remarks on the plan of opening the thorax. The value of this little book may be said to be in inverse proportion to its size. For thorough and systematic method in the performance of post-mortem examinations there is no guide like it, and we notice some points in which the method recommended differs from that usually in vogue in this country. The time allowed for a complete examination is three hours, and it would be well indeed if it were possible for every post-mortem prosector to give so much time to the examination of a single case. Under prevailing conditions, however—to which we need not particularly allude—it is plain that three clear hours are seldom at disposal. And herein, perhaps, lies the explanation of many regrettable deficiencies in the records of such examinations. The main object of the book is to lay down systematic rules for examination of cases of medico-legal bearing, but it is wisely urged that the same care and circumspection followed in such cases should be applied to all.

Transactions of the Clinical Society of London. Vol. XII. Longmans. 1879.

Index to the Clinical Society's Transactions. Vols. I. to XII. Longmans. 1880.

THE twelfth volume of the above Transactions fully maintains the credit of the Society whose work is here recorded, and in some respects it is more full of interesting and instructive matter than some of the recent volumes. We miss, however, papers of the elaborate extent with which the earlier years of the Society were occupied, although we have a collection of rare and interesting cases illustrating points of diagnosis and treatment. The present volume is especially rich in cases of intestinal obstruction, including conditions due to cancer of the bowel, to fibrinous exudation within it, impacted gall-stone, and intussusception. The subject of Ogston's operation for genu valgum appears in two papers, that of nerve-suture in another, and that of "litholapaxy" in one by the introducer of this adjunct to lithotrity. There is also the record of a case of gangrene of the lung treated by incision, the illustration accompanying it showing the correctness of the diagnosis, and the accuracy of the incision. Such are a few of the cases recorded before this Society. There is no need to dwell on them here; they have been sufficiently described and commented upon already within our columns.

The general Index to the first twelve volumes of the Transactions has just been issued, and will prove of great service to all clinical inquirers. It has been carefully compiled by Mr. Wheatley, a sufficient guarantee of its accuracy and admirable arrangement.

OUR LIBRARY TABLE.

The Micrographic Dictionary. A Guide to the Examination and Investigation of the Structure and Nature of Microscopic Objects. By J. W. GRIFFITH, M.D., and ARTHUR HENFREY, F.R.S., F.L.S. Third Edition. Edited by J. W. GRIFFITH, M.D., Professor MARTIN DUNCAN, M.B., F.R.S., F.G.S.; assisted by the Rev. M. J. BERKELEY, M.A., F.L.S., and T. RUPERT JONES, F.R.S., F.G.S. Illustrated by 48 plates and 812 woodcuts. London: J. Van Voorst.—This standard, but not sufficiently known, work, well deserves a passing notice as occasion offers. It is one of the books of reference with which every library table should be supplied. The plan is excellent, the descriptive text well compiled, and the illustrations are of great practical value. The only desideratum is a sale so extensive that a new edition may be issued bringing the book up to date each year. The work is of such value that an effort to secure its dissemination through the widest sphere seems in every way desirable.

Annals of the Anatomical and Surgical Society. Vol. I. 1878-9. Brooklyn, N.Y.—The record of work done contained in this volume is highly creditable to this young Society, and promises well for the future. Many interesting specimens and cases are reported, and two or three careful papers are found printed in full. Perhaps the greatest interest attaches to the description—very complete—of the fissured sternum of the late Dr. E. A. Grouse, who was good enough to exhibit himself to several London physicians and surgeons when he was in this country.

Notes on Diseases of the Testis. By SAMUEL OSBORN, F.R.C.S., late Surgical Registrar to St. Thomas's Hospital. London: J. & A. Churchill. 1880.—This is a small volume, uniform with the author's work on hydrocele. It consists of short chapters or essays on the common injuries and diseases of the testicle.

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THE LANCET.

LONDON: SATURDAY, MARCH 20, 1880.

THE Naval Medical Service does not present a pleasing spectacle. Estimated to have 476 members it has only 405, and when candidates are once more flocking to the Army there are but five found willing to enter the sister service, where there stand two Inspectors-General, representing four of the rank. There is a lowest depth to all misfortunes, at which sometimes amendment will begin, and therefore we entertain hopes that, stirred by the action of the War Office, the Admiralty will set to work to bring its service up to the proper level. As in 1865, a Committee has been appointed to inquire into the position of the medical officers of the Navy, and it is composed of representatives of each grade of executive officers, exclusive of the administrative. The results of the last Committee were not eminently successful in removing dissatisfaction, because it contented itself with recommending compromises where thorough reforms were needed, and the Order in Council framed on its recommendations was in the same spirit. With all its imperfections, however, it might have stood till now but for the issue of retrogressive circulars undermining the reluctant concessions, or retarding their practical application, and nowhere was the tergiversation more conspicuous or more irritating than in the matter of cabin accommodation. The usual signs of discontent accordingly revived, and no higher views of adequate means for appeasing it seem to have dwelt in official minds than to hold out an additional shilling per day for the first five years after entry, and the same increase each year to those grumbling within their dark and ill-ventilated cabins. The panacea not being found in these gratuities to the juniors, a raid was begun on the position and claims of the administrative ranks.

An Order in Council is in reality an emanation from the State Office that propounds it, although it is ostensibly a display of the Royal prerogative, which ought to be carefully surrounded with at least an appearance of justice. But when subsequent Orders in Council are soon discovered to be expedient to correct or explain its provisions, it may be safely inferred that the original was an instance of departmental maladministration that had dragged prerogative unnecessarily through the mire. If there be one thing more capable than others of checking a tendency to equilibrium in a public service, it is the frequent issuing of Orders in Council, keeping all serious interests in a state of uncertainty. The past ten years have been thickly strewn with such instruments, and with Admiralty Circulars; and all alike have been surprises, concocted without previous ventilation, that might have brought home to the Admiralty a knowledge that would have precluded grievances they would not have inflicted wittingly. Such was the case in 1869, and again in 1875, when, by an arbitrary act, the active-service life of administrative officers was reduced from sixty-five to sixty years, without option or retrospection, and without compensation to the most senior of them, as in the Army, and in every other department of the Royal Navy. Whatever public good may be hoped for in making organic changes, our English plan is to respect all antecedent claims, and to treat men fairly. This, however, we fear, was not the guiding principle on the occasions referred to, but the Nemesis which, sooner or later, balances all human transactions has brought utter confusion into the ranks then disturbed by a measure tainted with unfairness to some well-tried servants.

The policy hitherto acted on has displayed blindness to one great fact—namely, that since the passing of the Medical Act in 1858 every medical practitioner must possess legal qualifications, and that only such can enter the public service. Formerly those who had served in the Navy were privileged to practise on shore, without passing other examinations. The Admiralty have to realise these altered circumstances by treating even its most junior medical officers in every sense as professional men, entitled to cabin accommodation, and to all allowances, whether afloat or on shore, in full accordance with the principle of relative rank. A retrospect of the past twenty years will disclose instances of disabilities and inconveniences submitted to by medical officers, comparatively greater in degree than those which other professional officers, educated like them at their own charge, are called upon to endure. The War Office has with good grace recognised that principle of the substantive value of relative rank in all its bearings, and the sooner the Admiralty admits its importance the better it will be for the internal peace of the great national service they govern.

We have endeavoured to present, in articles which have appeared in our columns (THE LANCET, Feb. 21st and March 13th), as we conceive, the causes of the existing collapse, and to suggest principles on which alterations should be made. We will now submit a summary of what measures are, in our estimation, needed to reassure the profession, and to bring the Naval Service into a position of equality with that of the Army. This is a matter of importance to the public service, and it is therefore to be hoped that the views we support will be considered by the Committee now convened to examine the entire question.

The great fact that cannot be safely ignored is, that superior inducements must be given to draw young surgeons into the Navy, and to keep them contented with it; but it must be remembered that such a state of satisfaction is dependent, in no small degree, on the manner in which the balance is held between it and the sister service. We are impressed with this in offering our suggestions.

Professional qualifications and *special training at Netley*, before appointment, to be as at present. Surgeons, after six years' full-pay service or four years' foreign service, to be allowed to attend a course of lectures at Netley, on full pay, in order to qualify themselves for examination.

Promotion of Surgeons to the rank of Staff-Surgeon to be after ten or twelve years' full-pay service, of which five or six years have been served abroad; the required examination being passed. Staff-Surgeons to become Fleet-Surgeons after eighteen years' full-pay service, of which at least ten years have been passed abroad. Fleet-Surgeons to be eligible for Deputy Inspector-General after twenty years, with twelve of foreign service. Deputy Inspector-Generals to be eligible for the rank of Inspector-General after service of five years

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at home or three in a fleet or foreign hospital. Promotion to administrative ranks to be *by selection*.

The office of Director-General being now recognised as one appertaining to the Active List, the appointment should not be held longer than five years, subject to the ordinary regulations for retirement.

Special promotions to be given, as at present, for meritorious service or conspicuous ability, provided that the officer has completed the ordinary qualifications. The immediate reasons for such promotions always to be gazetted together with the promotion.

The age for compulsory retirement of Fleet-Surgeons to be fifty-five instead of sixty years. But medical officers who were on the Lists on the 1st April, 1870, and have attained, or shall attain hereafter, the rank of Fleet-Surgeon, to have the option, if not otherwise disqualified by the Order in Council of the 22nd February, 1870, of remaining on the Active List until sixty, to be retired then on the scale in force. But, as a compensatory inducement to earlier retirement, such officers may be permitted to go on the maximum pay of their rank on the completion of twenty-five years of full-pay service.

The full and half pay of all grades of surgeons to be equivalent to the scales in vogue for the Army, with allowance for time lost compulsorily on half pay, in accordance with Order in Council of 1866—viz., four years of full pay as Staff or Fleet-Surgeon to count as five years.

Retired pay of the same grades to be computed so that at the same ages medical officers of the Navy may be enabled to retire voluntarily on the same pay as those of the Army.

The equivalents of the rank and emoluments of Brigade-Surgeons to be established in the Navy.

The pay—full, half, and retired—of the administrative medical ranks of the Navy to be assimilated to those of the Army on the above principles, to assist in adapting which tables have been already proposed.

Orders in Council and Admiralty Circulars on the above points, to afford compensations, as by Article 31 of Royal Warrant for the Army dated November 27th, 1879.

The pensions of widows of Deputy Inspectors-General to be the same as those of widows of captains—viz., by seniority, and not by full-pay service of the deceased officer.

All allowances to be guided by relative rank with the military branch of the naval service.

Cabins to be allotted by seniority of relative rank, with exception of the senior executive and the senior navigating officers.

Fleet-Surgeons on retiring to receive on retirement, if recommended, a step of honorary rank; and if not recommended the reasons to be made known on appeal by the officer to the Admiralty.

Good-service pensions to be awarded in accordance with the honorary distinctions officers may have received as recognitions of meritorious services, assuming that such distinctions are to be considered official *bonâ-fide* marks of approval of, and not merely nugatory rewards for, good services.

A REPORT by Dr. BRIDGES, of the Local Government Board, on Small-pox in the Hospitals of the Metropolitan Asylums Board, from 1876 to 1878, has been issued as a Parliamentary Paper. It is a document of quite exceptional interest, and this, perhaps, not so much from what it contains as from what it omits. As regards Poor-law administration, the Report doubtless fulfils its purpose; as regards public-health administration it is singularly inadequate, and makes abundantly evident that, notwithstanding the union of the two administrations under the Local Government Board, there is no amalgamation even in matters where such amalgamation would seem most desirable. Dr. BRIDGES, as one of the inspectors of the Board for Poor-law purposes, in dealing with the subject of his Report, is obviously working in shackles. The question of small-pox in the Metropolitan Asylums Board hospitals, although primarily, and so far as he is officially concerned wholly, a question of Poor-law administration, assumed in the epidemic last past, as well as in the epidemic of 1871–72, a public-health aspect which completely overshadowed its true Poor-law character. Dr. BRIDGES appears to have been unable to avoid touching on many points of the public-health bearings of his subject, but his method of dealing with them suggests that they were, as might be expected, foreign to the considerations which would enter into the administration of the Metropolitan Asylums Board hospitals, and generally into Poor-law matters, lacking much that the public, unable or unwilling to discriminate between Poor-law and public-health functions, will not unnaturally look for from his pen.

The recent epidemic of small-pox in the metropolis was of considerably less magnitude than that of the epidemic immediately preceding. During the three years 1870–72 there died of small-pox in London 10,615 persons; during the three years 1876–78, 4695. Between December, 1870, and April, 1872—a period of seventeen months—13,905 cases were admitted into the Metropolitan Asylums Board hospitals, as against 13,377 in the thirty-six months of 1876–77–78. Dr. BRIDGES notes the tendency of small-pox to prevail in the metropolis with increased intensity at intervals of three or four years. The epidemics of 1870–72 and of 1876–78 were no exceptions to this rule of recurrence. But nothing like them as to virulence has been seen since the end of the past and beginning of the present century. So far as the mortality from the disease is concerned, the two last epidemics have thrown the metropolis back in this respect three-quarters of a century. It does not appear from Dr. BRIDGES' report that the vast experience of the disease in the Metropolitan Asylums Board hospitals has thrown any light upon the significance of this momentous question, except to confirm the fact of the exceptional virulence of the disease; and he contents himself with the somewhat inadequate observation with reference to the mortality of the two years 1877–78 that, having regard to the increase of population between 1841 and 1877—viz., from 2,000,000 to 3,500,000—it would not appear, "at first sight," of a very alarming character.

The several hospitals (now seven in number) are arranged with a certain regard to symmetry of position round the centre of the metropolis. Although the arrangement was made in the first instance with strict regard to Poor-law purposes, there is no reason to believe that any better and more suitable arrangement could have been made had public-health purposes been solely kept in view. Dr. BRIDGES

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touches on the alleged danger of a small-pox hospital to the surrounding neighbourhood, and in regard to this question he is satisfied that so far as the patient is concerned the isolation is complete, and so far as danger might arise to the outer world from the passing backwards and forwards of the hospital nurses and the visits of friends to patients, in the former case danger may be looked upon as non-existent, and in the latter case the risk is reduced to almost a vanishing point, and in both cases this freedom from danger arises from the precautions taken. He avers that the vague assertions as to the danger of these hospitals to the surrounding neighbourhood, as regards transmission of the disease from the hospital, are such as not to bear the test of careful investigation, and he remarks: "It is strange that hypothetical views as to the conveyance of microscopical spores through the atmosphere for indefinite distances should receive so much attention when perfectly simple explanations of the spread of a disease are abundant on every side." Nevertheless, he admits that there is a danger to which these hospitals give rise outside their precincts from the passage of patients to them, if the conveyance be carelessly made, which would certainly, from his showing, appear to have been too often the case. To this point Dr. BRIDGES' argument holds well together, but when he seeks to support his position by endeavouring to show what influence, if any, the presence of a small-pox hospital may have exercised upon the mortality of the *registration subdistrict* in which it lies, he gets upon doubtful ground. He gives a table of the mortality from small-pox in each of the registration subdistricts for London for 1871 and 1872 and for 1877 and 1878, and from it is to be gathered that of the several districts in which hospitals are situated, Hackney (Homerton Hospital) had in both epidemics a mortality considerably above the average; Lambeth (Stockwell Hospital) in both epidemics a mortality but very slightly above; Hampstead (Hampstead Hospital) in each epidemic a mortality much below; Fulham, Chelsea, and Kensington (the Fulham Hospital on the confines of the three districts, and in use in 1877–78, but not in 1871–72), the first-named district a mortality very slightly above, the two last-named a mortality less than the average; and Greenwich (Deptford Hospital, opened in 1877–78) a mortality little more than its due proportion. In the epidemic of 1871–72 the chief pressure fell upon Shoreditch and Bethnal-green; in 1877–78 upon Stepney and Poplar—districts which have no small-pox hospitals within their boundaries. From these results, Dr. BRIDGES concludes that they "afford on the whole no ground for the conclusion that the hospitals concentrate in their neighbourhood a larger proportion of disease than would otherwise have been found there." This conclusion goes beyond the legitimate showing of the figures. Read "registration subdistrict" for "neighbourhood" and Dr. BRIDGES is right. "Neighbourhood" has a much more restricted signification than district. We are not aware that it has ever been asserted that the presence of one of the Metropolitan Asylums Board hospitals increased the prevalence and augmented the mortality of the *district* in which it lies. The allegation is that they have increased the prevalence of small-pox in their immediate neighbourhood. Dr. BRIDGES' remarks on the conveyance of patients to them lead to the inference that he is by no means satisfied that *indirectly* they may not have contributed to a greater prevalence of the disease about them. *Directly* we feel assured that such has not been the case. But the question is one which requires to be dealt with by inquiry and observation, and we fear that such inquiry and observation into the occurrence of small-pox in the neighbourhood of their hospitals have not been held by the Metropolitan Asylums Board to come within their functions. Clearly, it is a public-health and not a Poor-law question; and how it comes to pass that a matter of so much importance, and which has involved so many and such serious considerations, has not been taken up by the Local Government Board, as the central sanitary authority of the kingdom, in its public-health aspects, passes ordinary apprehension.

The information afforded by the Metropolitan Asylums Board hospitals as to the results of vaccination forms one of the most important yet least satisfactory parts of the report. First, these results show most conclusively that notwithstanding the greatly increased virulence of the disease, the influence of vaccination was not less marked in diminishing the mortality than in the form of small-pox more ordinarily observed; and, next, that an effective revaccination almost absolutely, if not absolutely, shielded a person from the malady. We wish that these results and their bearing upon the peculiarities of the epidemics had been somewhat more prominently dwelt upon. But Dr. BRIDGES proceeds to draw an inference of his own from certain of the results, which we cannot but think may prove highly misleading. He says: "In estimating the degree of vaccination, the first rule to be observed is that quality takes precedence of quantity. One well-pitted mark affords more protection than a large number of indistinct ones." Now, this is a remark which would almost justify the *one puncture* private vaccinator in his mischievous doings. But it is inconsistent with the data which Dr. BRIDGES advances in support of it. If in one set of the returns he gives the *one* good mark shows a greater protective result than *four* indifferent marks, in another set the four *indifferent* marks show a much better result than the one good one; while in both sets of returns the very defined relationship of good results to the quality *and* quantity of the vaccination are again made strikingly obvious. *Quality* and *quantity* of marks are of equal importance in good vaccination, and it is to be regretted that Dr. BRIDGES, in indulging in a certain antithetical form of expression, should have apparently suggested that quality and quantity may be considered apart from each other.

Dr. BRIDGES has some important suggestions concerning the conveyance of patients to metropolitan hospitals, and on ambulances, to which we may have to refer on some other occasion.

A NEW and very simple method of investigation has been introduced for the study of the place of origin of albuminous exudations. It consists in causing the rapid coagulation of the albuminous elements by heat or other means, and so fixing them for future examination. The first to make use of this method was PERLS, and it has since been adopted by POSNER, RIBBERT, and LITTEN. The method commonly employed has been the quick coagulation of the albumen by heat. This fixes it in the localities in which it existed

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during life, whereas other modes of hardening, instead of doing this, have the disadvantage of extracting it. Boiling water hardens the fragment of tissue in a few minutes; its elements present no change; the chemical reactions with colouring agents are the same; and the fragment can be preserved in alcohol or chromic acid fluids, with the sole difference from uncooked preparations that instead of the spaces being empty they are seen to be filled with coagulated, clear, finely granular albuminous masses. These are so striking that POSNER asserts that no examination of a tissue infiltrated with an albuminous fluid can be regarded as exhaustive which is not controlled by this method. Applicable to various investigations, it is especially valuable in the examination of the kidneys. The slightest degree of albuminuria can, the same writer asserts, be demonstrated anatomically by this method with certainty. The transuded albuminous masses can be fixed both *in statu nascenti*, and after exudation. They are seen in characteristic aspect in the capsules around the glomeruli, and thence can be traced into the urinary tubules. When the effusion is not merely from the glomeruli, but also from the capillaries around the tubules, it can be seen between the membrana propria and the displaced epithelium. In the large white kidney, for instance, the naked-eye appearance is seen, in preparations by this method, to depend chiefly on distension of the capsules and urinary tubules with albuminous fluid.

The information which this method supplies regarding the translucent fibrinous cylinders is of especial interest. Some facts have been adduced to prove that the tube-casts arise by transformation of the epithelium of the tubules, but the results obtained by "cooking" suggest the opposite conclusion. Even in the human kidney, in which the process is complex, distinct transitions are met with between albuminous and homogeneous masses. POSNER found that, three days after ligature of the ureter, the kidney was distended and spotted with hæmorrhages, and the examination by this method shows that the condition is due to large quantities of exudation, partly serous, partly sanguinolent, partly in process of transformation, in homogeneous masses, and situated in part within the tubules.

LITTEN found that if the renal artery is ligatured, the kidney in two hours is intensely congested with serous exudation, which, after the ligature is removed, and blood allowed to flow through for twenty-four hours, comes away as tubal cylinders. Chromic preparations show abundant exudation, enclosing cells, and the early stage of the formation of tube-casts can be traced as a fine network of fibres (due to the precipitation), and visible first close to the cells. From this and other experiments, by producing venous obstruction, POSNER concludes that the formation of tube-casts may be regarded as independent of cell-destruction.

The subject has lately been reinvestigated, after the same method, by LITTEN. He finds the methods of coagulation by heat and by strong alcohol give equally satisfactory results. Having first satisfied himself that, in the animals experimented on (rabbits), the capsules around the glomeruli did not contain albuminous exudation, he tied the renal vein for two hours, and found throughout the whole cortex the capsules raised by coagulated albumen, which could be traced, in some cases, as far as the commencement of the twisted tubules. In other cases a number of red blood-corpuscles were found between glomerulus and capsule. The vessels themselves seemed to be intact, uncompressed. The epithelium of the tubules was normal, but within the tubes there was, in many places, the same material as filled the Malpighian capsule.

In another ries of experiments the renal artery was tied for two hours. The structure of the kidneys was everywhere intact. Within the capsules was the same albuminous material, but in somewhat smaller quantity. Much more intense changes were found when the artery had been tied for a time, and then the blood allowed again to flow. The exudation within the capsules was much greater, so as to press the vessels away from them, and it extended into the tubules throughout their entire extent, the epithelium, however, within them being intact. The epithelium of the capsules was much swollen, and partly separated by the exudation.

It must, therefore, be regarded as certain that in mammals the albumen transudes at the Malpighian capsules—a fact which NUSSBAUM first demonstrated to be true of the frog. The question arises under what physiological or pathological conditions may the albumen transude in this situation? The transudation, LITTEN thinks, occurs under conditions which have this in common—that the renal vessels undergo a transient dilatation of their calibre. He believes that after ligature of the artery this dilatation occurs when the blood is allowed to flow. Thus he explains the occurrence of albuminuria after section of the vaso-motor nerves, and not after section of the secretory nerves of the kidney, and also its occurrence after some brain injuries. In all these varied states he can see only one common character, the dilatation of the vessels, and the consequent retardation of the blood-current through them. In acute inflammation he attributes the escape of albumen to the same mechanism; in chronic inflammation no doubt changes in the wall of the vessel concur. LITTEN, from his experiments, agrees also that the exudation of albumen is probably not confined to the glomeruli, but takes place also in the tubules.

No appointment has yet been made to the position long and worthily filled by Dr. FARR at the head of the Statistical department of the General Register Office! The most different and contradictory opinions prevail among men equally in earnest and, we are bound to assume, equally honest, as to the value of the compulsory vaccination system as a preventive against epidemics of small-pox! The Guardians of St. George's, Hanover-square, are, as usual, at their wits' end, not this time in consequence of the waywardness of their medical officers, but because it is reported that the public asylums, and even the available licensed houses, for lunatics are full, and something needs to be straightway accomplished for the relief of the rapidly-increasing (?) number of insane persons and imbeciles claiming local protection! There may not at first sight appear to be any connexion between these scraps of news, culled from the daily papers, but on closer scrutiny we believe their relation will be found both practical and significant. At least, they point to a common inference of the greatest general interest.

We have not, as a community, much less as a State, begun to recognise the "science of results," and apply it seriously to public purposes. The office which deals with vital statistics

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is a subordinate section of an outlying department of the Government! No one appears to think this arrangement unseemly, or inadequate to the necessities of the case. It is, indeed, sometimes conceded that the statistics of population, with the relative birth-rates and death-rates of mortality; the apparent or conjectured causes of disease, with the sources from which they spring and the conditions which determine their virulence and extension; supply the only precise and trustworthy indications for social and State policy, but neither society nor the administrative authorities so regard them. The good ship *Hygeia* is still worked on her course by a system of dead-reckoning, and no mariner has yet arisen gifted with the acumen to strike out boldly and steer by chart and compass. In vain the heavens are studied and the laws of storms investigated; in vain the trade winds are recognised, and the needle points to the pole. We go on "coasting," carefully groping up creeks, and hugging lee shores, with the same sort of results in national health-culture and disease-extinction as the ancient mariners, of an age before the time of Columbus, were wont to gain by their seamanship. The need of the moment is a complete change in the organisation of the statistical service of the country, and an enlightened and practical estimate of its work. If, as we have more than once urged, it should yet be perceived that the opportunity offered by the present disorganised state of the department is too great to be disregarded, and wise, though tardy, measures are taken to create a well-constructed Ministry of Public Health, there will be cause to be thankful, otherwise we fear there must soon appear grave reason to regret the obtuseness which allows an opportune moment to slip.

It does not much concern us, and we cannot see that any great difference of result will accrue to the cause of public health, whether a medical man or a lay statistician is appointed to the vacant office, if the system and method of collecting and collating data and forming inferences are not wholly changed. The service of Dr. FARR has been altogether exceptional. It combined, or perhaps we ought to say included, two several functions. The qualifications indispensable to such a work are not likely to be again found in the same individual. With the retirement of Dr. FARR a special epoch closes. In future we should prefer to see the figures accumulated by the General Register Office treated solely as figures from the statistician's point of view, instead of being presented to the public, and dealt with, as medical *facts*, which they neither are nor can be unless the entire procedure by which they are collected and heaped together is rearranged. A fallacy lurks beneath the whole superstructure of the Registrar-General's Returns, so far as their bearing on "disease" and the "causes of mortality" is concerned, while as to the causes or conditions of disease these returns are in themselves worse than useless, because they are misleading. Probably the most direct way out of the difficulty would be to place one of the experienced statisticians now holding office in the General Register Office at the head of the department. It is a *statistical* office, and we fail to see why a medical man should be placed at the head of its staff. The statistical faculty is as different from the medical as that of law-interpreting from law-making; and, we must be excused for saying, generally incompatible. It is neither good policy from an administrative point of view, nor fair to the eminent statisticians engaged at Somerset House, to take the chief post from their office and give it to a member of another profession. We are persuaded that it would be better to let the Statistical Department be wholly statistical, holding it responsible for the integrity of statistical processes, and to transfer to a Health Department the duty of assessing the medical and sanitary value of the figures returned, together with the cognate duty of drawing inferences from them for the public guidance. If no better arrangement can be made, the Health Branch of the Local Government Board might be charged with the responsibility last mentioned. Dr. BUCHANAN and his coadjutors may be trusted to put an end to the evil of drawing unwarranted deductions from the information furnished by local registrars, although not even their experience and enterprise could convert the figures into facts. We have so repeatedly exposed the worthlessness of these miscalled data that it is needless to do more than urge that now, at least, they should cease to be put to a mischievous, because misleading, use. That good returns can be obtained we do not question, but not by any system which does not secure a direct and private communication of the real cause of death in every case to the central office and to a medical department. There can be no difficulty in carrying out such a method of collecting information, and it is the only one which can ever produce valuable results.

The science of results should be of prominent and practical concern to the statesman. It will occupy a central place in the political economy of the future. It is the digest of experience, the intelligent record of the *known*, from which alone the true philosopher will dare to reason. At present this science makes little or no progress, because the material with which it is provided is neither congruous nor veritable. Let those who know what the inquiry actually demands control the measures by which data are collected, and they will speedily find means to assure the accuracy and sufficiency of the returns they require. Sooner or later the country will recognise its need of a Ministry of Health. Whatever is done at the present conjuncture should point in that direction, if it is not far-sighted and out-reaching enough to compass the end in view. Whether the question be one of population, of the success of preventive measures against a particular disease, or of providing hospital accommodation for the insane, the "science of results" must supply the information required, and this science can only be studied to any practical purpose from the vantage-point of a department which shall be entrusted with the whole organisation of vital statistics in relation to the public health.

THE special correspondent of *The Times* has telegraphed from Calcutta a summary of the principal recommendations of the Indian Army Commission. Those relating to the Medical Service are thus stated:—"Medical Department to be recast. The civil medical service to be separated from the military, and the latter amalgamated with the British Army Medical Department, forming one list. Netley Hospital to be abolished." Until the details are received, it would obviously be useless to discuss the scheme for the reorganisation of the Department. We would merely remark that the authorities in India appear to have come to the conclusion we expressed last week, that there is no

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good reason why the Indian and British Army Medical Departments should not be amalgamated. But there is one paragraph in the summary to which we would direct special attention. It is, "Netley Hospital to be abolished." We presume this must mean the Army Medical School at Netley, for the abolition of the hospital as the great invalid establishment for troops on foreign service would be simply impossible. If, then, it be intended to refer to the Army Medical School, we trust the authorities at home will not give their sanction to such a recommendation. The creation of this school was one of the very great boons conferred on the army by the late Lord HERBERT of Lea, and it has effected an incalculable amount of good for the soldier. Prior to its formation, the raw, newly-fledged medical officer was sent to join the service entirely ignorant of the special duties he was expected to perform, and his experience was gained often at the cost of the health or even the life of the soldier, and with much anxiety and vexation to the officer himself. Since the establishment of the Army Medical School the candidate has been trained in the special work which devolves upon him in the army, and which he cannot learn in the civil medical schools; he has been taught thoroughly the best means of preserving health in the varied circumstances under which soldiers are employed, thus saving the lives and maintaining the efficiency of the men entrusted to his care; he has likewise been specially instructed in all that relates to the treatment of tropical diseases, of gunshot wounds and injuries, and in the duties of a medical officer with troops on active service. These are all matters of the utmost importance to the army, and to abolish the only school in which they are fully and practically taught would be an act of great folly. It might as well be proposed to do away with the department of artillery studies at Woolwich, or the school of military engineering at Chatham. When the necessity for technical education is becoming daily more realised, it would certainly be a strange proceeding, and clearly a step in the wrong direction, to abolish a school where so much valuable special instruction is given—instruction having an important practical bearing on the lives and health of our soldiers in India. Economy is undoubtedly needed in the military expenditure for India, but it must not be exercised at the expense of efficiency and at the risk of the lives of our brave troops.

Annotations.

"Ne quid nimis."

THE PRESIDENCY OF THE ROYAL COLLEGE OF PHYSICIANS.

THE Royal College of Physicians will, on Monday next, proceed to elect its President for the ensuing year. Is there any reason why the usage of recent times involving re-election of the same gentleman *six* successive years should be "consolidated" to the stability of a custom? Dr. Risdon Bennett has ably and acceptably filled the office during the last four years, and probably not a Fellow of the College would desire a change, except on the ground of principle, and in view of special contingencies which may be anticipated during the year on which we are entering. It seems to be time that the London University had the honour of seating a graduate in the chair of the College. Among the names which will occur to Fellows of the College at this suggestion, that of Sir William Jenner, Bart., K.C.B., stands out conspicuously. The profession as a whole, and the Fellows, Members, and Licentiates of the College would certainly hail the election of this distinguished physician. Dr. Risdon Bennett will not, we may assume, feel the slightest hesitation in making way for such a successor. On general grounds, however, we think it is most undesirable that this chair should be occupied by any member of the profession during a long series of years. In the sister college the presidency has rarely been held for more than a single year continuously. It is the post of highest dignity open to physicians, and the number of men upon whom the profession desires to see the honour conferred is, happily, too great to allow of a monopoly. We offer these remarks in the interest of the College itself, because it is only as that august corporation is in sympathy with the great body of professional men practising under its ægis it can retain respect and influence.

DR. FARR'S TESTIMONIAL FUND.

A PRELIMINARY meeting of the General Committee, which has been formed for the purpose of raising a testimonial fund for presentation to Dr. William Farr, in acknowledgment of his valuable services to public health and the science of statistics during the past forty years, was held on Wednesday afternoon last in the library of the General Register Office, by permission of the Registrar-General. The Earl of Derby, who has consented to act as chairman of the Committee, presided at the meeting, at which an Executive Committee, not to exceed ten members, was empowered to take such measures as may appear necessary or desirable for carrying out the object in view. Mr. R. Biddulph Martin, of 68, Lombard-street, E.C., was appointed honorary treasurer of the fund, and Mr. Noel A. Humphreys, of the Registrar-General's Office, Somerset House, honorary secretary to the Committee. It was stated at the meeting that Dr. Farr's official salary during his service of rather more than forty years averaged but little over £700 per annum; it averaged but £478 during the sixteen years 1840–55, and did not amount to £1000 until 1874. It is proposed that the testimonial fund shall be devoted to supplementing the very slender provision which Dr. Farr has been enabled to make for his family, it being understood that this course would afford the greatest satisfaction and gratification to Dr. Farr. A list of the subscriptions promised will shortly be published, and in the meantime any of Dr. Farr's friends or admirers who are willing to join the General Committee, or to promote the success of the testimonial fund in any other way, are requested to communicate with the honorary secretary.

A METROPOLITAN PROVIDENT DISPENSARY SCHEME.

OUR readers will remember that in June last, at a meeting at the Cannon-street Hotel, a Provisional Committee was appointed for establishing a metropolitan association for the purpose of arranging on provident principles for the ordinary medical treatment of the industrial classes in due relation to the hospitals. Our attention has been called to a scheme prepared by the Committee then appointed, and we gladly give it that consideration to which it is entitled. When a number of gentlemen of high standing in the community give their time to the elaboration of a project for increasing the providence and independence of the working classes in the matter of medical attendance, the least we can do is to respect the object, and give a friendly consideration to any actual scheme proposed. Here, then, is a scheme covering all London, which is put forward as a practical proposition to supply all that part of the com-

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munity above pauperism, and yet largely dependent on medical charities, with medical attendants of their own choice, and on independent and self-supporting terms. The defects of the present system are pointed out—somewhat roughly, we must say. The old hackneyed statement, that a million out of the four millions of London receive charitable medical assistance, is trotted out once more, though it has been pointed out again and again that this estimate is arrived at by reckoning all the patients claimed to have been relieved by each hospital as if they were all separate individuals, whereas such men as Sir Rutherford Alcock must know that many patients have letters often repeated, which make them appear as new patients, and that thousands go from hospital to hospital and count as distinct individuals in each case. In this way we get the portentous million made up very falsely. Another statement is, too, rough—viz., "About half the working men of London belong to Friendly Societies." This may be true, but to those who have had much contact with the working classes of London it will appear very doubtful.

We are told that at the meeting in question the medical profession was represented by three medical men. Two of these were consultants — one a specialist, — the third is most honourably known in connexion with the Poor-law system. It is not by such a representation that the opinions of general practitioners are to be got at. Had there been a larger representation of practitioners of actual experience in practice among the industrial classes, we scarcely think this "scheme" would have been adopted by the Committee. Briefly it is a scheme for creating fifty provident dispensaries in various parts of London, without any appeal to charitable motives or to the richer classes of the community. It is thought that the elimination of the pauper class will leave half a million of persons to be dealt with in a provident way, and that each dispensary might be so placed and built (for it is proposed to build the fifty) as to be the centre from which ten thousand of the population are to be ministered to medically. Our readers will ask how is such a scheme to be carried out on independent and voluntary principles without aid from rates, as in the case of School Board schools and free libraries on the one hand, or gifts from the charitable on the other. It is argued that the provident class of working men who compose Friendly Societies would be estranged and offended by any appeal to charity. It is further argued that the Societies in the provinces, acting jointly, have organised great medical institutions, admitting all who applied, without inquiry as to wage or income, and so have solved the problem of independent medical attendance, and that what can be done in the provinces can be done in the metropolis. Accordingly the Committee recommended that the reform of the system of medical relief in London should be based upon the action of the Friendly Societies. The funds for building the dispensaries might be raised, it is suggested, by forming a Joint Stock Company to hire or build, and to fit and let. It is believed that if the shares were issued at £1 they might be largely taken up by members of Friendly Societies and others, who would be subscribers also to the dispensaries themselves, and the Committee have no doubt that the friends of this movement of all classes would contribute. The rule of the Derby Medical Association is quoted with approval, that prior to admission no questions are to be asked as to the earnings of the husband or the family, the Committee being of opinion that as there is no charitable element in the matter, they have no right to do so. The dispensaries thus provided are to be in organic relation with the London hospitals, and a system of consultation between the dispensary and hospital staffs, in regard to bad cases, is formulated in a very felicitous if somewhat theoretical way.

We are not impressed with the practical aspect of this scheme. It has too much of a *doctrinaire* character in many of its parts, and has the look more of the handiwork of a joint-stock company maker than of a medical practitioner. It is also far too pretentious. The metropolis cannot be dealt with like a provincial town. It would have been far wiser to have attempted to create a few sound provident dispensaries on the lines of those already in existence, trusting to the force of good example. Again, it seems to us very objectionable indeed that anybody is to be admitted to cheap medical attendance without inquiry as to his fitness to pay proper medical charges. If this part of the scheme were carried out, the medical profession would be greatly injured instead of being benefited. But the weightiest objection we see to this scheme is that it, to use a proverbial phrase, "takes coals to Newcastle." It caters for the Friendly Societies, who already know how to manage their own affairs, and constitute the provident section of the working classes, and, more disappointing still, it would band all the industrial classes together, after the example of the medical institutions of some of the provincial towns. All we hear of these societies is to the effect that one medical man, generally a young man and a stranger, attends a large number of people for a very inadequate sum, to the dislocation of the old relations between families and their doctors. The scheme does not propose such an arrangement, but it is not to be expected that its promoters will have any power of permanently controlling the movement.

"DOUBLE-STAINING" IN MICROSCOPICAL INVESTIGATION.

THE employment of staining agents in the preparation of animal tissues for microscopical examination has been one of the most useful advances in this branch of science. Histologists were not long in finding out what might well have been predicted, that different tissues with varying chemical reactions are differently acted upon by various staining fluids, and this fact has for some time been used to assist microscopists in the differentiation of tissues. The number of staining agents has of late years become considerably increased, and a good deal of attention has been expended upon perfecting their use. At the last meeting of the Royal Microscopical Society, Dr. Heneage Gibbes explained the processes by which he is able to stain a single section in more than one colour, getting each tissue in the section stained a different tint. Double staining has been accomplished before, but Dr. Gibbes is able to get treble and even quadruple staining. Thus among other specimens he showed transverse sections of the rat's-tail, in which the bone, cartilage, nerves, tendon cells, muscle, and blood-vessels, which had different chemical reactions, were each stained a distinctly different colour; a section of a dog's tongue showed the muscle stained pink, the mucous glands purple, and the serous glands supplying the taste organ green; and a section of scalp showed the stem of the hair yellow, the root and follicle bright carmine, and the muscular tissue violet, with the nuclei green. These results have only been obtained after long experimenting. For double staining successive immersion in solutions of picro-carmine and logwood may be used; or, better, immersion first in a spirituous solution of roseine or aniline violet, and then in an aqueous solution of aniline blue or iodine green. To stain with more than two colours is much more difficult; the best results are obtained by first staining in chloride of gold or picro-carmine, and then in the spirituous and aqueous solutions of anilines. The value of these results will be apparent to all engaged in elaborate histological investigation. At the same meeting of the Royal Microscopical Society Dr. Gibbes demonstrated that perfect stereoscopic effect can be obtained under the ordinary binocular micro-

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scope with $\frac{1}{12}$ oil immersion objective without special stand or apparatus; both fields were fully illuminated, and in a section of a tadpole's tail the nerves, capillaries, lymphatics, and branched corpuscles could be seen lying each in their individual planes.

EXISTING SMALL-POX IN THE METROPOLIS.

A QUESTION put by Dr. Playfair to the President of the Local Government Board, in the House of Commons, on the 15th instant, as to increasing small-pox in the metropolis, and the relation of this increase to the arrangements for public vaccination, elicited on the whole a satisfactory reply. The increase to which Dr. Playfair referred is, we are assured, at an end; it was not very serious, and was confined to four or five parishes. The vaccination arrangements work well, although "the metropolis is not so efficiently vaccinated as the rest of the kingdom, in consequence of the fluctuating character of much of its population;" and, to crown all, there are recent reports of the Local Government Board, and the report of Dr. Bridges (both, by the way, relating to periods previous to the pre ent year) to consult on the subject of small-pox and vaccination. It is to be inferred from this, doubtless, that the Local Government Board has not been inattentive to the recent increase of small-pox, and that it may have taken some action with regard to it; but it should have been obvious that Dr. Playfair's question was intended to elicit information as to the extent to which that Board had given attention to the outbreak, and to the sufficiency of the public vaccination arrangements to meet it. Rightly or wrongly, the Board was blamed for lack of energy in stimulating apathetic vaccination authorities to action during the period of increment of the last epidemic; and the profession at least would certainly have been gratified to know that an increase of small-pox, such as that which has just happened in London, had given rise to energetic action on the part of the Local Government Board with a view of rousing the local authorities to earnest efforts for arresting the extension at the beginning. The President of the Local Government Board contents himself with being oracular, and he must not be surprised if the presumed light of his vaccination department being thus hid, as it were, under a bushel, ordinary eyes will not distinguish it there, and may be prepared to be led astray by the first unshaded heterodox light at hand—say, animal vaccination.

INTERNATIONAL CONGRESS OF HYGIENE.

PROFESSOR GIACINTI PACCHIOTTI of Turin, whose recent elevation to the Italian Senate reinforces an assembly already rich in medical talent, sends us a circular announcing the third meeting of the International Public Health Congress, to be held at Turin from Monday the 6th to Sunday the 12th Sept., 1880. The Italian Government has proffered its active co-operation in the meeting, and the President of the Provincial Council of Turin has set apart the sum of 2500fr. (£100) as a prize to the author of the best treatise on "The Application of Hygiene to Rural Populations." The prize will be awarded at the fourth International Congress. Already France, Belgium, Portugal, and Roumania have intimated their intention of being represented at Turin on 6th Sept., and Professor Pacchiotti, who attended the meeting of the British Medical Association at Cork, reminds us of the assurances he received from its members of their sympathy with the international hygienic movement, and of their wish to advance it in every way; while he has also obtained from Professor Donders of Utrecht, and other promoters of last year's congress at Amsterdam, the promise of influential support at the Turinese réunion. Dr. Jäger of Amsterdam, indeed, has proposed to utilise the occasion for starting an International Society of Pure Water Supply. The array of subjects already announced for discussion at the Congress is a formidable one, and among the English and American contributions we may note that of Mr. H. A. Allbutt of Leeds on "Pellagra, and the best means of preventing it," and that of Dr. E. Seguin of New York, on the "Metric System in Medicine," and on "International Medical Uniformity." Professor Pacchiotti holds out an additional attraction to the members of the approaching congress, to wit, an excursion on Sunday the 12th September to Milan, where an experiment in cremation may be witnessed in the "Crematorio monumentale," the first and best appointed of these establishments; while lovers of the fine arts will have an opportunity of gratifying their tastes at the "Esposizione delle Bella Arti," to be held at the same time in the picturesque subalpine city. Not a few of our readers must already in England and abroad have met Professor Pacchiotti as original or corresponding member of congresses devoted to the healing art, and in his courtesy and kindness as well as in his high professional gifts, they will find a still further inducement to attend the International Congress under his presidency at Turin.

POST-MORTEM CONTRACTION OF THE PULMONARY MUSCLES.

DR. A. HENOCQUE communicated at a recent meeting of the Société de Biologie some interesting observations upon this subject. He had been led to investigate it by observing, in the course of some experiments made with Dr. Brown-Séquard, some curious changes in the aspect of the lungs after death. To ascertain their cause, a series of experiments on animals were undertaken. When the lungs are removed in an uninjured state, three kinds of appearances of the pulmonary vesicles may be noticed—collapse or obliteration, moderate expansion, or an excessive degree of expansion which may be regarded as emphysema. If certain parts of the lung which can be carefully examined are watched, their aspect may be seen to change in the course of a few minutes. A part which at first presents only a moderate degree of expansion of the vesicles may presently exhibit an extreme degree of emphysema, even with rupture of vesicles. Slighter changes may occur in the volume and aspect of the pulmonary lobes, and may alternate with, and succeed, one another during five or ten minutes. Certain conditions favour or hinder the state of expansion of the vesicles. In a guinea-pig killed by carbonic acid gas the expansion was much more marked than in other animals of the same species asphyxiated by tying the trachea or killed by decapitation. The action of cold water notably increases the production of these phenomena, and they are also distinct in cats killed by curara. A series of observations were made upon dogs, cats, guinea-pigs, sheep, calves, and oxen, and led to the following conclusions—1. The condition of expansion, of dilatation, or collapse, the relative volume of the pulmonary vesicles, of the different pulmonary lobes, or of certain groups of lobules, may become modified after death. 2. These changes may be transient, may cease, and then manifest themselves in different parts of the lungs in variable extent; they may be produced slowly, and leave the lung in a state of definite expansion, which causes, after desiccation, very different appearances as to degree, extent, and seat of the expansion of the vesicles, of their dilatation or obliteration. 3. These modifications are due to the contractions of the smooth muscular fibres contained in the bronchial tubes and in the parenchyma of the lung. They correspond in the lungs to the changes in volume and aspect produced by the vermicular contractions which occur during the act of death in the intestines, bladder, gravid uterus, and ureters. 4. This interpretation is based on the conditions in which the variations are produced. When all the retraction due to the elasticity of the lung is over, they

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occur slowly and progressively, with alternations of arrest, and they are increased by stimuli, such as cold and carbonic acid, compression and light friction, and, finally, seem to be evolved in a manner quite similar to that of the contractions observed in other organs which possess unstriated muscular fibres. Brown-Séquard has shown that the contractions of unstriated muscular fibres may be increased by the action of carbonic acid. M. Paul Bert asked why the air in these circumstances should be driven into the vesicles—a question very difficult to answer.

WESTMINSTER HOSPITAL.

A DINNER in aid of the funds of the Westminster Hospital was held on Saturday last at Willis's Rooms, H.R.H. the Prince of Wales presiding. In proposing the toast of the evening—"Prosperity to the Westminster Hospital,"—the Prince stated that the special object of his appeal to the charitable was to clear off the debt incurred in the recent improvements of the hospital, it was also necessary to improve the accommodation of the resident medical officers and nurses, the out-patient department, and medical school buildings. Better accommodation is urgently needed, and we hope the Committee will actively take the matter up. Some months ago we called attention to several defects in the out-patient department; several of these have been corrected, but others remain and appear inseparable from the present arrangement of the rooms in the basement. We hope that a movement may be set on foot to secure the much-needed addition of a suitable building close by for the out-patients and medical school. The subscriptions announced at the dinner amounted to over £2500, including £1000 from the medical school, especially given towards the purchase of a site for the new buildings. This sum is a good nucleus, and it ought to encourage the Committee to undertake the task.

THE POPULATION OF FRANCE.

THE returns of births, marriages, and deaths in France during the year 1878 have just been published, and they show that the rate of increase in the population, as regards the excess of births over deaths, is less than it had been for many years. The births amounted to 937,211, consisting of 444,316 legitimate, and 35,032 illegitimate male children, and of 424,983 legitimate, and 32,880 illegitimate female children; and the deaths to 839,036 (432,867 males, and 406,169 females), so that the excess of births over deaths was 98,175, as compared with 172,936 in 1872, 101,776 in 1873, 172,943 in 1874, 105,913 in 1875, 182,608 in 1876, and 142,662 in 1877. At the present rate of increase, the population of France would not double itself in less than four hundred years; though in estimating the rate of increase in France it must be borne mind that there is another element besides the excess of births over deaths—viz., the immigration, which is always in excess of the emigration. The principal cause of the slow rate of increase is the decline in the number of marriages, which have fallen from 352,733 in 1872, to 279,892 in 1878. In the year 1877 there were only 17 departments in which the number of deaths was in excess of the births; while in 1878 there were 26, including the Seine-et-Oise, the Oise, the Seine-et-Marne, and the Calvados in the north; the Rhône, the Côte d'Or, and the Eure-et-Loire in the centre; and the Vaucluse, the Var, the Bouches-du-Rhône, and the Hérault in the south. The influence exercised by the altered modes of cultivating the land is apparent in these results. Thus, for instance, in Normandy the development which has been given to stock-breeding has diminished the demand for manual labour; while in the south the decrease of population is most marked in the districts which have had their vines destroyed by the phylloxera vastatrix. The department of the Seine—in other words, Paris—shows an excess of 6332 births over deaths, and 21,715 marriages were celebrated during the year.

DIARRHŒA AND SIMPLE CHOLERA.

FOR the first time since the beginning of the year the causes of death in London last week included deaths which were referred to simple cholera. The Registrar-General reports that the deaths of two women in the Westminster Workhouse, aged respectively seventy and sixty-four years, were last week certified by the medical officer of that institution to have resulted from English cholera and choleraic diarrhœa. It appears probable, judging from the irregular proportions which the deaths referred to simple cholera bear to those which result from diarrhœa in our large towns during the summer season, that considerable difference of opinion exists as to the definition of fatal cases of simple cholera. It would be interesting to know what constituted the difference between the symptoms of the two cases above referred to, and the ordinary cases of senile diarrhœa which are far from rare in our large workhouses. In order that the statistics of the causes of death in England and Wales, which are published by the Registrar-General at a considerable cost of public time and money, may acquire increased value, greater uniformity in the system of nosological nomenclature adopted by certifying medical practitioners is essentially necessary.

BERI-BERI IN CALCUTTA.

NEWS from Calcutta of the 14th inst. states the probable appearance of beri-beri in that city. The disease, although familiar enough in Madras and Ceylon, does not appear to have been observed in Calcutta before. The symptoms as described are—swelling of the limbs, fever, occasionally disturbance of the bowels, often burning and pain in the affected limbs, shortness of breathing, and great emaciation in fatal cases. Death is generally sudden. Showing itself first in the southern parts of the city, the disease has gradually spread to the northern. Hitherto Europeans have escaped the malady, the natives, Circassians, and Armenians having alone suffered, and this notwithstanding that the disease chiefly prevails in the European quarter. Whole families have been seized, and its "localisation" is said to be pronounced. The malady is reported to be dying out, but its reappearance in the rainy season is anticipated.

QUARANTINE CONFERENCE.

THE United States National Board of Health has requested all quarantine authorities in the States to send authorised representatives to meet and confer with it in Washington on the 5th May next. The Conference is for the purpose of amending the rules and regulations prepared by the Board last year, and recommended by it to State and local authorities for adoption. The rules and regulations in question were prepared to meet an emergency, and the time has now come when it is thought desirable to revise them, and to endeavour to place both maritime and, so to speak, inland quarantine in the States upon a uniform footing, or at least to secure that they shall be managed upon uniform principles.

GLANDERS AND FARCY.

THE recent report that no less than 116 horses had been slaughtered on account of glanders and farcy in the parish of Kensington during the past six months was somewhat startling. Lord G. Hamilton's statement on the subject in the House of Commons, on the 16th inst., does not mend the matter. He admits the slaughtering of 115 horses, but he

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explains this not by any recent increase in the prevalence of glanders and farcy, but by the greater activity of the Local Sanitary Authority in ferreting out cases and bringing them to light. If this be the case there must be a much greater amount of glanders present in metropolitan stables than is generally believed, and the subject deserves the careful consideration of other sanitary authorities with a view to pursuing the same course as has been pursued in Kensington.

RECENT ELECTION INTELLIGENCE.

WE regret to hear that Dr. Lush, the respected member for Salisbury, whose name has been closely identified with Medical Reform during many years past, will not seek re-election. The honourable member has long felt the strain of Parliamentary duty a severe tax on his strength, and we are sorry to find that he is not now in a state of health to render a continuance of this strain desirable. The respect of the profession will follow the resigning member into his retirement. It is not, we believe, yet finally settled whether Dr. Richardson will stand for West Kent. Dr. J. A. Campbell is stated to be a candidate for the representation of the Universities of Glasgow and Aberdeen. Dr. Farquharson is not, it seems, likely to be opposed in West Aberdeenshire. We may take this opportunity of adding to the list given last week of members of our profession seeking re-election, the name of Sir J. Trevor Lawrence, Bart., the representative for Mid Surrey.

WE are informed that the statements with regard to the prevalence of measles on board the training ships at Devonport have been exaggerated. The disease has been prevailing for some time past in contiguous towns, and as the boys have been allowed to visit their friends, many of whom reside in infected districts, it is not surprising that measles has shown itself in the ships. Since the early part of February twenty cases have thus occurred. Isolation and other sanitary precautions have, however, checked the spread of the disease, and to the date of our information (March 9th) no case had occurred for nine days.

AN inquest was held in Dublin last Monday on the body of a man who was suffocated by the fumes of chlorine gas whilst his room was being disinfected. It seems that the sanitary authority had ordered the apartment to be disinfected, and when it was completed the deceased was warned not to enter it for at least six hours; but disregarding this warning, he ran into the room, and, breathing the poisonous atmosphere, succumbed from its effects. The deceased was about fifty years of age, and was of weak intellect.

SURGEON-MAJOR FREDERICK B. SCOTT, M.D., has obtained permission from the authorities to accompany the ex-Empress of the French on her melancholy visit to Zululand. Dr. Scott was for a few months attached to Lord Chelmsford's Staff during the Zulu campaign, was present with the Head-quarter Camp at the time the Prince Imperial was killed, and he accompanied the party of officers, 17th Lancers, and Mounted Infantry, who started in search of the body on the morning after the event occurred.

THE vital statistics of the Madras Presidency recently issued, and covering the period affected by the late famine, show a remarkable falling off in the number of births within the districts most severely visited. In fourteen districts the ratio of births per 1000 of the population fell from 20 to 8·8. That this has immediately resulted from the famine is rendered nearly certain by the fact that in seven other districts which almost wholly escaped its ravages the birth-rate has only fallen from 19·9 to 17·2.

TO meet the increasing demand upon the accommodation of the Glasgow Ophthalmic Institution, the Earl of Stair, Lord Blantyre, James A. Campbell, LL.D., and seven other gentlemen, have offered £200 each towards the erection of a new house. The contemplated site is in a convenient position, and the scheme is already enlisting influential lay and professional support.

VERY severe weather has been experienced in Cabul during the month of February; on the 6th of that month snow fell in large quantities, detaining the convoys of sick, wounded, and worn-out men who were under orders to return to India. The thermometer at night registers 20° of frost. Deputy Surgeon-General Hassard arrived at Sherpur on Feb. 2nd, and assumed charge of the division.

A REPORT, which appears to want confirmation, has been circulated to the effect that a large number of the workmen employed in the boring of the St. Gothard tunnel are suffering from a disease exhibiting symptoms similar to those characterising trichinosis. Three of the workmen have been admitted into a Turin hospital.

THE following medical officers have been detailed for service with the Bombay troops ordered to Southern Afghanistan:—Surgeon-Majors B. Barland, M.D.; J. F. Beattie, M.D.; T. O. Farrell, M.D.; W. R. G. Hinde, M.D.; J. Riddick; H. Waghorn; Surgeons E. H. Roe and M. D. O'Connell.

THE financial statement read at the annual meeting of the Hastings Provident Dispensary last week was highly satisfactory. The institution was stated to be working with complete success, and £758 odd was paid to the medical officers during the past year.

ON the 1st of April an election will take place for an Examiner in the Royal College of Surgeons in Ireland, in the vacancy caused by the decease of Mr. O'Leary, M.P. None but Fellows of the College are eligible as candidates.

SURGEON-GENERAL DAVID REID MACKINNON has been appointed to succeed Surgeon-General Hampden Hugh Massy, C.B., as Principal Medical Officer of the Royal Victoria Hospital, Netley.

SURG.-MAJOR A. M. TIPPETTS has been appointed Principal Medical Officer of the Reserve Division, Afghan Field Force at Peshawur, with the officiating rank of Deputy Surgeon-General.

AN outbreak of simple continued fever has arisen in Hare Island, adjacent to Cork. About forty persons have been attacked, and one death has resulted.

Analytical Records.

WHYSALL'S LEMON GINGERETTE.

(W. WHYSALL, GRANTHAM.)

IT is always a great difficulty with the advocates of temperance to find a sufficient variety of non-alcoholic beverages to suit different tastes and requirements. Tea and coffee, though excellent in their places, do not agree with everyone, and should never be drunk except in strict moderation. Effervescing drinks, again, invaluable in the summer and to some persons, afford but little variety. The preparation now before us has therefore a strong claim upon our attention, and we are glad to be able to speak of it in terms of warm approval. It is extremely pleasant in flavour, is not at all sickly, and is not too highly flavoured either with

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ginger or lemon. It makes, in fact, a capital drink, either with soda-water or with hot or cold water; and it is remarkable that several of our friends who have tried it have refused to believe it was not alcoholic; such, however, is really the case.

AMERICAN BREAKFAST CEREALS.

(THE CEREALS MANUFACTURING COMPANY, NEW YORK; WHITE, SON, & STRATTEN, HULL.)

Wheat, oats, barley, and maize, carefully decorticated, crushed, partially cooked by steam, and dried. They are beautifully pure, and can be cooked in a few minutes, yielding very wholesome and nutritious food. Of course they can be cooked in a variety of ways, and in all possess to some extent the advantages of whole-meal bread. The finer meals are made into "cereal cream" for dyspeptics, children, &c., and "cereal milk" for infants of all ages. We can cordially recommend these preparations.

STRUVE'S MINERAL WATERS.

(PREPARED AT THE ROYAL GERMAN SPA, BRIGHTON.)

We have received samples of several of these excellent chemical imitations—or perhaps we ought rather to say copies—of well-known mineral waters. Thus we have the Hunyadi János, the Vichy Grande Grille, and the Super-carbonated Seltzer Waters, reproduced carefully from analyses; and also a Pyrophosphate of Iron Water. It is still a moot point whether such artificial waters can rival the original; but, at any rate, they have the advantage of lower price and certain and invariable composition.

SWEDISH IRON-WATER, FROM KARLSTAD.

(A. L. SCHELIN, MALVERN-ROAD, DALSTON.)

This mineral water is remarkable on account of the large quantity of iron in proportion to other elements which it contains. The iron seems mainly present as ferrous carbonate, precipitated on boiling. It is a powerful tonic, and will no doubt be useful in chlorotic affections, as it possesses many of the virtues of dialysed iron.

PEPTONE.

(PREPARED BY AND UNDER THE SUPERINTENDENCE OF MR. S. DARBY, FOR SAVORY & MOORE, 143, NEW BOND-STREET.)

Mr. Darby has for years past made the preparation of peptones an object of scientific study. It is a matter of no little difficulty to obtain a peptone—that is, an artificially digested albuminoid—which shall not be too bitter for use. The sample now submitted to us is a remarkable success, and shows what may be accomplished by skilful manufacture. It may be used in weak beef-tea, or in arrowroot or cream.

MEAD'S ADHESIVE PLASTER.

(MANUFACTURED BY SEABURY & JOHNSON.)

We have tried this plaster, and have been very pleased with the results. It adheres readily without heat or moisture, is unirritating, supple, does not crack, and retains its hold on the skin for several days. It is in many ways a great improvement upon the adhesive plasters in general use. It is said to be antiseptic, from the presence of salicylic acid.

IVORY JELLY.

(JOHN MOIR & SON, ABERDEEN AND SEVILLE.)

A firm, good jelly, highly flavoured, and as good as the best that can be made at home. It will be found a treasure in the sick-room.

LUMINOUS PAINT.

ON Thursday, the 11th inst., at the Society of Arts, Professor Roscoe in the chair, Mr. Heaton of Charing-cross Hospital gave an account of the luminous paint, for which the late Mr. Balmain obtained a patent, and which is now being introduced for many useful purposes. Surfaces painted with this substance, which looks like ordinary white paint, absorb light with remarkable avidity, and continue afterwards to emit it in the dark for some hours. The paint, in fact, stores up daylight, or even candlelight, and gives it out again afterwards in quantity sufficient to render it available in certain cases as a substitute for artificial illumination.

The property to which the paint owes its power is called phosphorescence, or more accurately, phosphorescence by insolation, since the broader term is often applied to the light emitted by living animals, by decaying animal and vegetable matter, and under several other conditions. It was first observed in 1602, when a shoemaker of Bologna, in trying to prepare gold from heavy spar, obtained accidentally the sulphide of barium, which possesses the property in a marked degree. Many other phosphoric, or light-carrying bodies, natural and artificial, were subsequently discovered, and particularly the celebrated phosphorus, or pyrophorus of Canton, which was prepared by igniting oyster-shells with sulphur, and was described to the Royal Society in 1761. A specimen prepared by Canton himself was shown at the lecture. It bears the date 1764 engraved on the glass, and was until lately in the possession of Mr. Canton of Charing-cross Hospital, a lineal descendant of the discoverer. The specimen still retains its power, although it has remained for 126 years in a hermetically-sealed tube. It consists, of course, essentially of sulphide of calcium, and it is remarkable that this compound prepared in other ways is still the most powerful phosphorescent body known.

Most of our scientific knowledge in regard to phosphorescence is due to the younger Becquerel, whose researches on the subject extend over more than thirty years. The property is a very common one, although most substances emit light only for very short periods of time. It is possessed to a certain extent even by white paper, and by diamonds and rubies with great intensity, though little persistence. Almost all shades of colour can be obtained from different preparations, but the rose-violet of Balmain's paint is superior, in brilliancy and duration combined, to all others.

The paint can be mixed either with water or oil. In the latter vehicle it resists the action of water and air in a remarkable manner, and can be applied to an almost indefinite number of purposes. Many of these applications were illustrated at the lecture, the luminous sources being the electric light, the electric spark, the magnesium light, ordinary candle and gas light, and above all, common diffused daylight. Among the ornamental articles exhibited were clocks, india-rubber balls, decorative tiles and statuary, the last being represented by a brilliantly luminous bust of the Prince Consort. In the more practical class were luminous panes adapted for use in gunpowder and spirit stores, lucifer match boxes easily visible throughout the night, advertisements of lodgings, inscriptions for post-offices, and the like. The roofs of railway carriages have already been painted with the new material, and the light is said to be quite sufficient for tunnels, although, of course, it is not proposed that it shall replace lamps at night. The names of streets may also be advantageously inscribed in luminous paint, and endless other uses suggest themselves.

Most important of all, however, are the proposed uses of the new paint for marine purposes. For example, it is often extremely difficult, and yet absolutely necessary, on dark nights, to distinguish the buoys which mark the channels of harbours and rivers. If the buoys were coated with the luminous paint they would be visible throughout the whole, or, at any rate, the greater part of the night. Again, a life-buoy is practically useless on a dark night. The unfortunate man overboard cannot see it, and however good a swimmer he may be, it is a mere chance if he reaches it, or if a boat is able to pick him up. But the life-buoy exhibited at the lecture would be at all times sufficiently luminous to be visible at short distances, and would guide not only the swimmer but the boat's crew. Lastly, a diver in full dress was exhibited, whose helmet and waterproof coat had been painted and illuminated. He looked like a ponderous and unwieldy ghost, and emitted an amount of light that would be quite sufficient to guide his operations at the bottom of the water. It was in fact stated that the same dress had been worn a day or two before at the bottom of the Southampton Dock, and that the diver had been able to

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distinguish the bolt heads on a ship's bottom with perfect ease.

Messrs. Ihlee and Horne of Aldermanbury, the agents for the patent, likewise showed a luminous inscription forty feet long in illustration of the value of the invention, as a means of advertising.

The lecture was largely attended, the presidents of several of the learned Societies being among the audience.

HEALTH OF LARGE ENGLISH TOWNS.

TENTH WEEK OF 1880.

ENGLISH urban mortality shows further decline from the high rates that prevailed a month since. In twenty of the largest towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5680 births and 3070 deaths were registered last week. The births exceeded by 495, whereas the deaths were 205 below, the average weekly numbers during 1879. The deaths showed a further decline of 111 from the decreasing numbers in recent weeks. The annual death-rate in the twenty towns, which had steadily declined from 37·0 to 22·1 in the five preceding weeks, further fell to 21·4 last week. During the past ten weeks the death-rate in these towns averaged 26·4 per 1000 against 23·0, 25·5, and 27·2 in the corresponding periods of 1877, 1878, and 1879. The lowest death-rates in the twenty towns last week were 15·6 in Portsmouth, 17·5 in Brighton, 19·0 in Sheffield, and 19·2 in Wolverhampton. The rates in the other towns ranged upwards to 24·5 in Leicester, 24·6 in Sunderland, 24·9 in Norwich, 25·9 in Manchester, and the highest rate, 31·3, was again recorded in Plymouth. This continued excess in Plymouth was again mainly due to the exceptional fatality of measles.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which were 638 in the first week of February, have since steadily declined, and were last week 457; these included 173 from whooping-cough, 99 from scarlet fever, 80 from measles, and 40 from fever, mainly enteric. The annual death-rate from these diseases averaged 3·2 per 1000 in the twenty towns, and ranged from 1·5 in Brighton to 5·9 and 9·0 in Hull and Plymouth. Whooping-cough showed the largest proportional fatality in Salford, Norwich, London, and Manchester; scarlet fever in Sunderland and Bradford; and measles in Plymouth, Hull, and Nottingham. Nine more deaths were referred to enteric fever in Sheffield. The 17 deaths from diphtheria in the twenty towns included 13 in London. Small-pox caused 13 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily increased from 80 to 185 in the five preceding weeks, declined to 172 on Saturday last; 39 new cases of small-pox were admitted to these hospitals during last week, against 48 and 49 in the two previous weeks. The Highgate Small-pox Hospital contained 16 patients on Saturday last, 2 of whom were, however, not suffering from small-pox.

The fatality of lung-diseases continues to decline, notwithstanding the prevalence of cold north-easterly winds. The deaths referred to diseases of the respiratory organs in London, which had declined from 1557 to 390 in the five preceding weeks, further fell to 315 last week, and were no less than 147 below the corrected weekly average; 191 resulted from bronchitis, and 83 from pneumonia. The annual death-rate from diseases of this class in London last week was equal to 5·0 per 1000, against 4·8 from the same diseases in Liverpool.

ABERDEEN ROYAL INFIRMARY.—The accounts of the Infirmary for 1879 show that the income amounted to £6082 18*s.* 3*d.*, and the expenditure to £6270 8*s.* 6*d.*, leaving a deficiency of £187 10*s.* 3*d.* In the previous year the balance sheet presented a surplus of £635, the income being £7075, and the expenditure £6440. The accounts of the Convalescent Hospital show that the income last year was £338 18*s.* 3*d.* and was exceeded by the expenditure to the extent of £88 2*s.* 9*d.*, a considerable decrease having taken place in the amount of donations.

Correspondence.

"Audi alteram partem."

ALGIERS AS A HEALTH RESORT.

To the Editor of THE LANCET.

SIR,—I need not say one word on the beauty of the climate of Algiers, or of its fitness for the curative treatment of disease—Algiers is already accepted by the profession in England as one of our most valued health resorts. With a climate hardly inferior to Cairo, it is within thirty-six hours' sail of Marseilles, and—which is another practical recommendation—it is in the hands of our allies the French, whose firm rule makes life here as safe, pleasant, and luxurious as in Paris. In a few months there will be a daily large steamer which will make the journey in about thirty hours from Marseilles. When I crossed a month ago it was like a trip on the lake of Geneva. Algiers lies at four days easy journey from our own shores.

It is of the accommodation which the invalid will find at Algiers that I feel it my duty to say a word of warning. For the rich patient who can afford to hire one of the villas at Mustapha, a suburb of Algiers, a very perfect winter home is offered. The sight is lovely, looking over the bay of Algiers and the distant, snow-capped hills. It must, however, be said of this enchanting spot that the drainage of these villas is not good, that French imitations of our water-closets are not a success, that sewer-traps are unknown, and that certainly there have been cases of typhoid there this winter. A model villa, perfect in every sanitary appliance, and placed on the heights at Mustapha, is the home of our Consul-General, and is known to all English visitors by his pleasant Tuesday afternoon garden parties. Colonel Playfair has introduced earth closets, and thus cut himself off from the defective drainage system of Mustapha. I cannot doubt that his example will extend to the other villas. I would also say that there is at Mustapha a charming English boarding-house for invalids—the villa Roussel of Mrs. Jennings—unfortunately so full that I could not gain admission.

This winter every villa and lodging in Mustapha is crowded, and the stranger seeking health in this climate is driven to the hotels in Algiers. I can fancy the dull sense of horror which must come over any English party with a sick brother or sister, who, familiar with the hotels of the Riviera, have by medical advice changed their winter resort to Algiers. I say at once they had better have stayed at home—many times better have gone to Ventnor or Torquay. The French quarter of Algiers is on the shore at the foot of the hill, on which lies the crowded Arab town. It consists of two or three streets of the usual French type, with covered arcades and high houses built round court-yards. I believe they pulled down many interesting Moorish houses, including the Palace of the Dey, to make room for these streets; yet on the opposite shore of the bay they had a site for a new Algiers which might one day have rivalled Carthage in the beauty of its surroundings, as it would have resembled it in position. Rooms were taken for me by a friend in one of the principal hotels on the boulevard facing the sea, and I thus had the good fortune to get a front room high up, out of the reach of the sewer gases that pervade the atmosphere of every street in Algiers, and even make the walk on the splendid terrace facing the sea intolerable. The court-yard of my hotel was glazed over, and the staircase and some of the bedrooms going into this court had thus no direct communication with the open air, and this in a hot climate, with the thermometer above 60° in midwinter. The water-closets all opened into one shaft, which was lighted from the roof, and was also glazed. There was no proper trap to these closets, and they and the corridors of the hotel on which they open are therefore in direct communication with the main sewers of the town. The service of the hotel was good, though the food and cooking were most indifferent. The whole hotel was thus about the type of one in a French or Italian provincial town. The crowded boulevard on which these hotels are situated is very noisy; a tram runs along late and early; the morning gun fires at

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six and shakes the house, and after that there is no rest. Fancy the misery of such surroundings to a delicate patient accustomed to the quiet luxury and order of the Riviera or Torquay hotels! It is proposed to build a large hotel at Mustapha, and I am sure, Sir, you will concur with me that until this hotel be opened patients, who cannot afford to live in a villa at Mustapha, had better not risk further illness in the hotels of Algiers, but remain on the other side of the Mediterranean. I stayed a week in Algiers, and had the fortune to escape all the ills which follow sewer-gas contamination of houses. Others I have seen have not been so lucky.

I came on by rail some fifty miles to this splendid health resort, the Hammam R'Irha, some 2000 feet above the sea, and on a site which for beauty or extent is excelled by few in Europe. It reminds one of the higher Italian Alps. There is a French village close by, and a few of the fields are being got under cultivation. M. Arlès-Dufour is the owner of the hotel and the adjoining land, and he is now planting vineyards on the site of the old Roman city of Aquæ Calidæ, the foundations of which lie all around. The hotel is very comfortable, and the table good. I have enjoyed ten days quiet and unbroken sunshine, with a shade temperature of 60° at these heights, and only the first days of March. The hot-water springs, which rise at 114°, are mildly saline, and are used as baths. There is, moreover, a pleasant, cold, alkaline spring, with a trace of iron, and slightly gaseous, which is the usual table water. I can hardly fancy a more charming retreat from the heat and sewer poison of Algiers, and I think our London physicians will be glad to remember this spot when giving instructions regarding a winter in Algiers.

I am, Sir, your obedient servant,
C. LOCKHART ROBERTSON.

Hammam R'Irha, March 9th, 1880.

AN EXAMPLE SHOWING THE ADVANTAGES OF ANTISEPTIC SURGERY.

To the Editor of THE LANCET.

SIR,—In an address on the "Advancement of Surgery," delivered by Dr. Roderick Maclaren to the Border Counties Branch of the British Medical Association, published in recent numbers of THE LANCET, Dr. Maclaren gives, as an example of the advantage of antiseptic treatment of wounds, a case of compound fracture of the patella, involving the knee-joint. As this case will show the good results which can be obtained by strictly following Mr. Lister's plan of treatment, I venture to add a few further details of the case.

The patient, a muscular labouring man, gave the following history of the accident:—Whilst engaged with several workmen in managing a powerful crane, from some cause it broke down, killing one man on the spot and driving a piece of jagged iron into the knee of the patient. The wound was simply bandaged up at the time, after the iron was withdrawn, and the patient was sent home, and it was not until the following day that he was sent to the Cumberland Infirmary, where he was admitted *thirty-two hours after receipt of injury*. The following was his condition:—Temperature 102°, pulse rapid and hard, skin hot and dry, tongue dry and furred, great thirst—in short, in a state of fever—with intense pain in the left knee. The injury had never been looked to since the accident, owing to his removal to his own home, away from the surgeon who first saw the case. The bandage was very dirty, and had a foul smell; on removing this I found a lacerated wound about two inches long immediately over the joint, which was much swollen; the edges of this wound were irritable and inflamed; on introducing my finger it passed through a transversely fractured patella, the fragments of which were widely separated, quite into the knee-joint; on withdrawing the finger a foul-smelling sanious discharge followed.

The case was a very grave one, and it was a question whether the limb could be saved. Here was a compound fracture communicating with a large joint, which had been exposed to septic influences for so many hours without even bathing with water, and fever had already set in. But, taking all points into consideration, I thought it possible to render the wound antiseptic, and if I could accomplish this I felt sanguine of a good result. With this object in view I first set the steam spray of carbolic acid playing upon and around the wound, then had the limb thoroughly washed with strong carbolic lotion from the thigh to the ankle, and for about an hour the wound was carefully and constantly syringed with carbolic lotion. Having by this means thoroughly removed all septic matters I left the wound exposed for another hour to the influence of the spray, when, having given it a final syringe, I proceeded to dress it by Mr. Lister's method, placing a piece of carbolised oil silk immediately over the wound to prevent undue irritation from the acid. By means of an antiseptic gauze bandage, applied as a figure of eight, I drew the fragments of the patella as closely together as the case would permit, covering the whole with layers of antiseptic gauze and mackintosh sheeting. A long back-splint with foot-piece was applied outside the dressing, and the limb slung in an ordinary cradle.

In the evening the patient expressed himself as feeling much easier, the pulse was more regular and not so frequent, and the temperature was rather less being 101·8°; he slept fairly well that night and the following morning the temperature had fallen to 99·6°. I again dressed the wound, using strict antiseptic precautions, found it perfectly free from the bad odour it had on admission, and looking healthy. In the evening the temperature was 99·8°, and from that time it fell to normal, never rising higher than 99°.

The antiseptic dressings were left undisturbed for a week, when they were removed under the spray, and the wound found to be completely healed. The serious compound fracture was thus reduced to a simple one, and, as stated by Dr. Maclaren, eventually a good result was obtained.

Remarks.—During the two years I was house-surgeon to the Cumberland Infirmary many grave compound fractures were admitted and excellent results followed under the antiseptic plan of treatment, which is carried out in all its details by the surgeons of that institution, but none more typically illustrates the advantages to be derived from "Listerism;" for undoubtedly this case was "going to the bad" until the septic process was arrested as above stated, and the limb, if not the patient's life, saved.

The whole case shows that, although many hours may elapse before the treatment is commenced, we need never despair of a good result, provided sufficient trouble is taken to render such a wound thoroughly aseptic, and *to keep it so* until nature has time to effect the healing process.

If this case of a wound exposed to septic influences for some time, and actually stinking, could be rendered antiseptic by care, why should not operations (without the discomforts arising from clouds of steam-spray in the operator's face, impeding his sight, &c.) be performed, and then, the operation being completed, the wound rendered antiseptic by carbolic bathing and spraying before applying Lister's dressing?

If equally good results were obtained it would, I should imagine, be advantageous to the surgeon to dispense with the spray until he had completed the whole, or at least the more delicate part of the operation; thus allowing him to see what he was about more clearly—a highly important matter in most operations.

I am, Sir, yours truly,
F. SYDNEY SMYTH, L.R.C.P., L.R.C.S. Edin.

Brockley, London, S.E.

"SCURVY AND THE PROPOSED ARCTIC EXPEDITION."

To the Editor of THE LANCET.

SIR,—In the last number of your influential journal occurs a special article on "Scurvy and the proposed Arctic Expedition," in which I, as the intended leader of such expedition, am placed before your readers in a light calculated to cause serious damage to the immediate bright prospects before us—at all events, within the range of medical influence. I beg, Sir, that, in justice to my combined arctic experience and common sense, you will at once inform your readers of the following principle relative to the prevention of scurvy to which I have undeviatingly adhered:—

1. I believe in thorough ventilation of the ship, and keeping the crew as much as possible in the open air.

2. I thoroughly believe in the constant use of lime-juice, which I should take out in the form of lozenges, after a proper test as to their efficiency, and on no account would I be without such a necessary adjunct to arctic work.

3. I place thorough faith and confidence in the liberal

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supply and consumption of preserved potatoes, carrots, dried apples, preserved cranberries, pickles, and preserved vegetables generally.

4. Constant variety in diet, work, amusement, and an endeavour to instil cheerfulness and competition in the duties to be carried out, would be the great aim of,

Sir, yours obediently,

JOHN P. CHEYNE, R. Commander R.N.

Central Arctic Committee-room, Fleet-street,
March 11th, 1880.

P.S.—I did say at the Mansion House meeting that the seeds of scurvy were in the constitutions of the men of the last expedition before they started on their spring sledging work, but no one, in the whole course of my lectures through the country, ever heard me disparage the use—aye, the generous use—of lime-juice. I think, Sir, under the circumstances, you might not only publish this letter, but remedy the injury done inadvertently by writing another special article calling prompt attention to the antiscorbutic principles held by me, and assuring your readers that no guarantee or written pledge will be required from me to administer health-giving diet to my crew.

PARIS.

(From our own Correspondent.)

THE proposal to create a chair for M. Cornil is likely to meet with further opposition. Should the project be realised, the new Professor of Practical Morbid Anatomy will be placed in possession of the laboratory of the Hôtel Dieu; and this arrangement will be anything but satisfactory to the clinical professors, to whom it now belongs. As, however, the Minister of Public Instruction is determined that the heavy outlay of public money incurred in the construction and fittings of this laboratory shall be justified in the future by more work than has hitherto been forthcoming, a deaf ear will most probably be turned to all remonstrance; and unless M. Ferry disappears from the Ministry with his Article 7, M. Cornil's appointment to the chair and laboratory will be a *fait accompli*.

The new building of the Clinique d'Accouchements, which is near the Observatory, is now finished, and will soon be ready to receive patients. The first-floor is occupied by the wards and their dependencies, closets, offices, and bath-rooms. One of these, the salle d'accouchement, is specially reserved for women in labour, upon the termination of which they will be wheeled back again to their beds. Separate wards for contagious cases, together with the lecture theatre, museum, and laboratory, are upon the same flat. Every means has been taken to render the wards capable of rapid and thorough disinfection in case of epidemic, the walls and ceiling being of stucco, with rounded angles, and the floor of marble mosaic. This Clinique will be a great boon to the necessitous poor, but it is to be hoped also that greater facilities for study will be afforded than have hitherto been provided. Practical instruction in midwifery has been most difficult of attainment, and many a doctor has issued from the Faculty of Paris who never attended a woman in her confinement.

The death is announced of Dr. Auzoux, the manufacturer of anatomical models of a special kind, to which he had applied the name of Clastic. The Academy of Medicine and the Institute awarded him prizes as long ago as 1822, and since that time his work has generally obtained a medal whenever exhibited. The well-known surgeon, M. Léon Labbé, was nominated a member of the Academy of Medicine yesterday, in spite of strenuous opposition from some of the leaders of the profession, whose motives may be perhaps readily guessed.

The cancer curer, "Dr." Von Schmidt, has been fined 1000 francs for illegally practising medicine, he not being able to produce any diploma whatever.

Paris, March 17th, 1880.

NICHOLLS'S HOSPITAL, Ardwick, which has been erected at a cost of about £20,000 by the widow of the late Alderman Nicholls, is now rapidly approaching completion, and is expected to be ready early in the ensuing summer.

Obituary.

GEORGE DALLAS BAIRD, F.R.C.S. EDIN.

THE subject of this notice, whose death took place on the 17th ult., in his seventy-third year, succeeded to his father's practice when only twenty-one, and for forty years was the principal medical practitioner in a wide district surrounding Linlithgow. Associating Dr. George Hunter with him as partner, Mr. Baird, after five years, retired from active work in his profession, retaining only a few of his old patients. Twelve months ago he was stricken with paralysis, since which time his general health had gradually failed. Though Mr. Baird was appointed Justice of the Peace, the excitement of municipal or political life was distasteful to him, and he is said to have refrained from voting at all elections of either character. He enjoyed the personal friendship of some of the leading members of the profession in Scotland, both of the present and past generations, and his death is lamented by a wide circle of friends.

LLEWELLYN POWELL, M.D. HEID., L.R.C.P., M.R.C.S.

DR. LLEWELLYN POWELL died on October 4th, 1879, at Christchurch, New Zealand. He was educated at the City of London School and at St. Bartholomew's Hospital, where he took a high place in the school examinations. He subsequently settled in Christchurch; his health, however, never permitted him to take a very active part in general practice, though as a consultant no man in the town enjoyed so large a share of the confidence of his medical brethren, not only on account of the soundness of his judgment and professional opinions, but because of his strictly upright and honourable conduct. Outside of his purely professional sphere he was well known as a man of refined and cultivated taste, and of extensive reading. He was an ardent student of natural science, and was for some time president of the Philosophical Society of Canterbury, to which he contributed several valuable papers. He was Lecturer on Botany and Zoology at Canterbury College, and medical officer to the Local Board of Health. His early death will be sincerely regretted by the Christchurch public, and to not a few of the profession his loss will be like that of a brother.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the last meeting of the Council, James Henry Gramshaw, M.D. St. Andrews (of Gravesend), was elected a Fellow of the College. His diploma of membership bears date December, 1842.—Mr. Christopher Heath has been elected Chairman of the Board of Examiners in Anatomy and Physiology.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on March 11th:—

Deane, Edwin, Wincanton.
Puddicombe, Wm. Noble, Purcells, Edgware.
Studer, Benjamin, Linthal, Alsace.

The following gentlemen on the same day passed the Primary Professional Examination:—

William Astley Cooper, Fredk. William Harvey, Philip Alex. Dewar Head, London Hospital; William Rees Williams, St. George's Hospital.

Staff-Surgeon T. Conry and Surgeon C. W. Magrane have been appointed to the *Flora* for service at Ascension.

His Grace the Duke of Devonshire has been elected President of the Chesterfield and North Derbyshire Hospital and Dispensary for the ensuing year.

The salary of Dr. Vallance, medical officer to the West Ham Union Workhouse, has been increased from £200 to £300 per annum.

DR. A. VANS DUNLOP, of Edinburgh, who died last month, has left £70,000 to the University of Edinburgh.

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THE LADIES' CHARITY AND LYING-IN HOSPITAL, LIVERPOOL.—The annual meeting of the friends and supporters of the Ladies' Charity and Lying-in Hospital, Myrtle-street, was held on Tuesday last at the Town-hall, the Deputy-Mayor (Mr. Alderman Livingston) in the chair. The report stated there had been an increase of 396 in the number of out-door cases. Out of 2224 confinements, only two fatal cases had arisen. The attendance of nurses and midwives at the instructions continued to form a special feature. During the year 33 women had attended the courses of instruction, and had passed examinations held by the medical department. A question arose as to the advisability of relaxing the rule which limits the benefits of the charity to patients having marriage certificates, but the suggestion to this effect was not accepted by the meeting.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—The annual report of this institution has just been issued. It states that every source of voluntary income—so-called—has been reduced, and while there is a slight set-off by the increase in the item of interest there is a diminution of £203 from the income of the previous year. The Hospital Saturday and the Hospital Sunday collections are both less than last year; the amount of the former is £1921 as against £2001 in 1878; the latter is only £778, instead of £915, the amount received the year before. The total receipts, excluding legacies, are £6781; expenditure, £6652 1*s.* 5*d.*, leaving a balance to be carried forward of £128 18*s.* 7*d.* The legacies have amounted to £1158 13*s.* The alterations in the laundry and washhouse are now completed, and this department is placed in a thorough state of efficiency, giving every satisfaction.

A SUBSTITUTE FOR LEAD AND BRONZE.—At the ordinary meeting of the Society of Arts on the 11th inst. Dr. Granville Cole described a new metallic compound, known as Spence's metal, which it is expected will be largely used as a substitute for lead and bronze. It is a combination of lead, iron, and zinc sulphides, and is about one-fourth the cost of lead, and consequently much cheaper than bronze. Its melting point is comparatively low, a temperature of 100° above the boiling point of water being sufficient to reduce it to the liquid state. Like type metal, it expands on cooling; it is capable of a very high polish; further, it is claimed that it will resist climatic influences well, and that it is scarcely attacked by the strongest acids. Sanitarily it will be useful, since water has no action on it, for cisterns instead of lead; and further, being an almost non-conductor of cold, the lining of pipes with it would prevent water from freezing.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Eastern Counties Asylum for Idiots, Colchester, has become entitled to £1500 under the will of Miss Mary Woodward, of Sproughton, near Ipswich. The Grocers' Company have given £100 to the Royal National Hospital for Consumption and Diseases of the Chest at Ventnor, £50 to the Central London Throat and Ear Hospital, £50 to the Lock Hospital, and £50 to the National Truss Society. Mr. F. Wise has given £5000 to the Home for Protestant Incurables, Cork; the Belfast Royal Hospital has received £50 from Mr. James Craig, and a similar amount from Mr. Braddell. Mr. Robert Donne, of Odcombe, bequeathed £100 each to the Taunton and Somerset Hospital, the Sherborne Hospital, the Yeovil Hospital, and the Crewkerne Hospital, after the death of his wife. The York County Hospital has become entitled to £100 under the will of Mr. George Dodsworth. The Hereford Dispensary has received £100 under the will of Mrs. John Prince, of Newton.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ALLEN, A., M.D., M.Ch., L.M., has been appointed Medical Officer for the Keelby District of the Caistor Union.

BAYNES, Mr. J., jun., has been reappointed Analyst for the Borough of Kingston-upon-Hull, for one year.

BENSON, A. H., M.B., has been appointed Lecturer on Ophthalmic and Aural Surgery in the Ledwich School of Medicine, vice Rainsford, deceased.

BOULTER, Mr. W., has been appointed Assistant Medical Officer at the Woolwich Union Infirmary.

BUTLER, P., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Assistant Medical Officer at the Workhouse and Infirmary, Camberwell.

CROWE, J. W., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the Workhouse and the Hartlepool District of the Hartlepool Union, vice Moore, resigned.

DOYLE, G. W., M.B., has been appointed Medical Officer to the Fifth District of the Norwich Union, vice Woodhouse, resigned.

GABBETT, H. C., M.B., L.R.C.S.I., L.K.Q.C.P.I., has been appointed Assistant Physician to the Royal Hospital for Diseases of the Chest, City-road.

GILL, J., M.D., L.R.C.P.Ed., has been appointed one of the Honorary Surgeons to the Stratford-upon-Avon Infirmary (not "Physician," as reported last week).

GOSSETT, G., M.B., has been appointed Public Vaccinator for District No. 3 of the Abingdon Union, vice Daly, resigned.

HOLLIS, A., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for Yarmouth, Isle of Wight.

HURST, G., B.A., M.B., &c., has been appointed House-Physician to the General Lying-in Hospital, London.

HUTCHINSON, J., F.R.C.S.E., has been appointed Consulting Surgeon to the Royal Hospital for Diseases of the Chest, City-road.

KEHOE, M., L.R.C.S.I., has been appointed Surgeon to St. Vincent's Hospital, Dublin, vice O'Leary, deceased.

MACASKIE, J. G., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Eastern District of the Belford Union, vice Burman, resigned.

MACKENZIE, J. A., M.B., C.M., has been appointed Medical Officer to the Dispensary for Sick Children, Gartside-street, Manchester, vice Powell, resigned.

NEDWILL, C., M.D., M.R.C.S.E., has been appointed Medical Officer to the Local Board of Health, Christchurch, New Zealand, vice Powell, deceased. Salary £250 per annum.

NORTHEY, W. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Tavistock District and the Workhouse of the Tavistock Union.

O'MULLANE, E. J., M.K.Q.C.P.I., L.M., & L.R.C.S.Ed., has been appointed Medical Referee to the Liverpool Victoria Legal Friendly Society at Nottingham.

REVELL, R. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Fifth District of the St. German's Union.

ROBINSON, J. W., M.D., M.R.C.S.E., has been appointed Medical Officer of the Old Prince's-road Workhouse, Lambeth.

SCOTT, W. E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator to the Second and Eleventh Districts of the Lincoln Union, vice Williamson, resigned.

SMITH, P. B., M.D., C.M., has been appointed Medical Officer to the Tailor Incorporation, Aberdeen, vice Fiddes, deceased.

WHITE, W. H., M.D., M.Ch., L.K.Q.C.P.I., has been appointed Assistant-Physician to the Royal Hospital for Diseases of the Chest, City-road.

WILLES, W., M.R.C.S.E., L.R.C.P.Ed., has been appointed Resident Surgeon to the Royal Sea-bathing Infirmary, vice Musgrave, resigned.

WOOD, Mr. W. W., has been appointed Analyst for the Borough of Halifax. 10*s.* 6*d.* for each analysis.

WORGER, T. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Kilnsea Union District of the Frome Union.

WRIGHT, W. H., L.K.Q.C.P.I., L.M., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator to the Normanton District of the Shardlow Union, vice Brady, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BANHAM.—On the 15th inst., at Mount View, Glossop-road, Sheffield, the wife of H. French Banham, M.A., M.B., of a son.

DOMVILLE.—On the 6th inst., at St. David's-hill, Exeter, the wife of Edward J. Domville, L.R.C.P.L. &c., of a son.

WIGHT.—On the 3rd inst., at Liverpool-road, the wife of George Wight, M.B., of a son.

MARRIAGES.

DUKE—CARDINALL.—On the 3rd inst., at St. Barnabas', South Lambeth, William Alexander Duke, Surgeon, Army Medical Department, to Edith, youngest daughter of the late J. Cardinall, of Halstead, Essex.

EVANS—BARMESTER.—On the 11th inst., at the Parish Church of Little Oakley, Essex, Samuel Evans, L.R.C.P.L., M.R.C.S., &c., of Harwich, to Eleanor Sophia, elder daughter of the Rev. George Barmester, Rector of Little Oakley.

HIND—DENTON.—On the 11th inst., at Holy Trinity Church, Stockton-on-Tees, by the Rev. Canon Falconer, Henry Hind, F.R.C.S., to Emily, sixth daughter of the late Jno. P. Denton, J.P., of Norton House, Stockton-on-Tees.

DEATHS.

BELL.—On the 19th inst., at The Wakes, Selborne, Thomas Bell, F.R.C.S., F.R.S., aged 68.

CRACKLE.—On the 9th inst., at Ilkeston, Derbyshire, Thomas Arthur Crackle, M.R.C.S.E., aged 31.

DAVIES.—On the 11th inst., at The Court, Merthyr Tydvil, Edward Davies, M.R.C.S.E., J.P. for Glamorgan and Brecknock, in his 78th year.

GOOLDEN.—On the 10th inst., Richard Henry Goolden, M.D. Oxon., F.R.C.P., of 1, Sussex-gardens, Hyde-park, formerly Physician to H.M.S. *Dreadnought* and St. Thomas's Hospital.

MIMPRISS.—On the 14th inst., at his residence, Wandsworth-road, Thomas Roberts Mimpriss, M.R.C.S.E., in his 85th year.

SMITH.—On the 5th inst., at The Wiglands, Hanslope, James Smith, M.B., C.M., aged 28.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, March 18th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 9.30 A.M.
Mar. 12	30·40	E.	44	42	73	53	40	..	Overcast
,, 13	30·32	N.E.	47	45	79	59	42	..	Hazy
,, 14	30·29	E.N.E	42	41	70	00	40	..	Overcast
,, 15	30·27	E.	43	40	56	48	37	..	Overcast
,, 16	30·12	N.E.	40	38	65	49	36	..	Overcast
,, 17	30·14	S.E.	41	41	83	51	38	..	Overcast
,, 18	30·38	E.	43	40	84	54	36	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

NON-SUSCEPTIBILITY TO VACCINATION.

H. H.—Section 20 of the Vaccination Act of 1867 provides that "If any public vaccinator or medical practitioner shall find that a child whom he has *three times* unsuccessfully vaccinated is insusceptible of successful vaccination,....he *shall* deliver to the parent or other person [having custody of the child] a certificate under his hand [testifying to the fact, and according to a form appointed], and the parent or such person as aforesaid shall not thenceforth be required to cause the child to be vaccinated." It would appear from this section that the Legislature regarded three unsuccessful attempts at vaccination as reasonable ground for looking upon the child operated upon as insusceptible; but in our correspondent's case the operator appears to look upon his failures as depending upon the method of his operating rather than upon the insusceptibility of the child. Be this as it may, our correspondent is not exempted from having his child again vaccinated until he holds the medical certificate of insusceptibility. We would strongly advise, in the child's interest, that it should be taken to one of the public vaccination stations, where the quality of the lymph and the efficiency of the operation can be equally assured, and the question of the susceptibility or non-susceptibility put beyond doubt.

Mr. A. Perkins.—We regret that we cannot find space for the tariff.

ALOPECIA.

To the Editor of THE LANCET.

SIR,—"W." might try hypodermic injections of some salt of pilocarpine. I am unable to give an exact reference; but two cases were reported in Germany last year, in which the use of this substance subcutaneously for another purpose was followed by a growth of hair. The hydrochlorate and the nitrate are both freely soluble in water, and their introduction beneath the skin is free from objection. I generally inject one centigramme, but this dose may be doubled if expedient. When this treatment has failed, as it most probably will, "W." might rub his patient's cheeks daily with a raw onion. A friend of mine, who is most learned in the preparation and use of "simples," assures me that this is positively infallible; and, although I am rather inclined to be sceptical, I find that some of the most venerable medical writers, from Dioscorides to the present time, recommend the same application with confidence.

Yours &c.,

March, 1880. X.

Mr. F. Heeley, (Stoke Devonport.)—Our correspondent may rest assured that "gas-flames" will not cause "typhoid"; but if he be wise he will consult the medical officer of health concerning his school-room.

Non-professional should consult a surgeon.

AN OSSIFIED UTERUS.

DR. J. T. WILLIAMS, Professor of Anatomy, Central University, Louisville, describes, in the *Medical Herald*, a curiosity he found in the dissecting-room. In the abdomen of the body of a negro woman, probably between sixty-five and seventy years of age, a tumour was discovered, occupying the lower zone of that cavity. It was surrounded by a quantity of loose material, in which were fifteen or twenty fibroids, varying in size from a guinea-fowl's egg to a pea. The tumour was hard and pear-shaped. On tearing open the mass longitudinally, it was seen to contain a perfectly preserved and well-formed child, apparently at full term, the breech presenting. Owing to the firm union between the foetus and the inner surface of the envelope, it was impossible to separate the two without destroying both. On microscopic examination, the covering was ascertained to consist of *bone*. Dr. Williams concludes, from the shape of the bony envelope, the nature of its contents, its position in the pelvis, its relation to the vagina, the presence of the fibroids, and the failure to find anything else corresponding to a womb, that this was an example of ossification of the uterus.

W. F.—It must be destroyed, and the marks must be indelible.

PROFESSIONAL CONTINGENCIES AFLOAT.

To the Editor of THE LANCET.

SIR,—Perhaps some of your subscribers may care to hear what they are subject to when acting as ship-surgeons.

After a slight attack of hæmoptysis, I decided to leave England for the fourth time for Australia, and for this purpose was appointed surgeon of a vessel bound for Sydney. When, however, we were 10° south of the equator the ship took fire, and all had to leave her in the boats. I was appointed to the charge of the captain's gig, and, for a crew, had two foreign seamen, an American stowaway, the stockkeeper, the second cabin steward, one saloon and one second cabin passenger (the latter an epileptic). We had a compass that would not act, and a good supply of provisions, excepting that most important for the tropics—water. The reason of this was that we had nothing to carry it in except ale-bottles, coffee-tins, &c. We had no sails nor masts, excepting those we made from sheets and oars. Several boats were worse supplied than we were, for they had no rudders. In strange contrast to our boat was the one selected by the chief officer. His was the whale-boat—a strong, new one, better adapted to carry twelve than our cockle-shell (intended for harbour use only) was to carry eight. His crew consisted of seven—the boatswain, the boatswain's mate, two English sailors, one French sailor, the second steward, and one saloon passenger. He had a twenty-eight gallon keg of water, a good compass, a chronometer, and a sextant. The carpenter knew less of navigation than I did; but yet I saw a female passenger in his boat. We parted company, and started for Pernambuco, 360 miles distant. Fortunately we were all saved. Our boat was picked up by an Italian barque bound for Monte Video. Nothing could have exceeded the kindness and attention of the Italian captain; he gave us the best he had, and spared no pains to make us as comfortable as he could. After our arrival in Monte Video we presented ourselves to the British Consul, who provided *deck* passages for the whole of us in the *Sorata*, one of the Pacific Steam Navigation Company's vessels. I had no change of clothes; with the exception of those I was wearing, I had lost all I had. I was told the Consul would give me none, so that what I had already worn for three weeks I had the prospect of wearing for another four. The idea of a deck passage up channel in the dead of the English winter, without proper clothing, was not encouraging to one with a delicate chest. I tried hard to get employment in Monte Video, but failed. English medical men have to pass an examination in Spanish before the local practitioner, unscrupulously bigoted against competition. I was obliged to join the *Sorata*. The captain behaved well to me, and gave me a cabin in the second class, where I was very comfortable. Fortunately for me the steamer called at Rio de Janeiro, and here again I tried hard to obtain employment. I made the acquaintance of two English medical men, but they could give me nothing to do. At last I met an English ship-chandler, Mr. Wm. Trout, of the Rua Primero de Março. I explained my circumstances to him, and found him the "Good Samaritan." He gave me clothes, and provided a passage for me in a little brig of 154 tons, bound for the Cape of Good Hope. After a passage of three weeks I arrived in Cape Town. I applied to Dr. Lansberg, the Secretary of the Local Medical Board; but he only advised me to return to England. I tried hard to get something to do as an assistant or locum tenens, but failed; there was literally nothing to be done, and I could get no help from the medical men to whom I had applied. There was a district surgeoncy, of the yearly value of £75, vacant at an out-of-the-way place called Peddie; but I had not the means of getting there. I could not even get the advance of a month's salary to pay my fare there. At last I went to Dr. Kitching, a graduate of London, a homœopath. I had been as sarcastic against homœopathy as most allopaths are; but Dr. Kitching behaved kindly to me from the first, although I told him of the difference of our opinions. He took me into his house, and provided me with the means for commencing practice. He treated me as a medical man. I was on the verge of starvation when I applied to him, and I have to thank him and Mr. Trout, of Rio de Janeiro, for the position I have since succeeded in making.

Yours &c.,

ARTHUR B. VANES, L.R.C.P.E., &c.

Uitenhage, Cape Colony; Dec. 17th, 1879.

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CASUAL WARDS IN PARIS.

A CORRESPONDENT writes:—While in 1878 all the world was flocking to Paris to participate in the gaieties of the great Exhibition, I noticed a modest work, begun in June of that year, in the rue de Tocqueville, a very poor quarter of the capital. This was the opening, by private initiative, of a casual ward, where a night's rest and a good bed are offered, without distinction of race or creed, to any man in absolute distress. In exchange he is required to give every particular concerning himself, and to be perfectly sober, and, though not necessarily to participate in, still to observe a decorous attitude during, the brief reading of prayers. It would require too much space to relate at length the wonderful and rapid progress of this institution. The poor readily availed themselves of the help offered, and with equal promptitude the rich came forward with the necessary means. Three casual wards now exist in Paris—the one at the opening of which I assisted, another at 14, Boulevard de Vaugirard, and the third at 81, Boulevard Voltaire. During the recent fearful winter, which has caused so much havoc among the poor of Paris, these institutions rendered the greatest service. They gave warmth and shelter to 19,412 men for an average of three nights each. To these were distributed 11,528 tickets for bread, and 16,663 tickets for animal food. Letters were written to the friends of the distressed, passports and legal papers procured, and, better still, employment of a permanent nature was found for 2116 of men relieved. When the hospitals were so overcrowded that the doors had to be shut upon the sick, room was found for some of the latter in these private casual wards. No less than 1936 foreigners were assisted, of which I am glad to note only 45 were Englishmen. The foreign nations that provided the greatest proportion of destitution in Paris were the Belgians, 655; the Swiss, 412; the Germans, 259; and the Italians, 254. I need scarcely point out that the timely and prudent assistance given by this institution must contribute considerably to the maintenance of public health. A good bed in a comparatively wholesome ward is provided, and sometimes a little bread or soup sufficient to preserve health, while every possible assistance is afforded for the procuring of work. Money is not given, and care is taken not to encourage pauperism, while seeking to prevent absolute and dangerous misery. Already the towns of Lyons, Lille, Bordeaux, Montpellier, and Béziers are preparing to follow the example set in Paris. From Vienna and from Pesth demands for information have been received, and M. Rubens, the chief of the Stockholm police, has been sent by his Government to Paris to report on this institution. On the other hand, one of its leading promoters, M. le Comte de Cars, recently visited London, and, aided by Dr. Bridges, of the Local Government Board, inquired into the condition and administration of English workhouses and casual wards. This latter incident is, perhaps, destined to bring about one of the most fruitful results of the work. The French would have much to gain if they studied the sanitary advantages of our charitable institutions; while we should be equally benefited if we could import from France the economy with which their charities are managed, the tact and gentleness that direct their distribution, and prevent the pauper losing all sense of personal dignity.

Dr. B. B. Joll, (St. Ives.)—The usual fee is one guinea for evidence, and one for a post-mortem examination. It is not customary to give "refreshers."

Mr. John Crerar.—The Bill in question did not become law.

INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—I see by THE LANCET that to-day (9th of February) the examination of candidates for the Army and Indian Medical Services begins, and it is that which prompts me to send you this communication, late though it may be, in the hope of attracting the attention of those about joining the latter service, and opening their eyes to what they are coming to, as probably not one of them knows anything of the vital changes that are about to take place in India as regards the Indian Medical Service at the present moment, and it certainly is a kindness to undeceive them if they do not.

An order of Government, which is cut and dry, and merely waiting for the 1st of April to put into force, deprives the Indian Service in each of the three Presidencies of its surgeon-general as derived from the local service, and places at the head of the services, British and Indian combined, so far as the military portion of the latter is concerned, an officer of the Army Medical Department; so that successful candidates for the Indian Medical Department need never expect to be able to rise to the head of their own department, but may look forward to serving under one of their contemporaries of the Army Medical Department some day, if they both live long enough, no matter what their relative qualifications may be; for the fact of belonging to the Indian Service is, apparently, in itself a disqualification for the post of a surgeon-general in India, no matter what assertions are made to the contrary; as, if it were intended to be otherwise, the three surgeons-general of the Indian Medical Department would not be wiped out at one stroke, and Army Medical Department men put in instead. Two, or at least one, of them would have been retained or selected from the local service; but it is not so.

This action of Government is not alone directly injurious to the Indian Service by abolishing an appointment the position and emoluments of which would incite men to work and strive and hope for some day; but it is insulting, as the practical assumption is, say what one may, that the Indian Medical Service is incapable of producing a man fit to be put at the head of a department where he would have to deal with European troops, and it at once reduces the Indian Medical Service to a subordinate and no longer independent position, and one which a man could not have the same pride as hitherto in belonging to.

Again, as regards deputy surgeons-general of the Indian Medical Department, out of a total of 21 in the three Presidencies, the number is now reduced to 12—viz., 6 in Bengal, 4 in Madras, and 2 in Bombay, so that the number of officers of the Indian Medical Department who can reasonably hope to reach this grade is very small indeed; and here again, with the more rapid promotion in the Army Medical Service, and the greater number of appointments in this grade available both at home and abroad, they must expect to be passed over, and serve under their contemporaries or juniors of the sister service.

There is another point in connexion with these abolitions and reductions, and that is the increased pensions attached to service in the grades of surgeon and deputy surgeon-general go, of course, too.

Again, as to retiring pensions, the contrast between the two services is striking and painful. The Indian Medical Department man, who has to serve all his time abroad and in the tropics, has a smaller retiring pension after twenty years' service and upwards than he of the Army Medical Department, who may have served a great portion of his time at home, or at all events in non-tropical countries. A glance at the scale of pensions laid down in the Memorandum supplied from the India Office and at that laid down for the Army Medical Department by the late Warrant will prove this at once.

Further, the recent Warrant grants certain privileges to officers of the Army Medical Department as regards leave, and that on full pay and counting as service *at home;* whilst for those of the Indian Medical Department the hard-and-fast furlough regulations remain unaltered. Service at home or in non-tropical countries and service in India are two very different things indeed, and more especially when after a time the climate begins to tell on a man, and he may have exhausted his furlough allowance, and cannot again get a change except with diminished pay and loss of service. It is then, if not indeed before, that he envies his brother of the Army Medical Department, who can go home after his tour of *foreign* service, serve at home, and perhaps ultimately come out to rule the other.

I do not mean for a moment to say that the late Army Medical Warrant erred on the side of liberality, for it did not; and, granting that, the contrast between the way the two departments are being treated is very marked indeed.

The arrangements regarding the civil portion of the Indian Medical Service have not as yet been revealed; but it is understood that they will be put under a lieutenant-governor or chief secretary to Government, with a medical secretary or some such thing, so that little or no promotion will be the result. Even were it otherwise, the slur put upon the local service by abolishing their surgeons-general ought to be removed.

The senior officers of the Indian Medical Department have, it is understood, legal redress under what is known as the Henley Clause of an Act of Parliament passed in 1858, when the service was transferred to the Crown; but the juniors have none, except what prescriptive rights and fair and equitable treatment on the part of Government give them. The former ought to have compensation for the immediate loss of promotion &c. in the shape of increased pension or bonuses on retiring, and the juniors ought to have something done for them, too, to compensate them for their prospective loss of promotion and present loss of status; for such it really comes to, I regret to say.

There ought to be no difficulty in completely amalgamating the junior portion of the Indian with that of the Army Medical Department; there is no fund to stand in the way now, and they could be placed on a roster according to their respective marks when passing out of Netley. Some such arrangement would seem fair, and would probably not be unacceptable to both. There probably would be a certain number of the Indian medical officers who would elect to remain civil; but that would create no difficulty, as a civil medical service in India there must be from the nature of things, and it could be dealt with separately.

If Government is really going to do anything for the Indian medical officers—viz., to improve their wretched rate of pensions, and restore their confidence and pride in their department—they ought to do so at once, so as to remove the painful state of suspense they are labouring under at present.

Your obedient servant,

Feb. 9th, 1880. DECCAN.

MEDICAL CHARGES.

L.R.C.P. Lond.—We agree with our correspondent. It is related of an eminent painter—Vernet, we believe—that on one occasion, being asked to produce a small pencil sketch, he did so while the applicant was waiting. When the latter protested against the price charged, the painter replied, "Do you think I spent but ten minutes in drawing that sketch? It represents the labour of thirty years."

Mr. J. Frank.—Austin Flint's work, published by Churchill, would probably answer the purpose.

M. F. Smith had better perhaps urge the need of a consultation.

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THE LATE PROFESSOR J. AITKEN MEIGS.

THE Board of Trustees of the Jefferson Medical College have placed on record the following note of the characteristics of the late Professor of the Institute of Medicine. We quote from the *College and Clinical Record*:—

"In the lecture-room Professor Meigs appeared to his best advantage. Deeply interested in his subject himself, he spared no pains to make his lectures attractive to his students by careful preparation and abundant illustration. His use of the stereopticon as a means of explaining his subject was extremely fortunate. His lectures delivered a year ago, upon the Eye and Ear, will long be remembered by those who heard them for their faithful representation of the latest contributions to the anatomy and physiology of these organs: they probably have never been excelled in this country. This winter he began his lectures with the subject of 'Reproduction,' and it gave promise of being an unusually brilliant course. When lecturing he was nervous and animated; he made no effort at oratorical display, but kept ever before him the idea simply of communicating information; his style was therefore plain and unpretending, though not unpolished; he possessed a free flow of language, but was cautious in expressing his views upon facts which he considered not fully established. Always affable and sympathetic in his manner, naturally kind and obliging in his disposition, ever ready to answer questions and freely communicate the results of his laborious studies, he was not only regarded as a friend by the students, but possessed the confidence and regard of his colleagues and the profession and community at large."

Mr. D. Holmes.—The regulations have been considered once at a meeting of the Fellows of the College, and will have to be passed at two future meetings.

IS JAGGARY AN ANTISCORBUTIC?

To the Editor of THE LANCET.

SIR,—Surgeon Cullimore, in your issue of Jan. 31st, calls attention to "the preventive and remedial effects of molasses in scurvy." As one who has done a fair amount of work in the same field as that which appears to have afforded your correspondent an experience of so marvellous a description, may I be permitted to remark on certain points of the arguments advanced by him which appear to my mind to weaken the assumption made?

Is one to conclude from Surgeon Cullimore's prefatory remarks that he has reverted to the ancient and exploded theory that "sea influences and salt provisions" *per se* are causative of scurvy? If not, whence the necessity of the statement that "the very bullocks died from want of *it* owing to the heavy salt tax" (I presume the word *it* refers to "salt," although it would be difficult to understand it to do so otherwise than from the context)? Now, I would ask whether it is not within the bounds of possibility that absence of sufficient pasturage and, occasionally, of water-supply were the proximate causes of the heavy mortality amongst bullocks which undoubtedly occurred? Again, why need he seriously ascribe the occurrence of scurvy in human beings as due "to the effects of *roots*, nuts, wild aloes, *prickly pear*, and such inedible matters"? Whence the necessity for this new theory? Is it not possible that the proximate cause of disease was the absence of sufficient vegetables and fruit in the diet of the famine stricken, depriving them of that class of salts whose acids form carbonates in the system (Parkes)? That scurvy was not due to starvation in its usually accepted sense (the remaining alternative given by him) may be inferred from the fact that I have known European officers suffer severely from the disease, resulting from absence of vegetable diet, when on tour through a district where the drought had been excessive, although they did not lack other articles of diet; secondly, from similar imperfect supply, I have seen natives monetarily in a position which would have removed them from the possibility of being famine subjects, fall victims to scurvy; thirdly, in one district in which I served, where drought was barely felt, and vegetation was therefore in fair condition—famine existing only on account of prices of grain, which necessarily ranged throughout the country,—scurvy was known only in cases imported from other districts. In short, the causation of scurvy in the Madras famine formed no exception to that found under other circumstances by hosts of observers on sea or land.

Much confusion as to the subject of starvation would be saved if the following simple plan were adhered to—namely, of regarding the term "simple starvation," divisible into an acute and chronic form, as applicable to those cases in which, from the symptoms displayed, there is no reason to believe that no constituent of human diet has been absent more than another, and of regarding the term "specific starvation" as applicable to those cases in which there is reason to believe healthy nutrition has been impaired as a result of absence of certain necessary constituents. Under such a classification scurvy would appear as a form of "specific starvation."

With regard to the experiments advanced by your correspondent to prove "the preventive and remedial effects of molasses in scurvy," I believe they simply demonstrate that if an addition of saccharine matter be made to a fairly good diet, fattening would be exhibited sooner than in its absence—not a very novel fact! If, however, Surgeon Cullimore really intends it to be understood that, consonant with increased weight, scorbutic symptoms may be expected to disappear, I can assure him this is far from being the case, and in this observation I by no means stand alone. I have seen wretchedly weak famine-stricken prisoners become decidedly fat and apparently well nourished after admission; yet, if these men's mouths were examined, the usual signs of scurvy were frequently found. Indeed, many of these "sleek" men ultimately fell victims to chest affections, dysentery, and gangrenous ulcers of scorbutic origin. In fact, my experience would lead me to infer that scurvy superadded to chronic starvation is a most intractable disease, and that increase of weight to even a large extent by no means justifies the supposition that the scorbutic taint is got rid of.

If the alleged antiscorbutic properties of molasses are derived from "partial acetous fermentation," why resort to a famine patient's stomach as a laboratory for its production! Would not such a process represent a mal-assimilation of saccharine matter? Would not such an occurrence precipitate intestinal affections in a patient so strongly predisposed as a famine subject? Finally, would Surgeon Cullimore guarantee to keep himself free from scurvy upon a diet of rice and dholl, with an unlimited allowance of jaggary? Until an experiment of the description is employed, I see little reason for believing that saccharine bodies are to be credited with any power beyond that of fat and heat formers. Performing such functions, it is possible, indirectly, that they may modify and ameliorate the effects of scurvy. But, as fatty bodies are ten and a half times more powerful in this respect, might not they be as usefully employed? If given as a cure for scurvy in a case *not complicated with simple starvation*, and remedial effects were ascertained, your correspondent might then, I think, with more confidence give jaggary the reputation of yielding "preventive and remedial effects in scurvy."

Your obedient servant,

Feb. 1880. A MADRAS FAMINE-WALLAH.

THE RADCLIFFE TRAVELLING FELLOWSHIP.

IN reference to our announcement last week that the decision of the examiners for the Radcliffe Travelling Fellowship in the University of Oxford had still to be confirmed by the electors, Mr. Wansbrough Jones writes to us saying that this is incorrect. The electors had ratified the examiners' decision before the result was announced.

T. N. D.—The questions have no medical bearing. We cannot deal with them.

OBSTETRIC ETHICS AND SYPHILIS.

To the Editor of THE LANCET.

SIR,—I should be glad if you will kindly express your opinion with regard to A.'s conduct in the following case:—

Mr. A. had been treating Mrs. B. for syphilis during two months previous and up to the time of her confinement. Mr. A. wrote to her husband, who did not reside with her, stating that on account of the malady she was suffering from he absolutely declined to attend her when in labour. The husband replied to say that he would find another doctor for the confinement. About a month ago Mrs. B.'s sister called upon me, and engaged me to attend Mrs. B. in her confinement, not mentioning anything with regard to her illness, or informing me that another medical man was attending her. The labour was natural, and in two days after I was informed that Mr. A. had been Mrs. B.'s doctor since she came to live in this neighbourhood, and that he would now go on with the case. Mr. A., with whom I am personally acquainted, was informed of my engagement two days previous to labour setting in, but he did not communicate with me. Now that the confinement is over, and also all risk of contagion, Mr. A. has resumed his attendance upon Mrs. B. I enclose my card. I am, Sir, yours &c.,

March 8th, 1880. C.

*** We cannot admire the part played in the above case by either Mr. A. or the patient and her friends. A. might have forewarned C., or, at the very least, have explained to the husband of the patient the duty of stating to C. the nature of the circumstances, and the dismissal which awaited him after the accouchement.—ED. L.

THE TREATMENT OF SEA-SICKNESS.

To the Editor of THE LANCET.

SIR,—As every contribution towards the treatment of *mal de mer* is generally welcomed, I beg to state the result of two years' experience, for the most part in the tropics. The best remedy I have found is a combination of small doses of bromide of potassium and hydrate of chloral taken with the citrate of magnesia during effervescence. Spirits of sulphuric ether may be added sometimes if there be much prostration. I may say that this remedy has only failed me in one case.

I am, Sir, yours &c.,

FREDERIC W. CORY,
Late Surgeon, Eastern and Australian Mail S. Co.

Buckhurst-hill, March 9th, 1880.

MEDICAL BENEVOLENT COLLEGE. — APPLICATION: MAY ELECTION.

To the Governors of the Royal Medical Benevolent College, Epsom.

HAMILTON GEORGE, AGED THIRTEEN YEARS,

Fourth son of the late George Smith Delavil Harris, L.R.C.P., who was in practice for many years at Leighton Buzzard, Beds, and died in September last, after a very sudden illness, brought on by overwork and anxiety, at the age of fifty, leaving a widow and ten children, seven of whom are very young, and entirely dependent upon her, and she is not in a position to educate them, being totally unprovided for through his sudden loss. The boy's age precludes him from more than two elections, so that your assistance is most anxiously asked for.

The case is strongly recommended by Prescott Hewett, Esq., F.R.S.; John Simon, Esq., F.R.S.; Lady Duncombe; Mrs. Arthur Flowers; Miss Cavendish; A. Macnamara, Esq.; Leopold de Rothschild; &c. &c.

*** We can strongly recommend this case as deserving the support of the Governors.—ED. L.

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TYPHUS IN ST. PETERSBURG.

"PURPURIC" typhus is reported to have appeared in St. Petersburg. On the 22nd February a woman attacked with this disease was admitted into the clinic of Baron Villiers, under the care of Professor Botkine, and quickly succumbed. Shortly afterwards the children of the defunct, aged respectively twelve, nine, and three years, were admitted with the same illness. The disease next spread in the children's wards, where it was dominant at the time of the latest news. It is added that the symptoms at first differ little from measles, with which disease it may easily be confounded.

A Country Practitioner.—We must refer our correspondent to our advertising columns, or to an agent.

THE FLESH OF DISEASED ANIMALS AS FOOD.

To the Editor of THE LANCET.

SIR,—Let me ask you a question. You probably know that a very large number of animals nowadays, bullocks, sheep, and pigs, are found when killed to have unsound lungs or liver. In fact, I have been assured by butchers that it is quite the exception for them to kill an animal perfectly sound in lungs and liver. Sheep are this year largely affected by liver disease, and pigs are as largely affected by lung disease. What I would ask is: Do you suppose that mutton and pork from sheep and pigs so affected are injurious as food? Suppose that to all *appearance* the meat is good when the animal is cut up, do you suppose that the local disease (in lungs or liver) has rendered the meat unfit for food?

March 13th, 1880. Yours sincerely, FARMER.

Private R.V.—To prevent blisters, it is of the utmost importance to have a well-fitting boot, and to march in worsted socks. We can speak from personal experience of the value of soapin- the socks. When the feet are tender, but the skin unbroken, sponging them with spirits in many cases does good.

CROTON LINIMENT FOR "FITS."

To the Editor of THE LANCET.

SIR,—A correspondent writes to you on Croton Liniment for Fits, and at the end of the letter wishes to know how to avoid the precipitate caused by adding liq. ferr. dialysat. to a mixture. If he makes the mixture up with "distilled water," he will find it clear.—Yours truly,

March, 1880. N.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Gowers, London; Mr. T. Smith; Mr. H. C. Lucas, London; Dr. H. Thompson; London; Dr. Squire, London; Mr. Winter, Wolverhampton; Mr. Joll, St. Ives; Mr. Thompson, Omagh; Mr. Richardson, Leamington; Mr. F. J. Gant, London; Dr. Bakewell, Rees, New Zealand; Mr. Turner; Professor J. Clay, Birmingham; Dr. Savage, Birmingham; Mr. L. Tait, Birmingham; Mr. A. Perkins, Exeter; Mr. Oliver, Manchester; Mr. Leaver, Stratford-upon-Avon; Mr. Jackson, Wolverhampton; Dr. Wheeler, London; Mr. J. Archer, Birmingham; Mr. Macaskie, Bamburgh; Mr. Clapperton, London; Mr. Tuohy, Agra; Dr. O'Neill, Shalpar; Mr. Jennings; Mr. Burroughs; Mr. Macleod, Edinburgh; Messrs. Douglas and Mason, Edinburgh; Mr. Hodgson, St. Helens; Messrs. Mayer and Meltzer, London; Commander Cheyne; Messrs. Murray and Co., Liverpool; Mr. Mears, Newcastle-on-Tyne; Mr. Forbes, Glasgow; Mr. Masterman, Ixworth; Mr. May, London; Dr. Haddon, Horncastle; Mr. Godson, Birmingham; Mr. J. Watt, Balla Hissar; Surgeon-Major Morrice; Dr. King, Fredonia, Ohio; Mr. Frank, Darlington; Mr. Marsden, London; Dr. Foster, Hitchin; Dr. Nedwill, New Zealand; Mr. Murray, Liverpool; Mr. G. F. Green, Alderton; Mr. Ashton, Gayton; Dr. Lush, Salisbury; Dr. Burrows, San Francisco; Mr. R. T. Cæsar, Shirley; Mr. G. Meadows, Hastings; Dr. Thin, London; Mr. G. Fleming, London; Mr. Hodgson, Brighton; Mr. Crowell, Tottenham; Mr. Whitefoord, London; Mr. Birchall, Liverpool; Dr. Page, Newcastle-on-Tyne; Mr. Kemp, London; Mr. Austin, London; Surgeon D. H. Callimore; The Secretary of the Statistical Society; X.; W. F.; The Military Secretary, India Office; Non-professional; N.; A Country Practitioner; B. F. W.; M.R.C.S.; A. B. S., Eastbourne; Alpha, Birmingham; M.D., London; L.R.C.P., Stoke Newington; H. M.; W. C.; Traveller; P. J. L., Manchester; M.R.C.S., Paris; Observer; W. G. G., Liverpool; I. M. D.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Toyne, Sheffield; Mrs. Martin, Cork; Mr. Boys, Bristol; Mr. Carter, London; Mr. Foster, Jamaica; Mr. Wheeler, Manchester; Mrs. Hymes, Frome; Mrs. Atkinson, Blackpool; Dr. Goodson, Stratford; Messrs. Clowes and Nash, Norwich; Mr. Crackle, Nottingham; Mr. Jeffreys, Chesterfield; Mr. Fernby, Snaith; Mr. Nicholson, Worsbro' Dale; Mr. Farrar, Bradford; Mr. Edwards, Faversham; Mr. Sutherland, Glasgow; Mr. Dunman, Hastings; Mr. Weddell, Dartford; Dr. Lush, Fyfield; Messrs. Isaacs and Co., London; Dr. Stewart, Nottingham; Mr. Claremont, Sheffield; J. M. G.; J. F. D., Mickleton; Delta, Dublin; Surgeon, Newcross; Doctor, Bayswater; Deltoid; M.B., Bath; Dispenser, Old Brompton; X. O., Holborn; C., Newcross; Warden; Medicus, Barking; Surgeon, Camberwell; B. A. K.; Box, Bradford; D. A. H., Newcross; Theta, Herperhey; A. V., Smithfield, W. F. J.; X. Y. Z.; Medicus, Sheffield; D. W., Ripon; Dr. E. S.; &c.

York Herald, Leeds Mercury, Weekly Express, Bombay Gazette, Bristol Mercury, Liverpool Daily Post, Cambridge Chronicle, Mansfield Advertiser, Herald and Weekly Free Press, Church of England Temperance Chronicle, Students' Journal, Richmond and Twickenham Times, Surrey Advertiser, Kensington and Hammersmith Reporter, &c. &c., have been received.

Medical Diary for the ensuing Week.

Monday, March 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. F. de Havilland Hall, "On a Case of combined Renal and Hepatic Colic."—Mr. Samuel Benson, "On a Case of Genu Valgum Cured by Mechanical Means."—Dr. C. R. Drysdale, "On Cerebro-spinal Syphilis."

Tuesday, March 23.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. V. Ball, "On Nicobarese Ideographs."—Mr. Alfred Taylor, "On a New Method of expressing Degree of Changes of Specific Form in the Organic World, especially referring to the Development of the Mind and Body of Man" (Illustrated by numerous Diagrams).
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. Pavy, "On the Estimation of Uric Acid by its reducing Action upon the Ammoniated Cupric Test."—Sir Henry Thompson will exhibit and demonstrate the "Nietze-Leiter" Endoscope on the living subject.

Wednesday, March 24.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
HUNTERIAN SOCIETY.—8 P.M. Mr. Warren Tay, "On Sterno-mastoid Tumours."—Dr. Little, "On a rare form of Wry-neck and certain Pathological Changes of the Face resulting from the Deformity."

Thursday, March 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, March 26.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, March 27.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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THE

Gulstonian Lectures

ON

EPILEPSY.

Delivered before the Royal College of Physicians,

BY W. R. GOWERS, M.D., F.R.C.P.,

SENIOR ASSISTANT-PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

LECTURE III.—PART I.

MR. PRESIDENT AND GENTLEMEN, — The aid which, during the last twenty years, the microscope has afforded in the investigation of the morbid anatomy of diseases of the nervous system has thrown little if any light on the pathology of idiopathic epilepsy. Neither the observations of Schrœder van der Kolk on the size of the vessels of the medulla oblongata, nor the changes which have been described by Meynert in the cornu Ammonis, can, I think, be accepted as having any real significance. In the cases I have had an opportunity of examining, the cornu Ammonis has presented no pathological change; while in two cases in which I have met with disease of this structure the patients had never suffered from convulsion. In considering, therefore, the pathology of epilepsy, we must seek for other evidence than that afforded by the pathological anatomy of the idiopathic disease, and draw our inferences from the morbid changes in organic disease attended by convulsion, and from the facts furnished by experiment and by the clinical study of the disease.

It may, in the first place, be assumed as not needing proof that the muscular spasm which constitutes the most conspicuous feature of the attack is due to the sudden violent action of nerve-cells—i. e., to the "discharge" of grey matter; and that the sensations which the patient experiences before losing consciousness are due, directly or indirectly, to the same cause—to the commencement of the discharge. To prevent misconception, I may say that the word "discharge" is used in the sense in which it has been employed by Dr. Hughlings Jackson and others, as a short expression for the sudden liberation of nerve-force, without any theory as to the form of physical or vital force thus liberated.

Premising this, the subject of the pathology of epilepsy resolves itself, in the main, into four questions, What is the seat of the discharge which thus produces the symptoms of the fit? Is the seat of the discharge the seat of the disease? How far does such discharge explain all the symptoms of the attacks? What is the nature of the morbid change which causes the discharge? Perhaps to no one of these questions can a conclusive answer be given. Nevertheless, these are facts which indicate the direction in which an answer is to be sought, and, what is equally important, the direction in which we must not seek it too exclusively.

What is the seat of the primary discharge? What grey matter is it which thus suddenly stimulates the nerve fibres and the muscles? It is hardly necessary to remark that the spinal cord acts only as a conductor, and that the over-acting grey matter is to be sought for above it, within the skull. Regarding the encephalic masses, we have two classes of facts. First, that there exist in the medulla oblongata, adjacent to the centres which regulate the respiratory movements and the state of the vessels, structures capable of giving rise by their action to general convulsions, the "convulsive centre" of Nothnagel. On the other hand, of all regional diseases of the brain, lesions of the convolutions stand incomparably first as a cause of convulsions, and experiment also demonstrates that irritation of the cortex, in the motor region, has the same effect. The teaching of experiment, then, is that both the cortex and the medulla may originate convulsions. The teaching of pathology is, as Dr. Wilks long ago insisted, that epileptiform convulsions have, in most cases, their origin at the surface of the brain. It may be doubted, however, whether the pathological facts alone, or in conjunction with experiment, quite warrant the conclusion that epilepsy is a disease of the convolutions. Burdon-Sanderson's researches make it probable that the convulsions which occur when the surface is irritated may depend on the discharge of motor centres more deeply seated, though connected with, and excitable from, the surface regions. So far as pathology and experiment go, these deeper structures, at the level of the corpus striatum, or perhaps lower still, may be the parts which discharge in epilepsy. The fact that lesions in certain regions of the convolutions cause convulsions beginning in certain parts, as the arm or the leg, is not incompatible with this view, since discharges beginning in the lower centres may have quite the same definite forms as when they are excited from the surface. Physiological considerations make it probable that the arrangement of represented movements in the lower centres is on the same plan as in the higher. Nor does the affection of consciousness afford valid ground for the assumption that epilepsy is a disease of the cortex, since those who believe that the discharge originates in the medulla find an explanation of the loss of consciousness by assuming an extension of the discharge to the vaso-motor centre, causing arterial spasm throughout the brain. Even if we admit for a moment that there is no proof of arterial spasm, and that the over-action of motor grey matter is the only certain element in the convulsion, such over-action may disturb the centres above as well as the centres below, and, as Dr. Robertson of Glasgow has suggested, the loss of consciousness may be the effect of an upward discharge, just as the muscular spasm is the effect of the downward discharge. Thus, neither pathology nor experiment enables us to exclude the lower encephalic centres as the seat of the primary discharge in epilepsy; and in the light of all known pathological and experimental facts, the latest writer of a systematic account of the disease, Nothnagel, can see no reason to modify the conclusion that the primary seat of the discharge—the seat of the disease—is the convulsive centre in the medulla oblongata.

Pathology and experiment, then, fail to take us farther towards a definite conclusion, but from clinical observation we may gain other important information. At this point the study of the modes of onset of convulsions becomes of the highest value. The commencement in the limbs helps us but little, because, as I have said, movements in the lower centres are probably differentiated, if not as much, yet on the same plan as in the convolutions. But it is different with the auræ referred to the special senses, or consisting in mental processes. We have seen that, of all the fits which begin so deliberately as to allow the patients to be conscious of the onset, a special-sense warning is present in a fifth—that is, the discharge, as far as we can ascertain, commences in a special-sense centre. But these centres are certainly situated within the hemispheres, above the pons, and far above the "convulsive centre." Hence the conclusion seems inevitable that the discharge in such cases originates in the hemispheres. It is equally clear that an attack which begins with an intellectual aura, an idea, cannot commence with a discharge in the medulla oblongata. Such an attack we can only conceive as commencing in the highest of all the cerebral centres, that which constitutes, to use the phrase made current by Spencer and Jackson, the anatomical substratum of intellectual processes.

We may therefore conclude that the teaching of pathology, if inconclusive alone, is right in its indications, and that in at least a large number of epileptic attacks, the process of the fit commences in the cerebral hemispheres, and that in many it commences in high centres. If this is true the question arises, Are we not justified in regarding all fits as due to changes in the hemispheres? Are there any facts to indicate that the lower centres of the pons and medulla are ever the primary seat of the discharge in idiopathic epilepsy?

It is certain that convulsions may arise from these lower centres, since they may still be produced in animals after the removal of the cerebral hemispheres. Moreover, in man, convulsions are caused, in rare cases, by diseases of the pons and medulla. But the clinical facts to suggest that they ever commence in this situation in idiopathic epilepsy are, it must be confessed, scanty. Does the study of modes of onset help us in this particular? There is one group of auræ which may be regarded as supporting the view that the fits which they initiate take origin in the medulla. I refer to those which I have grouped as the pneumogastric auræ, consisting in epigastric sensations rising to the throat, choking, dyspnœa, palpitation. We know that the pneumo-

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gastric nucleus and respiratory centres are in close proximity to, and connexion with, the convulsive centre, and it is readily conceivable that a commencing discharge in this situation may lead to disturbance of the respiratory and pneumogastric centres before it causes general convulsions. But on this point other facts must be taken into consideration. The phenomena of conscious sensation make it certain that the whole body is represented in the cerebral hemispheres. It is conceivable that when a discharge originates in certain parts of the hemispheres, the central structures connected with the vagus, or representing the respiratory processes, may be the seat of the first discharge, or may, at least, be the most sensitive to the commencing disturbance, and be the channel through which the consciousness is first impressed. We must remember, as we saw in the first lecture, and as Dr. Hughlings Jackson has pointed out, that these central representatives of the vagus are the most readily disturbed in emotion, such as fear. Thus the early affection of these centres, which we have just considered to be possible in a discharge originating in the medulla, is equally possible in a discharge originating higher up. Much weight cannot, therefore, be placed on the pneumogastric aura, as evidence that the discharge originates in the medulla. This conclusion is supported by cases which show that this aura is sometimes felt in attacks which certainly commence in the hemispheres. As was stated in the last lecture, this pneumogastric aura may be associated with special-sense warnings even of high elaboration, and an instance of this is the case which I related at length.

We are probably not justified in concluding that attacks never arise in the medulla. The extremely varied character of auræ, referred as they are to every part of the organism, shows that the discharge may commence in any part of a very wide region, perhaps the whole of the brain in which sensori-motor processes are represented. The cases are, however, very few which afford any clinical evidence that the discharge commences in the medulla. It is possible that, in cases of reflex convulsions, the process occurs in this situation. Almost the only example of idiopathic epilepsy which has come under my notice, in which the symptoms suggested that the discharge originated in the medulla, was a patient of my colleague, Dr. Ramskill, who kindly permits me to mention the case. A lad, fourteen years of age, had been subject to epileptic attacks for two years, when he gradually lost all power in his arms and legs, and even his neck was weak. In this condition passive movements of the trunk, slight flexion of the spine, invariably caused a severe epileptic fit, attended by loss of consciousness. Under treatment, especially ice to the neck, he steadily improved, and passive movement would no longer cause a fit, but for a long time slight attacks occurred whenever, after being still, he exerted himself. Although there was no epileptogenic zone, the attacks remind us of Brown-Séquard's epileptic guinea-pigs, in which the convulsions certainly did not originate above the pons.

The conclusion, then, is that the convulsions in idiopathic epilepsy may, as Dr. Hughlings Jackson has urged, be due to the discharge of any of the grey matter of the encephalon, which subserves sensori-motor processes. This brings us, however, to the second question, Is the seat of the primary discharge the seat of the disease? If, by such discharge, all the symptoms can be accounted for, we have no *need* to go further, and the theory that any other pathological process underlies the phenomena must rest upon its independent evidence. To learn, therefore, whether the seat of the discharge can be regarded as the seat of the disease, we must consider, first, whether there are any symptoms for which the discharge of grey matter, which causes the aura and the convulsion, cannot account; and, secondly, whether there is direct evidence of any other pathological process.

It has been supposed that the motor discharge, especially if it occur in a low centre, will not account for the loss of consciousness. We may doubt whether this assumption is justifiable with regard to any part of the brain, even to the medulla oblongata. Any small lesion of the brain, in almost any part, will cause transient loss of consciousness. All parts of the brain are intimately connected; the whole must be sensitive to a change in any one part. The maintenance of consciousness is its highest function, the first to be interfered with by any disturbance, such as results from a discharge. If the discharge originates in some cases in the lower centres, its upward effect may, as already suggested, cause a disturbance in the highest centres with which consciousness is incompatible. For the attacks characterised by loss of consciousness only, the theory held by Dr. Hughlings Jackson, that they consist in a discharge in or affecting the highest centres only, seems an adequate explanation, and is rendered probable by the fact that such attacks are often attended by sensations of a highly specialised character. In the case of the lower centres, it seems possible that a *slight* discharge in some situations may affect the centres above, and not the centres below—may impair consciousness, and not cause convulsion.

Thus it seems unnecessary, for the explanation of loss of consciousness, to assume the occurrence of any other pathological process than the discharge which causes the convulsive phenomena. As far as I am aware, the only other symptom which may be held to indicate that there is more than this discharge is the pallor of face which is sometimes conspicuous. But the peripheral vaso-motor nerves are known to be influenced, in a very ready way, by the stimulation of other nerve-structures. That pallor of face may *result* from cerebral action is proved by the effect of emotion, whatever be the mechanism by which that effect is produced. An injury to the brain of a frog will cause the arteries even of the foot to contract. Hence it is readily intelligible, and even probable, that pallor of face may be an *effect* of the discharge which causes the convulsion.

If then it is unnecessary, in order to explain all the symptoms of attacks of epilepsy, to go beyond the discharge of which we have certain evidence, we must ask what direct evidence there is of the occurrence of any other morbid process. According to current theory, another element plays an important part in producing the phenomena of attacks—vaso-motor spasm. It has been held that the discharge itself, though originating in the hemispheres, is due to vaso-motor spasm affecting particular arteries, and exciting the action by causing local cerebral anæmia. This view, which regards epilepsy as simply a disease of the vaso-motor centre in the medulla, is now held by few. It is unnecessary to discuss it separately, since the evidence on which it rests will be considered in speaking of the second view, much more widely held, that although the convulsion depends on the discharge of motor centres, the loss of consciousness is due to arterial spasm. A third theory of vaso-motor influence is that put forward by Dr Hughlings Jackson, that the local discharge in the brain excites, at the spot, arterial contraction, and that this determines the *spread* of the discharge.

What, then, is the direct evidence that vaso-motor spasm in the brain causes loss of consciousness, or any of the symptoms of the attacks? The evidence may be put, if somewhat baldly, yet I think accurately, thus:—Epileptic attacks are accompanied, at the onset, by pallor of face. Pallor—that is, anæmia—of face is evidence of anæmia of brain. Anæmia of brain will cause loss of consciousness and general convulsions. Therefore, loss of consciousness in epilepsy is due to anæmia of brain, the result of vaso-motor spasm; and, some would add, the convulsions themselves are due to the same cause.

The gaps between several of the steps of this reasoning will doubtless seem to many of you, as they do to me, considerable. But the first two statements are themselves of doubtful truth. I pointed out in the last lecture that epileptic attacks are often accompanied by no pallor of face, and this is true most conspicuously of many attacks of *petit mal*. I am convinced of this from my own observation, and I think I may quote in support of this the statement of Dr. Radcliffe, that the initial pallor is "often difficult to catch." Further, the assumption that pallor—i. e., vaso-motor spasm—of the face is necessary evidence of vaso-motor spasm in the brain seems scarcely justifiable. Surface vessels have no necessary correspondence in their condition with those of deeper structures. We do not infer that the brain is congested whenever the face blushes, and why should we assume that the brain becomes anæmic whenever the face becomes pale? We have seen that it is conceivable, and even probable, that the discharge in the brain may cause a reflex contraction of the peripheral vessels. In cases in which the pallor of face is apparently the result of cardiac failure, it is probable that this is the effect of the commencing discharge, and not its cause. Convulsion is not part of the ordinary phenomena of cardiac syncope. On the other hand, as the discharge often impresses the consciousness first through the pneumogastric centres, it is probable that it may in such cases influence the periphery first by the same channel. That such cardiac failure is not the *ordinary* cause of loss of consciousness in epilepsy a very small amount

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of clinical observation will demonstrate, since such loss of consciousness may occur without either failure of the pulse or pallor of the face.

Thus between the fact that profound anæmia of the brain and medulla oblongata will cause both loss of consciousness and convulsion, and the theory that these are commonly so caused in epilepsy, there is a gulf over which no bridge has yet been placed. No connecting facts have been adduced which are not susceptible of other and better explanations. It is a gulf, moreover, which is widened by every addition to our knowledge of the clinical history of the disease.

One vaso-motor theory remains for discussion—that which assumes that a local discharge on the brain excites, at the spot, reflex vaso-motor spasm, and that this determines the spread of the discharge. This theory, I would venture to suggest, is scarcely warranted by known facts, or needed to explain them. It is unneeded, because the anatomical relations of known centres already afford us the means of explaining many facts in the progress of auræ, and justify us in the belief that the explanation of the others, still mysterious, will be found in the relations of the unknown centres, and especially, as stated in the last lecture, of those which subserve sensation. The theory seems scarcely warranted, because in all organs, as far as we know, functional activity causes reflex dilatation, not contraction, of their vessels; and the experiments of Ferrier have proved that this is as true in the brain as elsewhere.

One other point on the current theory of epilepsy may be briefly noticed—that which refers the final clonic spasm to a cause different from that which excites the initial tonic spasm. The clonic spasm is ascribed to the irritation of the medulla by the venous blood. It was, however, pointed out in the first lecture that there is no abrupt transition from the one form of spasm to the other. The clonic spasm is developed by interruptions in the tonic spasm, and as the fit ceases the muscular contractions do not become slighter, but less frequent. The clonic stage certainly corresponds to the cyanosis which results from interference with respiration, but if we recognise the continuity of the tonic and clonic spasm, we can hardly attribute the two to totally different causes. Observation of fits suggests, I think, that the venous congestion does produce the clonic spasm, not, however, by direct excitation, but by interrupting and ultimately arresting the spasm which before existed. I think that the fixation of the chest in an epileptic fit simply does in an intense manner that which we do in a slighter manner when we arrest an hysterical convulsion by closing the mouth and nose. There is nothing inconsistent in a certain degree of anoxæmia arresting spasm, and a more profound degree, as in actual asphyxia, exciting it. Analogous difference is seen in the action of many stimuli. The view that the tonic spasm is only clonic spasm compressed, that the clonic spasm is only the tonic spasm spread out, is supported by the fact that in attacks which begin slowly, the slight initial spasm is almost always clonic, and as the discharge spreads and becomes more intense, the spasm becomes tonic. In partial epileptiform seizures the spasm is usually clonic throughout.

The conclusion, then, is that all the phenomena of the fits of idiopathic epilepsy may be explained by the discharge of grey matter; that the hypothesis of vascular spasm is as unneeded as it is unproved; that there are no facts to warrant us in seeking the seat of the disease elsewhere than in the grey matter in which the discharge commences; that this is in most cases within the cerebral hemispheres, although possibly in some instances lower down in the medulla oblongata; that epilepsy is thus a disease of grey matter, and has not any uniform seat. It is a disease of tissue, not of structure.

UNIVERSITY OF OXFORD: FACULTY OF MEDICINE.—Candidates for the several examinations in medicine are informed that in conformity with the statute passed on Dec. 17th, 1879, examinations for the first (or scientific), and for the second (or practical, part) and for the certificate in State Medicine and Public Health, will be holden during Trinity Term next—i.e., at an early date subsequent to May 15th. Notice will be given in Easter Term stating the days and hours of each examination. Intending candidates are requested to forward to the Regius Professor of Medicine, "Medical Department, Museum," their names, addresses, standing, and the date of passing their final examination in Arts.

Clinical Lecture
ON A
CASE OF ULCERATIVE ENDOCARDITIS WITH EMBOLISM OF THE BRAIN.

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(Concluded from p. 438.)

LET us concede that mycosis endocardii may perchance be present universally—not indeed in every instance of ulcerative endocarditis, but in every instance of the infective class as before defined. Another question remains to be asked. May we not learn a lesson from mycosis endocardii in the pathology of pyæmia? May we not see our way more clearly to the solution of the great problem, how to account for those secondary changes which, seated in front of the heart within the domain of the systemic arteries, are yet derived from sources of origin behind the heart, in the path of the venous circulation? Some instances of ulcerative endocarditis are themselves derived from this origin—in a word, they are examples of true pyæmia. In such cases there is no mystery at all. Starting from the point of invasion at the periphery, and then marching severally in single file, either alone or in company with molecules of clot, microzymes might indeed pass the barrier of the lungs; but if they were to continue on their way severally, or even in groups of a few cohering corpuscles, they would never at once block an artery or even an arteriole, whatever mischief they might do to the capillaries. On the other hand, let us suppose that the heart is their halting-place, and that here they rest for awhile and reinforce their numbers; they may then start anew, and, along with materials gathered from the heart itself, may advance in masses amply competent to stop the highway in the arteries and set up embolism there. As a rule, however, in pyæmia there is no ulcerative endocarditis, and therefore no mycosis endocardii, as the term is usually understood. Nevertheless, there may be analogous agencies at work, practically if not literally amounting to mycosis. The living organisms, and even the non-living portions of the blood-poison, when they arrive at the heart, may be free to enter into new arrangements there under new conditions. In lieu of the even onward flow of the venous circulation we have now to deal with eddying streams or stagnating pools. In these the septic elements may come into collision one with another; they may coalesce and cohere; they may react physically or chemically upon the normal constituents of the blood, so as to develop masses where before there were molecules only. With the right side of the heart we have no concern: moreover, it is easy enough without these agencies to account for the products of pyæmia in the lungs. The left heart is all-important, and here the blood is aerated, another circumstance which may have some bearing on the result. All this may appear to be wild and fanciful in detailed description, but if the secondary changes beyond the heart in pyæmia are really owing to embolism of the systemic arteries, there is much to be said for the main idea. Surely in this case the material for impaction must be elaborated in the heart, or its elaboration must begin there. If, on the other hand, the secondary changes are not owing to the cause assigned, we can only refer them in the last resort to simple thrombosis at the seat of change, or, better still, to embolism of the capillaries properly so-called. Limited to those capillaries in the beginning, the block will extend slowly backwards by overgrowth of accessory thrombi, or small superadded plugs, until the entire mass of sequestered tissue assumes the site and the proportions of a true arterial infarct. Let the pathologists of the future determine all these questions—at present they are involved in the deepest darkness.

It is otherwise, I rejoice to say, in the clinical discrimination of ulcerative endocarditis, which becomes, for the most part, clear as daylight when the teaching of a single case points the way to the diagnosis of another. You have only to do your bounden duty, and, as a matter of course, to examine the heart of every human being that comes under

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your care, and it is well-nigh impossible to make a mistake. Such examination, however, is absolutely essential, for this reason. Vegetations may be growing in rank luxuriance over the valves, and yet, strange to say, there may be no præcordial distress, no local *symptom* of any sort to awaken the suspicion of mischief at the heart. Put your trust, then, in the physical signs, and, in association with the general symptoms, they will proclaim the presence of the disease with no uncertain sound. They may not, indeed, tell the whole truth at once; but wait awhile, and after one or two examinations the question will be set at rest all but indisputably. The physical signs are evermore changing from day to day in correspondence with increasing changes in the form, site, and volume of the vegetations. The systemic phenomena are severe pyrexia, and, if infection be in the ascendant, then, in full force, all the symptoms of septicæmia.

I have said that the fever of ulcerative endocarditis is often in some respects peculiar and *sui generis*. I am warranted in so saying on the assurance of two of my three last cases. In one the temperature was never noted as exceeding 102·4°, whereas the pulse ran high throughout, and in the end inordinately high. In another, that of the girl H. C——, whom you must all remember, on a few occasions the pulse marked 150; many times it ranged between 130 and 140, and never once declined below 100 from admission to death — a period amounting to three months. The thermometer, on the other hand, never showed a higher reading than 103·8°, the minimum being 97·4°, the pulse at the same time registering 138. Surely this is a strange disproportion, and one that may possibly shed some light upon the diagnosis of the disease. Both the foregoing cases were of long duration, and in both the determining cause of death was hyperæmia and œdema of the lungs, exactly as might have happened at any moment to anyone suffering from heart disease without the aid of a blood-poison to accelerate the issue. The case of M. T—— differed widely from its predecessors. She died within a fortnight, and in her the blood-poison reached a high pitch of intensity. Moreover, in her there was no disproportion of the kind above-mentioned, or, if it existed at all, the ratio was reversed, and the temperature transcended the pulse-rate. Perhaps the hyperpyrexia, which closed the scene, may be reasonably referred to acute brain-softening, with meningitis, the consequence of that softening, and not to simple septicæmia. Be that as it may, it is the hyperpyrexia characteristic of severe shock or injury to the nervous system at its climax, and finds its nearest and best parallel in cerebral rheumatism, and occasionally in tetanus and lesions of the spinal cord. In M. T——, however, the temperature, though fitful and oscillating as in pyæmia, still maintained a high general average all along, and often reached or passed the uttermost limits of pyrexia proper, even before the occurrence of embolism in the Sylvian artery. Are we, then, at liberty to say that in the milder forms of ulcerative endocarditis the pulse-rate is ruled by the bulk and burden of the vegetations, provoking the heart to excessive action, but not materially exalting the fever-heat; while in cases that are truly and thoroughly infective the blood-poison is the overruling power that governs the course of events, and gives full expression to the fever in all its phases?

Other symptoms there are or there may be to which I should accord a high value and a strong significance. First, let me mention a marked apathy in the patient, an utter indifference to everything and everybody around him, sometimes alternating with delirium. Whenever I have found a murmur or a medley of murmurs at the præcordia, I have learnt to look upon delirium in the light of a symptom suggesting embolism of the extreme arterioles of the brain, chiefly in the cortical system of the convexity. M. T—— exhibited unconcern and indifference enough, apparently owing to sheer helplessness and abolition of all mental power. Usually I have seen it in the guise of reverie and dreamy abstraction. Such demeanour was not to be expected in M. T——. In her the Sylvian artery was plugged at the main, there was extensive softening of the central ganglia and their environs, and there was meningitis. In the girl H. C—— dreaminess was a conspicuous feature, and in her brain we found a minute focus of yellow softening near one of the parietal convolutions.

Another special symptom, and a most inauspicious one when it occurs, is an eruption of spots resembling petechiæ, and evidently originating in capillary embolism. As for embolism on the large scale, endangering life or limb, even when its presence is fully ascertained, I exclude it from the reckoning altogether, and for a good reason. I wish you to understand the case with all possible speed before such embolism arrives, and not to await its arrival.

Last, but not least, in the catalogue of special symptoms is profuse drenching perspiration, second only, if it be second, to that of ague, and far beyond the average mark and measure of phthisis or abscess. In all my recent cases of ulcerative endocarditis I have invariably met with this superabundant sweating, so that, in my mind, it is now fairly enrolled among the leading indicia that would guide me on the way to a right diagnosis. I dare not, indeed, affirm that sweating is universally present. In an old and ill-recorded case of my own there is no mention made of it in the notes.

Finally, I have to comment upon the insensibility of the entire left side, associated with left hemiplegia, as a result of the embolus in the opposite side of the brain. Hemianæsthesia, intense in degree and bounded with geometrical precision by the median line of the body, is far from uncommon as a symptom of hysteria, if we may accept the averments of the French authorities. Briquet and Charcot assure us that hemianæsthesia, perfect in all its points, occurs in 93 out of every 100 cases—that is to say, in upwards of 23 per cent. of all hysterical women. I can hardly imagine it to be so common in England; indeed, I am sure it is not; but then we are far behind the French in all the mysteries and marvels of hysteria. In the vast majority of instances you will be at no loss to discern the underlying neurosis, which will ordinarily be certain to betray itself by one or more of its familiar features, although you would do well to remember that M. Charcot has met with mixed cases truly cerebral and truly hysterical at once. Nay more, he has encountered a few cases of purely cerebral origin presenting all or nearly all the characters of hysterical anæsthesia. With reference to the pathology of the cerebral form, M. Charcot, after long wavering between many regions whose morbid changes might possibly determine hemianæsthesia, comes at last to the conclusion that the posterior part of the internal capsule is alone responsible for the result. At any rate, it is the only part which is found to be invariably destroyed or damaged in all cases of predominant and persistent hemianæsthesia where the lesions are circumscribed. Now, the internal capsule lies wholly within the domain of the Sylvian artery, a domain in the present case utterly disorganised by interception of its blood-supply at the fountain head—hence the hemianæsthesia. The hemiplegia needs no commentary. Cases of this kind are not numerous. The reason appears to be that the plug is usually seated at the point of a bifurcation, and not at the origin of the vessel. It is interesting to note how closely the lesions follow the lines of anatomy. The softened structures are all comprised rigorously within the range of the Sylvian artery; the unsoftened portions of the great central ganglia lie more or less beyond that range; their blood comes wholly or partially from other sources—in the corpus striatum from the anterior cerebral artery, in the optic thalamus from the posterior cerebral.

Regional diagnosis of brain disease offers many beautiful problems for solution. Has it any corresponding advantages in practice? It is a sad tale to tell, but I am afraid these advantages have been immensely overrated. For all that, I should be the last person to disparage or discourage it in its proper place, chiefly as a matter of medical science. On general principles, I should say in medicine, as in everything else, let us by all means solve all the problems we can. We never know what fruit our investigations may bear in time to come, however barren and unpromising they may seem to be now. Again, in a few particular instances, localisation may enable us to forecast the future of a case. If, for example, there are grounds for ascribing the symptoms to the medulla or its environment, then beyond a doubt life is most seriously compromised. Darker still are the prospects of recovery when we have reason to believe that an extravasation of blood has forced its way freely into the ventricles of the brain. Finally, if we ever meet with another case of hemiplegia and hemianæsthesia conjoined, and know that it is the result of embolism, the chances are that the embolus must be lodged *in limine* at the very commencement of the Sylvian artery, over and against the points where the basal branches are given off from the main trunk. I need not tell you that a lesion so situated would be imminently perilous to life. I am not aware that there exists in the arterial system around the spot any mechanism competent to save,

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from utter destruction the ganglionic territory within the sphere of the Sylvian artery, however it may fare with the convolutions and the cortex. Not that I should refer the rapidity of the softening process to this cause alone. Large allowance must be made for collateral agencies, for the fever of septicæmia, and for the general depravity of the blood and tissues. Even in our case the constitutional symptoms and the nature of the lesion must be taken into account. The mere site of the mischief in a particular region of the brain is only one item in the reckoning, and in the majority of cases it is only a subordinate item. Lastly, let me ask, will regional diagnosis avail you much in the matter of treatment? I fear not. It availed me nothing, or next to nothing, in my own case. It was there addressed chiefly to the pyrexia and the prostration. What in the world could I do with the embolus? As for the meningitis, I knew nothing of it before death, and, if I had known of its existence during life, no measure of mine would have made the slightest impression upon it.

ON THE TREATMENT OF CANCER OF THE FEMALE GENERATIVE ORGANS BY A NEW METHOD.

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In the following observations I intend to confine myself to the consideration of the treatment of carcinomatous affections of the generative organs, by a new method which I believe to possess great advantages, though as the experience of this particular treatment extends over a period of only twelve months, sufficient time perhaps has not elapsed, in some of the cases, to enable me to state positively that a permanent cure has been effected. It will be obvious, however, on reading the clinical facts here submitted, that if this ultimatum has not been attained, an amount of relief has been secured to the patients which has not been afforded by any other plan of treatment.

The researches of modern pathologists have done much to elucidate the nature of cancer, and have at least reduced to their anatomical elements changes of structure so singular and complicated that they seemed at one time to defy description. To define the histology and morbid anatomy of cancer does not come within the scope of this communication. There are certain facts of cancer which are obvious and indisputable—namely, that it is a definite morbid growth, possessing, among other qualities, rapidity of development, never retrogressive, but having an almost certain tendency to invade, step by step, each surrounding texture, without any distinction, extremely prone to recur on removal by operation or caustic agencies; very liable to attack distant organs, and invariably culminating in a fatal issue. This general description applies notably to cancer of the female generative organs, perhaps the most painful and frequent of all the forms of this disease which affect the human system. The patient's sufferings are aggravated by the knowledge that her disorder is pronounced by the medical adviser to be incurable; she lingers under the double torment of excruciating physical agony and mental depression, and the utmost that can be done by the medical attendant is to afford her the tenderest sympathy while deadening the anguish of the patient by the judicious use of sedative remedies. Divergence of opinion has existed as regards the curability of true cancer, probably ever since medicine has been studied as a science. On the one hand, those who deem cancer to be incurable urge that the infecting character of the disease, its multiple manifestations, its recurrence, and the cachexia which it induces afford incontestable proof of its incurable nature. The advocates of the theory of the curability of the disease deny the absolute fact of primary cancerous infection, and in support of their view quote cases which, after treatment, have not suffered relapse. Opinion, while deserving serious examination, does not carry conviction, but facts plainly and truthfully narrated, and corroborated by independent testimony, will always be received by the profession without prejudiced scepticism, and with an earnest determination to test their validity. Impressed with these views, fortified with a consciousness of the importance of the clinical investigation which I have made during a long period as to the curability of cancer, I venture to submit to the profession my most recent experiments, in the hope that suffering humanity may at least be benefited by their publication.

As the result of an extended trial of a large number of remedies, both general and local, in the endeavour to cure cancer, the conviction forced itself upon my mind that a remedy for this disease must be one to be administered internally, and that it must be of such a nature as not to interfere with the functions of the special organs, or otherwise to injuriously affect the nutrition of the body, and that it must also be capable of being administered for a length of time sufficient to effect the removal of the disorder. A large number of remedies for the cure of cancer mentioned by various ancient and modern authorities, as well as some hitherto untried, which suggested themselves to me, were employed empirically, but they failed to produce an appreciable effect in curing or arresting the disease. At length, after a careful study of the pathology of cancer, and the effects of certain carbo-hydrates administered internally, it appeared probable that a remedy for cancer might be found amongst them. A list of those apparently most eligible was made, but, after studying their therapeutic properties, it became obvious that most of them were unsuitable for the purpose as possessing commonly known specific properties, as well as exciting a special action on certain structures and organs of the body. Besides, their administration could not be expected to be sustained for a sufficient length of time, even if they were likely to act on the morbid growth. Circumstances, however, led me to think differently of the Chian turpentine, and I determined to try it on the first opportunity. This soon occurred. A woman came to the hospital as an out-patient, aged fifty-two. She was suffering from scirrhous cancer of the cervix and body of the uterus. Hæmorrhage was excessive, pain of the back and abdomen agonising, and cancerous cachexia well marked. The patient evidently had not a long time to live. The uterus was so extensively destroyed by the cancerous ulceration that its cavity readily admitted three fingers. In such a case it appeared to be justifiable to attempt to relieve the sufferings of the patient, even if the remedy should produce unfavourable symptoms, or should prove of no avail. I therefore prescribed Chian turpentine, six grains; flowers of sulphur, four grains; to be made into two pills, to be taken every four hours. *No opiates were prescribed* or lotion used. No change was to be made in her diet or occupation. On the fourth day after taking the medicine the patient reported herself greatly relieved from pain, and was in better spirits, but she complained of a large amount of discharge. It was feared that she referred to a discharge of a sanguineous nature. On examination, however, the vagina was found to be filled with a dirty-white secretion, so tenacious as to be capable of being pulled out rope-like, and this although she had syringed herself three hours previously. The os was quite contracted and would now scarcely admit the finger, and the surrounding swelling or cancerous infiltration of the cervix was much reduced. On the twelfth day the thick tenacious secretion had almost disappeared, and was succeeded by a somewhat copious serous fluid. The os was not so firmly contracted, but would only admit the finger. The patient's general health was improved and the medicine well tolerated. Sixth week: I ordered her a quinine mixture, in conjunction with the turpentine, but sickness supervened, which ceased on omitting the quinine. Twelfth week: My notes are—the parts feel ragged and uneven, and do not bleed on roughly touching them. The speculum shows several cicatricial spots. The turpentine has been taken regularly during the day for twelve weeks every four hours, during which time she has been almost free from pain and has had no hæmorrhage; no glandular enlargement; general health improved. Walks easily to the hospital, being about a mile distant. As the patient did not come again to the hospital her address was obtained, and it was ascertained that she had left her residence. Being a widow she could not afford to keep her home, and she went to reside with her married daughter in a northern town; but left no address. The case showed that the medicine was one of great power in cancer of the uterus, and it is to be regretted that an opportunity was not offered for fully carrying out the treatment.

Another patient, aged thirty-one, suffering from cancer of

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the os and cervix uteri, was treated concurrently with the one just mentioned. These parts were enlarged from carcinoma to the size of a hen's egg. The os was dilated, and the cavity of the cervix was filled with epithelial growths, which bled freely on examination. Sacral pain was very severe, and hæmorrhage had been continuous for the previous six weeks. The Chian turpentine and sulphur were given as in the previous case. The patient again attended at the hospital on the seventh day after taking the medicine. She was in excellent spirits, and expressed her gratitude for the relief afforded her. The medicine entirely relieved her pain. She had increased white discharge. On examination the os and cervix were found to be nearly of the normal size. The os was patulous, and its surface was studded with flabby shot-like eminences, which did not bleed on roughly rubbing them. I said to her, "You are better; you must continue the medicine." She answered, "I should think I must, for I could not do without the pills; they have eased me so very much." She continued to improve, and on the fourth week she expressed herself as quite well. I impressed upon her the necessity of continuing the medicine, and told her to see me occasionally. She did not come to the hospital again for four months, when she brought another patient to consult me, believing that she was suffering from cancer. I reproved her for leaving off attendance at the hospital. She answered that she thought it unnecessary, as she had continued quite well. On this visit she submitted to an examination. The os was rough and irregular, but was of nearly the normal size; no signs of cancerous infiltration; the periods were regular, and not profuse, and were unattended with pain; there was slight leucorrhœa. This case was a most remarkable one. The turpentine acted upon the growth with great vigour, literally melting it away in the brief period of four or five weeks.

The third case was one of epithelial cancer of the os, cervix, and body of the uterus, in a woman, aged fifty-two years. The vagina was not involved. The mass was larger than a cricket-ball, almost filling the vagina. The border of the os was three-quarters of an inch in thickness, forming a ring of two and a half inches in diameter, through which protruded an epithelial growth, principally proceeding from the anterior wall of the uterus, and projecting about two and a half inches into the vagina. The case was sent to the hospital for my opinion by my son, Mr. Langsford Clay, who had attended the patient but a short time. The journey to the hospital fatigued her very much, and she declared that she could not come again, and that she did not wish to remain as an in-patient, believing that she could not live many days. She had repeated hæmorrhages, had much pain, and had the cancerous cachexia well pronounced. My son volunteered to attend her at home, and I agreed to see her occasionally with him. I thought it advisable as an experiment to vary the treatment somewhat, and ordered to be added to the pills one-sixth of a grain of the ammoniated copper, as from the large mass to be acted upon I thought that an astringent should be superadded to the turpentine. The dirty-white tenacious discharge appeared and continued for the first five weeks, but there was no hæmorrhage after the first examination. The swollen os uteri and the cervix beyond were the first to show signs of diminution; this was noted on the fourteenth day. The tumour, however, was rough and shrunken, and did not project so much. Sixth week: The surface of the tumour was at the level of the os uteri, and seemed to consist of a mass of bloodvessels which bled moderately after examination. This condition occasioned me some surprise, as three weeks previously the patient was ordered a lotion made with perchloride of iron, with a view to arrest hæmorrhage, since from her anæmic condition it was feared that the loss of a moderate amount of blood would be followed by serious consequences. I asked her what kind of syringe she used with the lotion. She replied, "I thought the lotion was merely to bathe the external parts." This, as it happened, was very satisfactory information, as it showed that the lotion had no share in the reduction of the mass, which now was scarcely half the original size. She was supplied with a syringe for the purpose of applying the lotion, and after using it three days the mass of vessels had considerably shrunken, and no longer bled on manipulation; but the surface of the growth had the touch and appearance of a gangrenous mass, but there was scarcely any fetor. The patient now complained of gastrodynia, with colicky pains in the bowels, but she had no diarrhœa or vomiting. I believed this to be due to the copper, and it was consequently discontinued. It also occurred to me that the turpentine might not be efficiently digested in the solid form, and that it would be better if the remedy were administered in a state of minute subdivision, as in the form of an emulsion. An ethereal solution of Chian turpentine was prepared by dissolving one ounce of the turpentine in two ounces of pure sulphuric ether (anæsthetic). The ether dissolved the turpentine instantly. This solution was given to our skilful dispenser, Mr. Whinfield, with a request that he would prepare a pleasant mixture or emulsion from it, and after a few trials he prepared one which is not unpleasant to take, according to the following formula:—Solution of Chian turpentine, half an ounce; solution of tragacanth, four ounces; syrup, one ounce; flowers of sulphur, forty grains; water to sixteen ounces: one ounce three times daily. This form of mixture was given to the patient, and was much liked. She has now taken the turpentine for thirteen weeks uninterruptedly. The os uteri is a little more than one inch in diameter, and feels like a ring of cartilage about a quarter of an inch in thickness. The tumour has nearly disappeared, and the finger can be introduced posteriorly into the uterus for more than an inch. The general health has much improved, and she is quite free from pain and looks cheerful, and is becoming stouter. No sedative whatever has been given during the treatment. Fourteenth week: She complained of severe "cramp-like pains" in the back and lower part of the abdomen, which she attributed to the mixture, and in consequence it was discontinued for a few days, and an opiate given, by which she was greatly relieved. The turpentine was again resumed. Nineteenth week: She is now fairly convalescent. The growth has almost disappeared, and the parts beyond the os uteri are somewhat hypertrophied, yet are almost normal to the touch.

The fourth case was that of a patient aged thirty-two years, who came to the hospital after having been discharged as incurable from the Women's Hospital. She was greatly depressed, and was most desirous to be cured, for the sake of her family of young children. She has had repeated floodings, and suffered greatly from pain during the past five months. Constipation very troublesome, which probably arose from the opiates she had been in the habit of taking. On examination, she was found to be suffering from epithelial cancer of the os and cervix uteri, but not involving the vagina. There was a cancerous mass of the posterior parts of the os and cervix, of the size of a goose-egg. This growth pushed the os uteri towards the pubis, almost preventing that part from being felt. The turpentine mixture was given her three times daily, and from this period a very rapid diminution of the growth took place, so that by the sixteenth day it had almost entirely disappeared. The os uteri was now *in situ*, admitting the finger readily, and there was the same condition of the vessels as that observed in the preceding case. The lotion with the perchloride of iron was used daily for a few days with excellent effect. In the ninth week the patient suffered from spasmodic pains in the back and abdomen, and as this was attributed to the medicine it was discontinued, and iodide of calcium, in five-grain doses, three times daily, was administered. This was taken for about a fortnight, but, not feeling so well, the patient was admitted into the hospital. The condition of the internal organs was now much the same as before, the iodide of calcium was given, but there was some thickening about the cervix, which was fixed to the vagina. The rectum was excessively loaded, and required several days to effectually relieve it. The Chian turpentine was administered simply; but a lotion was prescribed, containing six grains of white arsenic to one pint of water, to be used daily. Under this treatment the woman very rapidly improved, the pains entirely ceased, and the parts became much reduced in size and more movable. The patient was now anxious to leave the hospital for her home, as she felt quite well; but it was deemed advisable to send her to the Sanatorium instead. She is very active, cheerful, and happy, and may be pronounced convalescent.

Other cases are under treatment, both in the hospital and privately, all showing similar effects. The remedy is now being tried in cancer of other organs, and apparently with good results. One of the most interesting, perhaps, is a case of scirrhus of the breast, which has been under observation for some weeks. Among the other cases are cancer of the vulva, stomach, and abdomen, in which very remarkable benefit has been already produced.

From the results obtained by the use of Chian turpentine,

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it may be confidently said that the remedy does exert a powerful action on cancer of the female generative organs in particular, and it will be of advantage to point out some of the conclusions at which I have arrived respecting the efficacy of the drug and the manner in which it should be employed. The oil of turpentine, if it produces any effect on cancer, is inadmissible on account of the speedy production of its specific effects even when administered in small doses. The same remark applies with less force to the Venice and Strasbourg turpentines; in my hands they have not produced the same beneficial effects on cancerous growths as the Chian turpentine has done. The maximum dose of the last-named drug which can be safely and continuously given is twenty-five grains daily. It is advisable to discontinue the remedy for a few days after ten or twelve weeks' constant administration, and then to resume it as before. The combination with sulphur was given at first, and has been continued. It is doubtful whether much benefit is derived from the combination, but the effects have been so uniformly good with it, that it was thought advisable to continue its use. There is every reason to believe, from the trials made with other substances in combination with the turpentine, such as carbonate of lime, iodide of calcium, ammoniated copper, quinine, bebeerine, hydrastin, &c., that the turpentine is best administered simply, as the most marked and rapid effects have always been manifested when it has been given alone.

The turpentine appears to act upon the periphery of the growth with great vigour, causing the speedy disappearance of what is usually termed the cancerous infiltration, and thereby arresting the further development of the tumour. It produces equally efficient results on the whole mass, seemingly destroying its vitality, but more slowly. It appears to dissolve all the cancer cells, leaving the vessels to become subsequently atrophied, and the firmer structures to gradually gain a comparatively normal condition.

It is a most efficient anodyne, causing an entire cessation of pain in a few days, and far more effectually than any sedative that I have ever given. In the cases I have described no sedative was employed in any instance, although in some cases where great pain had existed previously to commencing the treatment, large doses had been given. Whether this arrest of pain arises from the death of the tumour, or, as my son suggests, is due to there being no longer irritation of the sentient nerves (in consequence of tension being withdrawn by the removal of the cells), the fact is the same.

If, after the use of the remedy for some weeks, one of these cases were examined by a stranger for the first time, he would probably conclude that it was one of commencing malignant disease, by reason of the irregularities of its surface. The effect of the remedy being first to remove the cellular structures, any loss of tissue produced by the invasion of the disease cannot be restored, and hence the irregular touch and appearance even after cicatrisation. The arrest of the hæmorrhagic discharge and the remarkable freedom from glandular affections, after a lengthened use of the turpentine, are specially important factors in materially aiding the removal of the cachexia and of improving the general condition of the patient.

Without being in a position to affirm that the Chian turpentine is a positive cure for advanced cancer of the female generative organs, yet however the facts here adduced may be interpreted in this respect, two circumstances are indisputable—one, that all the patients after several months' treatment are living, and that the disease has not advanced as is usually the case, but has retrogressed—in fact, has all but disappeared; and it may at least be safely asserted that when the remedy is steadily used for some time it arrests the progress of the disease, and relieves the pain incidental to the morbid growth in a manner which cannot be said of any other remedy. It is probable that on an extended experience of its use and by variations of the mode of administration, it may prove an effectual cure for this intractable disorder. Patience and perseverance on the part of patient and medical adviser are absolutely required. We know that in some diseases, as bronchocele and syphilis, a long continuance of well-known remedies is often necessary to effect a cure of the particular disorder, and that the administration of the remedies has to be varied from time to time, according to the therapeutic effects produced by the drugs. In cancer, as far as experience has at present indicated, the same alternating method may perhaps have to be employed. Whatever may be the ultimate results there can be no doubt that Chian turpentine in these disorders is a most valuable medicine. Judging by my experience it is no figurative expression to say that it acts as a direct poison upon the growth, probably causing its ultimate death. In advanced cancer the process of reparation is slow, but if the surrounding structures are not too much involved in the process of destruction, it will seem that a cure may be reasonably expected. It is not that the remedy has failed against the cancer, but that the vital organs are so much destroyed that their complete reconstruction and adjustment of functions are not possible, and life fails in consequence of their mutilated condition. Even under these circumstances, if the cancer does not recur, the efficacy of the medicine is obvious. In the early stages of cancer it may be affirmed that an undoubted cure may take place speedily, and as the contiguous structures are not extensively involved, but little deformity ensues; and experience justifies the expectation that under such circumstances a recurrence of the disease will not follow.

The history of the local treatment of cancer of the uterus is one of singular interest, and is highly instructive to the practical physician. The contrast between the general and local treatment is the more notable, as nothing can be more injurious to the welfare of the patient than an attempt to destroy the cancer by external agencies. The disease is not to be averted by this means, as the symptoms assume a more intense and threatening character, until the patient rapidly sinks. It may be observed that the internal treatment here recommended when used for a considerable period is borne by the patient with remarkable tolerance. As I have mentioned, in some of my experiments I determined, in order most thoroughly to test the medicine, to rely upon this alone. Recently the arsenical lotion has been superadded, and, with no injurious consequences—it appears to act as a disinfectant, and it may produce some benefit by promoting the cicatrisation of the tissues. Several suggestions offer themselves for inquiry as to aiding locally the detachment of the growth, after its vitality has been destroyed; but this is not of much importance, as there seems to be no fear of the blood becoming affected by the absorption of the decaying tissues, the turpentine probably preventing any such calamitous occurrence.

If the practice now described should prove by future experience to be justified, then it will be incumbent upon the medical adviser to treat cancer of the generative organs at an early stage of its development, and it is reasonable to conclude that this dreaded and most fatal disease will no longer be the scourge it has hitherto proved, and that another benefit will have been conferred upon suffering humanity by the resources of therapeutic art.

Birmingham.

ON

ANÆMIA AS A CAUSE OF HEART DISEASE.[1]

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I SHALL base the remarks that I have to make upon this subject on the following four cases:—

CASE 1. *Hæmorrhage from the Uterus after Miscarriage; Fatty Heart.*—Emma S——, aged twenty-three, was admitted to Guy's under my care on April 26th, 1878. She had always been strong and healthy till her present illness. Three months before her admission she had a miscarriage, and lost a large quantity of blood, and ever since that time she had, at intervals of five or six days, been subject to repeated hæmorrhage, the last on April 20th. She was much wasted and completely blanched. The blood contained some 200 white corpuscles in every field, and the red corpuscles were much diminished in quantity. The viscera were normal except the heart, the action of which was very violent, and the beat diffused and cantering. There was a rough double sound at the base, with a systolic bruit to the left of the sternum. She died very soon after her admission, and at the inspection the heart was found thus:—The peri-

[1] Read before the Harveian Society, January 15th, 1880.

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cardium contained two ounces of clear serum. There was no pericarditis. The heart weighed eleven ounces. The left ventricle was a little dilated. Tabby striation was well marked in the musculi papillares, and in some parts of the wall of the left ventricle and also beneath the pericardium, particularly in the right ventricle. The valves were all healthy. The ventricles contained some poor, half-coloured clot. There was no appearance of leucocythæmia. The spleen weighed six ounces, the liver forty-three ounces, the kidneys nine ounces; all were quite bloodless, but not otherwise diseased. The cause of the hæmorrhage was found to be a slough of somewhat obscure origin in the uterine wall.

CASE 2. *Sarcoma of the Bladder; Hæmorrhage; Anæmia; Tabby Striation of the Heart with Dilatation.*—A man, aged thirty-four, was admitted under the care of Dr. Habershon, who has kindly allowed me to quote the case, for hæmorrhage from the bladder. This was first noticed when he was a boy, and the bleeding had returned many times at intervals, but latterly with severity and the passage of coagula. He died a month after his admission, and during the last few days of his life his temperature was pyrexial. The heart weighed sixteen ounces. There was a well-marked tabby change in both ventricles, the striation being well marked beneath the endocardium, and the left ventricle was dilated. The coronary arteries were good, and there was no excess of fat externally. The cause of the hæmorrhage was a large cauliflower growth of medullary sarcoma at the base of the bladder. The viscera were pale and bloodless, but not otherwise diseased.

CASE 3. A woman, aged forty-five, had suffered from severe hæmorrhage from a uterine fibroid. The hæmorrhage was so severe, that one of her legs became gangrenous, and she was admitted for this under Mr. Cooper Forster's care. She was extremely blanched, and for some time nothing could be done, but at length the limb was amputated, and she improved. After a time, however, she had rigors; a large bedsore formed, and uncontrollable diarrhœa carried her off. She was much emaciated. Chronic abscesses were found in her lungs and kidneys; thrombosis of the vena cava and other large veins beyond it; and the muscular tissue of the heart was in a state of tabby striation. The heart only weighed seven ounces.

CASE 4 has been already recorded at the Pathological Society, but shortly it is this. A boy, aged six, was admitted on October 8th, 1869, under Dr. Pavy. He had been taken ill seventeen days before admission, and his symptoms were those of well-marked typhoid fever, the pyrexia running as high as 105° on the twenty-seventh and thirty-first day of his illness. A rather copious hæmorrhage from the bowel occurred on the twenty-ninth day of the fever, and a second more profuse on the thirty-first, associated this time with epistaxis. This left him very blanched and exhausted, and he died four days later quite suddenly. At the inspection the muscular tissue of the heart was very pale, and the sub-endocardial muscle was markedly tabby from degeneration; the left ventricle was considerably dilated, and to this I think his sudden death may have been due. All the viscera were very bloodless and the lungs œdematous. The hæmorrhage from the intestine had come from a deep, almost perforating, ulcer in the mucous membrane of the descending colon, which with several others of like nature was situated on the mesenteric attachment.

In all these four cases there was a well-marked change in the muscular fibre of the heart. I have called it tabby striation rather than fatty degeneration, because all of us will admit that there is a degeneration of some sort—and therefore disease; perhaps all would not be willing to admit that its nature is fatty. I myself should allow that the change is one which does not yield very definite microscopical results. The muscular tissue alters and becomes granular, takes staining fluids badly and loses its striation—whether it is actually fatty may be a matter of question, though the change is one which is termed fatty degeneration by, I believe, all pathologists. It is not my purpose here, and I wish to treat the subject in its most practical bearings, to discuss the mode of production of the morbid material. I bring the cases forward as an anatomical basis for the assertion that simple bloodlessness, with of course the changes which are its consequents in the composition of the blood, is a cause of heart-disease, without entering into the question how the disease is produced. To the first three of them I do not think any objection can be taken, but to the fourth it may be said that the continued fevers are in themselves sources of muscular degeneration, and that the case being one of typhoid fever is a sufficient explanation without calling the hæmorrhage into account. This view is possibly correct, though the change described is but a very occasional accompaniment of typhoid fever. It may also be objected that the change occurred too rapidly, the hæmorrhage commencing but a few days before the child's death. To that I would reply that phosphorus-poisoning leads to changes of like nature in the muscles quite as rapidly as I suppose the anæmia to have done.

It is no new idea that anæmia leads to mal-nutrition of the heart. Walshe writes, "In cases where anæmia has either been persistently or with occasional intermissions sustained for a more or less lengthened period, it is probable that changes are effected in the structure and properties of the tissues of the heart;" and with special reference to the occurrence of fatty degeneration he writes, "Cardiac anæmia has frequently fallen under my notice as the immediate prelude to fatty metamorphosis." Ormerod, in his "Clinical Researches on Fatty Degeneration of the Heart," observed three cases similar to those I have given; Virchow has noted its existence in chlorosis, and Ponfick has described a form of fatty degeneration as the result of chronic anæmia and hydræmia.

The disease, too, called idiopathic anæmia is constantly, and is well known to be, associated with a similar change in the muscular tissue of the heart; though upon this class of cases the hæmorrhagic group have an important bearing, because we know nothing about idiopathic anæmia except what its name reveals to us, and there is always a suspicion behind it that simple bloodlessness may not be its essential element, and that the fatty heart may be part of that other something of which as yet we are in ignorance. Fatty heart ensuing upon recurrent hæmorrhage shows that the simple bloodlessness can and does produce a state of heart precisely similar to that found in idiopathic anæmia, and the two series of cases thus tend to corroborate and enlighten each other.

With the body of evidence thus obtained we may next associate certain ascertained clinical facts. The chlorotic heart is sufficiently well known hardly to need mention, but I may just say that in it, and not in it only, but in all forms of anæmia in women, the heart's impulse becomes diffused and displaced outwards; the first sound is sudden and excited, and associated with these are the subjective symptoms of breathlessness and palpitation. This subject has received attention in a very careful and suggestive paper by Dr. Pearson Irwine[2] in this country, and by several writers abroad.

There are many explanations of these various phenomena, but I can only say now that the best, or at any rate the safest, appears to me to be that derived from post-mortem evidence, and which demonstrates that anæmia is associated with degeneration of the heart muscle, and which therefore points directly to dilatation of the left ventricle as the cause of the symptoms. The heart in such cases is from all we know of the morbid anatomy of anæmia, actually in a state of fatty degeneration; it has become dilated, and hence the symptoms complained of. The same remarks hold good with regard to children, in whom there is no affection more common or brought about by a greater variety of circumstances than a persistent anæmia. For the past few years I have been in the habit of making observations on my out-patients at Guy's Hospital and the Evelina Hospital on the position and the sounds of the heart in these cases, with reference to the beginnings of heart disease, and as in women, so in them, the heart's impulse is generally widely diffused, often to an inch external to the nipple; the rhythm is irregular, while the sounds are for the most part considerably altered, the first sound being prolonged, confused, or thick, if there be not actually a systolic murmur. I believe with Parrot, Balfour, and others that temporary dilatation occurs in these cases, and leads to some incompetence of the mitral valve so long as it persists, and to this is due the systolic apex-bruit that is so frequently present. I am aware that some authors, of whom I may mention Fagge and Pearson Irvine, are of opinion that the bruit in many of these cases is due to eddying currents behind the mitral valve in a dilated ventricle, and I see no reason to object to this view as an alternative one. But if we accept the dilated state of the ventricle as a fact in anæmia, we may

[2] The paper in question was read at a meeting of the Royal Medical and Chirurgical Society, but has unfortunately never been published except in abstract in the Proceedings.

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take it as granted from what we know of the conditions under which the mitral valve acts that there must also be regurgitation in a good proportion of cases.

So far I think the facts are clearly in favour of all that I have attempted to draw from them, and the subject even hitherto is one of such moment to so large a number of persons, that I would have the teaching in our text books much more decided than it is. Prolonged anæmia leads to fatty degeneration of the heart at all ages, and during the existence of such anæmia, it is therefore imperatively necessary that the heart be rested as much as possible, and the anæmia should be dispelled with all possible celerity.

But this is not my main point. I should rightly be told that there is nothing new in this. There is not; but it is a step necessary to develop my main contention which follows—viz., that anæmia, by leading to dilatation of the left ventricle, is a fertile source of valvular and chiefly of mitral disease. If what I have said be true, it follows that this is highly probable. Anæmia leads to fatty changes in the heart. Fatty changes in the heart favour dilatation of the left ventricle. Dilatation of the left ventricle disarranges the coaptation of the mitral flaps, and mitral regurgitation results, the so-called curable regurgitation. But if this regurgitation is prolonged for any length of time, or is frequently repeated, as is not unusually the case in many instances of chlorosis, surely from the passage of blood in two directions instead of one, and particularly when the backward stream is such a twisted and rough stream, if I may use such a term of fluid, as is the regurgitant mitral stream, there must be a considerable increase of friction or wear and tear to the valve, and chronic disease of the tissue of the valve is started, which by and by—it may be years after the original cause has ceased—leads to permanent thickening and disease of the valve. This train of events, I say, has much of probability in its favour; yet where is there actual evidence of the existence of the evil? I appeal in vain to the standard authorities. Nevertheless I think it is to be found. It is not possible to prove the point to demonstration, as I have the dependence of muscular changes upon the anæmia, but its probability may be shown by an appeal to some facts which seem to me to be of considerable significance. First of all, I would mention that when there has been prolonged regurgitation on the right side, the tricuspid is generally considerably thickened. It is true that, under such circumstances, it never, so far as I know, approaches to any condition that could be called stenosis; but this deficiency in the parallel between the two valves is, I think, sufficiently accounted for by certain mechanical differences between the two sides, and by the difference in the amount of work performed by each. Secondly, I would say that but seldom in cases which are due to a primary muscular fault and to consequent failure of the mitral valve by stretching, do we find the mitral condition one of simple dilatation; the dilatation is very commonly associated with more or less thickening of the chordæ tendineæ and the edges of the valves. Here, again, we find no stenosis; but contraction takes time, and this class of cases is in the main composed of senile muscular failures and degenerations, which are rapid in their course. Take, next, another fact, less well known than it ought to be—viz., that in a large number of cases of chronic renal disease there is a notable and sometimes extreme thickening of the mitral flaps.

The facts bearing upon this that I have collected are these. In 192 consecutive cases of chronic renal disease of various kinds tabulated from our post-mortem records, 72, or more than a third, had some thickening of either the mitral or aortic valves, or of both. In 49 of these the mitral was either thickened or actually contracted. The mitral was contracted, and therefore very thick in nine cases, and all nine, without exception, were cases of small, contracted, or granular kidney. Ninety-seven of the 192 cases were examples of granular kidney, and of these 45 had more or less thickening of the valves. Again, of 215 cases of what appear in our records as primary heart cases, (the 192 given above figure as chiefly renal, so that the two series are distinct,) 34 were cases of granular kidney, and 9 of these were again examples of mitral stenosis, and all except three were mitral cases rather than aortic. I say rather than, because the aortic valves may here and there have been a little thick; but the mitral was the valve which was chiefly affected. These figures leave, I think, no room for doubt that chronic thickening of the endocardium is associated with chronic renal disease. I have been in the habit of teaching and demonstrating this for some years in our post-mortem room, and had thought that it was a somewhat novel observation, but I can no longer do more than say that it is an independent one, for others have now noted the same fact, and I am glad to be able to acknowledge that so late as yesterday I came across this passage, which I am almost ashamed to confess I had not noticed before:—"Disease of the aortic valves is common in the class of persons who acquire the gouty heart, and it is my strong conviction that mitral disease of the chronic sclerotic or contracting form found in elderly persons, especially in the form of regurgitation, is also found." Dr. Milner Fothergill, to whose work, "The Heart and its Diseases," I am referring, is there talking of the relation of heart disease to renal disease, and the thickening he attributes, and in part, no doubt, correctly so, to hypertrophy as a consequence of strain. It will be seen that I agree with him in his conviction, and contribute these data wherewith to support us, but I would supplement his remarks by saying that dilatation of the heart is common in these cases, and strain of some sort becomes all the greater, if, in addition to the greater dragging of a thickened ventricle, more forcible impact of blood against the flap, and the greater friction of the valves one against the other, there be added also the additional friction of a regurgitant blood-stream; and it seems to me to be probable that part, at any rate, of the chronic valvulitis is set up by the wear and tear of the regurgitant stream. But it may be said that the chronic thickening of the valve in old renal disease is due to an acute endocarditis toned down, and, if so, it would cease to have any bearing upon the question I am more particularly considering—viz., the influence of the anæmic heart upon valvular disease. I know it is taught in books that acute endocarditis is common in renal disease. Dr. Roberts, on the "Etiology of Acute Endocarditis," says, "Almost invariably the affection is due to some blood-poisoning, especially in connexion with acute rheumatism, but also in Bright's disease, pyæmia, &c."[2] Bright's disease is put first, after the greatly preponderating influence of acute rheumatism. Hayden,[4] after speaking of rheumatic endocarditis, says, "Next in point of frequency, it occurs, although not so often as pericarditis, in connexion with Bright's disease, and in this association it is usually fatal." Walshe,[5] too, writes, "Bright's disease, rheumatism, and pyohæmia are the main diathetic acute specific affections that clearly promote the occurrence of endocarditis." May I be forgiven for my presumption if I say these learned authors are all wrong. No, I will not be too dogmatic, lest, like a recent critic of the Lord Chief Justice on a legal question, I be set down as one of the most juvenile members of the profession; but I will say, May I beg your pardon, sirs, but the experience of Guy's Hospital and St. Mary's Hospital is completely against you. In our post-mortem records from 1866 to 1871, with an average of about seventy cases of Bright's disease annually, there is only *one* case of simple acute endocarditis in association with Bright's disease, and I state this on the authority of Dr. Hilton Fagge, who gives these figures in Reynolds's System of Medicine.[6] The late Dr. Sibson, in the same work, gives 297 cases of Bright's disease recorded at St. Mary's Hospital, and he only found one case of acute endocarditis. This is surely sufficient material to enable us to say that some mistake has been made on the point, and Rosenstein[7] seems to me to have expressed the facts correctly when he says, "Acute or chronic inflammation of the kidneys is not often the cause of endocarditis, but there are some recorded cases."

It is quite a mistake to suppose that acute endocarditis, in any but the most trifling proportion of cases, is present in renal disease; and I can only account for such an assertion by supposing that the chronic thickening of which I have made mention has been recognised as being frequently present, and that from it the pre-existence of an acute endocarditis has been assumed. But if so, it is an assumption quite without warrant. Chronic indurations are more often the parents of acute inflammation than are acute diseases the parents of chronic. So then I take the chronic thickening of the valves found in renal disease to be dependent in part upon dilatation of the ventricle and regurgitation of the blood through the valve, and so it is available as evidence in favour of a similar change being brought about in a

[3] Handbook of Medicine, 1873, p. 545.
[4] Diseases of the Heart and the Aorta, 1875, p. 749.
[5] Diseases of the Heart, 4th ed., p. 255.
[6] Vol. iv., p. 620-21.
[7] Ziemssen's Cyclop., Eng. trans., 1876, vol. vii., p. 87.

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similar manner in the fatty heart of anæmia. I might, if I cared to do so, even claim the renal condition itself as acting upon the heart by way of the anæmia which exists in such case, but I do not do so because I am one of those who quite adhere to the view that high tension is in great measure the cause of the dilatation of the renal heart.

I must very hurriedly give one other additional link of evidence, which I ask to be interpreted with the light of the foregoing facts. It is the well-known observation that mitral stenosis occurs in overwhelming proportion in women. The drift of this fact will be seen at once from what has gone before. Mitral stenosis is a form of valvular disease to which a rheumatic origin is denied by many, and when this cause for it is taken away we are stranded in the unknown, unless, indeed, we are to rest content in the happy vagueness of poor Topsy that it "growed," should some such interpretation as I now suggest not come to our aid. A congenital origin is supported by some, but it seems to me hard to reconcile such an hypothesis with the fact that mitral stenosis is not common in childhood. But here I am at issue with writers upon heart disease, so I must give the grounds of my belief. I have notes by me of ninety-six or ninety-eight cases of heart disease in children which have occurred in my own practice, and in only one have I put down decidedly that the case was one of mitral stenosis. In five others the murmur was systolic, and only questionably presystolic, and in one or two others there was a rough first sound, and all the rest were cases of well-marked mitral regurgitation. I should therefore say that the clinical features of well-developed mitral stenosis are uncommon in childhood, though it is not uncommon to meet with cases where that condition is in all probability in the course of development; and for my own part I do not think there is any escape from the conclusion that some of the cases of mitral regurgitation in children furnish some of the cases of the mitral obstruction of adults. With regard, however, to the question of the rheumatic origin of mitral stenosis, I am quite convinced of the propriety of giving an affirmative answer to that question for the larger number of cases. Before we conclude that a form of heart disease is not rheumatic, we must take a much wider view of rheumatism and its relationship than is comprehended in establishing the previous occurrence or not of rheumatic fever in a particular case. A careful analysis of any large series of cases so examined will show without doubt that many contracted mitrals have rheumatic associations when superficially they have not appeared to do. Hayden, Hilton Fagge, and Dyce Duckworth all agree in this, and the latter has collected 264 cases from his own practice and that of the two beforementioned writers, and he finds that 60 per cent. were of rheumatic origin, using that term, as Dr. Duckworth puts it, in words which, I consider, very aptly chosen, "in a comprehensive but not inexact sense." I am obliged to say this much on the question *in limine*, though it is really a little beside the point, lest otherwise the objection should be made that, though mitral stenosis is thought by many to be non-rheumatic, that is not really the case. Upon the point in question it matters very little actually what view we take, because the rheumatic state is one which is accompanied, and often only disclosed, by a state of persistent anæmia. But I, nevertheless, accept the figures I have quoted, and we have yet remaining 40 per cent. of mitral stenosis, the majority of them, be it remembered, in women wanting an explanation of their origin. Dr. Fagge has suggested that possibly scarlatina or diphtheria may account for them, and I have been at some pains to follow up this clue, but I have not obtained any information to make me think that it can be a cause of heart disease in any but a very small proportion of cases. Mr. Shirley Murphy, a late resident medical officer of the Fever Hospital at Islington, and now medical officer of health for St. Pancras, tells me that of the cases of scarlatina admitted to that institution about 5 per cent. evolve a systolic bruit during the course of the disease, but that he only knew of one case in which it was anything more than temporary. My own experience, though less wide, is considerable, and it all points to the same conclusion—that scarlatinal endocarditis is not common, and any persistent heart disease from this cause is still less so. Moreover, we have the further difficulty to encounter, supposing we could admit that scarlatina was an important factor—viz., why scarlatinal endocarditis should fasten itself so all but exclusively upon women. Now, the suggestion I offer as the elucidation of this obscure point in the etiology of heart disease is this. Mitral stenosis is not uncommon in advanced renal disease, and lesser degrees of mitral thickening are yet more common. I consider the valvulitis to be set up by regurgitation of blood through the mitral, which in its turn is dependent upon the dilatation of the left ventricle, so common in Bright's disease. Both pathological and clinical evidence has been adduced to show that anæmia is associated with deteriorated cardiac muscle and dilatation. Anæmia is an extremely common affection both in women and children, and it is by no means very common in men. Is it then anything improbable that much of the mitral disease which is met with in women is the outcome of the mitral regurgitation which is seen so commonly in childhood and young adult women, and that this is dependent upon the dilatation of the heart in the course of the anæmia?

The question of treatment is quite a distinct one, and upon it I shall not enter further than to say that, impressed as I am with the probable truth of the view that I have put forward, I do not find that the anæmia of young persons is considered seriously enough. A woman comes to the out-patient room pale and panting with amenorrhœa; it is considered sufficient often enough to give her an ounce of compound mixture of iron three times a day, and she is packed off as only a case of anæmia which iron always cures. Our students, if they examine her at all, are only alive to a *bruit de diable*—a matter practically of very little moment, while the position of the impulse and the quality of the first sound are unheeded. But if it be true that a state of prolonged anæmia lays the foundation for permanent valvular disease, surely some very decided teaching on the subject should be inculcated in our text-books. It would, I think, be well, at any rate, to insist more absolutely on the necessity for rest in these cases, on the administration of heart tonics, such as belladonna and digitalis, and of sedatives, as bromide of potassium and hydrobromic acid; while in the matter of hæmatinic, experience has sanctioned the use of iron in a quite unequivocal manner. But I believe with Balfour that it should usually be administered in larger than the customary doses, and in such a form as to render them innocuous to the palate or digestion.

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THE TREATMENT OF RINGWORM.

BY WYNDHAM COTTLE, M.A., M.B., F.R.C.S., &c.,
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THE perusal of Mr. Smith's very interesting paper on the diagnosis and treatment of ringworm in THE LANCET of Jan. 10th, 1880, and following numbers, has afforded me much satisfaction. It is gratifying to find that an independent observer advocates the same principles in the treatment of this disease that I have already laid before the profession, and that he has been led to adopt those views by the same line of reasoning that I then urged in their behalf. It seems to have escaped Mr. Smith's notice that in a paper read before the Dermatological Section of the British Medical Association at the meeting of the Association at Cork in August last, I advocated the treatment of ringworm in recent cases, and in certain situations, by the ordinary parasiticides, and more especially by the use of salicylic acid, while I recommended the application of croton oil to the more inveterate seats of the disease, so as to produce a deep pustular rash. As Mr. Smith seems to me from the description he gives to carry this treatment to an unnecessarily severe extent, I may perhaps venture to recapitulate my mode of procedure, which has been arrived at after a long series of experiments.

I found in practice that ringworm readily yielded to treatment (1) when situated on the parts of the body not occupied by deep-rooted hair, (2) when it occurred in infants, (3) in recent cases in healthy children. I accounted for this clinical feature of the disease in the first two classes of cases by the non-existence in them of deep hair-follicles, and in the third class by the fungus not having had sufficient time to spread far into the hair-follicles, and to its having fallen on a soil not congenial to its development. I also constantly encountered cases in which, after the most energetic and assiduous treatment, the disease still flourished in spite of the measures employed. I concluded that this persist-

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ence was attributable to the parasite having invaded the deeper portions of the hair root, and that the remedies employed, though they had cleared the superficial structures of the fungus, had failed to reach it in its more remote situations. In long-standing examples of ringworm the parasite prevades not only the epithelium and hair, but also makes its way to the bottom of the hair root, so that the microscope detects it at the very extremity of the hair bulb, and it is allowable to infer that it also penetrates that portion of the hair root which remains behind when the hair is extracted. That it abounds in the lining membrane of the follicles through its whole extent can be often demonstrated in those cases where, loosened by inflammatory action, the follicular sheath can be extracted with the hair. It is this propensity of the fungus to extend itself deeply beyond the hair that renders the most careful epilation inefficient to eradicate the disease, since, even when most successfully performed, it can only remove the hair and not its contiguous structures.

In applying remedies for this complaint, it is necessary by some means to bring them in contact with the deep-seated parasite, and we may be quite sure that if we can succeed in destroying it when buried beneath the surface, that which is superficially situated will have perished also. I thought that a penetrating subtle fluid was more likely to find its way into the hair-follicles than a thicker fluid or an ointment, unless the ointment were most thoroughly rubbed in—no easy matter on the tender scalp of a delicate child. I find that such is the case. I believe that strong solutions of perchloride of mercury are of such recognised efficiency in ringworm from the amount of alcohol that is usually prescribed in these lotions aiding the penetration of the salts they contain. Such solutions of mercury have been known to produce disagreeable effects. After many trials, I find no one substance so efficacious and convenient as salicylic acid. It is a parasiticide, a slight irritant, and exercises no toxic influence. I have prescribed it largely as an ointment, and also as a lotion; and it may often be combined with other agents with benefit. It is soluble in alcohol or rectified spirits of wine. However, we have a large number of bodies at our choice that act excellently in the way I mention—e. g., turpentine, or alcohol itself, or benzine, or the purer forms of the paraffin of commerce.

Many observations have taught me that in those portions of the scalp where kerion or an abscess supervenes, on the recovery of the part from such accident, no trace of ringworm was to be found, and that the sites of such abscesses remained free from disease, oases of health in the midst of the implicated scalp around.

Pus and the inflammatory process which gives it birth have long been recognised as inimical to fungoid life, and I concluded that in these cases of kerion the parasite had perished owing to its having been subjected to the action of the products of inflammation in its more profound and inaccessible situations. I saw that if I could succeed in producing a like condition I might hope to obtain a like result, and I have found that it is so. I thought that it would be sufficient for my purpose to set up a pustular rash involving the tissues to the depth of the hair-follicles, and that the formation of a subcutaneous abscess was unnecessary.

The various irritants that may be applied to the skin are wont to be followed by very dissimilar effects: for instance, mustard or heat will usually produce a superficial erythema; cantharides a sub-epithelial effusion; chrysophanic acid an erythema with a subcutaneous œdema; the more powerful chemically acting agents, as the caustic alkalies and strong acids, a local necrosis or slough; while localised suppuration, e.g., a pustular rash, most readily follows the application of antimony, chloride, or croton oil, but the antimony salt is apt to give rise to sloughing.

My earlier attempts to cause suppuration in the portions of the scalp occupied by inveterate ringworm were made with sulpho-carbolate of barium, an irritant and parasiticide combined of no mean potency, but I abandoned its use in favour of croton oil, since I found this agent more certain and rapid in its action, and able to produce a more perfect crop of pustules.

The method I am now using is the following:—

In recent Cases, &c.—In ringworm of the body, in infants, and in cases of recent origin on the scalp in older children, after the hair has been cropped short around the affected spots (if on the scalp), and the part well scrubbed with soft soap to insure the removal of crusts, &c., I direct the affected part to be thoroughly soaked and rubbed, three times daily, with a solution of salicylic acid in alcohol (thirty grains in an ounce), or with benzine, &c. The diseased hair, crusts, &c., must be cleared away as often as they are reproduced. This is generally all that is required, such cases as those indicated readily yielding to these measures. If any patches show a tendency to linger, they may be painted with glacial acetic acid, or blistering fluid, or carbolic acid. Solutions of salicylic acid in alcohol of themselves, however, set up considerable skin irritation, and sometimes a crop of pustules.

Chronic Ringworm.—In chronic ringworm of the scalp this treatment, however, will not always end the case, and it then becomes advisable to have recourse to the formation of a pustular rash. To effect this the tardily mending spots should be freely painted with the linimentum crotonis (B.P.) I find this preparation more efficient than croton oil itself, I fancy owing to the spirit it contains favouring its penetration into the follicular orifices, and bringing it into more close contact with the skin. Washing the part with alcohol or ether before applying the croton oil makes its action more certain, and, I believe, for the same reason. If the croton-oil liniment does not produce suppuration, I repeat it, and, if necessary, blister the skin before putting it on; or a liniment containing more croton oil may be used. The parts become covered with a yellow crust, which should be removed as soon as practicable by poulticing or softening with oil. Most of the diseased hair will come away with the crusts. Any that remain should be carefully removed with forceps, and the search for them constantly renewed. After the removal of the scabs and hair the salicylic acid should be freely and frequently applied. It is practically of advantage to produce suppuration on one side of the head only at one time, and to allow the parts to soundly heal before the other side of the head is attacked, in order that the child may be able to rest its head on the pillow without inconvenience.

The rapid drying of the croton liniment prevents the risk of the transference of the croton oil to the face, &c. It is not necessary to produce a real subcutaneous abscess or kerion to effect the destruction of the parasite even where deep in the skin. A copious pustular rash is all that is required for the purpose, and this less severe treatment may be carried out over considerable tracts of the scalp at the same time. The production of pustules by croton oil is neither adapted to, nor requisite in, cases where scalp irritation already exists.

In all chronic cases of ringworm suitable internal treatment should be adopted, for it is of the first importance to remove that condition of nutrition, whatever it may be, that favours parasitic growths on the skin.

A few days ago a most striking case came before me. A little girl, with other members of her family, had been affected with tinea tondens for nearly two years, and subjected to much careful treatment. To one particularly obstinate spot, the original seat of the disease, I had applied croton liniment three weeks previously. Microscopic examination detected conidia in several of the hairs taken from other portions of the scalp, while in the hair that remained where the croton oil had been used, though showing signs of inflammatory action, no vestige of the parasite could be found.

Although the deep abscesses sometimes occurring in cases of ringworm cause destruction of the hair roots and permanent baldness, I have not seen any such result follow the use of croton oil as I employ it. The application is painless, and the only ill result is the discomfort of a pustular rash on the part. We are all familiar with its effect when applied to the chest as a counter-irritant. Its action when used on the scalp is similar, and causes a like amount of inconvenience. The advantages of this method of treating ringworm are—

(1) It is comparatively painless, easy and agreeable to carry out; and if salicylic acid be employed there is no unpleasant odour.

(2) No poisons are used, and therefore no fear of absorption exists.

(3) The inconvenience of a pustular rash on the scalp (if it becomes necessary to resort to the croton oil) is less irksome to the child than the acute pain of the ordinary vesicating remedies.

(4) No permanent loss of hair results.

(5) Many intractable cases rapidly mend when so dealt with.

Savile-row, W.

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HUMAN AND ANIMAL VARIOLÆ: A STUDY IN COMPARATIVE PATHOLOGY.

BY GEORGE FLEMING, F.R.C.V.S.,
ARMY VETERINARY INSPECTOR.

(Continued from p. 445.)

IT is curious to note that, in 1863, the same (Lyons) Commission was desirous of discovering whether small-pox could be transmitted to animals, and they made a number of inoculations, but all these apparently failed. Subsequently the animals were inoculated with human vaccine, and the same negative result followed. But it was never suspected then that the vaccination failures were due to the previous variolation, supposed to be ineffective, and it was concluded either that human vaccine takes with difficulty on the bovine species, or the animals experimented upon had previously been affected with cow-pox. It would thus appear to be demonstrated in the clearest manner that variola and vaccinia are related, or rather opposed, to each other in the bovine species, in the same way as they are in mankind. The negative results following variolation in animals which had been successfully vaccinated, was a crucial test of the soundness of this demonstration. Three animals — a cow and two calves — were variolised and vaccinated at the same time, the small-pox matter being inoculated on the left side of the vulva, the vaccine lymph on the right. In the three there appeared on the right side the very characteristic vaccinal eruption, and on the left the typical papular eruption engendered by variolation, as in two of Ceely's experiments.

To prove whether, after all, the papular eruption produced by small-pox virus might not be a mild kind of cow-pox, the feeble eruption of which could, by a methodical cultivation on bovines, become more developed, its transmission was attempted to other cows; for the eruption differed from human small-pox in being always local, while the papules, neither in volume, external characters, nor development, bore the slightest resemblance to that disease; whereas by its localisation, development, and the absence of general phenomena, it did somewhat resemble cow-pox, though in other respects it widely differed. Three calves inoculated from the fully-developed eruption with all the care possible, showed still less local alteration, while with a young bull it entirely failed, and subsequent vaccination was most successful. From this it was concluded that the variolic virus, instead of being cultivable in the ox tribe, loses its activity, and scarcely produces any effect in the second generation.

Was this eruption, then, merely that of modified small-pox? The results of small-pox inoculation on man are nearly as well known as natural small-pox itself, and there could be no mistake in the result if this bovine eruption was successfully re-transmitted to the human species. With the object of proving this, an unvaccinated infant, three months old, was inoculated with a very small quantity of serosity obtained by scraping some of the papules on a variolised cow. Four days afterwards on one of the punctures a pimple was noticed, which soon assumed all the characters of a vaccinal pustule; and in nine days it was large, umbilicated, surrounded by a red areola, very irregular at its periphery, and covered on its surface with a kind of small vesicle; it was *aquarellée*. When opened, only a very small quantity of fluid could be obtained from it to inoculate the arm of another child. Next day the infant was feverish and ill, and on examining it carefully a great number of small pimples were found on the face and trunk; on the following day these were fine variolic pustules, the majority of which were umbilicated, and formed a quasi-confluent eruption. In a week the pustules were desiccating and the child recovering.

The child inoculated from this one had three punctures on each arm, all of which had a *bouton;* in eight days from inoculation the development of these was complete, and they so closely resembled vaccine pustules that several competent persons asserted they were such. The next day two small vesicles appeared around each pustule, and in four days some small-pox pustules (about fifteen) showed themselves on the face and other parts of the body. The child did not appear to be unwell, and the slight general eruption disappeared rapidly without leaving any traces.

Thus, in a second generation in the human species the variolic virus from the cow had produced much better local effects than in the first, and incomparably feebler general effects. What might it have been in a third or a fourth generation? The fear of creating an outbreak of small-pox in the hospital brought these transmissions to a conclusion. But even the very decided results obtained did not suffice to satisfy the Commission. After all, the eruption on the children, though it appeared to be due to nothing more than direct inoculation of human small-pox, might be only generalised vaccinia, which some authorities assert does occur. But such a confusion between the two diseases was proved by the foregoing experiments to be impossible. Deposit humanised vaccine beneath the skin of a calf, and an eruption of unmistakable vaccinal pustules is obtained, which can be indefinitely transmitted to animals of the same species. But inoculate with small-pox virus, and there is only an insignificant papular eruption, the transmission of which from one calf to another is extremely difficult, if not impossible.

To meet any objections, however, that might afterwards be raised in this respect, two calves—a male and a female—were inoculated with virus from the last-mentioned child. In seven days, in both animals there was a somewhat microscopic papule at the seat of puncture. One of these papules —on the scrotum of the male—was used for the inoculation of another calf, but the result was absolutely negative; proving, in the first place, that the virus transferred from small-pox infected man to bovines, and carried back to man again, is still small-pox virus, and is not converted into cow-pox virus; and in the second place, that small-pox is not vaccinia.

Some experimenters had previously attempted to inoculate the horse with human small-pox, but met with only negative results. The Lyons Commission undertook several series of experiments on this animal, somewhat similar to those on bovines, and arrived at analogous conclusions. The horse was as susceptible of inoculation as the ox tribe, and the same phenomena were produced; but the papular eruption developed at the punctures was so evident, that no doubt whatever could exist as to its presence and its specific character. Indeed, it was so greatly developed that inexperienced observers might have mistaken it for horse-pox, particularly at the commencement. But in horse-pox, as in cow-pox, and even more so in the former, there is a secretion and the formation of a crust; but these are nearly, if not quite, absent in the inoculated variola. The same experiments were made in vaccinating after inoculation, and *vice versâ*, as with the ox, with exactly the same results. The horse was also proved to be as little adapted to the cultivation of small-pox virus as bovines. Three children were inoculated from the horses, and though the phenomena observed are of considerable interest, yet I cannot allude to them in this place, but will merely remark that the patients offered symptoms, mild in their degree, similar to those which follow small-pox inoculation. The result arrived at was that, as with the ox, the horse returns the small-pox virus to man just as it receives it. But the production of variola in the three children was followed by a mild attack of natural small-pox in an unvaccinated infant in the same room; and its mother, who had been vaccinated as a child, was soon after affected with a true varioloid eruption, with fever and other signs of general derangement.

The variolic virus obtained from the equine species was cultivated in mankind to the fourth generation, and produced a local and somewhat modified general eruption. From the second generation horses were inoculated, and only the typical variolic exanthem was developed—never the unmistakable horse-pox. Transferred from the horse again to the ox, in order to be assured that the eruption engendered by the cultivation in man of the small-pox virus, transferred originally from him to the horse, was not that of vaccinia, another series of experiments on cattle was instituted. Many horses were inoculated, and the conclusion arrived at was, that when carried to and cultivated on the cow, after producing in mankind, for several generations, local eruptions altogether identical in appearance to vaccinia, the variolic virus of the horse only develops the phenomena of variola, as in the bovine species.

Thus it will be seen how earnestly and exhaustively the Lyons Commission accomplished its task, and what con-

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clusive results were arrived at. We can find no evidence anywhere in their report that the small-pox virus was merely deposited in a little pouch, and re-inoculated from it again. On the contrary, marked phenomena were developed in every instance, and the crucial manner in which one series of experiments was made to test or control the results arrived at in another, left no room for doubt or error. Many of the experiments were original, particularly those on the horse, of which there were nine series.

The Commission, in closing its report, refers to the positive experiments of Thiele and Ceely as opposed to their negative ones—experiments which, they say, were extremely important, and which, notwithstanding the erroneous conclusions of their authors, will always hold a considerable position in science. Thiele and Ceely, they add, each experimenting independently, succeeded in giving cow-pox to cattle by inoculating them with human variola, and this cow-pox became the origin of an excellent vaccine, which was cultivated in infants for more than twenty years, in certain parts of England, Germany, and Russia, and has passed through a great number of generations. It is not denied that they succeeded in obtaining positive results from their attempts to inoculate the cow with variola; but that which is astonishing, after the results arrived at by the Commission, is not these positive facts, but the negative results which other experimenters almost unanimously acknowledge. But had Thiele and Ceely well observed and closely interpreted the facts the manifestation of which they elicited? Is it really true that they succeeded in converting variola into vaccinia? The Commissioners think not, and are of opinion that the children they inoculated with their variolic vaccine had nothing else than small-pox, the same as the children in the Hôpital de la Charité. This kind of inoculation is now-a-days well known, and it is really not necessary to have recourse to a new inquiry to appreciate its signification with regard to the doctrine of identity of variola and vaccinia. What did Thiele and Ceely communicate to the cow? Was it cow-pox? It was nothing of the kind. The excellent drawings made by the Commission representing the characters of the eruption produced in the ox by variolisation, are evidence that there is not a very distant analogy between cow-pox and the results of small-pox inoculation. The Commission had not seen Ceely's drawings, consequently it did not know if they differed from those it produced; but it ventured to assert that if they differed from these, and represented eruptions of veritable small-pox, the artist had not been absolutely inspired by the real truth. Nothing that Thiele and Ceely had done in inoculating the cow with variola could have produced anything resembling cow-pox, not even the extensive variolous wounds that were obtained, by making long and deep incisions in the skin, and pouring large quantities of small-pox virus therein. But if their cows did not have cow-pox, how were these two experimenters able to vaccinate children with the matter from them? The cows could not give that which they had not, says the Commission; and this is why, it affirms, the children operated on by Thiele and Ceely received small-pox; and it was nothing but small-pox which was developed on all their inoculated subjects. It was variola such as the Commission had seen in its own experiments—variola limited sometimes to the local primary eruption, and quite like vaccinia, variola often accompanied by a secondary eruption, which gave it its special physiognomy. Between the descriptions of the two experimenters, and those given by the Commission as to the eruptions which offered benignant characters, there was not the slightest difference; and if the children inoculated by the latter were affected with variola in consequence, so should those of Thiele and Ceely. If the virus of the latter is really vaccine, then it should give cow-pox to the cow at once, like the Jennerian vaccine; if not, then it will only produce the papules of the variolic eruption.

With regard to the pretended innocuousness of Thiele and Ceely's so-called vaccination, reported to be as absolutely harmless as true vaccination, the Commission did not believe that it was due to the passage of variolic virus through the bovine species, as it was found that it underwent a considerable attenuation in the organism of the ox, and could only be propagated through a very limited number of generations; but when returned to the human species, it appeared to regain all its activity. When first transmitted to man from the ox or horse it caused a very abundant, almost serious, secondary eruption, while all the children inoculated from this transferred virus had a discrete and almost insignificant eruption. The Commission clung to the opinion that Thiele and Ceely only practised variolation, instead of vaccination; and they therefore gave the children they inoculated better protection than if they had been vaccinated, if they did not expose them to more dangers. A question of much interest is that of the innocuousness of mediate variolation, and if it be proved to exist the Commission thought recourse would at once be had to Thiele and Ceely's method when good vaccine lymph could not be procured. But there is the grave danger of *contagion;* for in passing through the organism of animals the small-pox virus loses none of its infectious properties. Experience has only too well proved this, and this is why mediate variolation, like direct variolic inoculation, would create, if it became generalised, permanent centres of infection, which would soon cover nearly the whole globe. This danger does not exist with the vaccine virus; and therefore it is that vaccination will always hold the first place in the prophylaxy of small-pox.

I think I have now offered sufficient evidence of a clinical and experimental kind to prove that the variola of man is not that of the cow, and that by no possible means can the virus of the one be transmuted into that of the other. The bovine organism cannot reduce a general eruptive disease, due to an exceedingly infectious virus, to a merely contagious and very mild disorder, accompanied by a limited local eruption. No more can the organism of the sheep; for the many experiments which have been performed with the small-pox virus have not modified it in any respect, and it has retained all its original infective properties. Neither can the human organism transform vaccinia into variola, for had this been possible, surely the millions of vaccinations which have been made under every condition during this century, would have afforded us some evidence of such capability! If vaccinia cannot be transformed into variola, as little probability is there that variola can be changed into vaccinia.

Years ago the veterinary professor, Hering, had repeatedly inoculated the cow with vaccine lymph, and found that this gave it renewed potency. The veterinarian Numann made similar observations, and incidentally noticed that the bull is as susceptible as the cow; also that the horse and ass are, but that their vaccine, when re-transferred to man, is slower in its action than that from the cow. Besides, the transmission of vaccinia by inoculation from cow to cow is accomplished without any difficulty, and the successive transplantations of the same lymph does not appear to have any influence on the development of the resulting pustules. In the very numerous experiments of Depaul, it was found that the pustules of the last inoculated animal offered the same characters and dimensions as those of the cow first inoculated. How is it, then, that the vaccine virus can be transmitted for generations from cow to cow, cow to horse, or horse to horse, retaining all its primitive potency, and even becoming revivified when carried from the human species; whereas the virus of human variola only produces a local papulation in them, quite unlike vaccinia, which can rarely be reproduced more than two or three times, and which always develops small-pox when inoculated again on man?

From all the evidence I have adduced, there is every reason to think that those experimenters who imagined they had produced vaccinia by inoculating the cow with variolous matter, were in error; and if it be true that they employed the virus from the cow in vaccination, then if the above evidence be accepted as trustworthy, there is reason to believe that it was merely the small-pox virus returned again to the human species, just as it was obtained from it. There are instances on record in which the most serious results have followed the attempts of imitators of Gassner, Thiele, Ceely, and Badcock—outbreaks of small-pox resulting. Have the widespread epidemics of small-pox in recent times been to any extent due to these inoculations of the cow with human variola, with the view of obtaining vaccine lymph?

However these questions may be answered, one thing must be looked upon as definitely settled, and that is that small-pox is not cow-pox; they are independent and distinct members of a family group, and can no more be transmuted or converted into each other than can two dissimilar plants or animals. The error in supposing that they are transmutable—or, rather, that small-pox can be converted into vaccinia was due, in all probability, to inacquaintance with experimental methods, an inability to appreciate the results of experiments, and imperfect knowledge of animals and animal disorders. No control experiments were resorted to, as with those of the Lyons and Turin Commissions, and what may have looked like vaccinia was accepted as vaccinia. In no

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other way can I account for what must now be considered a grave error.

In insisting upon the correctness of this view, and urging its importance not only with regard to comparative pathology, but also the prevention of an odious and destructive human plague, I am well aware that I am placing myself in an attitude of antagonism to very high and estimable medical authorities in this country; and especially Sir Thomas Watson, who in a paper in the *Nineteenth Century* (which paper has been recently republished in a small volume) says, "The truth is, that the vaccine disease is really small-pox rendered mild by passing through the system of the cow; the great object of inoculating the small-pox was to produce a benignant form of the disease by diminishing the number of its pustules."

I have shown that there is no relationship between the prevalence of cow-pox and small-pox, and that the one may, and does, prevail in localities, and at times when and where the other is not seen. In Denmark, for instance, small-pox is all but extinct, and yet cases of cow-pox are far from rare. The difficulty experienced by those who believe in the unity of the two diseases, in accounting for this circumstance, is attempted to be got over in various ways. Bollinger, for instance (*Sæmmburg. Klinischer Vortrag*, No. 116), thinks that cow-pox owes its existence sometimes to humanised vaccine—the most extended and extensive of all the forms of variolic contagium, he says. "We must look," he writes, "to humanised vaccine as the source from which the greater number of cases of bovine variola have their origin." A few instances are certainly recorded in which, apparently, accidental infection of cows by recently-vaccinated people has occurred. Osiander alludes to the case of a cow which was so infected by a boy who had been vaccinated a short time previously. In the Prussian Veterinary Reports on Contagious Diseases among Animals for 1870-71, Koch reports that the vaccination of the people on a farm occasioned the infection of the cows with cow-pox, and in the same reports for the following year an outbreak of vaccinia was announced as having taken place among a lot of cows, consequent on the revaccination of three dairymaids. In three weeks the disease appeared, and gradually extended, so that in fourteen days of twenty-six cows only three escaped. The majority of the cows had only a few pustules upon the teats, but others had a number upon the teats and udder. In the same reports for 1874-75, Damman describes an outbreak of vaccinia in several sheds in the Rugen Kries, while in the district many children had been vaccinated, and the vaccine vesicles were fully developed. Schneider informed Bollinger that in 1876, after several children in a certain locality had been vaccinated, four cows in two sheds in the same place became affected with cow-pox; two dairymaids became accidentally inoculated from these, and one of the women communicated the infection to her children, who had not been vaccinated. Reiter also told Bollinger that in cowsheds where he vaccinated cows, several non-vaccinated animals showed the characteristic indications of the disease, which ran its course in the ordinary manner.

Though there is no reason to believe that cow-pox is infectious—i.e., virus *volatile*,—yet there is as little reason to deny that cows may not become affected through contact with newly-vaccinated persons, provided some vaccine lymph obtains access through a sore. But it is evident that this chance inoculation will not account for many, if any, of the reported cases of cow-pox.

(To be continued.)

FALL FROM A HEIGHT OF OVER SEVENTY FEET; RECOVERY.

By STEPHEN KARTULIS, M.D. BERL.,
HOUSE SURGEON TO THE GREEK HOSPITAL, ALEXANDRIA.

THE happy result of a fearful accident, attended with such severe injuries as shown in the following case, is, I believe, sufficient to justify me in sending it to THE LANCET. So tremendous a fall without immediate death is a rarity of the greatest interest, to say nothing of the satisfaction of seeing the case thoroughly cured in so short a time and with the most simple means a surgeon can command.

In the afternoon of 1st June last, an English boy in his eighth year, accompanied by an elder brother, a sister, and an Arab servant, were playing on the terrace of a third-storey house (one of the highest in Alexandria), and not being able to fly a kite they had with them, clambered up on the roof of a wash-house. The boy wishing to cross over a beam which connected the front with the back part of the building, slipped and fell from the top to the basement on a granite pavement, a height of seventy-one feet three inches (carefully measured). I was immediately summoned, and on reaching the house a few minutes later was astonished at finding him still alive and conscious.

On examination I found, first, that both bones of the leg were smashed in the middle, so that the limb hung from the bed on which the boy was placed like a loose piece of the body. There was a sinus the size of a shilling above the fractured bone, whence issued a slight hæmorrhage. The femur was broken very irregularly about three inches above the condyle, so that it caused a deformity of the thigh; unfortunately it was not indicated, and the hour being late, and Sunday evening, it was impossible to obtain the assistance of another doctor, consequently the necessary bandages, &c., were not sent for. However, I made from the bedclothes sufficient bandages, and cut out of a piece of wood something like a Liston splint. This was done to get the fractured parts in as good a position as possible, leaving it to the following morning, if considered necessary, to make a more efficient bandage with the assistance of another surgeon. I nevertheless paid great attention to bringing the fractures to their proper bearings, but naturally I found much difficulty, unaided, in extending and dressing. I applied the splint to the outer part of the limb and bound it from the toes to the abdomen, leaving a fenestra on the sinus in the middle of the leg for the purpose of applying antiseptics. I washed it with a solution of carbolic acid, 5 to 100, and dressed it with gauze, &c. Ordered eight grains of calomel to be given at once, and an ice-bag to be applied constantly to the head.

June 2nd.—The boy had passed a restless night with convulsions. On a consultation with Drs. Mackie and Dove, of the Deaconesses' Hospital, it was decided to leave the setting as it was, to darken the room, and enjoin absolute rest. Bromide of potassium and ergotin to be given at intervals. Temperature, 39° C.; pulse, 160. Evening: temperature, 38·07° C.; pulse, 150.

4th.—Passed a restless night with delirium and convulsion. Formation of thrombus in the sinus; no pus. Elevated limb in a cradle, extending it at same time. Temperature, 37·05° C.; pulse, 130.

5th.—Better; without fever. Wound looks very well. No pus. Patient good-tempered.

6th.—Much better. No fever.

From the 6th to the 11th the patient progressed in health, and the wound granulated. On the 8th and 9th there was a little fever (38° C.) On the left temple, where there had been a contusion, a hæmatoma was formed, which I opened. On the 13th diarrhœa came on, which lasted for three days, and then passed off after the exhibition of bismuth. The general condition of the child was now satisfactory. He had no pains in the limb. The wound had healed; but there not being in the house all the commodities necessary for the requirements of such a case in absolute rest, a good deal of urine saturated the dressing, which became very offensive. I therefore determined to change the dressing. This state of things was indicated before the bones were united, and now that the time had arrived to bring them into a good position, and having obtained the valuable aid of Dr. Zancarol, of the Greek Hospital (Dr. Mackie having previously left for England), we took off the dressing, and applied a plaster-of-Paris bandage. This operation was carried out with great care, due respect being paid to the short lapse of time since the accident.

From this date I ordered a generous diet, and after thirty-three days removed the plaster bandage.

On examining the parts I found the fractures united, and with the exception of a slight curvature in the leg it was as sound as in its normal condition. In measuring, however, the length of both limbs, the injured one was found to be about half an inch shorter than the other.

On the 24th July the boy could hobble about with a crutch with slight assistance. Ordered an orthopædic apparatus for support of the limb.

On the 15th November the boy was racing across the playground of his school with six other boys of about the same age, and came in third.

Alexandria, Egypt.

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AMYLOID DEGENERATION.

BY GEORGE BUDD, JUN.

(Concluded from p. 324.)

EXPERIMENT 6.—Having dissolved a quantity of lardacein in a strong solution of ammonia, I subjected the resulting liquid to gradual evaporation at a low heat. At the end of a day the fluid had become reduced to a fraction of its former bulk, and a thin scum separated upon its surface, consisting of precipitated lardacein. I placed a portion of this scum upon a slide and treated it with iodine, whereupon it immediately exhibited the mahogany red reaction—a result seemingly sufficient in itself to disprove Dr. Dickinson's doctrine of acidity, seeing that the reaction persists after such a prolonged treatment with strong ammonia.

Reviewing the results of these experiments, it will I think be concluded that Dr. Dickinson's theory has been founded upon a misinterpretation of a series of simple chemical combinations; for the iodine reaction is not, as he thought, due to any acidity of the waxy substance. (Experiments 1, 2, 3, 6.)

But to revert to another matter. I have said that the analyses hitherto made do not denote the composition of the simple infiltration, but rather that of the infiltration plus the cells affected. To this sum I must now add a variable quantity of unaffected cells also. Before attempting analysis efforts are made to remove unimplicated structures. The waxy organ is cut into small pieces, and these are subjected to digestion. Each piece consists of a congeries of countless cells, some waxy, others not. The unaffected cells upon the surface may be dissolved away, but those beneath will be protected from digestive action by the lardaceous cells around them, and will play a not unimportant part in the composition of the mixture when analysed.

The formula then which has been hitherto supposed to represent the composition of the infiltration is an erroneous one, and in the absence of better evidence pertaining to its elementary constitution we must examine the substance from another aspect. The brown iodine reaction exhibited by lardacein points to some possible relationship to members of the starch group. Now there is a starchy substance (dystropodextrin) normally present in the blood which agrees with the infiltration in its most essential characteristic—viz., its total disregard for all fermentative influence. That starchy substance is a nutrient compound, and is in virtue of its stable constitution just such a body as might under certain conditions prove difficult of assimilation. Moreover, waxy infiltration exhibits a peculiar predilection for that zone of the liver lobule which regulates the formation of this alimentary dextrin. Of course, it may be that these are merely coincidences, but if so they are remarkable ones.

The morbid history of the waxy cell is unknown, and all conjectures in this direction must be speculative. But it would seem to me in the highest degree improbable that the process is one of simply mechanical addition of deposit to the cell; for the latter is a living structure and vital processes are not usually of so simple a nature. It is at least possible that the infiltration may undergo assimilation in the centre of the cell where the vitality is great, and that what appears to be a cell distended and surrounded by deposit is in truth an engorged cell within a shell of unassimilated infiltration, the latter like a layer of protective paint yielding the external phenomena of the mass, but, since it is present in only comparatively small quantity, giving no conspicuous indication of its presence upon ultimate analysis. This, of course, is speculation; all I wish to do is to call attention to the fact that not only does the reputed formula of the infiltration represent a mixture, but possibly a mixture in which the unaltered deposit may be present in only very small quantity indeed.

I had intended, in conclusion, to give a brief summary, but I find that I am unable to do so without unavoidably repeating many sentences and expressions used in the course of this paper, and I do not wish to encumber the communication with tedious reiterations. I would, however, again call attention to Experiments 1, 2, 3, and 6, as I believe they disprove in a decisive manner Dr. Dickinson's theory of acidity.

Edinburgh.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morbosum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

SURGICAL CASES ILLUSTRATING WOUND TREATMENT AND REPAIR.

(Under the care of Mr. BRYANT.)

THE following concludes this series of interesting cases:—

Rupture of Gastrocnemius; Hæmorrhage into Muscle; Recovery after Incision. (From notes taken by Mr. L. W. Stephens.) — John M——, aged twenty-eight, was admitted into Job ward on Nov. 10th, 1879. Seven weeks before admission, while carrying some deals, he slipped, and, to save himself from falling under them, threw them from him, and felt that he strained the calf of his leg in so doing. He continued to work, feeling occasionally pain until Nov. 4th.

On admission he seemed a strong, healthy man, and complained of pain in his calf, which was swollen, tense, and hot. There was no œdema superficially. The internal saphena vein was full, and somewhat distorted. The right calf measured fifteen inches and a half, against fourteen inches for the left.

On Nov. 13th fluctuation was detected, and an incision about one inch long was made over the inner belly of the gastrocnemius muscle four inches below the head of the tibia. About an ounce of serum escaped, and a large blood-clot was detached by the finger, of the size of a hen's egg. The wound was washed with iodine-water, and terebine was applied, with a pad and bandage. No suppuration followed, and the temperature did not rise above 98·6°. The man was discharged cured on Dec. 2nd. The blood had been extravasated into the body of the gastrocnemius muscle.

Genu Valgum; Division of Femur; Recovery. (From notes taken by Mr. Duckworth.) — Charles M——, aged four, was admitted into Lydia ward on May 15th, 1879. The child was a fine, healthy-looking little fellow, but was knock-kneed. While in a truck he fell out upon his forehead, and was brought to the hospital with an oblique incised wound just above and at the middle of the left eyebrow.

The wound was cleaned and strapping applied, and on May 31st it was completely scabbed over.

On June 3rd operation for genu valgum was performed under chloroform. An incision about an inch and a half above the knee was made on the inner side of the right thigh with a long scalpel, vertical in direction, and three-quarters of an inch in length. A small saw was introduced into the wound before the withdrawal of the knife. The saw was turned so as to be at right angles to the femur, which was then sawn about three-quarters through, and the bone snapped. There was scarcely any bleeding, and no vessels were twisted. Terebine-oil dressings were applied, and a splint placed on each side of the limb, which was put straight by pads of lint.

On the 23rd the wound was completely healed.

On July 14th the splint was removed. The bone had united and the leg was straight, but the patient could not flex the knee more than 30° without pain. On the 26th a felt splint was applied. The boy could walk very fairly. The left foot was everted in walking.

The temperature never rose above 98·5° F.

Ovarian Tumour; Ovariotomy; Recovery. (From notes taken by Mr. Duckworth).—Martha B——, aged fifty-one, was admitted into Lydia ward on May 28th, 1879. She was a healthy married woman and mother of seven children, all alive and healthy, the youngest ten years old. About a year before she first noticed a swelling in her abdomen, and felt on her right side a hard movable lump about the size of a teacup. The lump was slightly painful on pressure. When she laid upon her left side she felt it fall to the left. The lump gradually increased in size until two months ago, when it rapidly grew larger.

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On admission the abdomen measured just below the umbilicus forty-one inches, and two or three inches lower down about forty-four. Across the middle could be felt a very large, irregular, hard mass, very movable and painful on pressure on the right side, presenting across the centre a vertical depression in a line with the umbilicus. No fluctuation was discernible. There was resonance in the flanks, dulness in front. A tympanitic note was audible over the epigastrium. No fluid thrill could be felt. The skin presented a pitted and longitudinally wrinkled appearance from over-distension in pregnancy. The urine was dark-yellow, thick, and clouded with mucus, with a good deal of phosphatic deposit, and no albumen.

On June 9th the patient was examined by Dr. Galabin. The uterus was found in the normal position. A sound passed three inches, and the uterus was freely movable by its means. Tumour just reached in front of cervix, and did not descend into the pelvis, and did not appear to be closely connected with the uterus. It was thought the tumour was a polycystic ovarian, but possibly a pedunculated fibro-cystic tumour.

On June 11th ovariotomy was done under chloroform. A manifest thrill could be made out from side to side. An incision was made along the linea alba five inches long, through the skin and fat. One vessel was twisted and the other tissues were divided on a Key's director, and the cyst exposed. The cyst bulged through the incision and was tapped with a trocar and cannula, and about six pints six ounces of a dark-coloured, porter-like fluid escaped. The tumour was monocystic and thick-walled, and connected with the right ovary. The pedicle was clamped and the tumour removed without the loss of any blood. A silk ligature was fastened behind the clamp, and the clamp left on. The intestines which appeared during the operation were gently pushed back and omentum replaced over them. The wound was closed with ten silk sutures, and pads of dry lint and broad straps of strapping placed around the abdomen, and an ice-bag placed over all. A morphia suppository per rectum. Operation at 2.45; at 3.15 temperature 98·5°. At 5 another suppository; at 10.30 temperature 98·2°.

12th.—9 A.M., temperature 99·4°; 11 P.M., temperature 100·4°.

13th.—11 A.M., temperature 99·2°; 12 P.M., temperature 100·4°.

14th.—11 P.M., temperature 100·2°.

15th.—10.45 P.M., temperature 100·4°.

16th.—10.30 A.M., temperature 98·4°; 9.40 P.M., temperature 100·2°.

17th.—11 A.M., temperature 99°; 10 P.M., temperature 98·5°.

18th.—11 A.M., temperature 98·8°.

19th.—10 A.M., temperature 98·5°; 10.30 P.M., temperature 99°.

20th.—11 A.M., temperature 98·4°; 3 P.M., dressings removed for first time since the operation, and all the sutures removed. The incision is healing by primary union, and looks well. 9 P.M., temperature normal.

23rd.—Temperature 99·1°; evening, 99·6°.

24th.—Temperature 98·5°; evening temperature 100°.

25th.—Morning temperature 98·5°; evening temperature 99·2°.

26th.—Morning temperature 98·5°; evening temperature 98·6°.

The patient has progressed without any bad symptoms, and was discharged on July 16th, "well;" but there is no report after June 26th.

Puncture, penetrating; Wound of Abdomen; Protrusion of Omentum; Recovery. (From notes taken by Mr. Griffiths.)—H. H——, aged twenty-five, was admitted into Accident Ward on Dec. 7th, 1879. The patient was stabbed in the abdomen, and was not aware of the injury until about five minutes afterwards, when he felt a pricking pain, and upon examining himself, found that he was bleeding freely. Soon after the injury he vomited, and vomiting occurred after.

On admission he had an incised transverse wound of the abdomen, about one and a half inches long, and about two and a half inches above the centre of Poupart's ligament, from it a piece of omentum was protruding, and an escape of peritoneal fluid. The omentum was returned after having been well washed with carbolic lotion, and the wound closed with wire sutures, the peritoneum not being included. He was ordered milk diet and one grain of opium twice a day. Eight days later the sutures were removed, the wound having nearly healed. On the 17th he left the hospital, against advice, but apparently well, the reparative process having gone on satisfactorily.

The temperature never rose above normal, indeed on several days it was below the standard.

UNIVERSITY COLLEGE HOSPITAL.

THREE CASES OF TUMOUR OF THE ANTRUM OF HIGHMORE.

(Under the care of Mr. CHRISTOPHER HEATH.)

THE following is the third and last case of the series begun last week:—

CASE 3. *Epithelioma of the Antrum; Pneumonia; Death.*—R. M——, aged fifty-nine, a shoemaker, was admitted on May 30th, 1879. At the beginning of the previous month he had noticed that his right nostril was obstructed; a week or two afterwards the lower lid of the right eye became inflamed, and a swelling which commenced here rapidly extended over the right cheek. About this time a painful swelling of the hard palate appeared, and the patient consulted a dentist, who extracted a tooth. Shortly afterwards he applied at the hospital. His brother was stated to have died of cancer of the kidney. The other members of his family were, so far as he knew, healthy.

He was a pale but well-nourished and well-preserved man for his age, though he had, he stated, lost flesh latterly. Temperature varied from 99° to 100° F. He complained of a feeling of stuffiness in his jaw, but of no pain.

The skin of the right side of the face was reddened, œdematous, and tender, and the cheek was projected outwards by the tumour beneath it. The right eyelids were closed and œdematous, but could be opened slightly, displaying chemosis of the conjunctiva, a clear cornea, and a somewhat sluggish iris. The right nostril was obstructed, and there was a purulent discharge from it; the nasal duct on the right side also appeared to be obstructed, giving rise to overflow of tears. To the touch the tumour gave the idea of a soft solid rather than of fluid. Most of the right half of the hard palate was absorbed, a soft elastic swelling occupying the roof of the mouth, the mucous membrane of the latter being congested and swollen. The teeth of the upper jaw were carious or absent, but the alveolar process was neither displaced nor softened. Owing to the resistance of the patient, an examination of the posterior nares could not be made. The lymphatic glands in the posterior triangle of the neck were enlarged, but free from tenderness. The mouth could not be opened to its full extent, and speech was slightly affected. The tongue was broad, pale, and marked by the teeth.

On the 31st a fine trocar with cannula was inserted into the swelling on the roof of the mouth, and a few drops of stinking pus evacuated. The opening made by the trocar was subsequently enlarged, and a drainage-tube was passed into the antrum.

It soon became evident that the growth was malignant, and as the man's condition became worse daily, removal of the upper jaw offered the only chance of prolonging his life. This was accordingly done on June 4th. The floor of the orbit was taken away, but it was impracticable to wholly extirpate the growth in this direction, as the orbital structures were infiltrated. The somewhat free bleeding was restrained by the actual cautery, and the cavity of the wound was stuffed with strips of lint soaked in a strong solution of chloride of zinc.

The growth appeared to have commenced in the antrum, the walls of the latter being partially absorbed, the anterior almost wholly, thereby allowing invasion of the orbit, the mouth, and the pharynx. Several pieces of dead bone, surrounded by offensive pus and débris of broken-down growth, were found in its cavity, thus accounting for the inflammatory condition of the superjacent skin, and the purulent discharge from the mouth and nostrils. In other parts the growth was of a yellowish colour, translucent, gelatinous, and vascular. Several ordinary soft gelatinous polypi were extracted from the right nostril during the operation.

In sections taken from the margin of the growth near the gum, the microscope showed cylinders of epithelium cells, irregular in form and sinuous in outline, sometimes anastomosing, set in a stroma made up of fibrous tissue and spindle-shaped cells. Epithelium "nests" were observed here and there, but these were few, small, and ill-developed.

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The papillæ of the mucous membrane covering the gum, where the latter was infiltrated, were hypertrophied. The histological characters of the growth appeared to correspond with those of the "épithéliôme tubulé" of Cornil and Ranvier.

On June 13th pneumonia was present at the base of the right lung, and on the following day friction sounds were audible over the affected area. The edges of the skin wound had united, except at the inner angle of the orbit.

On the 16th there were dulness, extremely weak breath sounds, diminished local fremitus, and resonance to the angle of the right scapula, with bronchial respiration above. The lymphatic glands, which had become larger and very tender in the right posterior triangle, had diminished in size after treatment with belladonna and poulticing.

On the 18th, the physical signs of pneumonia at the left base became evident, and the general condition of the patient worse, though he wanted to "be up and about." The fetor from the cavity of the wound was now almost intolerable, and one or two sloughs had separated.

From this time the chest symptoms increased in severity, and he died on June 26th.

Necropsy (by Mr. BARKER) *twenty-five hours after death.*—Rigor mortis well marked. Body well nourished. The serum in the pericardium was normal in amount and characters. The heart was somewhat enlarged, and rigor mortis was well marked; a good deal of fat was noticed chiefly on the anterior surface. The superficial veins were somewhat loaded. The right auricle contained firm post-mortem clot. The right ventricle was also engorged with clot, part of this having evidently formed during several hours before death. The left ventricle was firmly contracted, and contained a small quantity of tough coagulum. The cardiac valves were healthy. The left lung was extremely emphysematous anteriorly, and posteriorly it was covered with recent lymph, hardly adherent. There were six ounces of serum in the left pleural cavity. The inferior lobe was considerably congested, and some small portions were collapsed. Section showed general congestion and grey hepatisation and softening at numerous points, but the lung was not gangrenous. The bronchi were intensely congested in patches down to the smaller ramifications, and full of dirty brown sero-mucous fluid. The right lung was adherent to a large extent to the ribs, particularly over the lower lobe, and by more recent lymph above. A large abscess opened on removing lower lobe from chest wall. This abscess, occupying a large portion of lower border of upper lobe, upper border of lower lobe, and extending deeply into the substance of the lung, was a ragged, ill-defined space, full of black, very fetid broken-down lung tissue, and was surrounded by blackened, sloughing, very soft lung tissue. The bronchi, as in the left lung, were intensely congested, increasingly so towards the finer ramifications, and full of foul sero-pus. The bronchial glands were much enlarged at root of both lungs. The tongue was covered with a thick covering of foul material, apparently dropping down from the roof of the mouth. There were enlarged papillæ at the base, the size of millet seeds, raised, pedunculated, and deeply pigmented. The œsophagus was normal. The mucous membrane of the larynx and trachea was inflamed throughout. There was a quantity of grey mucus in the ventricles of the larynx. The anterior surface of hard and soft palate was covered with foul, tenacious pus. The operation-cavity extended back beyond orbit to the pterygoid fossa upwards to sphenoid bone. The septum of the nose was carious, and giving way. The orbit and eyeball had not been particularly injured by the operation. The liver was apparently normal. There was no post-mortem staining in the great vessels, nor extravasation in the mucous membranes of the intestines.

LEEDS GENERAL INFIRMARY.

CASES OF NERVOUS DISEASE, PRESENTING OPHTHALMOSCOPIC PHENOMENA.

FOR the notes of this interesting series, concluded from page 447, we are indebted to Dr. E. H. Jacob, late resident physician.

CASE 10. *Multiple Paralysis; Anæsthesia; Optic Neuritis.*—H. J——, aged nineteen, was admitted on April 30th, 1878, under the care of Dr. Heaton. She was married, and had had two children. Her last confinement, four months ago, being easy and natural.

Six weeks ago she found one morning she had lost sensation in the left half of her upper lip. The next day this had extended to the whole cheek. The day after she had some loss of sight in the left eye, and the numbness extended to the forehead and side of the neck. With this her right leg began to be numb, though there was not complete loss of sensation. In a few days the sensation returned to the anæsthetic parts, but there still remained some loss of sight. About a week after this the left leg began to lose sensation, and in four days she had lost all power over it as well; this was followed by a similar affection of the right leg, ending in complete paraplegia. At the beginning of the attack she lost power over her bladder for a week; this returned naturally.

The patient was a bright-looking intelligent girl, but rather pale. She answered questions clearly. There was complete loss of power over both legs, and sensation was so far impaired that she could not feel a light touch anywhere below the umbilicus. Reflex action was increased. There was nothing abnormal in the back. No tenderness or increase of sensibility to heat or cold. She said her legs sometimes burned and jumped. There was complete loss of sight of outer half of the field of vision on the left side. The pupil was dilated and insensible to light; the optic disc was a large, woolly-looking mass, with dilated tortuous vessels partially hidden by effusion. The disc in the right eye was rather white, but apparently healthy. She was ordered brisk, cutaneous faradisation with a metallic brush. The muscles acted to a moderately strong current. A tonic iron mixture was also prescribed.

On May 6th, she could move her toes slightly, and feel a very light touch on both legs. On the 8th, she could move her feet a little, sensibility was perfect. The field o vision was perfect, and there was less effusion on the disc. On the 13th, there was still effusion over the whole fundus, especially the apparent inner half. The disc was woolly but fairly defined. There was a slightly more marked patch of effusion straight above the disc. On the 17th, the disc was much clearer, but there were some streaks of effusion along the vessels. She could walk with assistance, and read large print with the left eye. On June 3rd, she could walk slowly without assistance, the left disc was clear but the vessels were large and tortuous. She could read moderate-sized print, but said the letters looked misty. She was discharged a few days later.

Remarks.—The severe, but transient and variable, nature of the paralysis and anæsthesia in this case removes it from the category of organic disease. Ophthalmoscopic signs, however, though functional amblyopia is common, appear to be very rare in hysterical cases. No case of the kind is mentioned by Dr. Gowers in his "Atlas of Medical Ophthalmoscopy," although he quotes Landolt as having seen dilatation of vessels and serous transudation into the retina, in connexion with extreme amblyopia. Unilateral optic neuritis is a phenomenon of rare occurrence, though two cases have been reported by Dr. Hughlings Jackson, in which the affection was on the opposite side to the cerebral tumour.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Granular Contracted Kidney.—Dilatation of Fallopian Tubes.—Fatty Degeneration of Muscles in Infantile Paralysis and Talipes.—New Method of Mounting.—Cancer of Breast.—Melanosis of Finger.—Epithelioma of Penis.—Aneurism of Mitral Valve.—Disease of Pulmonary Valves.—Ulcer of Stomach.—Drawings of Cancer.

THE ordinary meeting of the Pathological Society was held on Tuesday, the 16th inst., the President in the chair. There was a large attendance of members. A number of specimens illustrating the changes met with in granular contracted kidney were exhibited by Drs. Saundby and Greenfield, and the discussion upon them was the main incident of the evening. At the close of the meeting the President announced that Dr. Hilton Fagge had consented to introduce the discussion on Rickets, which was arranged to commence at the second meeting of the Society in November.

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Dr. SAUNDBY, before describing his specimens of Chronic Granular Kidney, which were under the microscopes in the adjoining room, referred to the views of Johnson, Traube, and Gull and Sutton, each of which was partly true but also insufficient. He classed the changes into those in the tubes, in the interstitial tissue, and in the vessels. He claimed that his specimens showed the epithelium in the tubes to be actively proliferating, and filling the tubes with free nuclei; in places these nuclei could be seen undergoing transformation into spindle cells, while where the change was more advanced, wide tracts of hyaline connective tissue containing a few spindle and stellate cells were seen. In many places part of a straight tube was seen filled with a delicate granulation tissue which, becoming gelatinous, formed a tiny mucous cyst. It might be thought that this conversion of epithelium into connective tissue was a breach of Remak's embryological law, but as the Wolffian ducts, tubes, and glomeruli are believed to be formed from the mesoblast, we must regard the renal epithelium as genetically connected with the connective tissues. Dr. Hamilton has recently described a similar process in cirrhosis of the liver, Dr. Creighton in the mamma, and it can be demonstrated in the lungs also. Secondly, the capsule and intertubular tissue is widened by swelling, by increased intercellular secretion and growth of its formative elements; but there is an entire absence of any appearance of general nuclear proliferation. The Malpighian capsules are also thickened, the glomeruli atrophy, and the epithelium lining the capsules and covering the vessels proliferates and forms a little mass of granulation tissue which in most cases becomes gelatinous and forms a mucous cyst. Thirdly, the vessels with differentiated coats are greatly dilated, the endothelium proliferates and narrows the lumen, the elastic laminæ are swollen and separated, the muscular coat is swollen and hypertrophied, and the adventitia blends with the hyaline connective tissue around it. The vessels with homogeneous walls are seen to be formed of concentric layers of spindle cells identical with muscular fibres, the walls being of great thickness. These vascular changes are merely those met with in the vessels of inflamed tissues generally; but some amount of the thickening of the vessel-walls probably occurs anterior to the commencement of inflammation. The commencement of the lesion in the parenchyma and the filling of the tubes with nuclei have been often observed and taught. To these views he would add the statement that the nuclei of the proliferated epithelium become converted into spindle cells and connective tissue. A similar fact has been noted elsewhere by Drs. Hamilton and Creighton. The mode of cyst-formation he has described is also, he believes, new in this situation. His views on the much debated question of the vascular changes are those generally held on the Continent.—Dr. GREENFIELD had promised the secretary to exhibit some specimens bearing upon this subject, but had felt a difficulty in doing so, as he was in ignorance of the ground to be traversed by Dr. Saundby. He had hoped that Dr. Saundby would have discussed the pathology as well as the histology of the affection, would have dealt with its etiology, and shown how it interferes with the renal function; but in all this he had been disappointed. There was much doubt about the whole subject; all of the three views mentioned by Dr. Saundby contained parts of the truth, and with improved methods of research it was reasonable to hope for more definite and accurate knowledge. The specimens he exhibited were intended to show what he believed to be the initial and important changes in the kidney; they were the antitheais to Dr. Saundby's. He had been quite unable to trace the development of connective tissue from the epithelium, and having examined a large number of specimens he was of opinion that this change must occur in only a small minority of cases, if at all. Dr. Saundby had not adopted Charcot's view, which was, that interstitial change was often subsequent to epithelial change. He had pointed out that after ligature of the ureter in a guinea-pig great interstitial proliferation was found, while the glomeruli and arteries were free from change, in this respect differing markedly from granular kidney. He suggested that this was subsequent to epithelial proliferation. His own specimens illustrated a condition common to many forms of renal disease, constituting a primary change in all cases of chronic disease, even the lardaceous form. The change in question is a proliferation of the epithelium lining the glomeruli which leads to a formation of connective tissue, compressing and so causing atrophy of the contained capillaries. There is also proliferation of the epithelium covering the glomerulus, and there may be a fusion of this tissue with the lining of the capsule in one fibrous mass, which he thought was the mucous degeneration of Dr. Saundby. There is in addition a thickening of the fibrous capsule of the glomerulus which spreads out around the convoluted tubes. This he believed to be the initial and most important change in chronic renal diseases. If the kineys of people suffering from a general fibroid disease in whom there is morbid renal change are examined, this change in the glomeruli is found in scattered patches. The glomerulus is the apex or extremity of a renal tube, and, with it, may be looked upon as a renal element. It is well known that the greater part of the water of the urine is secreted in the glomerulus; if this then is interfered with the tube below is deprived of its usual stimulus and the epithelium lining it atrophies and dies. And further, the arterial flow being obstructed through the glomerulus the circulation in the vessels beyond—those round the convoluted and straight tubes—is also impaired, causing lessened excretion from them and their ultimate atrophy. This glomerular change is often seen to be limited to certain conical patches of cortex, and to regions surrounding the interlobular arteries. In pure granular contracted kidney the change is essentially atrophic: the tubes waste, the epithelium degenerates and remains as only a few cells. He had found this change in nearly all examples of chronic renal disease. In the form met with after scarlatina it was very constant and might be the only change. One of his specimens was taken from a boy who died from acute dropsy on the forty-ninth day after the onset of scarlatina, and the change was almost limited to the glomeruli. In the large white kidney the change is essentially interstitial, and in the glomeruli all the stages of the change are seen. It is also met with in the last stage of lardaceous disease when from capillary obstruction there is no longer a flow of blood round the convoluted tubes leading to loss of function and atrophy. In certain cases the granular disease is connected with primary change of the arterioles, a thickening of all the coats. The later changes met with in the vessels are those of atheroma, or endarteritis deformans, a thickening of the inner and outer coats. He did not think Dr. Saundby had brought forward a clue to the pathology of granular contracted kidney. He had drawn attention to these glomerular changes because they are not mentioned in the text-books, or hardly at all; they are not the primary change in the large white kidney, and in acute renal disease there is inflammation with exudation and epithelial degeneration. In scarlatinal nephritis he had traced the connexion between the changes in the glomeruli and tubes. In the kidneys of a boy who died from renal disease three months after scarlatina, and which were at first sight quite healthy, he had found at certain parts remarkable proliferation of the cells covering the glomeruli, while in the convoluted tubes prolonged from them the epithelium had lost its granular character, and had become flattened below.—Dr. MAHOMED thought Dr. Saundby had added considerably to our knowledge of this subject, his specimens showed the origin of connective tissue from the epithelium. But he was sure that all granular kidneys had not this origin, and it was a great mistake to speak of this disease as one—there were three distinct forms of it. The first was that in which there is granular kidney without any clinical evidence of it, a part of a general fibroid disease—Sir W. Gull's arterio-capillary fibrosis—where there is a distinct intertubular exudation followed by dense fibrous change. The second was the mottled yellowish granular kidney with tubules full of epithelium undergoing degeneration—a true granular kidney with symptoms during life. These changes largely result from a fibroid degeneration of the epithelium. The form of granular kidney met with in young people shows well marked epithelial change. The third form is the lardaceous granular kidney. Many large white kidneys begin as lardaceous disease, followed by changes in the arteries, and a true nephritis producing the granular form of the disease.—Dr. N. MOORE could not clearly distinguish between Dr. Mahomed's first two forms of the granular disease. He was also anxious to learn whether Dr. Saundby was able to point out the difference between the two classes of granular kidney, which were clinically so distinct; in the one often following scarlatina there were the symptoms usually associated with a large swollen kidney, and death ensued in two or three years, and the kidneys were found to be small, pale, with a thickened capsule; in the other there was a general fibroid change throughout the body. The two kidneys when

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granular may be indistinguishable, but surely they begin differently.—Dr. MAHOMED explained that arterio-capillary fibrosis is met with in any form of true renal disease; it may occur alone, or in conjunction with kidney disease proper.—Mr. EVE thought that serious objection must be taken to Dr. Saundby's view of the development of connective tissue from the nuclei of epithelial cells; it was entirely contrary to our present knowledge; it was common to see collections of leucocytes round epithelial changes, especially in the breast and tongue.—Dr. HOGGAN thought Dr. Saundby's specimens did not support his statements. What were called small cysts he regarded as tubes bare of epithelium seen in section, while the spindle-shaped cells were the nuclei of the shrivelled and atrophying tubes seen in the same way.—Dr. SAUNDBY reminded Mr. Eve that the kidney was developed from the mesoblast, and that therefore its epithelium had genetic relations with connective tissue. He thought that granular kidneys were subject to intercurrent attacks of inflammation which caused interstitial fatty degeneration, which made the main difference between the different varieties of the disease. He made no pretence whatever to throw light on the etiology of the disease, which he considered quite a distinct subject, and too large to be combined with that he had brought forward, which was simply the histology of the affection. One objection to Dr. Greenfield's view was the fact that the water-secreting function was not early interfered with, as would be the case if the glomeruli were primarily diseased.—Dr. GREENFIELD replied that the increased flow of water was due to the greater lateral pressure in the healthy unaffected glomeruli necessarily resulting from the obstruction in the diseased; while the atrophy of the excreting tubules explains the diminution of the urinary solids. The first form of chronic granular change is probably primarily vascular; the other arises from renal change.

Dr. MULES (Manchester) showed some specimens mounted by a new method introduced by Mr. Priestley Smith, the minor details of which he had slightly altered. They were specimens of various diseases of the eyeball, mounted in glycerine jelly. They were prepared by being hardened in Müller's fluid and then decolorised by chloral, or hardened in alcohol; others were mounted fresh from carbolic glycerine. The specimens shown had been mounted two years, and their colour and appearance were perfectly preserved. In answer to Mr. Doran, Dr. Mules stated that by this method the œdematous appearance of specimens could be preserved.

Mr. NUNN showed drawings and sections of three tumours. The first was a Cancer of the Breast, which was removed from a lady between fifty and sixty years of age, from whom Mr. Curling had removed a tumour seven years before. The recurrence was small, and removed early. Dr. Goodhart had examined the first tumour, and stated that it was a peculiar form of scirrhus: his specimen showed that the recurrent growth retained these peculiar characters, for it consisted of very minute cysts lined by columnar epithelium, and containing a quantity of obsolete blood in the centre. The second was a specimen of Melanosis of the Finger, also from a lady between fifty and sixty years old. For more than a year she had noticed what looked like an ecchymosis on the finger, which was supposed to be due to the pressure of a ring worn on the next finger during a squeeze of the hand. During the last six months it took on a more malignant aspect, and declared itself as melanosis. The melanotic cells are diluted, as it were, with a large number of leucocytes, as if the later growth had been a development of these colourless cells between the older pigmented ones. The third was an Epithelioma of the Penis from a gentleman aged seventy, showing a great development of epithelium.—Mr. GODLEE exhibited before the Society some years ago a tumour closely resembling the cancer of the breast; it had recurred locally, after removal by caustics, and then again in the axilla; it was composed of similar cysts containing blood. Mr. Nunn's case was the only other example he knew of.—Dr. THIN said that the section of the breast tumour under the microscope satisfied him that the tumour was one of the class he had described in a paper he had read before the Medico-Chirurgical Society as duct-cancers. These duct-cancers were essentially the same in structure as the tumours usually called adenomas. In the commoner form, that usually recognised as adenoma, a cluster of small epithelial tubes was the usual appearance; but in some cases, and Mr. Nunn's case seemed to him to be one of them, a further development took place. Instead of the tubes a large mass of cells was formed. These cells broke down in the centre of the mass, leaving a cavity lined with epithelium, and from the walls of the cavity secondary growths sometimes sprouted into the free space. He had been able to examine sections of tumours prepared in various London hospitals and in Edinburgh, and had found transition forms from the commoner adenoma to the rarer forms the growth assumed, of which the present was an example. The cancer of the mamma following disease of the surface of the nipple was in all the instances he had examined of this form, and as in these cases the disease was rapid and fatal, it seemed that the disease, when it took its origin from the epithelium of the larger ducts near the surface of the nipple, was much more severe than when it developed deep in the breast from the smaller ducts. The clinical difference between this form and scirrhous cancer was, he thought, illustrated by the history of Mr. Nunn's case.—Dr. S. MACKENZIE asked how long the finger had been removed, whether there was any recurrence, and whether the blood had been examined at any time. He thought an examination of the blood would be of great service in showing the existence of dissemination of the pigment.—Mr. NUNN replied that there was no secondary deposit and no recurrence; the blood had not been examined. He had some specimens of adenoma of the breast showing a structure just like the prostate gland. His specimen of cancer of the breast was referred to the Morbid Growths Committee.

Dr. N. MOORE showed a specimen of Disease of the Valves of the Pulmonary Artery, which was found in a woman aged thirty-six, who died a week after parturition from right pleuro-pneumonia. The valves were red and swollen, and affected with old and probably also recent endocarditis. He could not find any evidence of pulmonary embolism. Dr. N. Moore also showed a specimen of Ulcer of the Stomach. The patient, a woman aged thirty-four, died from intestinal obstruction due to a band constricting a loop of ileum. For three to four days before death there was uncontrollable vomiting, and after death a small ulcer was found in the stomach, close to the pylorus, and a similar one in the jejunum. He thought the gastric ulcer was the result of the vomiting.

During the evening the following card specimens were exhibited:—

1. Dilatation of Fallopian Tubes, by Mr. Alban Doran.
2. Dissection of Calf of Leg in a case of Infantile Paralysis, showing Fatty Degeneration of Muscles and Nerves, by Mr. Alban Doran.
3. Dissection of Leg in Congenital Talipes Equino-varus, showing Fatty Degeneration of the Muscles, by Mr. Eve.
4. Drawings of Cancer, by Mr. Hulke.
5. Aneurism of Mitral Valve, by Dr. N. Moore.

The meeting then adjourned.

CLINICAL SOCIETY OF LONDON.

Spontaneous Gangrene of Fingers.—Congenital Cystic Hygroma.—Intrathoracic Sarcoma.

THE ordinary meeting of this Society was held on the 19th inst., Dr. E. H. Greenhow, F.R.S., President, in the chair. The subject of Cystic Hygroma, introduced by Mr. T. Smith, led to some interesting remarks; and the question of the differential diagnosis of pleural effusion and new growths was raised on a case of the latter contributed by Dr. de Havilland Hall.

A remarkable case of Cardio-Pulmonary Bruit was shown by Dr. TAYLOR.

Mr. T. SMITH read notes of a case of Spontaneous Gangrene of the Thumb and Fingers of the Right Hand. A fairly nourished girl, three years of age, was admitted into the Hospital for Sick Children, suffering from an abscess in the thigh. The abscess was treated antiseptically. For some time she had suffered from pains in the feet and legs, and her extremities were mostly bluish and cold. Whilst under treatment for the abscess the fingers of the right hand became the seat of an erythematous blush, and no pulse could be felt at the wrist; then blebs formed, and the fingers and thumbs became gangrenous, separating at the metacarpal joints. Mr. Smith expressed himself unable to account

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for the gangrene. It seemed as if the habitual chilled state of the hands had gone beyond its usual limit, and so led to blood-stasis and gangrene; for in other respects the child's health was good, and there was no evidence of renal or cardiac disease, nor of embolism. The gangrene was limited to the hand.—Dr. SYMES THOMPSON said that five or six years ago he was consulted by a Russian general, who suffered so much from coldness and powerlessness in the feet that he could only walk for five or ten minutes at a time, and then had to sit down. Dr. Thompson could not find a sufficient cause for this; and physicians consulted in St. Petersburg, Vienna, Berlin, and Paris were equally at a loss to account for the condition. Since then the patient has been attacked with gangrene of both lower extremities, from the toes to the ankle. In reply to the President, Dr. Thompson added that the heart was healthy, there were no signs of atheroma, nor did the pulsation in the lower limbs appear diminished.—The PRESIDENT suggested that the condition in Mr. Smith's case was allied to chilblain.—Mr. CROFT asked whether the blood had been examined microscopically. In obscure cases of gangrene some light might be thrown by noting not only the relative proportion of the red and white corpuscles, but the quantity of fibrin in the blood. Gangrene might be due to deranged nerve-supply, to arterial degeneration (as probably in Dr. Thompson's case), or to altered composition of the blood, as apparently in Mr. Smith's case. To such blood condition alone could be explained the occurrence of "white leg" in young women during menstruation. The child was in ill health from its large abscess in the thigh, and that might have increased the tendency to clotting in the vessels, aided by the languid circulation. Were there any septicæmic symptoms?—Mr. GOULD asked whether there was any evidence of carbolic-acid poisoning when the gangrene came on. In a case of amputation at the hip-joint he brought before the Society last year thrombosis occurred, and he attributed it to carbolic-acid poisoning.—Mr. MACNAMARA said that in poisoning by carbolic acid the movements of the white corpuscles are arrested; and it was possible that clot-formation would be started by this action of carbolic acid upon the vitality of the corpuscles.—Mr. SMITH, in reply, said that carboluria did not occur until three weeks after the onset of the gangrene. He had observed carboluria, in many cases, of children under carbolic-acid treatment. His own view was that expressed by the President, that the case was an extreme form of "chilblain." However, the child had no chilblains elsewhere; she was well fed and cheerful, but flabby textured. There were no signs of septicæmia. The blood was not examined. The spleen was palpable, and there was slight rickets.

Mr. T. SMITH also read notes of Two Cases of Cystic Hygroma. In each the growth was of considerable size, extending from the neck into the axillary and subscapular regions—and both were cured by the same process. The first case was that of a female child about three years old, who came under care in September, 1878. The tumour reached from the elbow to the axilla, and across the thorax as far as the sternum. It grew slowly from birth till the age of one and a half years. Four weeks before admission a blow had been inflicted on the swelling; and when admitted it was acutely inflamed, non-fluctuating, and with a firm, shining surface. In three weeks the local inflammation had subsided, and the cysts had become retracted; so that when the child left the hospital five months later only a sort of fibrous thickening remained. The second case was a female child, aged two years and a half, admitted in August, 1878, with a large hygroma of the neck, extending back to the scapular region. It was composed of large cysts, which lodged in the neck and axilla, and were traversed by large veins. Setons were introduced, and on the third day the cyst had begun to be inflamed. Suppuration followed, and the child was very ill for many weeks, but was eventually discharged, after being in hospital for six months, with the tumour consolidated and very much diminished. Through the kindness of Dr. Barlow he was enabled to show a third case. This was a baby six weeks old, with large cysts below the chin on each side of the neck. Mr. Smith said that about five years ago he collected cases of this affection in a paper in St. Bartholomew's Hospital Reports, and he there remarked upon the capricious progress of such cases—how sometimes the growth would diminish in one direction and increase in another. The largest example was the case of a child at the Hospital for Sick Children, where the hygroma was larger than the child itself; it extended from the chin to the pubes, and down one arm. The child lived to eight or nine years, and died from pneumonia and inflammation of the hygroma. In the paper referred to he had advocated the use of setons for want of a better method of exciting inflammation, although it was attended with risk. He had never tried the iodo-glycerine solution, but should think it would be successful in cases of single cysts—cases, however, which it would be easier to cure by other methods. In all cases where he has tried to remove the cysts the wound has healed badly.—Mr. WARRINGTON HAWARD had no doubt that the use of setons was the simplest form of treatment, although attended with risk. Still a considerable number of cases do undergo spontaneous cure. He had lately seen two such cases. In one case the child fell down and struck the tumour; blood was effused, and as it underwent absorption the tumour contracted. The child being out of health, Mr. Haward had advised operation to be deferred, and then this happy accident occurred, and the growth eventually quite disappeared. In another case, of less extensive character, spontaneous cure took place without obvious injury. The child was four years of age, and it was noticed that, as one part of the tumour diminished, other cysts seemed to become rather more tense. He presumed that as in other serous cysts—e.g., hydrocele—inflammation alters the secreting surface; and, as in hydrocele, sometimes a little and sometimes much inflammation was necessary to start absorption. He, therefore, advised that children suffering from these congenital cysts should be observed for a time before having recourse to operation, for here, as in nævus, the larger the growth the more likely was it to get well spontaneously, because of its greater liability to injury.—Mr. GODLEE asked for information upon the pathology of these cysts. He had lately removed some small cysts from a child's arms, the lining membrane of which showed typical lymphatic epithelium. The tumour resembled a fatty growth before removal. The wound healed in three or four days.—Mr. PARKER had seen two or three of these cases. The first was one at Great Ormond-street Hospital, which, at Mr. Smith's suggestion, he treated by the use of setons, and the case did well for a time, but the hygroma refilled three or four months afterwards. Later the child contracted scarlet fever, and after that the hygroma disappeared. He remembered another case at the London Hospital, under the care of Mr. Maunder, who, in removing it, found it had deep connexions with the cervical vertebræ. The growth consisted of connective tissue, with loculi full of fluid. In a third case the cyst, which was a single one, dwindled away after slight inflammation had occurred. He asked whether it was not unusual to meet with them on both sides of the neck.—Mr. HOWARD MARSH said that before Mr. Smith's paper—one of the best essays in children's surgery—was written, but little was known about these cysts. Mr. Cæsar Hawkins, some years ago, had pointed out the great difficulty there was in their removal owing to their deep connexions, for in one case Mr. Hawkins found the growth passing between the œsophagus and the spine. But they were not limited to the neck. Mr. Holmes had a case below the ischium, and in removing it exposed three inches of the rectum. Mr. Marsh himself once saw a child, nine days old, with a cystic tumour of the cheek, preventing closure of the mouth, and sending out lobes which pushed the soft palate on one side. As the growth was enlarging towards the pharynx he made an incision over the tumour, and dissected it out from under the zygoma, taking away also one-half of the soft palate. The child recovered. Sometimes these cysts occurred on the trunk, sometimes on the arms. He agreed with Mr. Haward that in many cases they may be left alone, but in some the growth goes on enlarging, and it is imperative to interfere. The use of setons was dangerous, often attended by severe illness, sometimes with loss of life.—Mr. PARKER added that he had under his care an adult suffering from a similar cystic growth in the neck, which he had injected with Morton's fluid, the injection being followed by much pain in the arm.—Mr. SMITH, in reply, endorsed Mr. Haward's statement that the larger of these cysts were those most prone to get well spontaneously. Still, sometimes interference had to be had recourse to when there was danger from suffocation. Any kind of curative treatment, of course, involved risks. The disease does occur in other parts of the body—e.g., they had one case of cystic hygroma of the kidney at the Hospital for Sick Children. He had seen another case where a child's belly became so distended and round that it looked like a large gooseberry. The child was

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so well that Mr. Smith postponed operating; and one day the child, after dinner, fell off a high chair and "burst himself." The swelling thenceforth disappeared. No doubt this was a case of this class. He could not say what was the precise pathology of these hygromas, to which Mr. Godlee's case seemed to belong. Cysts separated by tissue like that in the umbilical cord were their gross features. He did not think it very rare to occur on both sides of the neck. Mr. Cæsar Hawkins gives an instance where the disease underwent an apparent spontaneous cure, but at the end of fifteen or twenty years began to grow again.

Dr. DE HAVILLAND HALL read notes of a case of Intrathoracic Sarcoma. The patient, a clerk, aged nineteen, had enjoyed good health until nine weeks before, when he "caught cold" whilst playing cricket, suffered from shortness of breath, and a slight cough, but had no hæmoptysis, nor was there severe pain. In three weeks' time he gave up work, and was treated by a medical man for pleurisy. He was admitted into Westminster Hospital on Dec. 6th, 1879. He lay on the left side; there was absolute dulness on this side in front from the second rib downwards, and behind from the spine of the scapula. Vocal fremitus was diminished, but not quite abolished. The heart's impulse was seen one inch within and below the right nipple. Next day he had dyspnœa, and the dulness extended to the clavicle and across the sternum above. An exploratory puncture with the aspirator resulted only in the passage of some cheesy matter. On Dec. 8th he was again tapped, but only blood obtained. Mr. Gould then made an incision, and found caseous material as far as he could reach; and two or three other aspirations in other places yielding no fluid the wound was dressed antiseptically. The course of the case was marked by attacks of dyspnœa. On the 22nd he was much collapsed. Pulse 102; respiration 40. There was dulness at the right base and tubular breathing. He had an alarming attack of dyspnœa on this day, passed a restless night, became cyanosed, and died on the 23rd. The minimum temperature during illness was 98° to 99°; maximum 99·4° to 101·2°. Quantity of urine passed varied from 10 oz. to 24 oz. per twenty-four hours. Post-mortem examination showed an enormous mass of new growth filling the left side of the chest, in the pleural cavity, depressing the diaphragm, and extending across the middle line. The pericardium was displaced to the right of the mid-sternal line, and was adherent to, and implicated by, the growth. The left lung lay completely collapsed along the spine; the bronchi on the right side were full of secretion, and the lower lobe of the lung contained a recent infarction. Some outlying nodules of new growth lay along the spine, behind the parietal pleura. The upper part of the tumour was pale yellow; central part pulpy and caseous; its lower part firm and white. The splenic capsule was thickened; liver and supra-renals normal. The growth was a round-celled sarcoma. The points of interest in the case were:—1st, Short history of illness, the patient being strong and well enough to play cricket only nine weeks before; 2nd, the physical signs of pleural effusion, with the exception of the slight action of vocal functions, in the bulging of chest and displacement of heart—nor was there any sign of centripetal pressure. 4. The rapid growth of the tumour, for when first seen the impulse of the heart was one inch within the right nipple, and later it shifted to an inch outside that limit. Had the caseous matter removed been examined microscopically, perhaps the true nature of the case would have been at first recognised. The growth probably started from the anterior mediastinum.—Dr. DOUGLAS POWELL said that so far as the physical signs went the case showed no distinction from one of pleural effusion, except in the result of puncture. He believed that when that test is thoroughly tried it is conclusive in diagnosis. For if in making the puncture the needle is found to be grasped by a mass, and still more if portions of that mass are removed by it, there should be no further doubt respecting diagnosis. Generally in these lymphomatous tumours pressure signs are not marked, for they often surround vessels without invading or compressing them until quite at the last, so that the only diagnostic point was the result of puncture.—The PRESIDENT said it was certainly to be regretted that the material removed by the trocar was not submitted to microscopical examination. Still he could not agree with Dr. Powell, that failure to get fluid on exploration rendered the diagnosis certain. In two cases he recalled, where abortive punctures were made; and had he not felt sure of the presence of fluid he might have been led to regard them as cases of solid growth. Punctures should be made in more than one place before finally deciding in favour of tumour. The case seemed to be one of lympho-sarcoma of very rapid growth and degeneration.—Dr. TAYLOR mentioned a case of empyema following pneumonia, when a first puncture failing, a second was made with a larger needle, and resulted in evacuation of the pus.—Dr. POWELL explained that he referred to cases of extensive effusion or extensive solid growth sufficient to cause displacement of the heart. In such cases the result of puncture would settle the diagnosis. Was there any hæmoptysis?—Mr. GOULD said that his impression of the result of aspiration was that the pleura was lined by a thick layer of concrete pus, which blocked the tube, and prevented the escape of fluid.—Dr. HALL, in reply, said that Mr. Butlin had examined the growth, and said that it was a sarcoma and not a lymphoma. The history of the case was unlike that of malignant growth. The lad got wet through when playing cricket, and from that time began to suffer from pain in the chest. Nine weeks afterwards he presented all the signs of a large pleural effusion, which *rapidly* increased. He had never heard of any tumour growing so rapidly as to displace the heart to so great an extent in so short a time, and he therefore had several punctures made. There was no hæmoptysis.

The Society then adjourned.

OBSTETRICAL SOCIETY OF LONDON.

AT the meeting on March 3rd (Dr. Playfair in the chair), Mr. LAWSON TAIT read a paper on Axial Rotation of Ovarian Tumours, leading to their Strangulation and Gangrene; three cases successfully treated by immediate Ovariotomy. The first case of the kind which the author had met with was that of a woman aged forty-eight, on whom he had operated for a femoral hernia, supposed to have been strangulated for two days. The patient died in five days. The autopsy revealed a small ovarian tumour not recognised during life. It was black and gangrenous from twisting of the pedicle. Of the three cases now recorded, the first was that of a woman forty-six years old. In March last the author diagnosed a small monocystic tumour, probably parovarian. On June 9th she returned with the tumour much enlarged, and suffering from intense abdominal pain. Immediate ovariotomy being performed, the author found the cyst of a black-pearly colour, universally adherent by recent lymph. The pedicle was twisted three or four times. The patient made an uninterrupted recovery, though no Listerian precautions were used. The second case was that of a woman aged thirty, who had noticed gradual increase of size for nine months. Sudden and violent pain in the abdomen occurred on Nov. 6th, followed by incessant sickness. Ovariotomy was performed on Nov. 17th, with Listerian precautions. The tumour was dark-purple, friable, and universally adherent by recent adhesions. Bleeding was controlled by the application of solid perchloride of iron. The pedicle was twisted twice. The patient survived, but made anything but an antiseptic recovery. The third case was that of a woman aged thirty-six, who had not menstruated for seventeen weeks, but had noticed an increase of size too rapid for ordinary pregnancy. Intense abdominal pain, followed by sickness, came on on Nov. 11th. Immediate ovariotomy was performed. The uterus was found occupied by a pregnancy of about the fourth month. The tumour was a parovarian cyst of the right side, and was of a pearly-black lustre, and the pedicle was twisted three times. Listerian precautions were used, and the patient made a better recovery than the second case, but not so good as the first. No symptoms of miscarriage appeared. In all these three cases the tumour was one of the right side, and the pedicle was twisted from within outwards and to the right side. From this circumstance the author deduced a theory as to the causation of the rotation—namely, that it is due to the alternate filling and emptying of the rectum. The fæces descending the rectum would act as a wedge, and the point of application of the force would be the most favourable possible in the case of a right-sided tumour.—Mr. KNOWSLEY

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THORNTON related several cases in which, on performing ovariotomy, he had found the tumour gangrenous from twisting of the pedicle. He agreed with the author that immediate ovariotomy should be performed when symptoms arise leading to a suspicion of such a condition. In some cases, however, the necrosed tumour being excluded from septic influence, remained quiescent for a considerable time.—Mr. SPENCER WELLS thought that it was easy to account for the rotation of the tumour by the patients' changes of position. Moderate degrees of twisting were often found without any gangrene being produced. He had seen two patients who died suddenly from very profuse bleeding within the cyst, without its rupture, the pedicles being found twisted. Last year he had removed by ovariotomy a cyst necrosed from twisting of the pedicle, which had been supposed malignant on account of the pallor of the patient. She recovered perfectly.—Dr. BANTOCK had recently met with two cases in which small tumours were found with twisted pedicles. Both tumours were found adherent, and both patients had been attacked by sudden pain, followed by symptoms of peritonitis. He thought that the twisting produced no symptoms, but that the rupture of a bloodvessel was indicated by an attack of pain.—Dr. HEYWOOD SMITH thought that not only should ovariotomy be performed immediately if strangulation of an ovarian tumour were diagnosed, but that, given an ovarian tumour, this should be done should pain suddenly intervene at all. The same theory as to the cause of rotation as Mr. Lawson Tait's had occurred to himself while the paper was being read.—Mr. ALBAN DORAN said that Mr. Tait's theory with regard to the causes of torsion accorded with his own convictions, grounded on experiments made in the post-mortem room. Whether the torsion was progressive or not would depend on the length and elasticity of the pedicle.—Mr. LAWSON TAIT, in reply, said that he hoped that Mr. Thornton and Mr. Wells would publish their cases, with specific details. The rotation could not be accidental, as held by Mr. Wells, if the great majority of the tumours twisted were right-sided tumours, and the twist in a specific direction.

"A refutation of the account given by Professor C. M. Gardien, of Paris, in 1866, to the effect that the Princess Pauline de Schwartzenburg was delivered of a living fœtus some hours after she was burnt to death," was read by Dr. HAIN, Philadelphia. The author examined the evidence in support of Professor Gardien's account, and concluded that it was absolutely valueless.

HEALTH OF LARGE ENGLISH TOWNS.

ELEVENTH WEEK OF 1880.

THE rate of mortality in our large towns remains low. In twenty of the largest English towns, estimated to contain in the middle of this year seven millions and a half of persons, or nearly one-third of the entire population of England and Wales, 5592 births and 3075 deaths were registered last week. The births exceeded by 407, whereas the deaths were 200 below, the average weekly numbers during 1879. The deaths showed an excess of 5 on the decreasing numbers returned in recent weeks. The annual death-rate in the twenty towns, which had declined from 37·0 to 21·4 per 1000 in the six preceding weeks, was again 21·4 last week. During the past eleven weeks the death-rate in these towns averaged 25·9 per 1000, against 23·4, 25·2, and 27·3 in the corresponding periods of 1877, 1878, and 1879. The lowest death-rates in the twenty towns last week were—10·7 in Brighton, 16·5 in Leicester, 17·4 in Hull, and 17·9 in Wolverhampton. The rates in the other towns ranged upwards to 28·3 in Manchester, 28·5 in Nottingham, 30·6 in Plymouth, and 34·8 in Oldham. Measles continued to prevail in Plymouth, and caused 17 deaths during last week. In Oldham the high rate of mortality was partly due to the prevalence of measles and scarlet fever.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had slowly declined from 638 to 457 in the six preceding weeks, rose again last week to 476; these included 169 from whooping-cough, 113 from scarlet fever, 91 from measles, 30 from diarrhœa, and 30 from fever, mainly enteric. The annual death-rate from these seven diseases averaged 3·3 per 1000 in the twenty towns, and ranged from 0·8 in Portsmouth to 9·9 in Oldham, and 15·3 in Plymouth. Whooping-cough showed the largest proportional fatality in Plymouth, Norwich, Salford, London, and Manchester; scarlet fever in Oldham and Norwich; and measles in Plymouth, Nottingham, Oldham, and Hull. Fever, chiefly enteric, caused 10 deaths in London and 4 in Sheffield. Of the 23 deaths from diphtheria in the twenty towns 18 occurred in London. Small-pox caused 11 deaths in London, but not one in any of the nineteen other large towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which in the two preceding weeks had declined from 185 to 172, were 166 on Saturday last; 23 new cases of small-pox were admitted to these hospitals during last week, against 49 and 39 in the two previous weeks. The Highgate Small-pox Hospital contained 16 patients on Saturday last, one of whom, however, was not suffering from small-pox.

The fatality of lung diseases last week was not increased, although the mean temperature of the air was 5° below that of the preceding week. The deaths referred to diseases of the respiratory organs in London, which had declined from 1557 to 315 in the six preceding weeks, were again 315 last week, and were no less than 145 below the corrected weekly average; 220 resulted from bronchitis, and 65 from pneumonia. The annual death-rate from diseases of this class in London last week was equal to 4·5 per 1000, against 5·5 from the same diseases in Liverpool.

NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—I thank you for publishing my letter in your issue of March 6th, and trust attention may be now drawn to the fact that if promotion from surgeon to staff-surgeon be fixed at twelve years, a wrong will be done to those at present heading the list. I cannot assent to your editorial comment "that promotion can scarcely continue for long at ages so low as at present." I maintain that taking into consideration the presumptive ages of officers on the Inspectorial and Fleet Surgeons lists, it will, if present regulations be maintained, even improve still more; of course, I cannot say what it will become should the Admiralty permit further discoveries on the part of officers about to be retired from age.

One of the proposals for a new scheme is, I understand, to retire Fleet Surgeons at fifty-five years of age, another to give £1 a day retirement at twenty years' service. Both these would probably still further increase the flow of promotion from the junior ranks, but should a period of twelve years' "service" or "in the service" be fixed, the benefit of these retirements will be lost to the surgeons, and you will have them by and by doing the duties now delegated to Staff and Fleet Surgeons. The argument I have heard used as to "uniformity" with the army is, I think, a weak one indeed—our lives, our prospects, our everything being so widely different, that the greatest hardship of the army medical officer is his having to take a sea trip in going to or returning from foreign service. Compare the life of the surgeon of a gunboat in the Persian Gulf, on the east coast of Africa, with that of his contemporary serving in the army in India, who is the better paid, who has the most comfortable life?

You say foreign service in a junior rank is sometimes a grievance—certainly, but only when you are required to do what should be another man's turn. It is, as I remarked in my former letter, manifestly unfair that some should be allowed to serve almost continuously at home.

As you mention "meritorious service," I would draw your attention to the fact that every promotion so made under present regulations inflicts a wrong on those over whose heads the "meritorious" man passes; and I think it might be fairly demanded that such promotions, in whatever grade, should be supernumerary until absorbed in due course.

To do justice all round, to endeavour to make the naval medical service a trifle more attractive, will, I trust, be the aim of the committee now appointed to consider the question; to do so they have to keep us *ahead* of the Army Medical Department in *fixed* pay and in promotion. While I hope this may be effected by the new scheme, I am anxious at the same time that no wrong should be done those at the top of the list who have borne the heat and burden of the day.

I am, Sir, yours faithfully,

March 9th, 1880. SURGEON R.N.

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THE LANCET.

LONDON: SATURDAY, MARCH 27, 1880.

THERE are few medical teachers in the universities of Scotland who better represent all that is good in their system of teaching than Professor STRUTHERS of Aberdeen, and Professor GAIRDNER of Glasgow. They are specimens of men of good powers and high tone who have chosen to devote their energies to teaching. It is not too much to say that their respective universities owe to each of them a debt of gratitude for the great increase in their prosperity of late years, and for the enhanced reputation of their medical degrees. It is inevitable, therefore, that we should feel a great interest in the evidence which two such teachers have to give on the great questions of medical reform which were being investigated before the abrupt and unexpected dissolution of Parliament, and which will claim attention from the new Parliament.

To take these witnesses in the order in which they were examined, we begin with Dr. STRUTHERS. Dr. STRUTHERS speaks with natural satisfaction of the education and examinations of the Scotch universities in general, and of that of Aberdeen in particular; and it is not disputed that their education is very good, and their system of examinations very efficient. There is, indeed, little to criticise in Professor STRUTHERS' evidence as regards the universities. Is it quite correct to say that they give no half qualifications? Do they not give a Bachelorship of Medicine, apart from a Mastership in Surgery? At the very least do they not charge separate fees for these degrees? Dr. STRUTHERS approves of the suggestion of the Duke of BUCCLEUCH that Conjoint Board examiners might sit together with University examiners. This concession seems to contain the germ of a settlement of the difficulty as regards the universities. But Professor STRUTHERS goes out of his way to extol the examinations of the Scotch corporations. He believed the Scotch corporations had a very good minimum standard, and he believed that if the London corporations and the English College of Surgeons would combine as the Scotch corporations had done that would be all that is necessary! What a delightful solution of a difficult problem, to find the perfection of a minimum examination in the Scotch corporations, and to call upon all other corporations to imitate. Now the world may all be wrong, and Dr. STRUTHERS may be right. But he is not with the majority of people who have pondered seriously on the defects of our examining system in thinking that the Scotch corporations are models of a minimum examination. It is almost amusing to see a Scotch witness give such a turn to his evidence as to give prominence "to the weak points of London and English schools," only to be remedied by turning them into institutions like Scotch universities, and indicating that all that the most earnest reformers should work for is to get the English and Irish corporations to imitate the Scotch ones. It is time to be outspoken in this matter, and to remind Dr. STRUTHERS of what he must well know, that there is an extensive impression abroad that the examinations of the Scotch corporations, if made to include more subjects, are less stringent than those of England in regard to the most vital subjects. This may be a wrong impression, but it is so extensively held that the best friends of the Scotch corporations are those who advise them to demand a system which will secure, as far as any system can, that they shall be placed beyond the risk of comparisons which are disparaging,—not those who speak of their joint boards as models to be copied. Dr. STRUTHERS says there is not a better joint examination anywhere than in Edinburgh. But this, though seeming to imply much, means nothing; for there is not, as far as we know, in any other division of the kingdom, a joint examination at all. Dr. STRUTHERS is rather weak on the subject of the Direct Representation. He is not against it, indeed; and yet he is not for it. He used to approve of it; but "when he saw a man like Sir JAMES PAGET coming forward in the face of ten thousand practitioners he was greatly impressed": his opinion had partly changed. It is as if Dr. STRUTHERS were all sound on the subject till he saw a sort of apparition—"a man like Sir JAMES PAGET"! Sir JAMES will feel flattered that a man like Dr. STRUTHERS thinks more of him than of ten thousand of his professional brethren. We expect the next change of opinion on the part of Dr. STRUTHERS will be in favour of conjoint boards, when they have among their advocates "a man like Sir JAMES PAGET." Moreover, we expect to recover him as an advocate of direct representation when we remind him that Sir JAMES PAGET is not opposed to direct representation. Rather is he in favour of it, as are five out of the eight members of the Medical Council so far examined. Their objection applies only to popular election.

Professor GAIRDNER, in his examination, expressed the opinion, which has so often been refuted, that a Conjoint Board would greatly deteriorate the efficiency of all the universities of Scotland. We will not go over ground which we have so often traversed. We would rather leave it to Dr. GAIRDNER'S own mind to satisfy itself that a movement for raising the minimum examinations cannot depress higher ones. To raise the base of a pyramid is to secure the raising of the whole structure. It is so with minimum and university examinations. Universities would feel compelled, for very honour's sake, to be far above the minimum standard. He objected especially to that part of the Medical Bills which enacted that students can only be affiliated with corporations in that part of the country in which they had passed the Conjoint Board. Dr. GAIRDNER says that his objection would be greatly lessened if this limitation were removed. Clearly it ought to be removed. The examinations should be so equal in every respect—their equality should be so guaranteed—that the student should be entitled to claim affiliation with any corporations he preferred, provided the corporations are to remain the licensing bodies. We are glad that in both Dr. STRUTHERS' and Dr. GAIRDNER'S evidence prominence was given to the unreasonableness of high fees being exacted from the student for the support of numerous corporations, though only receiving one diploma. This comes of having so many corporations to be maintained. We are not sure that Professor GAIRDNER, if more closely cross-examined, would not have

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come out as a very good medical reformer. He confessed his inclination to a *Staats Examen* similar to that of Germany—like us, not seeing the force of Professor TURNER'S and Professor STRUTHERS' objections to that system, or some modification of it, for this country. There is one expression which Dr. GAIRDNER used which, we think, he would be willing to amend. He thought every practitioner should have a double qualification. Why a *double* one? He should have a complete one after a complete examination embracing all necessary subjects; but a double one implies a division in the knowledge of a general practitioner into halves, medical and surgical, which is now artificial and inconvenient, and ought to be obsolete. Dr. GAIRDNER boasts that all the bodies give a complete examination; what more reasonable than that this should carry a complete diploma?

Finally, there is nothing in either Dr. STRUTHERS' or Dr. GAIRDNER'S evidence to show us that the demands of medical reformers will abate in the least the demand for the degrees and the education of the Scotch universities.

THE *Gazette* of the 16th inst. contains a series of General Orders issued by the Local Government Board, under date the 8th of the present month, concerning the appointments of medical officers of health and inspectors of nuisances, whose salaries are partly repaid by moneys voted by Parliament, in substitution for the Orders which were issued soon after the passing of the Public Health Act, 1872. The new Orders appear to have been called for partly to adapt the phraseology to the Public Health Act, 1875, and partly to effect certain amendments in their details. Moreover, two additional General Orders have been issued applying to the qualifications and duties of medical officers of health of urban and rural sanitary districts, no portion of whose salaries is paid out of moneys voted by Parliament, the qualifications and duties of these officers having been previously left without regulation by the central authority.

As to the Orders relating to medical officers of health who are partly paid out of Imperial funds, and are more directly under the supervision of the Local Government Board, the changes in them appear for the most part to be verbal, in order to meet the altered form of the law since the Orders of 1872 were drafted, but a few touch matters of considerable importance. The reference in the preamble and other parts of the earlier Orders relating to the appointment of medical officers of health to two or more districts is omitted, for what reason does not yet appear, and the possibility of their being appointed to more than one district is noted only of the medical officers of health of rural sanitary districts, and that in relation to their appointed duties. Is the Local Government Board contemplating dealing with the appointment of medical officers of health for two or more sanitary districts in a more comprehensive fashion than hitherto? Let us hope so. In respect to tenure of office the clause limiting first appointments to five years is omitted, and with the omission we trust that the Local Government Board may see a way to sanctioning appointments for a longer period than it has yet done, or even for a permanency. Not that the expunged clause seemed to the uninitiated to forbid this course before in the case of reappointments, but we are given to understand (not daring to express an opinion ourselves on so abstruse a subject) that it did form a bar to the Local Government Board acceding to the wishes of local authorities that their medical officers of health should be permanently appointed. We note, in passing, an addition to the clauses as to the salary, which directs that it shall be considered as accruing from day to day.

The changes made in the section of the Orders relating to the duties of medical officers of health are few, but of considerable moment. The sentence of the earlier Orders adapting them to the case of so-called combined districts, is omitted in the Order as to the medical officer of health of an urban sanitary district, but retained, as already mentioned, in the Order as to the medical officer of health of a rural sanitary district. In Clause 6, which in the earlier Orders directed the medical officer of health, on receiving information of the outbreak of any contagious, infectious, or epidemic disease of a dangerous character within his district, to visit the spot without delay, and inquire into the circumstances of such outbreak, and to advise the person competent to act as to the measures which may appear to him to be required to prevent the extension, &c., the words have been added "after such outbreak," "and in case he is not satisfied that all due precautions are being taken," to do so and so. This addition will relieve many medical officers of health from an unpleasant difficulty they have not unfrequently been placed in by the imperative wording of the clause in the earlier Orders. They have felt that no discretion was left to them in the matter to which it relates when they have been informed of infectious disease in families possessed of every means and of competent advisers for dealing with it without prejudice to the public. We are aware of cases where a medical officer of health has, by reason of this regulation as it formerly stood, been placed in circumstances of considerable difficulty and unpleasantness between his sanitary authority on the one hand and well-to-do families and his professional brethren on the other. The words added to the clause would appear to remove all objection to it on that score. The next clause as to duties (7) supplies an omission to which very much of the imperfection observed in the carrying out of the public-health law is due. The earlier Orders dealt with the inspector of nuisances as having only certain incidental relations with the medical officer of health, and not as part of an organisation in which the medical officer of health must be the co-ordinator, if it were to be worked with any intelligent regard to the object for which it was designed. The present Orders provide that, subject to the instructions of the Sanitary Authority, the medical officer of health "shall direct or superintend the work of the inspector of nuisances in the way and to the extent that the Sanitary Authority shall approve." This would be sufficient to remedy the evil we have referred to, and to place the inspector of nuisances in proper relationship with the medical officer of health, if we could depend upon the advice tendered by the general (lay) inspectors of the Local Government Board—the inspectors who will be concerned in the matter—to sanitary authorities as to the *extent* to which the inspector of nuisances' work shall be directed or supervised by the medical officer of health. It cannot but be remembered that it was owing to the advice of these inspectors the apparent antagonism between the duties of

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the medical officer of health and the duties of the inspector of nuisances shown in the earlier Orders, and too frequently in practice converted into an actual antagonism, was originally set up, to the immeasurable detriment of public-health administration. However, now that the Local Government Board has seen the defect in its earlier Orders, and removed it, in a fashion, from the present Orders, we must hope that it will be enabled to succeed in obtaining and securing a reasonable interpretation of the clause as it now stands, and that its obvious intention shall not be frustrated by vagaries of its subordinates. The important addition of "milk," which had been omitted from Clause 9 in the earlier Orders, has been made to the articles of foods which a sanitary authority may cause to be inspected and, if they deem necessary, seized. In Clause 14, the directions as to the contents of a medical officer of health's report have been rearranged, and Clause 15 no longer requires that he shall make quarterly reports to the Local Government Board.

The duties imposed upon medical officers of health of urban and rural districts, no part of whose salaries are paid out of imperial funds, are the same as those of medical officers of health whose salaries are in part so paid, with the exception that he is required himself, within seven days of his appointment, to report the same in writing to the Local Government Board.

The new Orders relating to Inspectors of Nuisances are substantially the same as the earlier Orders.

IT is one of the penalties of education by experience that we learn to recognise facts before we are able to define them, but without doubt this is the natural mode of gathering knowledge. The child becomes acquainted with the leading characteristics of fire by almost blinding his eyes as he tries to stare at it, and burning his fingers when he attempts to grasp it, long before he is able to describe or even name the element. Practical knowledge is always in advance of philosophic information with regard to the common things of life, and the majority of veritable and lasting discoveries are made by practical men. It should, therefore, occasion no one any surprise to find that many of the most familiar facts in science and subjects of daily observation are undefined and seemingly undefinable. Every medical practitioner and ordinarily intelligent layman *knows* what is meant by insanity, but as yet no expert or general observer has been found able to frame a definition of the abnormal state which shall cover the disease without including some of the phenomena of healthy life by which the so-called "symptoms" of mental derangement are apt to be simulated. There will be a red-letter day in the chronicles of legal medicine, and a new era in lunacy practice will be inaugurated, when, if ever, a satisfactory definition of insanity is accomplished. We are not about to attempt the feat. It would need to be more than a triumph in technicology.

As the matter now stands, probably no member of the profession would be prepared to admit that he could fail to recognise a "lunatic" or "person of unsound mind," if one were submitted to his judgment; it is, however, impossible to feel sure, except in regard to the most strongly-marked cases, that the opinion one practitioner forms will coincide with that pronounced by another equally trustworthy examiner. Still less easy is it to determine whether the view which may afterwards be taken by a judge and jury looking back on a case of alleged insanity, will ratify the opinion formed by the medical practitioner at the outset on his personal responsibility, and condone such measures as he may have deemed necessary for safety. Much of the delay and no small share of the disappointment attending the treatment of the insane, may be directly traced to the want of a common understanding as to the characteristics of insanity, at least such an understanding as would prevent subsequent dispute as to the very existence of the disease.

The position occupied by the medical man consulted in a case of lunacy is at the present moment both peculiar and painful; it wholly cripples his action, and must effectually, while it is forced upon him, hamper the progress of clinical science and postpone the discovery of improved methods of treatment. In the case of no other class of patients is the medical adviser so strangely placed. It is not enough that a sick person is brought to him for instant judgment, he is confronted at the outset with the danger of a legal penalty in the event of failure to recognise that he is, perhaps, being hoodwinked by the friends, or misled by the fancies, of his patient. While the risks run by other professional men chiefly concern the skill and fidelity of their work as a whole, the practitioner called in to certify in a case of alleged or supposed insanity is placed in jeopardy by his first expressed opinion as to the nature and needs of the patient; and possibly he has had no special training in diagnosis. He is required to assure himself of the good faith of the persons who apply to him, and to form a final and irrevocable judgment as to the verity of such indications as are presented by the alleged lunatic *before* he can safely treat the case.

No one who has not had considerable experience in the early and instant diagnosis of mental disease can have any notion how difficult and embarrassing this task really is. The worst, because the most dangerous, cases are often the least well marked, and a mistake on the side of what seems to be "humanity" is often especially easy where it must be most disastrous. It would be no light task to make a hasty diagnosis in cases of the class we are now indicating, if nothing more than the professional repute of the practitioner were staked in the balance, but he is handicapped with the dread of penal consequences if he errs. On either side perils beset him. If he places a sane man under treatment, he may be cast in a suit for damages. If, on the other hand, he permits a lunatic to go at large terrible events may ensue, for which he will be held morally if not legally responsible. It is easy for lawyers and jurymen to look back on the history of a case of this character, and point to errors of judgment committed by a medical man so placed, but justice requires that the difficulties shall be recognised, and full weight given to the embarrassing nature of the act the practitioner is required to perform under pressure, and amid untoward circumstances, before his conduct is condemned or even severely criticised.

All the difficulty and inconvenience arises from the mistaken policy of confounding functions and responsibilities

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which are wholly distinct, and, as we believe, incapable of being adequately discharged by the same authority. Why not let the legal questions involved in a recognition of insanity be settled by some official agency, leaving the medical practitioner to study and treat his case in peace, as a professional clinician and therapeutist? If a man has a fit of apoplexy or epilepsy, or fever with active mental excitement, or even the furious delirium excited by drink, the law does not interpose a formal and embarrassing process of certification, with socio-legal aims, between the medical attendant and his task. He can at once set to work to treat his patient, taking all such measures, including coercion, as may be necessary to effect a cure. Considerations of disability for the duties and privileges of health are left to the patient and his lawyers. It would be perfectly easy to place mental disease on the same footing as bodily disease in these respects. At the outset of an attack of "insanity" there is seldom any real difficulty in determining what sort of treatment it requires. The difficulty, where there is any, arises later; just as there might be difficulty, if a medical man were called in after the subsidence of the first symptoms of an acute disease, in determining whether the patient was really ill or malingering.

One of the immediate advantages of separating the civil or legal questions arising in connexion with a case of insanity from the purely medical would be, that the chief motive for concealing the existence of mind disease would be extinguished. We should not then, as now, be perplexed with the delicacy of deciding whether an eccentric person is insane enough to require "certificates," or may be treated at home, or in the family of a medical practitioner, without contracting that "stigma" of lunacy which the friends of the "nervous" so greatly dread and deprecate.

It is surely impossible that the obvious course in regard to this matter of "certifying" will be indefinitely refused. No reform of the Lunacy Laws can be effectual which does not deal with the subject of certifying; and it is not easy to see how it can be dealt with, except by separating it from "treatment" and placing it on a legal footing. Undoubtedly medical knowledge is indispensable on the part of the person giving a certificate, but we are convinced that he should be an *official* appointed by public authority, and not a practitioner—engaged in the discharge of ordinary professional duties—however distinguished or expert. The need of Medicine as a science is to put an end to the severance of "mental disease" from general pathology. Whatever the relations of mind and matter may be, we cannot afford to forego the light thrown on ordinary disease by mind-symptoms; and we do not think "mental medicine" has gained anything, or been rendered more valuable to humanity, by being studied and practised as a specialty. The first step to retrieve errors and amend the situation is to eliminate the *legal* element from what is really a *medical* question—namely, the diagnosis and treatment of insanity. This is necessary before we can hope to find a satisfactory answer to the question—In what does insanity consist?

M. DUMONTPALLIER described, at a recent meeting of the Académie de Médecine, an apparatus for the purpose of lowering the temperature of the body, continuously or intermittingly, the effect of which can be exactly measured. The apparatus consists of two parts. First, a refrigerating envelope, for the purpose of applying to all parts of the body a layer of running water of a fixed temperature. The envelope can be reduced to the required dimensions to encircle the regions of the thorax or abdomen. It is composed of two pieces of silk, so sewn together that a tube of india-rubber, forty metres long and one centimetre in diameter, passes through the parallel spaces left between the stitches. This envelopes the body from the axilla to the groins, and the current of water is never interrupted, whatever be the weight or movement of the body. Moreover, a little apparatus, introduced into the course of the tubes, indicates the least alteration in the flow. The second part of the apparatus, the "distributor," consists of "robinets" placed at each extremity of the tube, which permit the regulation of the flow of liquid, and thermometers adjacent show, at all times, the temperature of the water flowing into and out of the india-rubber tube. The apparatus is supplied by a syphon placed in a reservoir, one metre and a half above the patient. In the use of the apparatus, the axillary and rectal temperature having been noted, the patient is enveloped in the refrigerator, placed in the bed, and covered with the bedclothes. The taps are then opened, and the water quickly circulates through the whole length of the tube. The circulation of the water is so rapid that at first the two thermometers, at entrance and exit, show nearly the same temperature; soon, however, that at the exit rises, in consequence of the abstraction of heat from the body by the flowing water. Then this thermometer gradually falls, because the heat of the body is insufficient to maintain the temperature of water which circulates at the rate of nearly two litres a minute. In from fifteen to twenty-five minutes the thermometer of exit falls 11° or 12° C., and every ten minutes the axillary or rectal temperature will be found to have fallen one or two tenths of a degree; and after an hour, or an hour and a half, the fall of temperature is from 1° to 2° C. Then, if the stopcocks are closed, the thermometers rise equally and progressively, although the rectal or axillary temperature remains stationary for from fifteen to twenty minutes. Sometimes the rectal temperature continues to fall for half an hour or an hour, while the axillary temperature remains stationary or exhibits a tendency to rise. Apparently, in this case, the surface of the body withdraws the heat from the internal parts. Thus, by such an apparatus, the patient remaining in bed, the temperature can be lowered at will during any period and the effect observed.

M. DUMONTPALLIER has studied carefully the effect of partial and total refrigeration of the surface, and concludes that when it is limited to the hairy scalp, to the occipito-spinal region, or to the anterior abdominal or hepatic region, it has little or no influence on the general temperature of the body. The refrigeration of the entire surface of trunk and limbs permits the temperature to be lowered one or two degrees in an hour or an hour and a half. But the refrigeration of the surfaces of the thorax and abdomen by means of the envelope will lower the temperature to the same extent. Ignorance of all that is done outside France is a characteristic of modern French workers. An apparatus essentially the same as that of M. DUMONTPALLIER has for some time been

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employed by LIEBERMEISTER, and will be found figured in the article on "Abdominal Typhus," in the first part of EULENBERG'S Cyclopædia, now in course of issue.

Annotations.

"Ne quid nimis."

KING'S COLLEGE, LONDON.

THE position held by King's College in the educational world is somewhat anomalous. Those whose memories carry them back to the time of its foundation know how it originated. They recall the sectarian spirit that animated its founders, zealous for the cause of religion, and fearful of the dangers which threatened society by the establishment of the college in Gower-street on a purely unsectarian principle. Meanwhile the world has been growing wiser. The fears have proved to be groundless, and even in Oxford and Cambridge admission can now be had to all but a few of the colleges, free from any subjection to religious tests. King's College, London, however, still retains its tests, claims to act up to the letter of its charter; and yet somehow or other draws to it students and teachers who would probably dispute that they are held under any bondage whatever in the matter of religious opinion. It cannot be that King's College wishes to remain shackled in its selection by reasons which place it on a sectarian basis, for to admit individuals to its secular offices only through the portal of orthodoxy in religion would so narrow its field as to do more harm than good to the institution. The tendency of the day is towards absolute freedom in religious opinion, and to respect the motives of every man who ventures to differ (be it widely or slightly) from so-called orthodox belief. To insist on a rigid conformity to particular doctrines is to uphold the system of tests which one would have thought Englishmen had now recognised to be unjust, if not immoral.

THE FORCE OF PURPOSE.

THERE is no physiological reason to suppose that mental purpose augments the force available for physical activity, but it certainly calls a larger amount of the reserve stock of potential energy into operation, while it concentrates the powers of the system on the particular end in view. How else are we to account for the familiar fact that under pressure of circumstances, or at the bidding of motives that incite to feats of unwonted exertion and endurance, persons of no extraordinary physique are enabled to perform seemingly impossible achievements? Sometimes the energy of an enterprise may, as it were, overpower the agency by which it should be effected, and the result is a break-down in the crisis of accomplishment. As a rule however, happily, determination will carry a man through undertakings which seem so vast as to threaten to overwhelm him. Possibly at no time are the "possibilities" of personal work of a nature which combines activity of both mind and body more conspicuously illustrated than during a "general election." And few events of the class have called out more latent vigour than the time through which we are now passing. From the stupendous exertions of Mr. Gladstone in Scotland to the sleepless energy of some of the candidates and their agents in large constituencies like those of the metropolis, the process of "calling up the reserves" of psycho-physical force is proceeding at a pace and to an extent rarely equalled. Presently the crisis will be passed, and then the exhaustion will begin to declare itself. Those will be wise who recognise what it is they are doing. The stock of force on which they are drawing is not increased to meet the occasion. They are simply using up in an emergency what nature has designed to be held in reserve like the residual air in the lungs, or the volume of atmosphere in the wind-cushion of a set of bag-pipes. If this reserve be exhausted there will be no resilience, and nothing left to play upon. The illustration is inadequate, but it will suffice to point out our meaning. The fact that a great effort *can* be made must not be assumed to show that such an outcome of force is natural. While the feat is in progress, a serious break-down may occur at any moment, and the power of recuperation will in that case be found to be itself exhausted. When the special exertion is over, the fatigue that follows will be more than common weariness. It will be a "dead-point" in the progress of vitality at which special measures of help and recovery are sure to be necessary.

SCURVY AND THE PROPOSED ARCTIC EXPEDITION.

LAST week we published a letter from Commander Cheyne, R.N., complaining of a criticism of ours based on remarks made by him on the question of the outbreak of scurvy in the last Arctic expedition under Sir G. Nares. As there is some discrepancy between what Commander Cheyne says he stated in his speech at the Mansion House and the report of that speech as it appeared in *The Times* of the day subsequent to its delivery, we place both before our readers. In his letter to us, Commander Cheyne states what he said at the Mansion House was "that the seeds of scurvy were in the constitutions of the men of the last expedition before they started on their spring sledging work." Had this been all he said, it would have called for no comment from us; but *The Times* reports Commander Cheyne to have said—"The last expedition came back broken down with scurvy, and the reason was *not the want of lime-juice*, but the want of proper ventilation between decks on board ship, and the want of fresh air and exercise." This statement, made in the face of the evidence obtained by the commissioners appointed to inquire into the outbreak of scurvy among the members of the sledging parties of the late Arctic expedition, gave us reason to fear that Commander Cheyne was disposed to pay more regard to mere hygienic arrangements for the preventing of scurvy than to trust to its absolute prevention by the use of lime-juice; and this opinion was strengthened, because we could not find in any part of his reported speech that he made reference to the antiscorbutic value of lime-juice, but chiefly that he placed reliance on improved ventilation to prevent an outbreak of the disease. It is satisfactory to find that our article has drawn from Commander Cheyne a full confession of faith with regard to lime-juice—a confession that was certainly required after a perusal of his speech at the Mansion House.

THE HISTOGENY OF GRANULAR KIDNEY.

IN his recent communication to the Pathological Society Dr. Saundby opened up new ground in a well-worn, but still disturbed field. Years ago, Dr. George Johnson asserted that the granular kidney was the result of changes mainly limited to the epithelial lining of the urinary tubules. He created the phrase, "desquamative nephritis," and held that the relics of degenerate and atrophied tubules formed the mass of the contracting tissue. Since then the tendency has been to relegate to the tubules a passive part in the process, and to establish the view that the change is mainly that of intertubular new formation precedent to the tubular atrophy. Dr. Saundby showed specimens to prove that there was room for a third view, and that the apparently startling one, that the newly-developed connective tissue was formed from the proliferation of the epithelial nuclei. The

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strangeness of the fact was lessened by the consideration that the kidneys are mesoblastic in origin—an argument, by the way, that could not apply to the alleged similar derivation of connective tissue from the hepatic and mammary epithelium. Dr. Greenfield confessed that he had not been able to trace the development of connective tissue from the renal epithelium, but very forcibly and suggestively urged that in the glomeruli were to be found the primary lesions upon which tubular atrophy and other changes followed. His remarks travelled over a wider range than the single point raised by Dr. Saundby; for he added that there was less evidence of intertubular change in the granular kidney than in the large white kidney, thereby, indeed, reversing much generally-accepted opinion, and making it seem as if the terms "parenchymatous" and "interstitial" as applied to these two forms of Bright's disease have been misplaced. It would be impossible, however, to do justice to either observer without far more careful scrutiny of the subject than can here be given to it. It is obvious, however, that much scope is opened up for further careful research in the minute anatomy and the pathology of the various forms of nephritis and renal degeneration. Especially should attention be paid to the slighter and less advanced cases of "granular kidney," if correct inferences upon its histogeny are to be arrived at. To do this thoroughly would require the resources of a pathological laboratory and workers willing to devote their whole time to this investigation. The same indeed might be said of almost every branch of pathology—so multitudinous are its unsettled questions, or rather, its questions which have been only partially settled by being viewed in too limited a manner.

WHAT IS FOOD?

IT seems easy to say that food is what we eat and drink and the body lives upon. By an extension of the formula it may be contended that the mind, too, feeds, and what maintains its strength and gives it energy is also food—"food for the mind," as the phrase goes. Meanwhile we are no nearer a direct and full answer to the question, What is food? That there are limits to the class of materials which may be designated "food" is obvious, because what is one man's food is another's poison. This brings us, practically at least, somewhat nearer the point we want to reach. It may be affirmed generally that, owing to differences of need, and of method, in the maintenance of life in the composite organism of mankind it must be vain to anticipate the discovery of a universally useful dietary. Not only will the food of man always vary with the conditions of his daily life, but with the peculiarities of his individual temperament. A consideration of great moment, which would seem to be too commonly disregarded, is the need of something more than mere digestibility—that is solubility—of the articles offered to the body for its sustenance. It is neither sound policy, nor practicable, to leave what may be termed the organic appetites of the body out of the calculation in arranging for the supply of "food." Just as there is such a thing as somatic life, and another such thing as interstitial or organic life—that is, the life, or lives, of the component parts of the body—so there may be organic appetites and predilections, as well as the gross tastes and likings and dislikings of the individual. We can conceive of a point at which the subtle refinements of skill in adapting "food" to the physiological requirements of the body may break down. Food may be not only too much concentrated, but too little palatable, if we may so say, to the stomach itself, or the organism, to be acceptable. The body is not wholly nourished by physico-chemical processes, such as those of endosmosis and the intermixture of fluids and gases, or the mutual reaction of substances with what re called "chemical" properties. The researches of recent scientists go to show that even the minor constituent parts of the organism have their independent characteristics, and they may also have their individual predilections. In practice we find that many well-intentioned and docile patients *cannot* take what is "good for them," perversely wax fat when they ought to grow lean, or in some other way falsify the prognostications of the empiricist. Setting aside the question whether these idiosyncrasies are natural or acquired, true or corrupt as indications for the kind of food to feed upon, we venture to think they should have great weight; and however excellent and ingenious some of the new schemes of nutrition and special devices for fattening or thinning the body may be, human nature, as we find it, will have to bow to them.

PHYSIOLOGICAL PROPERTIES OF EMETIN.

A PHYSICIAN in Dorpat, v. Podwyssotzki, has recently published in the *Archiv für Experimentelle Pathologie* the results of his observations on the effect of pure emetin. He states that the emetin usually sold contains tannic acid and colouring matter. When purified from these foreign substances it was found to be soluble in alcohol, ether, bisulphide of carbon, chloroform, and all ethereal and fat oils, but soluble with difficulty in cold water, benzin, and petroleum ether. It melted at 62° to 65° C. (144° to 149° F.) It tastes rather sharp and bitter, as do also its combinations with acid. If kept in the dark it remains white, but assumes a yellowish hue when exposed to the sunlight. It crystallises out of concentrated solution of petroleum-ether or benzin in needles, and when treated with concentrated nitric acid it yields oxalic acid. The subcutaneous injection of 0·005 to 0·01 gramme in frogs caused gradually developing paralysis and loss of reflex excitability. The irritability of the muscles, however, remained unaltered both with direct and indirect stimulation with induction currents. Frogs recovered completely from the paralysing influence of the smaller of the above doses in the course of twenty-four hours, whilst the larger doses proved fatal. Injections made into the exposed hearts of frogs caused, after a short period, various irregularities, the ventricle contracting peristaltically, its force diminishing, and its frequency being less than that of the auricle. Ultimately the whole heart passed into a condition of perfect relaxation or diastole, which could not be removed either by mechanical stimuli or by atropine. Experiments on cats, dogs, and rats corroborated the statements of earlier observers, the injection of about one grain and a half rapidly leading to death without previous vomiting. The animals quickly became very weak, fell over to one side, and died in feeble convulsions in consequence of cardiac paralysis. The effects on the blood-pressure were precisely those described by Dr. Dyce Duckworth. He was unable to observe that the drug had any influence on the vagus.

SURGEONS PRACTISING DENTISTRY.

ALL medical men engaged in dental practice who value the reputation of their specialty, will thank Mr. W. A. N. Cattlin, the President of the Association of Surgeons practising Dental Surgery, for the bold and able way in which in his recent address he expressed his disapproval of an Act by which 5289 persons have been put on to a recognised dentists' register, only 533 of whom have given evidence of either a medical or a dental education. It is gratifying to hear from Mr. Cattlin that the sub-committee of his Association will use every endeavour to urge the Legislature to prohibit unqualified persons assuming the title of physician or surgeon alone, or in convenient and misleading conjunction with any other word or words. An evil principle has been acted on which may lead, if not soon disavowed, to still deeper injury to the

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medical art. We may have surgeon bone-setters and surgeon corn-cutters if the reckless legislation of recent years is not vigorously opposed.

ORAL INSTRUCTION OF THE DEAF AND DUMB.

AN interesting example of the success which may attend persistent and well-directed efforts to overcome what at first sight appear insurmountable difficulties is afforded by the history of the Training College and School for the Deaf and Dumb in Fitzroy-square. One day last week a number of ladies and gentlemen assembled at Grosvenor House to witness the oral examination of sixty or seventy pupils of this excellent institution, under the direction of Mr. Van Praagh. Not very long subsequently to the commencement of the enterprise we took occasion to explain in some detail the nature of the system of lip-reading, by which deaf-mutes are taught to communicate their ideas in audible and articulate speech, and the results of the examination on the occasion referred to were such as to afford the liveliest gratification to the party assembled, and to reflect great credit on the director and his assistants for the patience and skill with which they have remedied, as far as is possible, one of the most grievous defects to which human beings are liable.

UNACKNOWLEDGED SERVICES.

THE people of London and the suburbs generally, especially those who pass most of their lives in the close atmosphere of densely populous districts, must have been a good deal astonished by the recent distribution of honours in the City of London. We say nothing as to the merits of the gentlemen who have just been knighted; our concern is with the neglect to honour one at least whose name has been identified with the timely rescue from enclosure and the preservation of fully six thousand acres of open airing and recreation ground in Epping Forest. When Mr. Nelson, the City Solicitor, took this matter in hand, he was almost alone in his work. The boon his enterprise has conferred directly on the pleasure, and indirectly on the health, of the people cannot easily be over-estimated. His services in the inauguration of the system of free bridges have been not less public-spirited, and deserve to be widely appreciated. Through a long series of years Mr. Nelson has laboured for the interests of the people of the metropolis; and it is strange, to the extent of being inexplicable, that his energy and achievements have been overlooked. Our own more immediate interest in the matter relates to the health aspect of the case. In the long and hard struggle to stay the spoliating activity of those who cared less for the preservation of open spaces than for other considerations, Mr. Nelson was ever, in his private, and as far as possible in his public, capacity on the side of the people; and it would have been only just and generous had his labours received the acknowledgment they deserve. We begin to think it is true that what happens is the unexpected.

ANIMAL VACCINATION IN INDIA.

AT a meeting of the Vice-Regal Council, held on the 20th February last, the Honourable Sayyad Ahmad Khan moved that the Vaccination Bill, which he had introduced on the 30th Sept., 1879 (see THE LANCET, Nov. 29th, 1879), should be referred to a Select Committee. The Bill, it will be remembered, if passed, would make vaccination compulsory, and it provides for vaccination from heifer lymph, as well as from humanised lymph, but gives precedence to the former sort of lymph, and permits the use of humanised lymph under certain specified circumstances only. The Bill, moreover, provides that it should have no force except in municipalities and cantonments, where adopted by the local authorities. It is, in fact, a permissive Bill. The promoter stated that the Government of India had now before it information from local governments, municipalities, and other sources, which would enable them to form a judgment as to its acceptability or otherwise. It was supported both by Hindus and Brahmans in a way to prove that it contained nothing inimical to their religious beliefs or practices; and he referred to an important statement of the Lieutenant-Governor of the Punjab, to the effect that a child of the age at which vaccination is practised is not, according to Hindu law, liable to ceremonial impurity; and therefore, even though vaccine may be impure to Hindus, the child would not be made impure by it. ' He denied that Dr. Cunningham's "Sanitary Primer" and his own Bill had for the first time made the source of vaccine matter known to Hindus at large, as asserted by the Punjab Hindu Association. Treatises on the subject, giving minute information as to the lymph, existed in the Hindi and Urdu languages, and had been published in 1860 and 1867. He again urged his argument for compulsion, observing that a hundred thousand lives are lost every year in India from small-pox. "In view of this awful fact," he said, "I must confess that I find it difficult to conceive how any vague apprehension and opposition, or the existence of unfounded prejudices, can have greater weight than the absolutely certain fact of the enormous loss of human life which is caused by the absence of a well-organised system of compulsory vaccination." After a brief discussion the Bill was referred to a Select Committee, with instructions not to provide for its introduction in any municipality or military cantonment, unless the authorities were satisfied that there was a preponderance of native opinion in favour of it, so far as could be ascertained.

STEEVENS'S HOSPITAL MEDICAL SCHOOL, DUBLIN.

THIS institution, which of late has not been in a very flourishing condition, may now be said to have collapsed, a result consequent on the recent action of the governors in filling up two vacancies in the hospital. For one of these Mr. Warren, lecturer on anatomy, and connected with the school for the past ten years, was a candidate, and although put forward by the medical committee, he was passed over by the governing body, who elected a gentleman very much Mr. Warren's junior. It is stated that several of the lecturing staff of the hospital have in consequence resigned their appointments in connexion with the school.

CONVENTION ON VITAL STATISTICS.

THE National Board of Health of the United States have issued an invitation to *all* (? within the limits of the United States) who are interested in vital statistics and charged with the duties of State or municipal registration to meet with it in Washington, on the 6th May next, for the purpose of considering the best method for the collection and publication of such statistics. The convention is more especially to consider mortality statistics, for which (the invitation states) it is extremely desirable to secure more uniformity than exists at present in nomenclature, in nosological arrangement, and in the forms of tables or graphic representations intended to show the relations of causes of death to locality, meteorology, sex, age, nativity, occupation, and birth-rate. Registrars of vital statistics are invited to forward to the Board as soon as possible, their suggestions as to nomenclature, blank forms, &c., including the following points:—1. Nomenclature. That of the Royal College of Physicians is suggested as best for present use, but if this be objected to, what substitute is recommended. 2. Copy of the State or municipal law or ordinance relating to registration of births

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and deaths, with observations thereon. 3. Copies of blank forms and specimen pages of registers of all sorts used in registration, with observations relating thereto. 4. Forms of statistical reports recommended for use in asylums, dispensaries, hospitals, prisons, and other public institutions. 5. Forms for the registration of births, deaths, and marriages. 6. Opinions as to the registration of certain contagious and infectious diseases, stating diseases, and suggesting forms.

ROYAL COLLEGE OF PHYSICIANS.

AT the extraordinary meeting of the College on March 22nd, after the minutes of the previous meeting had been confirmed, the new regulations for the College Licence were finally approved. The President then addressed the Fellows on the completion of his year of office. James Risdon Bennett, M.D., F.R.S., was re-elected President of the College, and Dr. Wilks was admitted a councillor.

SMALL-POX IN DUBLIN.

FOR many months an epidemic of small-pox has existed in this city, the deaths averaging about five each week. Although the mortality is slight, yet the continuance of the epidemic after so many months reflects unfavourably on the sanitary authorities. Neglect of vaccination seems to lie at the root of the evil, for the relieving officer of the South Dublin Union recently reported that there were 260 non-vaccinated children in the Union. Dr. MacCabe, Local Government Board Inspector, has recommended that twelve of the most respectable defaulters should be prosecuted, as there was no prospect of small-pox dying out in Dublin so long as such a state of things was permitted to exist. This suggestion has been adopted, and it is also probable that a special prosecutor will be appointed for these cases of neglect of vaccination.

A GRIEVANCE OF SICK PAUPERS.

THE REV. H. A. GOODWIN of Sambourne Rectory, Romford, gives prominence in the *Chelmsford Chronicle* to what was really a hard case, and which, we fear, is only one of a considerable number. A decent labourer, fifty-five years old, one of whose clubs had failed, and who had become superannuated in another, had to fall back on the parish doctor, to whose skill and kindness Mr. Goodwin testifies. But the rector ascertained that before the order for the doctor and medicines could be procured forty-one miles had to be travelled, of which the wife walked twenty-nine. These facts need no comment, and call attention loudly to a great evil. Even in London there are distances to be travelled which imply great hardship to poor and ill-tended people. It is not by such penances that unprincipled paupers are to be punished, and they are unworthy of a Christian country in the case of decent and injured people like the above labourer.

BRIGADE DEPOTS: MEDICAL OFFICERS.

A GENERAL ORDER just issued lays down that medical officers on half-pay, or otherwise retired, who are appointed to the medical charge of Brigade Depôts, are while so employed to wear the uniform of the Army Medical Department as laid down in the Dress Regulations, 1874 (amended by G.O. 3, 1880), according to their rank on retirement, or the honorary rank they now hold.

A MELANCHOLY and fatal accident to the Professor of Chemistry at the Grenoble Lyceum is reported. In the course of his lecture the professor, to moisten his mouth, took up a vessel which he supposed to contain *eau sucrée*, and drank so much of a mercurial solution that death ensued almost instantly.

AN official inquiry has been held by Captain Hildyard, Local Government Board inspector, as to the expediency of permitting the Town Council of Salisbury compulsorily to acquire land for the formation of a sewage farm, Mr. Jervoise, the owner of property adjoining the present drainage outfall having taken steps to prevent the flow of sewage into his river, under the Rivers Pollution Act. It was stated that the total cost of purchase and the erection of the necessary works will be £80,000. The inspector said he would report on the subject to the Local Government Board.

WE have pleasure in learning that the Justices of Surrey have recognised the important services of Dr. Brushfield, as superintendent of the Brookwood Asylum, by an addition to the salary of his office, which brings it up to £1000 a year. Dr. Brushfield opened the asylum, himself planned, and superintended the construction and furnishing of the new buildings added in 1875, and has conducted the institution for now fourteen years with credit to himself and advantage to the county.

THE Sunderland Local Board has called attention to the 252nd section of the Public Health Act, which would appear to require amendment. That section enacts that any legal proceedings for breach of building bye-laws must be taken within six months of the date of the committal of the offence. Of course many infringements of the law are not discovered until after the expiration of the time stated, so that the limitation referred to obviously cripples the powers of the Act for good.

THE outbreak of fever in Hare Island to which we referred last week has turned out to have been much exaggerated, and it appears on reliable authority that there were only twenty-nine cases affected, of which twenty-eight are under twelve years of age. Also that the disease is of a very mild type, and that there have been no additional cases for the past week. The origin of the epidemic cannot be traced.

SURGEON-MAJOR FRANCIS P. STAPLES has been compelled by ill-health to resign the appointment of Assistant Professor of Military Surgery at the Royal Victoria Hospital, Netley. He will be succeeded by Surgeon-Major Richard Tobin, who has officiated for the last six months.

THE "Watsonian Gold Medal, with five sovereigns," given annually by the Faculty of Physicians and Surgeons of Glasgow, to the gentleman who gains the highest average marks at the primary examinations, has been awarded this year to Mr. George W. Till, of Anderson's College.

MR. E. E. PHILLIPS, L.R.C.P. Edin., of Southend, has, we regret to learn, met with a serious accident, by the vehicle in which he was riding coming into collision with a cart. Mr. Phillips was thrown to the ground and sustained a fracture of the leg.

WE regret to report the death on the 17th January, at Lahore, of Surgeon-Major W. Eddowes, Indian Medical Department, in charge 30th Bengal Native Infantry, and for many years medical officer of the 2nd P. W. O. Ghoorkas.

ON the 19th inst., at the Freemasons' Tavern, Major Graham, the late Registrar-General, was presented with a life-size portrait of himself, executed by Mr. Frank Holl, A.R.A.

DURING the week ending February 28th there were three fresh outbreaks of pleuro-pneumonia in Essex. Of swine fever there were twenty-eight fresh cases in the county.

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THE

INFECTIVE DISEASES KNOWN AS PYÆMIA, SEPTICÆMIA, AND PURULENT INFECTION.[1]

(Continued from p. 286.)

IN the second part of this report we are presented with an elaborate analysis of what for want of a better term may be styled the natural history of septic diseases. Dealing with a large number of cases, the committee have aimed at interpreting their phenomena in the light afforded by experimental research. The idea is worked out so thoroughly as to leave little to be desired, and doubtless the plan laid down will be followed in the future. The more this portion of the report is studied the more clearly will its intrinsic value be appreciated. It is almost the first satisfactory attempt to clear away the obscurities which have shrouded the conditions of septicæmia and pyæmia; and difficult as the task must have been, it has been performed with a considerable measure of success, both in the direction of suggestion for further work, and in the actual settlement of doubtful points.

The opening paragraph of this section states that in it an attempt has been made to divide cases of septicæmia and pyæmia in the human subject into sharply defined groups corresponding in their clinical features and naked-eye morbid appearances to diseases of the same kind artificially produced in animals.

Septicæmia.—The various definitions that have been given from time to time are stated. Dr. Sanderson defines it as a constitutional disorder produced by the entrance into the blood of a quantity of septic material, as a disease of definite duration, in which the poison has no tendency to multiply in the organism. Davaine includes under it every case of death following the entrance of putrid substances into the blood without the formation of local centres of inflammation or suppuration. Koch all those cases of general infection from wounds in which there are no metastatic changes. Birch Hirschfeld regards it as a process of poisoning; Hueter—as a fever caused by the entrance into the circulation of products of putrefaction from local centres of decomposition; Billroth—as an acute general affection due to the taking up of various kinds of putrid substances into the blood; whilst the various authorities in this country, looking mainly to clinical characteristics do not recognise any sharp distinction between the various forms of blood-poisoning.

The experimental researches of Koch have, however, led the way to the recognition of two distinct forms of septicæmia. His experiments made on the mouse showed that when a sufficient dose of putrid blood was injected subcutaneously death rapidly followed in a few hours, as from a virulent poison. In such cases, he declares that no organisms arise in the blood, that the poison does not multiply, and that the disease cannot be transmitted by inoculation. He would style this form *septic intoxication*. But if a very small dose of the poison be administered, either no effects follow, or else the animal becomes weaker and dies at the end of forty to sixty hours, with swollen spleen, and fluidity of blood, which teems with organisms and is highly virulent. This is true *septic infection*, and finds its parallel in most cases of human septicæmia.

The conditions favourable to septic intoxication in the human subject are two—viz., a sufficient quantity of septic matter to furnish the fatal dose, and the presence of conditions favourable to rapid absorption. On the first head there are no reliable data; but it is surmised that the quantity required to be absorbed to produce rapid death from intoxication would be from one to two ounces of putrifying blood or serum. The means for its rapid absorption would be those afforded by raw surfaces before they are covered with healthy granulation tissue, and therefore acute septic intoxication would be favoured by large and irregular wounds, as those resulting from compound fractures; hollow wounds, as those left after the removal of tumours; wounds of joints, of large serous sacs, and large abscesses opening externally by an insufficient aperture. The accumulation of septic matter in the uterus after delivery; in the peritoneum after ovariotomy are favourable conditions. It is suggested that cases of death in the forty-eight hours after ovariotomy are probably due to this cause, which the adoption of antiseptic measures and drainage has almost eliminated.

The evidences of fatal acute septic intoxication in man would then be based upon the presence of a sufficient quantity of septic matter to yield the necessary dose of the poison; the invasion of the symptoms at a time when decomposition of the discharge has commenced, and before the surface of the wound is covered by granulations; the occurrence of high fever, followed by great depression; post-mortem appearances, indicating a tendency to congestion and capillary hæmorrhage; and probably also the absence organisms from the blood during life, or immediately after death (Koch). Out of twenty-eight cases of septicæmia there was only presumptive evidence in two instances that the patient died from this form of blood-poisoning. The one was a case of tumour removed from below the lower jaw, and the cavity became distended with foul discharge, death taking place on the third day with dyspnœa, but no rigors, vomiting, or diarrhœa. The patient was a woman aged seventy-four, and the autopsy showed blood-staining of the endocardium, pale and softened liver and spleen. The other was a case of death on the third day, after an abscess of the patellar bursa had been opened. It seems probable that had cases of ovariotomy been included several other instances of true septic intoxication could have been gathered. Still, enough has been done to show that this is a definite form of blood-poisoning; and it seems to us to be one of the chief gains derived from this report to have clearly brought this into view.

Between this condition and that ordinarily known as septicæmia—viz., "septic infection without metastatic inflammation," there are marked contrasts. In "septic infection" the poison appears to multiply in the organism, and its effects are not directly proportional to the dose. Nothing is definitely known concerning the exact nature of the poison, but the researches of Koch (borne out to a certain extent by the committee) are in favour of the view of its dependence on the presence of a microscopic organism which multiplies in the blood, like the bacillus of splenic fever. The post-mortem appearances of fatal cases are chiefly those of congestion of internal organs, especially of the spleen, together with subserous and submucous petechiæ. The conditions indicative of it in man would be the occurrence of a wound of such a size as to render it impossible for the necessary fatal dose of septic matter to be found in it, the evidence of infection by inoculation from one patient to another, and the presence of large numbers of bacteria in the blood during life or immediately after death. In the case of large wounds it would be more or less complicated by septic intoxication. A minute dose of a very virulent poison found in decomposing discharges might cause death without any process of multiplication in the body of an affected animal; but in that case it would lose its virulence by repeated inoculation, the reverse of that which happens in true septic infection. Out of the twenty-eight cases there were only two in which the wounds were so small as to exclude the possibility of sufficient septic matter being present to yield a directly fatal dose, one being a case of death after ligature of a small epithelioma of the tongue, the other a case of dissection wound.

The period of invasion in all the cases of septic infection varied from two to twenty-two days. In all but two cases rigors were marked, and mostly repeated more than once; and the other most frequent symptoms include delirium, sweating, diarrhœa, dyspnœa, and icterus. The post-mortem appearances were chiefly congestion of the lungs, swelling of liver, spleen, and kidneys.

It is concluded that further investigation is necessary to ascertain whether any distinct separation can be made clinically as well as experimentally between septic intoxication and septic infection. Septic intoxication should be absolutely preventable, depending, as it does, upon the accumulation and decomposition of discharges in a wound of considerable size, whilst in septic infection a virulent poison is produced capable of transmission from patient to patient.

Pyæmia.—Here, again, the word has been used in different senses, and it is pointed out that, "although it would be much better if the word was entirely discarded and some other found in its place, it is very difficult to suggest any

[1] Report of the Committee appointed by the Pathological Society of London to investigate the nature and causes of those infectious diseases known as Pyæmia, Septicæmia, and Purulent Infection.

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that would be free from objection," and the definition given by the College of Physicians in the nomenclature of diseases—viz., "a febrile affection resulting in the formation of abscesses in the viscera and other parts"—is sufficient to make clear the clinical meaning of the term.

After a brief sketch of the experimental researches on pyæmia, the report proceeds to an analysis of the cases collected by the committee. No fewer than ten groups have been made, and we can do no more in this place than give the headings of these classes, for the report is so concise and so full of detail as not to admit of analysis within the limits at our disposal. The first group includes—1. Cases of pyæmia, secondary to an open wound in which there is no evidence that the secondary inflammations are due to embolism, comprising (*a*) cases in which visceral abscesses are wanting, and (*b*) cases in which visceral abscesses were present, but no softening thrombus found at the primary seat of disease. 2. Cases in which venous thrombosis occurred apparently as one of the secondary affections. 3. Cases in which venous thrombosis and softening of thrombus occurred without giving rise to embolism or secondary abscesses. 4. Cases in which venous thrombosis and softening of the thrombus occurred, with secondary abscesses in other viscera, but not in the lungs. 5. Cases in which venous thrombosis with softening of thrombus occurred, with abscesses in the lungs and in other viscera. 6. Cases in which venous thrombosis and softening of the thrombus occurred, with embolic abscesses in the lungs only. 7. Cases of "pyæmia" secondary to infective periostitis. 8. Cases of "pyæmia" secondary to infective endocarditis. 9. Infective myositis. 10. Spontaneous septicæmia and pyæmia.

The conclusion arrived at from this minute and exhaustive analysis of cases of septicæmia and pyæmia is characterised by the true spirit of scientific caution. "It is quite certain that our knowledge is not yet sufficiently advanced to justify the assertion that all these various forms are only modifications of one disease. If such an assertion can ever be proved to be true it can only be when the exact nature of every form is perfectly understood—a time which we venture to predict is still far distant"; and it is, moreover, pointed out that instances of apparent merging of one form into another can be equally well explained on the supposition of "the coexistence of two or even more of the foregoing conditions in the same case."

THE DISPUTE AT GUY'S.

THE questions which have arisen out of the change of nursing system lately introduced at Guy's Hospital were submitted to a General Court of the Governors, which assembled for the purpose on February 23rd and on March 3rd, 10th, and 11th. The following letters addressed by Sir T. Dyke Acland to Lord Cottesloe will show in some degree how the discussion was conducted, how narrow were the questions submitted to the Court, and how, between the fear of offending their treasurer and increasing the feeling which had naturally arisen among the members of the staff, the decision arrived at was very much of the nature of a compromise. It does not, we confess, seem likely to produce more than a temporary calm, seeing that the office of treasurer is still virtually one of dictation, and that Sir T. Acland's sensible opinion "that no power can be allowed within the hospital to be independent, in the sense of being without superintendence, or check, or appeal," has been passed over by the Court. Subjoined are the letters.

Letter from Sir T. DYKE ACLAND *to* Lord COTTESLOE.

16, Suffolk-street, Pall Mall East, March 13, 1880.

Dear Lord Cottesloe,—I hope I may be acquitted of presumption if I respectfully submit to the treasurer and governors of Guy's Hospital, through you, as chairman of our meetings in the absence of the president, my view of our present position.

You opened our proceedings on the 3rd inst. with the wise advice that we should not dwell on the past, but look to the future well-being of the hospital, which we all desire. At the close of the verbal communications of the medical staff, of the medical superintendent, and the matron, I heard, with a feeling of deep disappointment, that before we could enter on any future arrangements we must first adjudicate on what has passed.

I ask with all respect a question suggested by an eminent governor, "What is the issue?" We have had before us a long letter full of complicated details, inferences as to the construction of rules, hypothetical forecasts of ulterior intentions; on the other hand, marginal rejoinders, of which I will only say that they include severe accusations as to the conduct and even the spirit of the staff. We have heard speeches eloquent and manly, if not always couched in language showing the discretion of practised advocates, exhibitions of strong feeling, and full personal explanations; there have not been wanting, moreover, hints of suggestions prompted by various persons not before us. Is it desirable that we should attempt to come to a formal adjudication on such data? Is it likely that we shall be unanimous in our verdict? Can we not rather follow your opening counsel, and act in a manner more befitting the president, treasurer, and governors of Guy's, as one undivided and even now unquestioned authority?

It must be obvious to the governors that there has been much misunderstanding, much incorrect information, much high colouring of insignificant details. It seems to me most undesirable to express a formal opinion as to the causes which have led to these unfortunate misconceptions. I think, however, that after eliminating these disturbing influences we may arrive at some tangible results which are not in dispute. And yet it would seem hardly expedient for the governors to state such results in an abstract form by way of reply to the written or verbal communications brought before them.

It seems to be admitted:—1. That the medical treatment of the patients is the first object of this hospital; the advancement of science, in conjunction with the practical teaching of medical students, the second; the training of nurses the third, subordinate to the two first, but indispensably required by modern opinion. 2. That the ward system, as defined by Sir W. Gull, with the assent of Dr. Pavy, may and ought to be continued. 3. That some central authority must be responsible for the supply and training of nurses. 4. That the orders of the medical staff as to any matter affecting the treatment of their patients, must be implicitly obeyed by the sisters and nurses, and not interfered with by anyone else. 5. That any complaints of the medical staff as to the nursing should receive immediate attention, without needlessly taking up their time. 6. That no power of control can be allowed within the hospital to be independent, in the sense of being without superintendence, or check, or appeal. 7. It is important to note that the matron, in reply to definite questions, disavowed the claim to make rules irrespective of the chief hospital authority, and that she expressed her willingness that any complaints about the nurses should, in the first instance, if so desired, be lodged with the medical superintendent.

These principles, reasonable as they may appear when stated, have been slowly wrung out of the facts by discussion. It may be excusable if, under the circumstances of the estrangement between the staff and the matron, they seemed to be called in question.

It seems to me that the staff were not only excusable for stating, but were under an obligation to illustrate, the grounds of their apprehensions. Having done as they were required to do, though possibly not always in cautious language, still with no apparent disrespect to the treasurer and governors, they took the wise course of closing their verbal communications by reading the well-considered letters of their spokesman, Dr. Pavy, and of Sir William Gull. Nor is it irrelevant to notice that a junior member of the staff (especially called upon) practically abandoned the ground of personal objection to the matron. The staff then left the whole matter unreservedly in the hands of the president, treasurer, and governors.

Under these circumstances I venture most respectfully but earnestly to repeat my suggestion, that we should pass on at once from anything like judicial investigation into the region of practical administration for the future, and, to speak more particularly—1. That opportunities be given to the staff to offer suggestions, either individually or through a small deputation. 2. That measures be taken without delay to establish free communication between the medical staff and the matron, either directly or through the medical superintendent. I do not venture to make any suggestion as to the official machinery by which these ends are to be

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obtained, whether through the treasurer, who possesses our confidence, through the court of committees, or through a special committee.

I reserve for verbal statement on Wednesday some serious considerations as to the need for watchfulness with reference to the growth and future development of the changes recently introduced, beneficial as I believe them to be, if carried out with discretion and with the co-operation of all concerned.

I am, dear Lord Cottesloe, yours truly,
THOMAS DYKE ACLAND.

Extract from the Minutes of a General Court, held on 17th March, 1880 :—

Read proceedings, dated February 25th, March 3rd, 10th, and 11th.

Resolutions :—

'1. That the Court, while fully appreciating the anxiety of the medical staff in regard to the possible introduction of any changes likely to affect the well-being of the hospital, have great satisfaction in recording, as the result of the recent inquiry, that, in their opinion, no fundamental changes contrary to the rules of 1874 have been made, and that the matron has not exercised any authority in this respect without consultation with the treasurer and the superintendent. Certain changes of an administrative and domestic character have indeed been ordered. Some of these have been carried out, some have since been given up, and some are still under consideration.

'2. That the measures now in progress for the improvement of the supply and training of nurses, if carried on with due discretion, with consideration of the wishes of the medical staff, and with their co-operation, will tend to promote the well-being of the patients, and to sustain both the hospital and the medical school in public estimation.

'3. That the treasurer having already expressed his desire to take the opinion of the medical staff on such changes which seem still open to adjustment, the governors request the treasurer and court of committees—the appointed executive authority of the hospital—to invite the attendance of any of the medical staff to meet them and the superintendent and the matron, with a view to the recommendation of such administrative details as may best secure the efficiency and harmony of the internal arrangements of the hospital.

'Ordered that a copy of the above be communicated to the medical staff.

ED. H. LUSHINGTON, Secretary.

Correspondence.

"Audi alteram partem."

IS INSANITY CAUSED BY "DRINK"?

To the Editor of THE LANCET.

SIR,—DR. Mortimer-Granville's honest and comprehensive letter upon this important question which appeared in THE LANCET of February 21st—a question which is so misunderstood by many if not by most observers—suggests points worthy of consideration, and in writing this letter I am merely acting upon his advice when he says—"The relation between drink and insanity should be discussed on the basis of *records of practice* without prejudice or a preconceived opinion." In my asylum practice during a period of seven years, I had an unqualified opportunity of observing the relationship which exists between "insanity due to alcohol as a cause," and "alcoholism due to insanity as a cause." I may perhaps regret that I have no absolute statistics to guide me or to confirm my opinion, but I cannot say that I am sorry for this defect, as the greater part of the evidence of patients themselves in all matters relating to drink and insanity and other nervous affections is often worse than valueless, because in the majority of instances it is an utter perversion of truth. So that I am inclined to think that any careful, honest observer, of ordinary knowledge and grasp of character, is better able to form an opinion relative to cause and effect, if he applies himself thoroughly to elucidate facts by indirect methods of research, than by his taking the statements of patients as absolute.

In dealing with the causation of disease, I hold that we ought to consider, firstly, how far the diseased condition is due to the inherent or determined cause. Secondly, how far it is due to the exciting assignable or determining cause. We often see and read of men of large experience who write and speak of paraplegia caused by drink, or of epilepsy caused by drink, or of insanity caused by drink, or of paralysis caused by syphilis, and they even go so far as to raise *dicta* upon such presumptive evidence. I must say that, from a legal point of view, there may, perhaps, be some difficulty to substantiate a doctrine founded more or less upon what may be to a legal mind "an assumption," but to one skilled in clinical medicine it is nothing more than a rational and scientific, although probably a technical, deduction. The relationship between drink and insanity in reference to *cause* and *effect* may, I venture to conclude, be viewed in a somewhat similar light to the foregoing proposition, and, as psychologists and physicians, we must not fail to take into consideration the functional mental derangements and loss of physical power, which are caused by exhaustion and want of nutrition of the nervous centres, and which we find occasionally in the habitual drunkard, and frequently in the confirmed dipsomaniac.

My experience of the dipsomaniac is this—that he is a person of feeble, and in fact defective, nervous organisation. He may be a man of quick or even brilliant intellect, but withal he shows a feebleness of mind and instability of character which render him peculiarly sensitive and impressionable to his surroundings. He is impulsive, vacillating, and emotional, easily led, but not so easily driven. He has a passion and a craving for drink over which he has no control, and, like a ship at sea without a helm, he is driven about by every turn of tide and change of wind.

If drink were the great *cause* of insanity (which I do not believe), rather than the *effect* of an inherent enfeeblement of the mind (which I believe it to be), we ought to have, as Dr. Mortimer-Granville says, some more distinct and decided evidence of those pathological changes in the connective tissue of the brain which we find do arise from the effects of alcohol in other structures of the body. Yet I am not one of that class of observers who believe that a hard, cirrhosed liver or kidney must of necessity be due to alcohol, and my experience has guided me to this conclusion.

There are few observers, however, who will not readily admit that insanity and drink are in some cases so associated—I might almost say correlated—that it is almost impossible by any obtainable evidence to draw the line between cause and effect with any amount of accuracy.

The morbid craving for drink which is the marked characteristic of the dipsomaniac is undoubtedly in itself a species of insanity, and does in the course of time lead to confirmed insanity in some more objective form than that of dipsomania. But this morbid craving for drink which we find in the dipsomaniac is merely an instance of a defective and unstable mental process, and in all probability the would-be lunatic, if he had not originally a morbid craving for drink, would evince a passion equally as morbid in some other given direction; and it is on this account that we are being constantly reminded that the cause of So-and-so's insanity is drink, or masturbation, or impotency, when in fact these conditions are due to a weakness and inadequacy on the part of the nervous centres, which are inductive of morbid tendencies, and which become by a process of development the factors which eventually bring about that dissolution and disorganisation of those occult attributes of the mind through which a man becomes branded by the term "insane."

I am, Sir, yours obediently,
THOMAS STRETCH DOWSE.

Old Burlington-street, March, 1880.

COMPARATIVE PATHOLOGY.

To the Editor of THE LANCET.

SIR,—Kindly allow me space for a few comments on the remarks which have recently been made in THE LANCET, in reference to Comparative Pathology.

In the first place, I would call attention to the sweeping assertions so often made as to the dependence of some endemics and epidemics upon the existence of enzootics and epizootics; it is well known to all observant veterinary surgeons that epidemics and epizootics frequently co-exist, and it is equally well known that the latter may take prece-

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dence, in point of time, of the former, or *vice versâ*; but that either are dependent upon the other for their origin is a gratuitous and hypothetical statement.

The existence of an epidemic or epizootic atmosphere—if I may be permitted the use of such an expression—is equally operative in the production of this class of diseases in both cases; in other words, the atmospheric influences which produce epidemics originate epizootics likewise.

In the second place, I would express my concurrence with the majority of the opinions recently advanced by Mr. Fleming in reference to variola, and would also call attention to some facts which have come under my notice at different times as to the prevalence, in England, of variola vaccina.

Some nine or ten years ago I saw cases of this disease in the neighbourhood of Blackburn, in which district it was well known. During the past eight years I have occasionally met with typical cases in the dairies of Edinburgh and Leith, and, with the exception of a few, all have passed through a regular course with but very slight apparent illness, or diminution of, or interference with, the lacteal secretion.

So little is the milk altered in its characters that it is a very rare occurrence for it to be kept separate from the daily yield. I have myself, on several occasions, examined such milk very carefully, microscopically, and otherwise, and in no instance have I been able to detect any material departure from the normal condition.

If small-pox were dependent upon variola vaccina for its existence we should expect that it would be unusually prevalent in Edinburgh and Leith, particularly amongst the families of cow-feeders. I believe I am justified in saying that such is not the case.

All the cows which suffer from variola vaccina in this neighbourhood are brought from North Lancashire (collected usually at Preston from the surrounding districts), from Cumberland, and Westmoreland, hence it should be an easy matter for medical men residing in these counties to institute inquiries as to the relative prevalence of small-pox and variola vaccina.

The remark made in your issue of February 28th, by Dr. H. D'O. Foote, to the effect that the animals which he saw suffering from V. vaccina were sickly, thin, and miserable, is probably to be explained by the treatment to which they had been subjected. I have observed in my book on "The Four Bovine Scourges," that when cows are cared for during the febrile stage of eczema epizootica the suffering is comparatively slight, but if they had been subjected to exposure or hardships in travelling the fever is aggravated and the subsequent results very grave. The same remarks apply equally to V. vaccina. As to the measles of pigs, I have frequently observed rubeolous affections in these animals running through a course almost identical with that of measles in the human subject, and have looked upon such cases as in every sense analogous to that exanthem.

Canine variola is often met with here. Lastly, in reference to the remarks recently made by Charcot as to the prior existence or otherwise of a localised pneumonia in pulmonary tubercular disease, I may observe that whatever may be the case in the human subject, we seldom find traces of a previous pneumonia in the tuberculous lungs of cattle.

I am, Sir, your obedient servant,

THOMAS WALLEY,

Principal, Royal Dick's Veterinary College, Edinburgh.

ANIMAL VACCINATION IN INDIA.

To the Editor of THE LANCET.

SIR,—In the note on "Animal Vaccination in India," which appeared in your issue of the 24th of January last, you appear to share the fears of the Punjab Hindoo Association in regard to the loss of caste which a Hindoo would incur in consequence of being vaccinated from lymph taken from the teats or udder of a heifer or cow. Permit me to observe, that if this matter may be judged by the practical experience of Bombay, the most populous city in India, these fears are perfectly groundless. Compulsory vaccination, and chiefly animal vaccination, has been established here for the last three years; the lymph used is mostly that from the udder of the heifer. Not only has objection to this lymph not been taken by the Hindoos, but animal vaccination is preferred to arm-to-arm vaccination. The people are quite pleased, because their vaccinated children are not usually required to contribute the lymph for extending the system. The Guzerathee portion of the Hindoo community of Bombay are quite as full of caste prejudices as any other Hindoos in British India, and yet they accept vaccination from the heifer as an unmixed blessing. The prejudices of the Punjab Hindoos appear to me to belong to Buddhism. When, several centuries ago, Brahminism regained the ascendancy in India and displaced Buddhism, some of the minor prejudices of the latter sect were necessarily transferred with the change; and this fear of heifer vaccination may be one of these prejudices. In Sanscrit literature the ordinary name for a guest is cow-killer; and no feast is said to be worthy of the name at which animal food was not provided.

Be this as it may, nothing has yet occurred to induce the Government of India to withhold a Compulsory Vaccination Act; nothing to prevent the free use of animal vaccination in any town or city in this country. Considering the vast benefits which a complete system of vaccination would confer upon India, it seems to me to be a matter of much regret that any educated public Hindoo body should engage itself in searching out fancied objections to animal vaccination at a time when the very life of the country requires that if any appeal is made to the people at all it should be an appeal to reason and common sense rather than to the spurious literature of an effete age. It is true in India that whenever Government have passed a well-considered law, which even the ignorant ryot can perceive will benefit all classes of the people, all prejudice has been at once forgotten, and a loyal obedience has been at once rendered. This has occurred in Bombay with the Compulsory Vaccination Act, and it will occur everywhere else in the country if Government has the courage of its opinion.

Whether arm-to-arm vaccination is to be preferred to animal vaccination is not now the question. Bombay experience is in favour of animal vaccination, especially amongst the poor with skins more or less diseased; but time is required before its protective influence can be accurately determined. If a Hindoo can be found weak-minded enough to object to animal vaccination, the remedy is at hand, and he may have his choice of human lymph, but such a man will have to meet a Hindoo vaccinator.

I trust, Sir, that the importance of this subject to the unvaccinated hundreds of thousands of the people of India will secure for my remarks a place in your widely-circulated journal.

Yours faithfully,

THOMAS BLANEY,

Bombay, Feb. 14th, 1880. Chairman Bombay Town Council.

TRANSVERSE DEPRESSIONS ON THE NAILS.

To the Editor of THE LANCET.

SIR,—The point in Dr. Thin's communication of the 20th inst. is of some clinical and medico-legal importance. Several observers have recorded cases to illustrate the dates of appearance and progress of these furrows. In particular, Dr. Wilks and Dr. Langdon Down have contributed facts bearing on this subject.[1] I have often observed the course of these depressions, and am inclined to agree with the recorded statements. I think, however, that there is a rather more rapid formation of nail than that of two complete growths in the year. Certainly, the rate of formation varies in different people, and at different seasons of the year. It is also influenced by the habits and occupation of the individual.

I am, Sir, your obedient servant,

DYCE DUCKWORTH, M.D.

Grafton-street, March 22nd.

THE RANK OF THE DIRECTOR-GENERAL OF THE ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—While the Director-General has been fighting and winning battles for the benefit of his brother officers, he has forgotten to claim justice for himself. I allude now to the very inferior relative rank granted this officer. As you are aware, every surgeon-general of the Army Medical Department ranks with a major-general in the army—a fair and just rule; but the Director-General of the whole department

[1] Vide Mr. Hutchinson's Lectures on Clinical Surgery, 1878, p. 144.

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who has control over these officers, and their very appointment in his hands, has but the same relative rank of major-general.

Now, any day, if a surgeon-general low on the list was made Director-General A.M.D.—a by no means impossible occurrence,—we would see the strange sight of the Director-General being junior in the army to one of his own subordinate officers. It needs no knowledge of organisation to see that there is a mistake here.

The Director-General, on appointment, should have the relative rank of a Lieutenant-General; and on retirement he should, if he have done the State good service, get the further honorary rank of a full General in the army. In a short time the Director-General A.M.D. will have the great Native Army of India also under his control, and will be a most powerful officer.

I hope you will support the view that his rank is now inferior, and move the authorities for its being changed to its proper position. Yours, &c.,

March, 1880. I.V.R.C.

THE AFGHAN CAMPAIGN.

(From a Correspondent.)

THE fighting of the tribesmen round Cabul ceased on the 23rd December, and they withdrew to the Highlands of Kohistan and Ghuzni. The exposure endured by our men during the twelve days of fighting has told heavily upon their strength, and there are now more than 700 men, native, European, and followers, in hospital. Pneumonia is the prevalent disease, and is the cause of many deaths. The 92nd Regiment particularly has suffered from this disease.

The British Field Hospital is placed in an angle of the Sherpur Cantonment, and all the sick are in houses, and have plenty of fires, warm clothing, and food. Medicines too are ample, although in the fighting much medical and surgical equipment was lost when the forces fell back on Sherpur.

The Field Hospital system here, and along the Khyber Line, has worked well, although it is true that the labour it entails on the Field Hospital Staff is very heavy. There is, of course, one medical officer with each corps or battery, but their work is very light, and the general opinion seems to be that the younger officers should be placed in these billets. It seems impossible to exaggerate the fatigue and labours of the Field Hospital work, and it is quite certain it will always be hard work in any campaign. To march a Field Hospital full of sick, to choose the camping ground, pitch the camp, arrange for the feeding and nursing of the sick, the shelter and feeding of the staff and servants, the due care of the transport animals, and the management of the large following of doolie bearers, is trying work.

It cannot be forgotten either that the Medical Department has often an uphill labour to perform in carrying out its duties, owing to the want of due aid being given to it by other branches. Up to the late campaign of 1878 staff officers in India were not required to take any special notice of the hospitals—that is to say, the hospital as a unit in the *army* was not thought of, as each *regiment* had its own hospital, which pitched its camp in the rear of its battalion without any further question. Now, however, with this new system the Field Hospital as a unit takes its place in the line of the camp, and becomes a very perceptible item in the general camp.

One great advantage that exists this year is that all the medicines, instruments, purveyors' stores, and records of the hospital are carried on mules, in regular mule-boxes. Last year camels were used, and caused much trouble to the medical officers from their slowness and inability to keep pace with the marching column.

An order is needed directing that mules once issued to a Field Hospital for this duty should remain with it during the campaign, as now a battle has often to be fought with the Transport Department to prevent these mules being sent away at every halt in an encampment.

The Gandamak Field Hospital in its march to Cabul was completely carried on mules, and it kept its place behind the reserve ammunition throughout the whole of the march over very trying passes from 6000 to 7000 feet high without a single mishap. The order of march was as follows:—1. Medicines packed in mule gakdans, or paniers. 2. Puckals or water skins on mules, a most important requirement. 3. The office record. 4. Purveyors' stores—all packed in boxes except the blankets, which were carried in rolls on either side of mules, twenty-five on each mule. 5. Light mountain tents, two on each mule, well rolled up, and packed on the pack-saddles. 6. A mule carrying the cooking pots, rations for the day, or beef-tea ready to be heated. 7. A mule carrying camp colours, picks and shovels, on one side, and on the other the bed-pans, urinals, &c. Eighth in order: officers' baggage and mess equipment, then servants' baggage.

About seventy mules were needed for the hospital, but several of them carried grain and food for man and beast for several days. In addition to these mules thirteen camels were used, carrying hospital marquees of a larger size, but these often did not arrive on the ground till five or six hours after the light mule hospital following the column had come in.

When the campaign is over (and every one is heartily sick and tired of it) no doubt we shall have many papers on hospital working in the field, from the officers serving with them.

A secretary for the P.M.O. of each Division has been sanctioned in a kind of way. Last year THE LANCET drew attention to the want of such an officer, and doubtless the notice has done much towards getting even the present indefinite sanction of the appointment. It cannot be impressed enough on the authorities that the P.M.O. of a Division does need a secretary to assist in the routine of office duties.

The want of an Army Hospital Corps is very much felt also. The present ignorant followers, called Hospital Servants, are wretched creatures, and should give place to well-trained and disciplined men with good pay and pensions. The want of mule carriage for ailing or slightly wounded men is also an urgent matter, as the vast army of undisciplined doolie bearers need to be cut down very much. We all hope for great things when this war is over. I have not met one man, from the highest to the lowest, who does not hate Cabul and want to get away from it.

Cabul, 18th Jan. 1880.

New Invention.

THE "CARMICHAEL" PORTABLE BOOT-TREE.

THIS is a very simple, interesting, and useful invention. A boot is constructed of india-rubber cloth, or, rather, a cushion in the shape of a boot; and when inflated with air it acts as a boot-tree. The advantage is self-evident. When the tree-cushion is empty it can be folded to form a very small package, and when required for use it can be introduced into the boot, when only partially distended, without straining the leather, as happens when a wooden tree is employed. This latter point, though not apparently specified by the inventors, strikes us as of no small importance. To country medical practitioners, sporting men, officers on campaign, travellers generally, and careful people in particular, the apparatus will commend itself as meeting a long-felt need very efficiently. The agents are Messrs. W. Sparkes Hall & Co., 310, Regent-street, London.

Obituary.

THOMAS BELL, F.R.S., F.R.C.S., F.Z.S., F.L.S.

MR. THOMAS BELL, whose death we recorded last week, was the son of a surgeon in large practice for more than fifty years at Poole, in Dorsetshire. He was born on the 11th of October, 1792. He commenced his professional studies with his father. In 1813 he proceeded to London, and attended the practice of Guy's and St. Thomas's Hospitals in the time of Mr. Cline, Sir Astley Cooper, Mr. Travers, and other celebrated surgeons of that period. In 1815 he passed the College of Surgeons, and in 1817 began lecturing at Guy's Hospital on the Anatomy and Diseases of the Teeth. He was appointed at the same time Dental Surgeon to the Hospital. He also gave lectures on Comparative Anatomy in

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the same school. Mr. Bell resided for many years in New Broad Street, City, and had a large and select practice as a dentist, and attained a very high position in the scientific world. In 1836 he was appointed Professor of Zoology in King's College, London, when he ceased his lectures on Comparative Anatomy at Guy's. He was elected a Fellow of the Royal Society in 1828, and in 1848 was chosen secretary of that body, and held the office till his election as President of the Linnæan Society in 1853. Mr. Bell became an Honorary Fellow of the Royal College of Surgeons in 1844, and was formerly one of the Board of Examiners in dental surgery at the College. Besides numerous contributions to the Transactions and Proceedings of the Zoological and Linnæan Societies, he was the author of a work on the "Anatomy and Diseases of the Teeth," "History of British Quadrupeds," "History of British Reptiles," Gilbert White's "Natural History of Selborne," published in 1876. He gave up practice some years back, and retired to the Wakes at Selborne, Gilbert White's house, which he had purchased from the family of the naturalist, and where he died on the 13th inst., in the eighty-eighth year of his age.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on March 18th:—

Bartlett, Charles Richard, Halsey-street.
Clarke, William, Lamont, Ottawa, U.S.
Grindon, Francis James, Olney, Bucks.
Hepburn, John, Turnham-green.
Hormazdji, Robert Nesbit, Artesian-road.
Lecoq, Jules Arthur, Soho-square.

The following gentleman on the same day passed the Primary Professional Examination:—

Yeatman, John Walter, St. Bartholomew's Hosp.

COLLEGE OF PHYSICIANS IN IRELAND.—At the March examinations the following obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—Kyran Thomas Buggy, Charles Hayden Cox.
MIDWIFERY.—John Battersby, Kyran Thos. Buggy, Charles Hayden Cox, Arthur Richard Frederick Exham, Alexander Silcock.

SURGEON S. W. VASEY has been appointed to the *Seagull*.

THE Vestry of St. George's, Hanover-square, are about to undertake large works in wood-paving.

A FARMER of Street, Bridgwater, was fined £20 last week, at the Guildhall Police Court, for sending to market the carcases of sheep which had been suffering from fluke disease.

MR. FRANCIS WISE, of Cork, has presented £5000 to the Home for Protestant Incurables in that city. The Home requires about £3000 more to complete it, and, when finished, will, it is stated, be one of the finest institutions of the kind.

ADMIRALTY, March 23rd.—The undermentioned surgeons have been promoted to the rank of Staff Surgeon in Her Majesty's Fleet, with seniority of this date:—Solomon Kellett, James D'Arcy Harvey, Thomas O'Sullivan, M.D., Joseph Wood, M.D.

HYDROPHOBIA.—An inquest was held on a woman at Hulme, Manchester, on Monday, and a verdict of "Death from hydrophobia" was returned. It appeared that the deceased was bitten on the thumb by an injured cat on January 27th. The wound, which bled profusely, was bound up, and healed. On March 16th, however, symptoms of hydrophobia supervened, and the woman died on the 18th.

BRISTOL CHILDREN'S HOSPITAL.—The annual meeting of this charity was held on the 20th inst., the Mayor presiding. During the past year 326 little ones had been received as in-patients, of whom 262 had been cured or materially relieved, 13 had died, and 88 were still under treatment; the out-patients had numbered in all (women and children) 3033. The total income for the year was £1262, but there remained an adverse balance of £54 14s. The system of requiring some payment from out-patients is still maintained. No note of introduction to the benefits of the hospital is required.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Miss Mary Woodward, of Sproughton, bequeathed £2000 to the East Suffolk and Ipswich Hospital, £1500 to the Essex Hall Asylum for Idiots at Colchester, £200 to the Essex and Colchester Hospital, £100 to the Suffolk Convalescent Hospital, and £50 to the Ipswich Lying-in Charity. Mr. Thomas Blackwell, of Soho-square, bequeathed £500 each to the Middlesex Hospital and the Westminster General Dispensary. The Brompton Hospital for Consumption has received £100 from "J. G. D." The Glasgow Royal Infirmary has received £100 under the will of Mr. Andrew Borland.

IRISH GRADUATES' ASSOCIATION.—The Irish Graduates' Association had their annual metropolitan dinner on St. Patrick's Day (Wednesday, 17th March), at the Holborn Restaurant, under the presidency of Mr. W. MacCormac, of St. Thomas's Hospital. Sixty-two members and guests sat down, and an excellent dinner was served. The following gentlemen were present:—Dr. Paget (president-elect), Dr. Balthazar Foster (treasurer), Drs. Daniell and Thompson (hon. secs.), Dr. Risdon Bennett, Mr. Wood, Mr. Erichsen, Mr. Jonathan Hutchinson, Dr. Greenhow, Mr. Mason, Dr. Ord, Dr. Milner Fothergill, Dr. Fancourt Barnes, Dr. Brodie Sewell, Dr. Tonge-Smith, Dr. Yeo, Rev. H. T. White, Dr. Wheeler, W. W. Mackeson, Q.C., Messrs. Wilson, Finlay, Mahr, Laistner, Wallace-Baines, H. Thompson, W. J. Frazer, Danaher, Vance, Wigmore, McBeath Davison, Butler, Croft-Oakes, Clements, Haddon, Hudson, Partridge, Murphy, Lough, Burton, McGrath, and many others. After dinner the usual list of toasts was given—"Our Rulers," "Our Guests," "Our Elders," "Ourselves." The latter was proposed by the President of the Royal College of Physicians of London in a very happy speech. The health of the President, Mr. MacCormac, was drunk with a bowl of Irish punch. A special selection of Irish music was played during dinner by the Holborn Band, and some exquisite violin and pianoforte recitals were given by Mr. Mahr and Mr. Laistner. Twenty-eight new members were elected. The company separated at a late hour, having passed a very pleasant evening.

BOOKS ETC. RECEIVED.

J. B. BAILLIÈRE ET FILS, Paris.
Le Cerveau. Par le Dr. C. Morel.
Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques. Tome XXVIII.
Le Régime de Pythagore d'après le Dr. Cocchi: De la Sobriété. Par L. Cornaro.
Cours de Thérapeutique. Par Adolphe Gubler.
L'Ecole de Salerne. Par Ch. Meaux Saint-Marc.

BAILLIÈRE, TINDALL, & COX, London.
On Consumption and its Treatment by the Hypophosphites. By Dr. J. C. Thorowgood.

C. L. BERMINGHAM & CO., New York.
The Hypodermic Injection of Morphia. By Dr. H. H. Kane.

J. & A. CHURCHILL, London.
The Elements of Indian Hygiene. By John C. Lucas, F.R.C.S.

DAWSON BROTHERS, Montreal.
Clinical and Pathological Reports of the Montreal General Hospital. Vol. I.

LONGMANS, GREEN, & CO., London.
Practical Chemistry. By W. A. Tilden, B.Sc. Lond., F.C.S.
The A B C of Philosophy. By T. Griffiths, A.M.

TRÜBNER & CO., London.
Physiology of Religion. Part I. By Henry Lee.
Manual of Operative Surgery. By Dr. Stephen Smith.

Address by Dr. F. N. Manning, Sydney.—The Answer of the New York Neurological Society to the Report of the Committee on Public Health relative to Lunatic Asylums.—The Medical Act (1858) Amendment Bill and Medical Reform. By Dr. W. E. Steavenson. (Baillière, Tindall, & Cox.)—The Victorian Review.—Journal de Médecine.—Australian Medical Journal.—The Sanitary Journal. (A. Macdougall, Glasgow.)—Boracic Acid a New Remedy in Eye Disease. By Dr. S. Theobald. (Trow's Printing Co., New York.)—The General Practitioner of Medicine, his Position and Education. By Dr. Bowles.—Transactions of the Cremation Society of England. (Smith, Elder, & Co.)—The Famous Victory. (Hamilton, Adams, & Co.)—Simplicity, Common Sense, and Intelligent Supervision in Sanitary Appliances. By P. Hinckes Bird. (C. L. Marsh & Co.)—Transactions of the Odontological Society of Great Britain. No. V. (Wyman & Sons.)—Good Words; Sunday Magazine. (Isbister & Co.)—A Plea for Cold Climates in the Treatment of Pulmonary Consumption. By Dr. Talbot Jones.

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Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ABBOTT, G., M.R.C.S.E., L.R.C.P.L., has been appointed Surgeon to the Central London Ophthalmic Hospital, vice A. Dunnage, deceased.

BRIDGFORD, C. T., L.K.Q.C.P.I., has been appointed Medical Officer to the Bray Dispensary District, vice Whistler, resigned.

BURMAN, C. C., L.R.C.P.Ed., has been appointed Medical Officer to the Workhouse and West District of the Belford Union, vice Miller, resigned.

CHEYNE, W. W., F.R.C.S., has been appointed Assistant-Surgeon and Demonstrator of Anatomy to King's College Hospital, vice Yeo, resigned.

COLEMAN, H. W., L.R.C.P., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Upper and Lower Wootley District of the Bramley Poor-law Union.

DOYLE, C. W., M.B., C.M., has been appointed Medical Officer for the Fifth District of the Norwich Union.

FRAZER, A., M.D., has been appointed Medical Officer to the Drumkeeran District of the Manorhamilton Union, vice Nash, resigned.

GRAVES, T. W., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Glamorganshire and Monmouthshire Infirmary, Cardiff, vice Vachell, resigned.

KING, T., L.S.A.L., M.R.C.S.E., of St. Mary's Hospital, has been appointed Assistant House-Surgeon to the Female Department of the London Lock Hospital and Asylum, Westbourne-green.

KIRKMAN, J. M., L.R.C.P.Ed., has been appointed Medical Officer to Districts 1 and 2 of the Cricklade and Wootton-Bassett Union, vice Parker, resigned.

LLOYD, T. L., L.R.C.P., has been appointed Medical Officer for the Fifth District of the Drayton Union, vice Prior, resigned.

MACKENZIE, A. G., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Surgeon to the *Severn*, in the Royal Mail Steam Packet Company's Service.

MAUDSLEY, Mr. H., has been appointed House-Surgeon to University College Hospital, vice W. H. Neale, M.B., M.R.C.S.E., &c.

MURRAY, Mr. H. M., has been appointed Ophthalmic Assistant to University College Hospital, vice R. S. Walton, M.R.C.S.E.

PATERSON, W. H., M.D., C.M., L.M., has been appointed Medical Officer for the Spittlegate District of the Grantham Union.

ROSS, R. A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the First District of the Alderbury Union.

SHARPLES, W., M.R.C.S.E., L.S.A.L., has been appointed Resident Surgeon to the North Cambridgeshire Cottage Hospital, Wisbech, vice Pearse, resigned.

SHARMAN, Mr. P. E., has been appointed House-Surgeon to University College Hospital, vice W. Banks, M.R.C.S.E.

WHITE, J. R., M.B., L.R.C.S., has been appointed Medical Officer and Public Vaccinator to the Nos. 2 and 6 Districts of the Ongar Union.

WILLIAMS, D., M.B., B.Sc., has been appointed Physician's Assistant to University College Hospital, vice B. Pollard, M.R.C.S.E.

WOODHOUSE, W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the First District of the Norwich Union.

Births, Marriages, and Deaths.

BIRTHS.

RIDGE.—On the 19th inst., at Carlton House, Enfield, the wife of J. J. Ridge, M.D., of a son.

WINCKWORTH.—On the 16th inst., at Shefford, Beds, the wife of Charles Edward Winckworth, L.R.C.P.L. &c., of a daughter.

MARRIAGES.

BEHREND—WAGG.—On the 18th inst., at Bryanston-square (the residence of the bride's brother), Henry Behrend, M.R.C.P., of Norfolk-crescent, Hyde-park, to Marian, daughter of the late John Wagg, Esq., of Gloucester-place, Portman-square.

IRVINE—CORRIE.—On the 20th inst., at Fawley, Henley-on-Thames, Gerard James Irvine, Surgeon, Royal Navy, eldest surviving son of the late Gerard Irvine, Esq., M.D., of Bungalow, Irvinestown, County Fermanagh, Ireland, to Henrietta Frances Corrie, youngest daughter of the late William Byrom Corrie, Esq.

DEATHS.

MACKAY.—On the 17th inst., at Elphinstone-terrace, Hastings, Caroline Frances (Fannie), second daughter of the late George Mackay, M.D., R.N., Inspector-General of Hospitals and Fleets, and Honorary Surgeon to the Queen.

SYKES.—On the 17th inst., at Queen's-road, Dalston, of pneumonia, George Sykes, M.D., aged 49.

THOMSON.—On the 20th inst., at Berkeley-square, Bristol, Charles Edmunds Thomson, F.R.C.S., aged 73.

N.B.—*A fee of 5s is charged for the insertion of Notices of Births, Marriages, and Deaths.*

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

SCIENCE TEACHING IN BOARD SCHOOLS.

AT a recent meeting of the Birmingham School Board (says the *Local Government Chronicle*) the Education Committee presented a report, recommending that a demonstrator be appointed, at a commencing salary of £250, for giving systematic elementary science teaching in the Board Schools. Following the plan which has been adopted by the Liverpool School Board, the Committee proposed that his duties should consist of—first, the organization of the instruction in elementary science in the schools, the performance of the experiments, and the giving of oral instruction to standards 4 and upwards of certain boys' and girls' schools; secondly, to teach classes of pupil-teachers to be established in connexion with the Science and Art Department, in the evenings or on Saturdays. The subjects to be taken will be, in the schools, mechanics for boys, and domestic economy for girls; and for the pupil-teachers (males) two or more of the following subjects:—Acoustics, light, heat, magnetism, and electricity; (females) animal physiology. The proposal was carried, after some discussion, by eight votes to five.

Volunteer.—The forage allowance for each horse in cavalry regiments is 12 lb. of hay, 10 lb. of oats, and 8 lb. of straw per diem.

BLEEDING IN PUERPERAL CONVULSIONS.

To the Editor of THE LANCET.

SIR,—A few days since I was called to see Mrs. Y——, who was expecting to be confined for the fourth time. She was about thirty years of age, of short build, thick neck, and florid complexion. At her first confinement she had convulsions; but at that time the os and soft parts were well dilated, and the attending doctor was able to turn and deliver a dead child, after which she only had two convulsions, but remained insensible for five days. When I saw her at this time she was in bed, complaining of severe pains in her head and slight ones in her back. On making an examination, I found the presentation normal, but the parts were not at all dilated. I gave her a mixture of chloral and bromide, ten grains of each, and she slept comfortably, but on waking complained that she could not see she had no true labour pains. She shortly went to sleep again, and awoke in a violent convulsion, with loud stertorous breathing, pupils insensible to light, and dilated. I made an examination, and found the os not dilated larger than a shilling, so it seemed impracticable to turn and deliver. Under these circumstances I sent for assistance, and administered chloroform to try and control the spasms, which I partly succeeded in doing till Dr. Shank, of Granville, arrived, which was probably in about three hours. We then bled in the arm, taking away an ordinary basinful of blood, and the spasms ceased, breathing becoming more natural, but pupils still insensible to light. I then applied a blister at the nape of the neck, and administered a powder of quinine and calomel. This was about five o'clock on the second day—i.e., I had been there since the previous evening at eleven o'clock. We continued to administer these powders at intervals of two hours, and at about half-past nine the child, a female, was born naturally, but was dead. A dose of castor oil was then given, and the bowels moved about eleven in the morning. I afterwards administered nitre and digitalis every three hours. The patient did not recover consciousness till twelve o'clock on the following night. She afterwards progressed as favourably as in any ordinary case.

What I wish to know is whether the treatment was correct, and whether anything else could have been done in the place of general bloodletting. Perhaps some gentleman who has had a similar case will kindly inform me in your columns how he treated it, and oblige,

Yours respectfully,

W. L. KING, M.D., L.R.C.S.C., &c.

Fredonia, Licking County, Ohio, March 1st, 1880.

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STATISTICAL SOCIETY.

AT the usual monthly meeting on Tuesday, the 16th inst., Sir Rawson W. Rawson, C.B., K.C.M.G., in the chair, two papers were read: the first by Dr. T. Graham Balfour, F.R.S., "On Vital Statistics of Cavalry Horses," in which he showed that the subject has received much more attention in France than in this country. In 1843, owing to the heavy losses by glanders sustained by the army during the preceding ten years, a permanent Commission, presided over by the celebrated physiologist Magendie, was appointed, whose duty was to be the examination of all questions relating to the health and preservation of the horses of the army. The Commission established statistical returns to be furnished annually by the veterinary surgeons of the army, and was uthorised by the War Minister to publish an annual volume giving the results of these returns, and any information it might judge eserving of publication relating to the health of the horses. The rst of these reports was brought out in 1847, and twenty volumes had bee rpublished prior to the breaking out of the Franco-German war. The mortality of the horses in the French army during the thirty years 1837-66 averaged 58 per 1000 of the strength; ranging between 125 in 1841, and 26 in 1862; and the proportion "cast" was 80 per 1000, ranging between 135 in 1849, and 47 in 1855. The total loss amounted to nearly 14 per cent. annually. Dividing the thirty years into quinquennial periods, the mortality shows a marked progressive reduction, attributable to the improvements introduced by the Commission, the deaths in the last five years having been only 27·5 per 1000 as against 115 in the first. The reduction did not extend to the casting, which was higher in the last two than in the first two periods. The importance of these results is shown by the fact that a saving of upwards of £90,000 a year was effected in the amount required for the purchase of horses for the army during the last five years compared with what would have been necessary had the ratio of deaths and casting been the same as during the first five years. The influence of sex is shown in a slightly higher rate of mortality, but lower of casting among mares than horses. The mortality by ages shows the rate to decrease steadily till 11 years of age, when the minimum is reached. The casting, as might have been expected, increases steadily with advancing years. The disease which causes the highest rate of mortality is glanders, and next to it stands inflammation of the lungs and pleura. The highest death-rate by glanders occurs at the age of 6, after which it steadily decreases; the highest rate of deaths by lung disease is among the 4 year old horses. The chief cause of casting is legs worn out, which accounts for two-fifths of the whole. The mortality has been highest in the Engineer Train and Transport Corps, and lowest in the Imperial Guard, the latter being, in the opinion of the author, to a considerable extent owing to the Guard being mounted on better bred horses than the line. The admission of cases into the infirmaries averaged more than 50 per cent. annually, about one-fourth of them being on account of wounds and injuries. The influence of the seasons on the sickness is shown by a table of the admissions in each quarter of the year by the chief classes of diseases; they are lowest in the fourth, and highest in the second quarter. The returns, unfortunately, do not show the number constantly non-effective—a point of great importance. The information respecting the British Cavalry is very meagre. The deaths, on the average of eighteen years, 1861-78, were 21·07 per 1000, ranging between 16·9 in 1864, and 28·1 in 1871. The number cast averaged 98 per 1000, and ranged between 76 in 1871, and 156 in 1878. The mortality was lowest in the Household Cavalry, and highest in the Cavalry of the Line; while the casting was lowest in the Royal Engineers, and highest in the Military Train and Army Service Corps, the Household Cavalry furnishing the next highest proportion. There is no information available as to the causes of death and casting. The author concluded by calling attention to the very valuable results obtained by the statistical method of investigation as applied to the horses of the army in France, and suggested that a similar course should be followed in our service, more especially with a view to test the actual value, as a measure of efficiency and economy, of the importation into our cavalry of horses purchased in Hungary. He also pointed out the importance, as shown by the French returns, of stamping out glanders by killing all infected horses as soon as the nature of the disease is verified.

Mr. H. L. Harris.—The preparation (or something) may be procured of R. M'Cord, 1, Australian-avenue, E.C.

A LARGE CHILD.

To the Editor of THE LANCET.

SIR,—On the 15th instant Mrs. G——, aged thirty-five, wife of a butcher, was delivered of a fœtus which weighed 12½ lb. It was her ninth confinement, and she was assisted instrumentally. The circumference of the child's head was 12½ in.; chest, 19 in.; whilst in height it was found to be 23 in. The mother did well. This may be of some interest to your readers.

Yours &c.,

Manchester, March, 1880. P. I. L.

A PERIL AT HOME.

A DANGER which has more than once been pointed out was illustrated in the town of Thaxted, in Essex, a few days ago. A gentleman sitting in the coffee-room of an hotel observed smoke rising from the surface of the uncovered table on the side opposite to where he sat. The table was standing directly facing and under the front window, through which the sun's rays were passing at the time. On examining the spot whence the smoke rose, the surface of the wood was seen to be charred as by fire. A decanter filled with water was on the table in a direct line between the charred spot and the window. A piece of paper was laid on the spot after all trace of fire on the table was removed, and it immediately ignited. Lucifer matches were laid down with the same result. Thus the decanter of water appears to have acted as a lens to concentrate the sun's rays with a power sufficient to produce combustion.

Mr. Simeon Snell.—The paper will appear in an early number.

TOBACCO-SMOKING.

To the Editor of THE LANCET.

SIR,—In the discussion upon tobacco which has been going on in your pages lately, the question, as far as I have seen, has not been raised in connexion with the effect, if any, that smoking has upon the teeth. It has been usual, when the necessity arises for obtaining data upon a subject which is little known, to proceed at once to organise some statistics, and from these to draw a general conclusion; but obviously in the case before us, where so many causes are at work to produce the same result—namely, decay of the teeth,—any statistics drawn from those men who smoke and from those who do not would be of rather less value than statistics usually are. There is, however, one point which admits at any rate of some latitude for expressing an individual opinion, and that is whether or not tobacco-smoking augments the process of decay in a tooth in which decay has already commenced. A few observations upon this subject have inclined me to the belief that tobacco-smoking *has* this effect. Smoking may be innocuous to teeth already healthy; but let decay once appear, and its progress will be accelerated by the presence of the smoke. And to what may we assign the cause of this, assuming this suspicion to be correct? It seems to me that it is to be found in the chemical properties of the smoke—the combustion processes liberating from the tobacco the elements which are productive of the mischief. The irritating properties of tobacco-smoke are proved by the effect which follows its application to the conjunctiva. It is reasonable, therefore, to conclude that some such effect occurs upon the teeth in which decay has commenced. But how is it with a certain section of the community, one of whose pleasures in life is to chew tobacco? Judging only from what I have seen, I am bound to admit that, beyond blackening the teeth, it does not seem that the practice followed by these men is harmful as far as the teeth are concerned. I have looked into the mouths of many subjects upon the post-mortem table, the majority of them being seamen, whose propensity for chewing is well known, and frequently I have found the teeth sound and good, but, of course, intensely blackened.

Yours faithfully,

Paris, March 16th, 1880. M.R.C.S.

POST-MORTEM APPEARANCES IN A CASE OF STARVATION.

THE following description by Dr. Snowball of the appearances found thirty hours after death in a child five weeks old brought to the Children's Hospital, Melbourne, with a history of neglect and improper feeding, is given in the *Australian Medical Journal*:—"Brain pale, and of such thin consistence that on opening the dura mater it ran out like a pasty fluid. Lungs pale, but healthy. Heart: walls soft and flabby; no blood in cavities. Liver engorged with blood; gall-bladder *quite empty;* coats thin and pale. Coats of stomach and intestines greatly attenuated and pale; small quantity of fæces in lower gut. Kidneys pale, but healthy. All the internal fat absorbed."

Mr. T. L. Laen.—Cases are reported in THE LANCET of Feb. 15th and March 1st, 1873. We have no recollection of others.

SWELLING AND TENDERNESS OF THE LYMPHATIC GLANDS IN RÖTHELN (GERMAN MEASLES).

To the Editor of THE LANCET.

SIR,—I have been interested in Dr. Dyce Duckworth's account of rötheln in THE LANCET of the 13th inst., as, so far as I had noticed, he was the first English describer of the inflamed lymphatic glands that occur in the disease. In a considerable epidemic of the complaint that occurred here about seventeen years ago, this feature was not noticed, although in other respects the novelty of the complaint led to its being discussed one evening at our local Medical Society. During last year and this year the disease has revisited us, and now the tenderness and (moderate) swelling of the cervical and sub-occipital glands have been prominent characters, and yet not universally so, as in about one-fourth of the cases that I have seen they have not been detectable. A careful inquiry about the incubation has led to sixteen days being considered the usual period; but in some instances it has seemed to extend to eighteen, and in others even to twenty days.

I remain, Sir, yours &c.,

Brighton, March 15th, 1880. G. F. HODGSON.

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ADVICE TO "A STRUGGLER."

A Struggler asks us how he can best introduce himself in a new neighbourhood, moving from an old one a little distance off, where he has achieved an income of £350 a year, including the proceeds of a district appointment; and he suggests the issue of circulars, intimating his change of address and his hours of consultation. Our correspondent says that he does not wish to do anything *infra dig.* Our advice would be not to do anything in the new neighbourhood and in the larger house, which would not even be dignified in the old neighbourhood, and certainly to leave the issue of circulars to the neighbouring tradesmen. The arrangements for utilising the larger house which our correspondent mentions are reasonable enough.

Mr. H. S. Reynolds should put his views into the form of an advertisement. He would probably soon find a purchaser for his practice.

FRACTURE OF SKULL; RECOVERY.

To the Editor of THE LANCET.

SIR,—I have the pleasure of forwarding to you notes of a case of rare and extraordinary injury to the skull without damage to the brain.

On October 17th, at 5 P.M., Manuel, a Portuguese boy, aged fifteen, was thrown from a horse, and dragged by the stirrup till his head struck against an iron pipe, when the strap parted. The horse ran off. The boy jumped up and started after him, but was caught and restrained by the bystanders. He was brought here immediately, quite sensible; clean-cut wound on right side of the head; a piece of skull, attached by a little bit of skin, hanging from the wound; wound five inches long, beginning an inch above the ear, running first straight up, and then backwards; dura mater apparently uninjured over a large uncovered space; slight bleeding only from the cut edges of the scalp. Some faintness, but no paralysis or other affection of the general or special senses. I attempted to replace the bone, but found it impossible. Skin brought together with sutures, and dressed with carbolised water. The patient had a good night, with very slight wandering of mind. The piece of skull was peeled, or rather dug out, clean off the dura mater. It is nearly a parallelogram, three and one-eighth inches from front to back, two and one-eighth vertically; very little periosteum on the outside; the inside masked by the groove of the middle meningeal artery.

Oct. 18th.—11 A.M.: Pulse 115; temperature 102°; complains only of soreness; mind quite clear.

19th.—Noon: Pulse 114; temperature 104°.

20th.—Noon: Pulse 120; temperature 104°. Wound dressed.

21st.—Noon; Pulse 125; temperature 107°. Wound dressed.

22nd.—Noon: Pulse 120; temperature 107°. Considerable suppuration; matter bogging below. I passed in a director, and made a counter-opening. Much pus evacuated.

23rd.—Pulse 122; temperature 101°. A strip of bare skull visible along the front edge of the wound; much discharge; erysipelatous swelling of right ear and face.

Till 26th.—Much the same; pulse 116; temperature 105°.

27th.—Pulse 84; temperature 100°. Still much discharge; swelling of face and ear has disappeared; night restless; appetite poor; can help himself in every way.

30th.—Noon: Pulse 97; temperature 103°; swelling appears in the upper lip and left ear.

31st.—Swelling in left ear alone; he is much stronger; pulse 96; temperature 101°.

Nov. 3rd.—Very little discharge; pulse and temperature normal.

4th.—Somewhat fallen off, though the appetite is now good; right ear has swollen again; pulse 88; temperature 105°.

5th.—Ear is well.

8th.—Doing well; pulse 85; temperature 100·5°. From this date he was well, except for the wound, which is now an inch and a half long, granulating healthily at the edge; almost no discharge. All the time the dressing has been carbolised water. He is very bright and happy.

16th.—A scale of bone came away, that which is noticed in report of Oct. 23rd.

24th.—Yesterday another scale of bone came away. To-day the granulations have closed over. The wound is nearly healed. The boy otherwise well.

Remarks.—The injury is a very remarkable one. It is hard to see how it could be artificially imitated. Could a good mechanic knock out a piece of skull, three by two inches, with clean rectangular edges, through a single cut in the scalp, under the condition that the brain is to suffer no injury? I am, Sir, yours faithfully,

ROBERT M'KIDDIE, M.R.C.S., &c.,
Surgeon to the Queen's Hospital.

Queen's Hospital, Honolulu, Jan. 12th, 1880.

MEDICAL CHARGES.

To the Editor of THE LANCET.

SIR,—As a general practitioner, my account for the attendance and service rendered, as detailed by "Extra-urban Practitioner," would have been delivered as follows:—"To medical attendance, July 20th to 24th inclusive, £2 2s."; and in my ledger a note thus: "Charge six visits, at 7s." Your obedient servant,

March 22nd, 1880. J. W.

P.S.—My practice is extra-*sub*urban, and among the class indicated my account is seldom or never questioned.

Traveller.—Our correspondent must be a much better judge of his question than we or any other person could be. There is no rule or tariff for such services. They should be the subject of an agreement beforehand. In any case the remuneration of the medical man should turn upon a number of social, financial, and professional considerations, of which no one but himself can be a judge.

IS JAGGARY AN ANTISCORBUTIC?

To the Editor of THE LANCET.

SIR,—Your last issue contains an anonymous communication under the above heading, offering some criticisms on my letter "On the Preventive and Remedial Effects of Molasses in Scurvy and Diseases connected with Chronic Starvation," which appeared in THE LANCET of the 31st of January last. To this communication it is difficult to reply in an edifying or useful manner. It is not necessary to occupy much of your space, but with your permission I will draw attention to the fallacy of a few of your correspondent's most prominent remarks.

The whole second paragraph, which occupies about half his letter, is devoted to commentaries on the causation of scurvy, which have so little bearing on the influence of jaggary or any other substance on that disease that I refer to it only to illustrate the illogical and incomprehensible manner in which he uses and draws inferences from my statements. After referring, in my letter, to the large experience of practical men as to the beneficial effects of molasses in scurvy on board ship, I proceed, by way of contrast and illustration, to say, in a general way, that the disease in India "was due to causes far removed from sea influences and salt provisions." Now, Sir, if "Famine Wallah" be not a disciple of Messieurs De Talleyrand and De Retz, who are credited with believing that the use of language is to conceal our thoughts, I submit that it surpasses the bounds of imagination how he can assume that I am a believer in what he is pleased to call "the exploded theory that scurvy is *per se* due to sea influence and salt provisions." The fact is, though I believe both, under certain circumstances, to be fruitful sources of scurvy, I am not aware that I have ever until now said so.

Again, your correspondent asks why do I say that the cattle died from want of salt? My answer is, because it is true; which, however, does not preclude the possibility of their dying from other causes. For example, if I assert that children die from small-pox, I have a right to expect that no sane person will run away with the idea that it is my belief that they may not also die from other diseases, such as measles or scarlatina.

His third paragraph concerns itself solely with a triple division of scurvy, which, as it is beside the question at issue, I have nothing to say.

In the fourth paragraph it is asserted, on what grounds I cannot imagine, that my experiments are advanced to prove "the preventive and remedial effects of jaggary in scurvy." With reference to this I have only to say that I made no experiments with such an object. My experiments were made with a view of testing the "powerful assimilation-assisting properties of jaggary," to which I have stated I attribute the greatest importance. I have not even hinted that the men experimented on suffered from scurvy. However, as he appears anxious to be informed "that if consonant with increase of weight I expect scorbutic symptoms to disappear," I say yes, at least in the vast majority of famine cases, and not only as regards scurvy, but most other diseases as well; and further, without such increase of weight, few indeed would remain long to be troubled with scurvy or other ills to which flesh is heir.

Now, Sir, one word as to the real question under discussion, and I have done. As I have been asked a large number of not very pertinent questions, and in not the most agreeable style, I should like in return to ask "A Madras Famine-Wallah" whether he has had any experience of molasses or jaggary either in his own case or that of others? For the present, at all events, as he has not brought forth any, I am forced to the contrary conclusion, and must therefore, however reluctantly, consider his opinions as practically worthless. Moreover, from the testimony of the New England ship captains as to the efficacy of molasses in scurvy, from the evidence adduced in its favour by Dr. Buzzard in "Reynolds's Medicine" during the civil war in America, where it was used with "decided benefit," and from my own experience and that of others in India, I have little hesitation in asserting that, had your correspondent performed the experiments he considers so conclusive, or given it a trial on himself, I am pretty confident he would not have been under the necessity of subscribing himself a "Famine-Wallah."

Yours faithfully,

Connaught-square, March 22nd, 1880. D. H. CULLIMORE.

RETRACTION OF THE TONGUE.

MR. H. MEYMOTT, of Ludlow, submits the following case as containing features of interest:—

William B——, aged twenty-five, labourer, had been suffering from bronchial irritation, and whilst at work on the 28th February suddenly lost all control over the muscular action of the tongue. I did not see him until several hours had elapsed. He could neither speak nor swallow. The tongue was much swollen, and he could not protrude it in the slightest degree. After several minutes' digital manipulation, and urging his own efforts to protrude it, I succeeded in bringing it out a little distance from the teeth, when it slipped back again. A second effort was more successful, and, to his immense relief, he could both speak and swallow. It remained in place, but was much swollen, and a large quantity of saliva was secreted. I gave him an astringent gargle, and he rapidly recovered.

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Dr. Maurice G. Evans.—Mr. Keetley described an apparatus of the kind in THE LANCET for Jan. 8th, 1876. Or application may be made to the Secretary of the St. John's Ambulance Association.

Mr. R. S. Hudson.—The name will be inserted in the official list.

RARE CASE OF RETARDED LABOUR.

To the Editor of THE LANCET.

SIR,—The following case of retarded labour appears to me worthy of being placed on record :—

Mrs. W——, aged thirty-six, third confinement, who was delivered of twins in her previous labour, sent for me on October 28th, 1879, at 6.30 P.M. I found that she had been suffering slight pains since 8 A.M. that morning, when the waters had broken. I examined and found the os dilated to about the size of a shilling; had had no pains for more than an hour. I left her, and called again about 9 P.M., and found everything in the same state. I left, and she sent for me about 1 A.M. on the 29th, having had violent pains for about an hour. The os was now fully dilated, and the head descended slightly with every pain, but receded when it was over. Pains more or less violent every ten minutes. I waited for two or three hours, and then applied Simpson's long forceps, which slipped on my using some force. I reapplied them with the same result. I then obtained the assistance of Mr. Reckitt, who also tried the forceps with a similar result. Mr. R. then administered chloroform. I passed my hand into the uterus, and found the following condition of things :—A tight contraction of the internal os, or the lower fibres of the uterus, around the neck of the child, and compressing the cord, a loop of which had slipped down. The child, of course, was dead. I gradually inserted my hand further into the uterus and turned the child. I had some difficulty in extracting the head, which had been again grasped by the os internum, but eventually I overcame that difficulty by perforating, and so relieved my patient, who had been five or six hours in strong labour. She made a rapid recovery.

There is an account of a somewhat similar case read before the Edinburgh Obstetrical Society by Dr. Angus M'Donald, and published in the *Obstetrical Journal* for September, 1879. Dr. M'Donald remarked that his was an unusual case, there being very few recorded. I, therefore, thought this might be worth insertion.

I may add that had I known what was the cause of retardation, I should first have tried the effect of a full dose of opium; but when I had my hand in the uterus, I thought the wisest thing was to turn and deliver the woman, who was becoming exhausted.

Your obedient servant,

Newark-on-Trent, March, 1880. H. O. LUCAS, M.R.C.S.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Fayrer; Dr. Gowers, London; Dr. Dyce Duckworth, London; Dr. Greenfield, London; Professor Clay, Birmingham; Mr. J. H. Cameron, Toronto; Mr. Thatcher, London; Mr. Gore, Bath; Dr. Thudichum, London; Mr. Cullimore, London; Mr. Hudson, Redruth; Mr. Snell, Sheffield; Mr. Harris, London; Mr. E. Firth, Edinburgh; Mr. Craigie, London; Dr. M. G. Evans, Cardiff; Mr. Aikman, Guernsey; Mr. Epstein, London; Mr. Richard, Dumbarton; Dr. J. Thomson, Leamington; Dr. Hardwicke, Sheffield; Mr. Boyle, Hailsham; Mr. Adamthwaite; Mr. Coleman, Cardiff; Mr. Coombe, Toondla; Mr. Paramore, London; Messrs. Fell and Bryant; Dr. Cameron, M.P.; Mr. Reynolds, Natal; Surgeon Lewtas; Mr. C. Bader, London; Mr. Richardson, Newhaven; Mr. G. A. Wright, Manchester; Dr. Brett, Watford; Mr. Murphy, London; Mr. Gamgee, Birmingham; Mr. Field, London; Dr. Fussell, Brighton; Mr. Myers, Nottingham; Mr. M. Baker, London; Messrs. Mottershead and Co., Manchester; Mr. Fosbroke, Birmingham; Mr. Ellis, Newcastle; Dr. Struthers, Leith; Mr. Mann, Manchester; Mr. Dovell, Lundy Island; Mr. Warren, London; Mr. Abraham, London; Mr. Hyrons, Glasgow; Mr. Cottle, London; Dr. Russell, Glasgow; Dr. Caird, Edinburgh; Mr. Laen, Cardiff; Mr. Whalley, Edinburgh; Dr. Thursfield, Shrewsbury; Dr. Cuolahan; Dr. Slorach, Bandon; Mrs. Whitworth, Birkenhead; Messrs. Richardson and Co., Leicester; Messrs. Maclachlan and Co., Edinburgh; Mr. Howe, Birmingham; Mr. Collins, London; Mr. Fawcett, Bradford; Messrs. Edmonson and Co., Skipton; Messrs. Garwood, York; Mrs. Stratton, Newport, Isle of Wight; Messrs. Arnold and Sons, London; Messrs. Leader and Sons, Sheffield; Mr. Hochheimer, Brighton; J. W.; I. V. R. C.; 420; Volunteer; Medicus, Norfolk; Mrs. H., Manchester; A Fourteen Years' Total Abstainer; D. A.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Fulton, Toronto; Mr. Passmore, Brixton; Mr. Sullivan, Leicester; Mr. Lewis, Hay; Mr. Gelling, Walsall; Mr. Wright, York; Mr. Hughes, Halstead; Mr. Newlands, Lewes; Mr. Watkins, Worcester; Mr. Robson, Northampton; Mr. Kenworthy, Hollinwood; M.B., Dowaham; Chemist, Clewthorpe; L.R.C.P., Hull; Surgeon; J. A.; Medicus, Tamworth; Alpha, Cardiff; Z. P. L.; J. W.; Beaumont; Medicus, Sheffield; C. B.; &c.

Arbroath Guide, Dundee Advertiser, La Independencia Médica, Shield, Welshman, Cambridge Chronicle, East London Observer, Aberdeen Herald, Daily Free Press, Englishman, Revista de Medicina, Army and Navy Gazette, El Observador, Abergavenny Chronicle, Aberdeen Journal, Laws of Health, Warehousemen and Drapers' Trade Journal, Surrey Advertiser, Metropolitan, San Francisco Western Lancet, Independent Practitioner, Rochdale Observer, Liverpool Daily Post, Boston Medical and Surgical Journal, &c. &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, March 24th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Mar. 19	30·41	E.	42	41	79	56	38	..	Cloudy
,, 20	30·33	S.E.	35	34	86	51	32	..	Foggy
,, 21	30·30	N.E.	43	38	83	52	43	..	Hazy
,, 22	30·36	E.	40	36	50	45	32	..	Overcast
,, 23	30·36	N.E.	41	38	71	46	35	..	Overcast
,, 24	30·33	S.E.	42	40	87	57	32	..	Hazy

Medical Diary for the ensuing Week.

Monday, March 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, March 30.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, March 31.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, April 1.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
HARVEIAN SOCIETY.—8½ P.M. Dr. Cavafy, "On a Case of Urticaria Pigmentosa."—Mr. Malcolm Morris, "On a Case of Pemphigus Cured by Arsenic."—Mr. Reeves, "On Rectal Stricture, with special reference to Rectotomy and Twenty-five Colotomies."

Friday, April 2.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, April 3.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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THE

Lumleian Lectures

ON

THE DIGESTIVE FERMENTS, AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians,

BY WM. ROBERTS, M.D., F.R.C.P., F.R.S.,

PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY; PROFESSOR OF CLINICAL MEDICINE TO THE OWENS COLLEGE.

LECTURE I.—PART I.

DIGESTION has been usually regarded as the special attribute of animals. They receive into their alimentary canal the food which they require for their sustenance in a crude form. It is there subjected to the action of certain ferments which transmute its elements, by a peculiar chemical process, into new forms which are fitted for absorption. Looked at in this restricted sense, plants have no digestive function. They possess no alimentary canal nor any vestige of a digestive apparatus. But when the matter is examined more profoundly it is seen that plants digest as well as animals, and that the process in both kingdoms of nature is fundamentally the same.

In order to understand this generalization—which was first propounded by Claude Bernard, and constitutes one of the most important fruits of his splendid labours[1]—it is necessary to recognise digestion under two types or conditions—namely, a digestion which takes place exteriorly at the surface of the organism, and a digestion which takes place interstitially in the interior of the organs and tissues.

Exterior digestion is that common process with which we are familiar as taking place in the alimentary canal of animals, by which the crude food introduced from without is prepared for absorption.

Interstitial digestion, on the other hand, is that more recondite process by which the reserves of food lodged in the interior of plants and animals are modified and made available for the purposes of nutrition.

These two types of digestion are essentially alike, both as regards the agents and the processes by which they are carried out; and although one type of digestion is more developed in the animal kingdom and the other type more developed in the vegetable kingdom, both types are represented in the two kingdoms, and bear witness to the fundamental unity of the nutritive operations in plants and animals.

I shall only be able to indicate in outline the facts and arguments on which Bernard sought to establish these propositions.

Exterior Digestion.

We all know that the alimentary canal is simply a prolongation of the external surface; that the skin is continued, at either extremity, without a break, into the alimentary mucous membrane. Accordingly the processes which take place in the digestive tube are, strictly speaking, as much outside the body as if they took place on the surface of the skin. Upon this inner surface, if I may so call it, are poured out the digestive juices, charged with the ferments which are the special agents of the digestive processes. This is the common condition of exterior digestion as it occurs in animals, but it is not the only condition. Among some of the lowest members of the animal series a permanent alimentary canal does not exist. In the amœba any portion of the exterior is adapted for the reception of food. The morsel sinks into a depression formed on the surface at the point of impact; it is digested in this improvised stomach, and the indigestible portions are expelled through an improvised anus.

Among plants exterior digestion is a much less prominent feature than among animals, but examples of its occurrence and evidence of its importance are not difficult to point out. In the lowest orders of plants-fungi and saprophytes, which are devoid of chlorophyll, exterior digestion is probably a function of prime necessity. In all likelihood their carbon-containing food is only absorbed after undergoing a process of true digestion. The transformation of cane-sugar by the yeast-plant is a striking example, though a distorted one, of exterior digestion. Cane-sugar is a crude form of food both to plants and animals, and requires to be transformed into invert-sugar (a mixture of equal parts of dextrose or grape-sugar and lævulose or fruit-sugar) before it can be made available for nutrition. The yeast-plant is no exception to this rule, and when placed in a solution of cane-sugar it is under the necessity of transforming that compound into invert-sugar before it can use it for its profit in fermentation. This transformation is effected by a soluble ferment attached to the yeast-cell, which can be dissolved from it by water. We shall see later on that a similar ferment exists for a similar purpose in the small intestine of animals, having the same property of changing cane-sugar into invert-sugar.

Even among the higher plants exterior digestion is not quite unknown. The function may be said to be foreshadowed in the excretion of an acid fluid by the rootlets of some plants which serves to dissolve and render absorbable the mineral matters in their vicinity. But genuine and most remarkable examples of this type of digestion occur among the so-called insectivorous plants, of which Mr. Darwin has given so interesting an account. In the sundews, the plant, by a peculiar mechanism provided on its foliage, seizes the insects which fortuitously alight on its leaves. A stomach is extemporised around the prey, into which is poured out a digestive fluid. The prey is digested, and the products absorbed, in essentially the same manner as in the gastric digestion of animals.

Interstitial Digestion.

Both animals and plants lay up reserves, or stores, of food in various parts of their tissues for contingent use, so that if you suddenly withdraw from them their food-supplies neither animal nor plant immediately dies—it lives for a certain time on its reserves. But before these reserves can be made available for the operations of nutrition they must first be converted from their inert and mostly insoluble state into a state of solution and adaptability to circulate in the nutritive fluid which constitutes the alimentary atmosphere of the protoplasmic elements. This conversion of inert store-food into available nutriment is brought about certainly in some, presumably in all cases, by the same agents and processes as the digestion which takes place in the alimentary canal of animals; and it is this identity in the agents and the processes which Bernard insisted on as the proof of the fundamental identity of the two kinds of digestion.

The storing up of food is carried on to a larger extent in the vegetable than in the animal kingdom, owing to the intermittent life of most plants. In their seeds, tubers, bulbs, and other receptacles are laid up stores of albumen, starch, cane-sugar and oil—designed primarily for the growth and nutrition of the plant or its offspring—but which are largely seized on by animals and utilised for their food. Owing to their more continuous life animals store up food less than plants. Nevertheless, they accumulate stores of fat in various parts of their body—of animal starch (glycogen) in their livers and elsewhere—and of albumen in their blood. Birds also store up large quantities of albumen and fat in their eggs.

The transformation of store food has been followed out most completely in regard to starch, its congener glycogen, and cane-sugar. Bernard worked out this subject with marvellous minuteness and success. It has long been known that the transformation of starch into sugar in germinating seeds was effected by diastase; and that a similar ferment, existing in saliva and pancreatic juice, performed the same office on the starchy food of animals. It has also been proved that the stores of starch laid up in the tuber of the potato and in various parts of other plants are changed at the periods of budding and growth in the same way and by the same agent. Bernard showed that animal starch or glycogen is stored up largely not only in the liver but in a variety of other situations, and especially that it is widely distributed and invariably present in large quantities in embryonic conditions. In juxtaposition with the glycogen is found a diastatic ferment which transforms it into grape-sugar, as it is required for the active operations of growth and nutrition.

The stores of cane-sugar which exist in the beet-root and

[1] Claude Bernard: Leçons sur les Phénomènes de la Vie. Tom. II. Edited after his death by Dastre. Paris, 1879.

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in the sugar-cane are transformed or digested in like manner into invert-sugar when the plants enter on the second phase of their life—the phase of inflorescence and fructification. Here, again, it has been proved that the converting agent is a soluble ferment—the same ferment which, as already mentioned, is attached to the yeast-cell—and the same ferment which exists in the small intestine of animals for a similar purpose.

The transformation of store proteids and fats has not been followed out with the same success as that of starch and cane-sugar. But the evidence, as far as it goes, and analogy point to the conclusion that the stores of albuminous and oily matters contained in the seeds, bulbs, and other receptacles of vegetables are subjected to a digestive process before they are made available for the nutritive operations of the plants, and that the changes thus effected are of the same nature and are accomplished by the same agents as those which take place in the digestion of proteids and fats in the alimentary canals of animals.

I have, I think, said enough to show the scope of the evidence and the analogies from which Bernard deduced certain far-reaching generalisations, which I have ventured to summarise in my own language in the following propositions :—

(1) Digestion, or the process by which crude food is changed into available nutriment, is a function of capital importance in every form of active life. (2) This function is exercised partly on food brought into proximity with the surface of the organism (exterior, chiefly intestinal digestion) and partly on reserves of food laid up in the interior of the organism (interstitial digestion). (3) The agents concerned in this function and their mode of action are essentially the same whether the organism be a plant or an animal—and whether the action takes place in the interior of the tissues,—or on the general or intestinal surfaces.

General Characters and Properties of the Digestive Ferments.

The essential work of digestion is carried out by a remarkable group of agents, called soluble or unorganised ferments. These are found dissolved in the several digestive juices or secretions, which are thrown out on the path of the food as it travels along the alimentary canal. The physical and mechanical processes to which food is subjected in the mouth and stomach are all purely introductory, or preparatory, and are solely intended to facilitate the essential work of digestion, which consists in the action of the digestive ferments on the alimentary principles.

The number of distinct ferments employed in the digestion of the miscellaneous food used by man is not accurately known, but there are at least seven or eight of them. The accompanying table presents in one view a scheme of the several digestive secretions or juices—and the ferments which they contain—together with an indication of the action of each ferment on the several alimentary principles.

Table of the Digestive Juices and their Ferments.

Digestive Juices.	Ferments contained in them.	Action on Food Materials.
Saliva	Salivary diastase or ptyalin	Changes starch into sugar and dextrine.
Gastric juice ..	*a.* Pepsin	Changes proteids into peptones in an acid medium.
	b. Curdling ferment	Curdles the casein of milk.
Pancreatic juice..	*a.* Trypsin	Changes proteids into peptones in alkaline and neutral media.
	b. Curdling ferment	Curdles the casein of milk.
	c. Pancreat. diastase	Changes starch into sugar and dextrine.
	d. Emulsive ferment	Emulsifies and partially saponifies fats.
Bile	?	Assists in emulsifying fats.
Intestinal juice ..	*a.* Invertin	Changes cane-sugar into invert-sugar.
	b. ? Curdling ferment	Curdles the casein of milk.

An examination of the table shows that a long and complicated series of ferment-actions is required to accomplish the digestion of our food. Starch is attacked at two points—in the mouth and in the duodenum—by two ferments, salivary and pancreatic diastase, which are substantially identical. Albuminous matters are also attacked at two points—in the stomach and in the small intestine; but here the two ferments, pepsin and trypsin, are certainly not identical. The ferment, of which the only known characteristic is to curdle milk, is found in the stomach and in the pancreas—and I think also in the small intestine. The bile is not known to possess any true ferment-action, but it assists, by its alkalescent reaction and by its physical properties, in emulsifying and promoting the absorption of fatty matters. The ferment which transforms cane-sugar, strange to say, is not encountered until the food reaches the small intestine.

The known digestive ferments all belong to the class of soluble or unorganised ferments. They are sharply distinguished from the insoluble or organised ferments, of which the type is yeast, in not having the power of self-nutrition and self-multiplication. All living organisms possess this power either in a dormant (potential) or in an active (kinetic) state. Soluble ferments cannot therefore be said to be alive—but they are exclusively associated with living organisms and take an essential part in their vital operations.

The digestive ferments are all the direct products of living cells, and may be regarded as detached repositories of cell-force. They are quite unknown in the domain of ordinary chemistry. Their mode of action bears no resemblance to that of ordinary chemical affinity, and has a distinctively physiological character. They do not derive their marvellous endowments from their material substance. They give nothing material to, and take nothing material from, the substance acted on. The albuminoid matter which constitutes their mass is evidently no more than the material substratum of a special kind of energy—just as the steel of a magnet is the material substratum of the magnetic energy—but is not itself that energy. This albuminoid matter of the ferment may be said to become charged, at the moment of elaboration by the gland-cells, with potential energy of a special kind—in the same way that a piece of steel becomes charged with magnetism by contact with a pre-existing magnet. The potential energy of the ferment is changed into the active form (i.e. becomes kinetic) when it is brought into contact with the alimentary substance on which it is designed to act.

The chemical and physical characters of the digestive ferments appear to be tolerably uniform. In composition they resemble proteid substances, and contain carbon, oxygen, hydrogen, and nitrogen in the same or somewhat similar centesimal proportions as albumen. But as not one of them has yet been obtained in a state of absolute isolation and purity, this is, strictly speaking, a matter of inference rather than an ascertained fact. They are all soluble in water; they are all diffusible, though with difficulty, through animal membranes and parchment paper. They are also capable (all those I have tried) of passing through porous earthenware by filtration under pressure; but some of them pass through readily, and others with the utmost difficulty and only in the smallest proportions. They are precipitated from their watery solutions by absolute alcohol; but, unlike other proteids (peptones excepted), they are not truly coagulated by alcohol. When the alcohol is removed, the ferments are still found to be soluble in water and to retain their activity unimpaired. They are coagulated and rendered permanently inert by the heat of boiling water; and when in solution they are coagulated and destroyed by a heat of about 160° Fahr. (71° C.)

Each digestive ferment has its special correlative alimentary principle, or group of principles, on which alone it is capable of acting. Diastase acts exclusively on amylaceous substances. Pepsin and trypsin act only on the azotised principles; the emulsive ferment of the pancreas is only capable of acting on fatty bodies; the inversive ferment of the small intestine has no activity except on cane-sugar.

The changes impressed on alimentary principles by the digestive ferments are not, chemically speaking, of a profound character; and they affect much more the physical state of these principles than their chemical composition. In the main they are processes of deduplication and hydration; and the result is to render the substances operated on more soluble and more diffusible—to diminish their colloidal state, and to make them approach, or even to reach, the crystalloid state. This does not appear to be an invariable event, however. Cane-sugar is a marked exception—it is converted in the small intestine into invert-sugar (a mixture of equal parts of grape-sugar or dextrose and fruit-sugar or lævulose); but invert-sugar, though more highly hydrated than cane-sugar, is neither more diffusible nor more soluble.

It does not appear to be absolutely true that all food

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requires digestion before it can be absorbed. Fat is largely taken up by the lacteals in its unaltered state, except in so far that it is finely divided or emulsified. Grape-sugar (dextrose) is not known to suffer any digestive operation, but to be absorbed unchanged. Perhaps it would be more correct to say that grape-sugar is an article of food predigested for us by the agency of plants.

Although the mode of action of digestive ferments is special and peculiar, the results of that action are not peculiar, but can be obtained in other ways by ordinary chemical forces. By long-continued boiling in water—and more rapidly by boiling with acidulated water—starch is converted into dextrine and sugar, and albumen is changed into a substance resembling peptone. The peculiarity of the action of ferments consists in this: that the ferments are able swiftly and without violence to produce changes which by ordinary chemical agencies can only be produced either by strong reagents, or by long-continued and very slow action of weaker reagents. It is interesting to remark that the changes produced in food by digestion are, in their ultimate results, very similar to, if not identical with, those produced by protracted cooking.

The Preparation of Artificial Digestive Juices.

The study of the digestive ferments has been immensely facilitated by a method first introduced by Eberle. Eberle discovered that an aqueous infusion or extract of the digestive glands possessed the same properties as the natural secretions or juices of those glands. The reason of this is that the glands which secrete the digestive juices contain within them a reserve stock of their respective ferments. Accordingly when the glands are infused in water their reserve stock of ferments passes into solution. These infusions or extracts then constitute artificial digestive juices which operate in a flask or beaker in the same way as the corresponding glandular secretions act in the alimentary canal. Solutions of organic matters are, however, extremely perishable—they pass quickly into putrefaction. In order to obviate this inconvenience, and to obtain an extract which is always handy for use, various preservative means have been employed. Bernard used carbolic acid—others have used glycerine or common salt. These preservatives, although perfect for the purpose intended, have a pronounced taste which is impossible to get rid of. I have made a good number of experiments on this point. As the ultimate object I had in view was to obtain a solution which could be administered as a medicine by the mouth—or which could be employed in the preparation of artificially-digested food—I sought for a preservative which either had little taste and smell, or one which was volatile and could be got rid of by vaporization. After a good many trials I adopted the three following solutions as on the whole the best suited for the purpose.

1. *Boracic Solution.*

This solution contains 3 or 4 per cent. of a mixture of two parts of boracic acid and one part of borax. An extract of the stomach or of the pancreas made with this solution keeps perfectly, and has little taste and no smell. For experimental purposes, this extract is, I believe, all that can be desired—it is neutral in reaction and is chemically inert. It answers well also for administration by the mouth when the dose does not exceed one or two teaspoonfuls. But when larger quantities are required for the preparation of artificially-digested food, and when food thus prepared has to be used day after day in quantity sufficient to sustain nutrition, larger quantities of boracic acid and borax are taken into the stomach than that organ can always comfortably tolerate.

2. *Dilute Spirit.*

The second solution is water mixed with 12 or 15 per cent. of rectified spirit. This solution makes a most excellent extracting medium, and the quantity of spirit in it is so small as rarely to be an objection to its use. In the preparation of artificially-digested food a final boiling is usually requisite, and in this final boiling the alcohol is dissipated. On the whole, this is perhaps the most generally useful of the three solutions.

3. *Chloroform Water.*

Chloroform dissolves in water in the proportion of about 1 in 200; these are the proportions employed in the preparation of the *Aqua Chloroformi* of the British Pharmacopœia. This forms a perfect solvent for the digestive ferments, and its keeping qualities are unrivalled. But though the quantity of chloroform dissolved is so minute (about two and a half drops in a fluid ounce), it communicates a somewhat powerful smell and taste to the solution. This taste and smell are agreeable to most persons, but not to all. It is, however, quite easy to get rid of the chloroform. If the dose to be used be first poured into a wine-glass or saucer and left exposed to the air for three or four hours, the chloroform passes off almost entirely in vapour, and leaves behind a simple aqueous solution of the ferments. Or if the solution is employed for the preparation of artificially-digested food, the chloroform, being very volatile, disappears in the final boiling. It is perhaps well to mention that chloroform water has the property of reducing Fehling's solution, and that this property has to be taken into account in making experiments on digestion which involve testing for sugar.

Alimentary substances fall naturally into three well-marked groups—namely, *Carbohydrates*, *Proteids*, and *Fats*. I propose to consider the digestion of the three groups in the order here indicated. I have, however, no intention of dealing systematically with these subjects, but rather to take up certain points and questions in regard to which I have myself made observations, or which have a bearing on the preparation of artificially-digested food and its administration to patients. I shall treat the digestive transformation of starch in some detail, because this has been worked out almost to completeness, and because it probably furnishes a type which will hereafter be of service as a guide to the study of the more complex problem of the digestion of proteids.

THE

Gulstonian Lectures

ON

EPILEPSY.

Delivered before the Royal College of Physicians,

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LECTURE III.—PART II.

THE last question is, What is the nature of the tissue change? Can we form any opinion as to the character of the alteration in the grey matter which permits its sudden, explosive discharge? This problem is essentially the same, whatever theory of epilepsy is adopted. The violent muscular contractions suggest a corresponding overaction of the nerve cells, and it has seemed to some, as Dr. Hughlings Jackson, that such repeated overaction can hardly be other than an indication of increased functional activity—of increased, if abnormal, nutrition. On the other hand, others, and foremost among them is Dr. Radcliffe, have maintained that the general conditions of epileptics and the phenomena of epilepsy suggest impairment of functional power, and that a symptom so abnormal as an epileptic fit can hardly result from normal nutrition, to whatever excess it may be carried.

Modern physiology teaches us, I think, in what direction an answer is to be sought. It is necessary, in the first place, to avoid too direct an inference from the outward manifestation to the internal process. No one probably now imagines that the nerve-force, which sets a muscle into action, forms part of the force liberated by the muscle; and, although the two are no doubt proportioned, the difference between them may be as great as between the energy liberated by an electrical spark and by a charge of gunpowder which it fires. We may easily overrate the amount of nerve-force needed to cause violent muscular action, and may also overrate the relation which the nerve-force bears to the potential energy of the cells concerned.

Every nerve-cell may be described as a storehouse of latent energy, and may be compared by analogy to a charged

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Leyden jar, or, what is more convenient for our present purpose, to a bent spring. The energy of the spring is due to the force which has bent it, and depends on the resistance which keeps it bent. The recognition of the resistance to action in nerve-cells, and of the part which it plays in normal processes, is a most important step in modern physiological thought. Of the nature of the resistance we can form perhaps no idea, but its existence in nerve-cells may be taken as hardly needing proof, for we are unable to conceive of their action without it, and the idea has underlain such expressions as "nerve tension," and the like, which have been long employed. The fact is probably only the highest instance of a series of relations which runs through the whole of organic nature. The formation of every organic compound, for instance, consists in, so to speak, the bending back of the spring of chemical affinity in a process by which force is held latent by some unknown resistance.

The application of this mode of thought to the morbid action of the nervous system promises to yield clearer views of many problems of disease, and for this step we are chiefly indebted to some important and suggestive papers by Dr. Ringer. The state of a nerve-cell, whether at rest or action, may be regarded as depending on the proportion which its tendency to liberate energy bears to the resistance within it. The action of a nerve-cell may depend on the production of force within it being increased, in excess of the resistance, or on the resistance being unduly lessened. The cessation of its action may depend on the tendency to liberate energy being diminished, or on the resistance being increased. It is highly probable that all the phenomena of "inhibition" depend on increase of resistance by the action of one cell upon another. It is, indeed, conceivable that the interaction of the nerve-cells of the brain may be such that their mutual influence is a balanced resistance, and the amount of force in the brain, nascent but restrained, may be infinitely greater than any manifestations of energy which we perceive could possibly suggest. We may, perhaps, ultimately learn to regard the effect of stimuli in developing nerve-action, not after the analogy of the mechanism of a piano, each blow upon a key directly exciting the sound, but rather after that of an organ, in which the movement of a key merely lessens the resistance to the action of a pent-up force.

Do not, I would ask, the phenomena of epilepsy best accord with the theory that the unstable equilibrium of grey matter depends on instability of resistance rather than on any primary change in the energy-producing action of the cells? When loss of blood develops general convulsions, by its action on an otherwise healthy nerve-centre, can we conceive, I would ask, as Dr. Radcliffe has asked before, that it acts by increasing the production of nerve-force? It appears far more intelligible to regard its effect as a sudden diminution of resistance, by which the pent-up nerve-force is suddenly released, the nascent energy developed. The arrest by the ligature of fits which begin deliberately seems to point in the same direction. A strong peripheral impression causes such a change in the grey matter to which the discharge is advancing, that the discharge is arrested there, and passes no further. We can hardly conceive the effect of the impression except as causing a local increase of resistance, so that the liberation of energy ceases at the spot, can no longer occur. Once arrested in this way it is arrested for a considerable time. If the discharge depended on a primary increase in the energy-producing action of the cells, we should expect it to recur when the ligature was removed. It does not. I have a patient who has, for a long time, arrested every fit, commencing in the hand, by a ligature above the elbow. At first, if he did not apply the ligature, the attack went on into a general convulsion. He now finds that the sensation, beginning as before, stops, of its own accord, at the spot at which the ligature used to be applied, and never goes on to a fit. According to the view I have suggested, the repeated increase of resistance has led to a corresponding permanent change, resting on an alteration of nutrition, so that the unstable grey matter is limited by a zone of greater stability, where the discharge is arrested.[1]

Analogy suggests that the internal resistance to action is a higher function of the nerve-cells than the mere transformation of energy. The control is a higher function than the production of the force. Hence the fact that there is an apparent overaction becomes consistent with the theory that there is imperfect nutrition.

The discussion of the real nature of these influences—the liberation of energy, and the resistance to action—how far they are ultimately to be referred to vital, chemical, or electrical changes, is beyond the scope of these lectures. The recognition of one point only appears to me essential—that nutritive changes may underlie them, and that from them nutritive changes may result.

Two other points in pathology remain for mention. I have suggested that failure in resistance, permitting the liberation of energy, constitutes the essential element in discharge, and that such discharge causes the symptoms of the epileptic paroxysm. Physiological considerations make it probable that the resistance in cells may be raised and lowered by the action of cells at a distance. There are a few phenomena of minor attacks of epilepsy which seem best explicable by assuming that the resistance in a centre is suddenly raised (perhaps by the action of other cells) instead of being lowered. A patient, for instance, whose severe fits affect one side only, may have slight attacks which consist only of sudden transient weakness in the side. We have seen that while visual sensations, due hypothetically to discharges in the visual centres, are frequent warnings, sudden inability to see may also be part of an aura, and such inability to see must be regarded as a sudden inhibition of the visual centre, that is, a sudden increase of resistance within it. A slight increase of resistance affords the best explanation of the apparent diminution in the size of objects. The increase of resistance is equivalent to a diminution in the sensitiveness of the centre, and the effect upon it of the stimulation of a given area of the retina is less than normal, and corresponds to the effect of a similar stimulation of a smaller retinal area. The object appears smaller and farther off, and as the resistance in the centre increases, the object may appear to recede. It is the opposite process to that which occurs in lessened resistance in the centre. This commonly results in such liberation of energy as affects consciousness. There is a visual impression, perhaps a sense of a ball of fire; and as the discharge spreads this seems to get larger and larger. The effect is the same as if an increasingly large area of the retina were stimulated. There is one centre which is usually inhibited, rather than discharged, in epilepsy—the centre for the motor processes of speech.

The phenomena of hystero-epilepsy seem to point to an instability of grey matter of different seat and perhaps different kind. The excessive violence of the muscular spasm in that disease is comparable only to the convulsions of epilepsy and tetanus. The phenomena appear due to the more deliberate and sustained overaction of centres which are concerned in specialised, co-ordinated movements, in emotions, and also in intellectual processes. The fact that some patients in these attacks fall suddenly, and remain still for a few moments before the co-ordinated movements commence, has been regarded by Dr. Hughlings Jackson (adopting a theory of the late Dr. Dickson) as evidence that the "co-ordinated" phenomena are always due to the release of lower centres from the control of the higher by the temporary discharge of the latter. He has urged that an actual discharge of grey matter can only give rise to inco-ordinate "brutal" effects. That co-ordinated convulsive action may succeed attacks of true epilepsy is beyond all question; but it is also, I think, beyond question that the co-ordinated phenomena are not always preceded by epileptic symptoms. In some cases which I have watched the attacks commenced with the co-ordinated movements which characterised them throughout. The tonic rigidity, which initiates the attacks in other cases, cannot be regarded as a true epileptic symptom; it is rather part of the hystero-epileptic attack, and may recur during its course. Thus I think that there is in many cases no evidence of true epileptic symptoms, that the co-ordinated convulsion, which constitutes the chief symptom of the hystero-epileptic attack, may exist alone.

Even for the cases in which this symptom succeeds a true epileptic seizure, it may be doubted whether the hypothesis of "loss of control" affords an entirely adequate explanation. We can discern no difference between epileptiform attacks which are, and those which are not, followed by such symptoms. This suggests that this occurrence depends

[1] That variations in tissue-resistance may influence the *spread* of a discharge which has already commenced has been recognised by Dr. Hughlings Jackson. (Brit. Med. Jour., Jan. 11th, 1879.)

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upon some other condition, a condition pertaining to the nervous organisation of the individual and not to the form of attack. This is supported by the fact that cases in which epileptic attacks are succeeded by "co-ordinated convulsions" present (as we saw in the first lecture) distinct characteristics in age, sex, causation, and conditions under which the fit occurs. In these respects they resemble the patients in whom such attacks of hysteroid character occur without any preceding epileptoid symptoms. These facts make it probable that there is in these epileptics, in addition to the instability of nerve-tissue which causes epilepsy, also the instability, whatever it may be, which gives rise to hysteroid attacks. "Loss of control" may be the immediate mechanism by which this instability is thrown into operation, but will not alone account for its existence, and is no necessary condition for its manifestation. Nevertheless, in some patients the hysteroid tendency may be so slight that it never manifests itself spontaneously—never except during the post-epileptic state. Hence I think that the old conclusion is the true one; that all patients who present these co-ordinated convulsions after epileptic attacks are really the subjects of both epilepsy and hysteria. The existence of the epileptic symptoms may be obvious, or may be most difficult to detect; initial simple tonic spasm cannot be regarded as evidence of their existence, and it may be practically impossible to say, in many cases, without the rare opportunity of witnessing the onset of the attacks, whether there is or is not an initial truly epileptiform seizure. This is the explanation of a point in the method of these lectures which may have occasioned surprise; while endeavouring to distinguish the two diseases, I have not ventured to separate them. Such a separation I believe to be practically impossible; to attempt it would entail an error, the amount of which would be unknown, and certainly large. I have therefore considered each fact with regard to the entire series; endeavouring to ascertain, however, the extent to which it is true of the cases with, and those without hystero-epileptic, or co-ordinated convulsion. The former term, "hystero-epileptic," has been employed in its popular meaning, without reference to theory, as a designation for the severer forms of hysteroid attack, in which their violence, severity, and recurrence bring them practically nearer to the disease which we call epilepsy than to that which we designate hysteria. I cannot but think that it would be a gain if we were to discard the dubious word "hysteria," even in its modifications, as a designation for such attacks, and call them simply "co-ordinated convulsions."

Such forms of attack, in which the convulsive phenomena are violent in degree and disorderly in sequence, are in the lowest grade of co-ordinated phenomena, while the highest are those forms of involuntary action which we call automatic. In these, complex actions are performed, sometimes with considerable skill, of which the patient is subsequently entirely unconscious. Dr. Hughlings Jackson has long maintained that these are really post-epileptic phenomena. That they are commonly such, all must, I think, agree. The older view was that these were true epileptic events, the result of such changes in the brain as might, in another degree or part, constitute an ordinary epileptic attack. While recognising that they are commonly post-epileptic, I doubt whether the older view must be entirely discarded. Many of the phenomena mentioned in the first lecture may make us hesitate to assent to the conclusion that the discharge of epilepsy must always cause inco-ordinate symptoms. What, for instance, is the vision of an old woman making ugly faces, which one patient had sometimes as the aura of a fit, sometimes as an attack of *petit mal*, but an automatic action of—a co-ordinated discharge in—the centre for visual ideas? The remarkable aura which I detailed at length suggests the same explanation, and so do many others that were alluded to. I have seen a patient suddenly, while being watched, without the slightest pallor, hesitation, or any symptom to indicate a discharge in the highest centre, proceed to empty his pockets, take off his coat, or to some action which in him characterised and I think constituted his attacks of minor epilepsy. With regard to the attacks of post-epileptic automatism, the same difficulties face us as in the case of the co-ordinated convulsion. We have the facts that in one individual attacks may always be followed by automatic action; and in another, similar attacks may never be so followed. This suggests that there is, underlying the phenomenon, a condition of the centres on which it depends. Were it not for this condition the epileptic attack would not lead to it, and this condition may, in rare cases, cause its primary manifestation.

Lectures
ON SOME
RECENT INVESTIGATIONS
INTO THE
PATHOLOGY OF INFECTIVE AND CONTAGIOUS DISEASES.

Delivered in connexion with the Brown Institution, at the University of London, Dec. 1879,

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LECTURE I.—PART III.

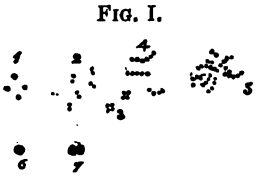
I MAY now proceed briefly to describe these several genera of bacteria, limiting myself to the forms which may be observed in a pathological connexion, though not necessarily as the causes or results of disease.

Micrococci: Spherical Bacteria. — The simplest forms of bacteria are the spherical or globular bacteria—micrococci. Various names have been given to these: thus one variety has been called *microsporon* by Klebs; and there are other names applied to various groupings of these bodies. They are distinguished from rod-shaped bacteria by their globular or ovoid form. According to Cohn, they are cells, colourless or slightly coloured, which multiply by transverse fission into moniliform filaments consisting of two or more members, so as to form a chain (torula-form); or else into large colonies or balls; or into masses consisting of innumerable members massed together, with but little intercellular substance, which are variously called glœa, zooglœa (Cohn), or mycoderma (Pasteur). According to Cohn they are motionless. Individual micrococci are usually less than one micromillimetre ($1\mu = \frac{1}{25000}$ in.) in diameter, their size of course varying with the different species, and also to some extent with their nutrition.

Many different terms are used to designate the various forms which the elementary spherules produce by their arrangement—such as chain-form, rosary-form, dumb-bell-form, sarcina-form, and the like. But it is much better to discard these terms, together with names like "leptothrix" and "vibrio," which have no special meaning, merely indicating forms which may be assumed by very different organisms.

The form in which micrococci are usually met with and most readily distinguished in decomposing animal fluids, or in the living fluids of the body under pathological conditions, is that usually called double or dumb-bell micrococci. They have then the appearance of two minute, highly refractile spherules closely joined together; this, in fact, representing an organism in course of division; but such is the activity of reproductive fission that it is the condition in which they commonly appear. This form is represented in Fig. I., 2 and 7; the simple elementary spheres being seen at 1

FIG. I.



and 6. Doubtless an explanation of this fact is that before complete separation occurs between the two members of a divided micrococcus the process of fission in the separating members has already commenced, so that they are rarely seen as isolated spheres. When, however, they grow more slowly in a tissue or in a quiescent fluid, they may form

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chains, single or in groups, as at 4 and 5 (Fig. I.), or sarcina-like groups of four, as at 3—the latter more rarely; and they have also an especial tendency to grow into globular masses composed of an infinite number of densely aggregated individuals.

Whether as isolated double elements, or in zoogloea masses, many micrococci stain very readily and deeply with various reagents, and not unfrequently of peculiarly vivid colour, this fact, as we shall see, being of especial value in the study of their relations to disease.

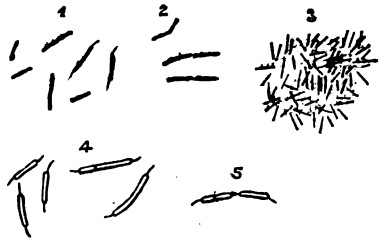
Having mentioned that, according to Cohn, micrococci are motionless, I must add that they very commonly appear to be in very active movement, and that this movement does not always appear, judging by ordinary criteria, to be a mere Brownian movement. It is, I believe, very probably due to the active nutritive and molecular changes which they are undergoing in the course of their rapid growth and fission.

Micrococci are met with in nearly all infective fluids, and, indeed, in all decomposing animal fluids at certain stages. In the lymph of vaccinia, and some other contagious fluids, micrococci are also constantly present. I shall mention later some of the views which have been entertained as to their significance in these fluids; here I may say that whilst some have divided micrococci into zymogenic or fermentation-producing, chromogenic or colour-forming, and pathogenic or disease-causing, attempts have also been made to attribute to these bodies the *rôle* of contagia, and thus the micrococcus vaccinæ, micrococcus diphtheriticus, and many others have been described. For all these it must be said that the term *pathogenic* should not be used, unless it can be shown that these bodies are not merely constantly present, but that they are the actual causes of the disease; a point to be further considered.

Can micrococci alter their form and become further developed into rod-shaped bacteria, or do rod-shaped bacteria divide into micrococci? These questions are as yet only incompletely solved. Billroth is one of the chief authorities in favour of the view that micrococcus and bacterium are two forms of the same organism. Klebs alleges that he has seen bacteria divide into micrococci. Dr. Cossar Ewart states that he has seen bacterium termo elongate and form numerous spores, which escape and form swarms, which, if separate, would be indistinguishable from micrococci.[1] Like many others, I believe it to be highly probable, for many reasons, that micrococci may be spores of rod bacteria, but I have not been able to prove it experimentally. I have grown micrococci in successive generations under varying conditions, but without ever producing a single rod bacterium, and so has Professor Ewart. Amongst the facts which indicate it as probable that some micrococci are the spores of some rod bacteria is the fact that rod bacteria often contain nuclei closely resembling those of bacilli, and these very possibly hold a similar relation to them. Another fact is that in cultivating the spores from a bacillus and watching them through various generations, I have found that sometimes they pass into a condition in which they continued to multiply, but from which I was unable to reproduce the bacillus.

Bacteria proper; Rod-shaped Bacteria.—The second genus, bacterium proper, includes several varieties, of which the most important for our purpose is the common bacterium

FIG. II.



1 and 2, Rods of bacterium termo. 4, The same under higher power, showing flagella (these should be longer and the bodies shorter). 5, Rod dividing. 3, Part of zoogloea mass under a lower power.

termo of decomposition. Rod-shaped bacteria consist of short rods which multiply by transverse fission, not forming long chains, but, according to Cohn, only four members at the most being seen in a line. These rods are usually in active movement, having, however, alternate stages of rest and motion at different periods of their existence. In the motile stage they possess flagella, usually one at each extremity, and in all probability this is true of all the forms which possess the power of movement at any stage, though as yet only proved with regard to a few species. In the case of bacterium termo, the flagella were, I believe, first described by Dallinger and Drysdale,[2] and they have since been observed by others. The extreme difficulty in observing them may be judged from the fact that the average length of bacterium termo, as estimated by Dallinger, is only 2·5 μ, or $\frac{1}{10000}$ inch; the diameter of the body ·8 μ; whilst the diameter of the flagellum is only ·08 μ, or about $\frac{1}{100000}$ of an inch. If, however, a fluid containing bacterium termo in active growth be watched, one may often see during the process of fission that a rod becomes attached to the cover-slip, then divides, and the parts separate; but the free rod, which is in more active movement, struggles for some time before it becomes detached, and every movement is attended by a corresponding motion of the fixed rod, showing that though at a distance, the two are still attached by an invisible link, resolved by higher powers into the thread-like flagella.

When bacteria are cultivated they grow into zoogloea masses, in which is a definite permanent intercellular substance, formed, according to Cohn, by the partial solution of their envelope. The formation of spores in bacterium termo has been observed to occur in two ways. Dr. Ewart (*loc. cit.*) states that he has seen them growing into long rods, in which spherical spores developed at short intervals. These, after two or three days, became free, and lay isolated or formed a zoogloea, subsequently germinating into short rods. The individual spores themselves closely resembled micrococci, but did not, like them, undergo subsequent division. The other form in which spores are observed consists in the presence of a single nucleus-like body at the end of a short rod—a condition not uncommonly seen in putrescent fluids.

It will thus be seen that there are many analogies between the changes occurring in these bacteria and those to be described in bacilli. Bacterium termo comprises members having considerable differences in size and length; the latter usually varies from 2 to 4·5 μ. Their especial pathological interest has reference to their constant occurrence in the course of putrefaction, and the experimental researches in the production of sepsin by their action.

3. *Filamentous Bacteria (Faden-bacterien); Bacilli.*—It is in relation to this group, which may be regarded as practically coextensive with bacilli, that the most important discoveries of recent years have been made. And, as there seems to be a sort of glamour about the very name "bacillus," it seems desirable that I should dwell upon the group with some detail.

Bacilli were originally defined by Cohn as consisting of elongated cylindrical parts, which when isolated are similar to bacterium lineola, and multiply by transverse fission; but which also form long chains composed of similar rods, at the junction of which no constrictions are seen. Cohn stated that they often form swarms, but never true zoogloea masses. They, like bacterium termo and lineola, have alternate stages of rest and motion. The facts thus stated by Cohn represent important features of bacilli, but there are many others of no less importance. For we now know that bacilli go through a number of stages of development, and assume various conditions, the formation of spores being one of the most important. In short, bacillus rods may elongate and divide into a number of rods, or assume the shape of long filaments in which spores develop. Again, these spores may become free and escape from the filaments, or the filament may break up into segments corresponding to the spores; the spores may form swarms or remain isolated; and they may, previous to regeneration of the filaments, themselves undergo subdivision. In describing these changes more minutely I shall divide the genus bacillus into two groups, and shall take as types of each bacilli which I have myself observed.

The first class presents a transition stage from bacterium termo, and it may be a question whether further observation will show its greater analogy with that class, or whether it is a merely accidental variation in mode of growth. It is a class in which the rods, after multiplication, do not form long convoluted filaments, but arrange themselves in heaps,

[1] M. Dallinger has, I believe, recently stated that he has watched the transition of one into the other form, but I have not seen the paper.

[2] Jour. Roy. Microsc. Soc., 1878. Vol. i., p. 169.

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not unlike the zoogloea of bacterium termo. I have been able to watch the growth of only one bacillus of this kind; it appears to be identical with one described by Dr. Koch, as occurring under similar conditions. This was an extremely minute bacillus found in a form of septicæmia in the guinea-pig, and represented in Figs. 3, 4, and 5. The bacillus as seen in its simplest condition is a slender rod, as at Fig. III. 1. Sometimes two are joined end to end, as at Fig. III. 2. These rods under cultivation elongate into filaments from six to eight times the length of the original

FIG. III.

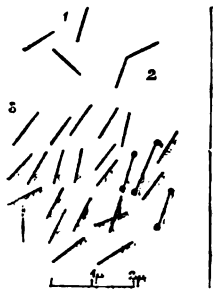


FIG. IV.

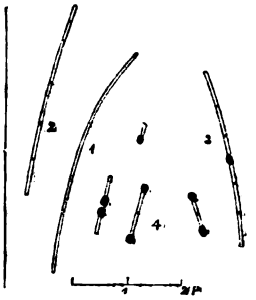
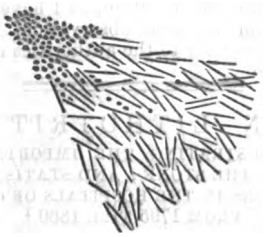


FIG. III.—Bacillus from a form of septicæmia in the guinea-pig (semi-diagrammatic). 1, Straight rods. 2, Two rods joined together, forming a bent rod. 3, Group of rods, some with spores, after cultivation.

FIG. IV.—The same under cultivation, more highly magnified (semi-diagrammatic). 1, Simple elongated filament. 2, Filament showing signs of division. 3, Same as 2, but one spore seen. 4, Rods containing spores.

rod, and either break up into shorter rods, as at Fig. IV. 2, or remain homogeneous (Fig. IV. 1). In these rods spore-formation takes place, either in the free rod, as in Fig. IV., or in the zoogloea masses, as at Fig. V. The growth of these zoogloea masses is a matter of some interest. If a cultivation be watched it will be found that rounded masses develop, which, on examination, consist of short rods densely massed together, towards the outer part radially arranged, and in the centre often appearing to consist almost entirely of spores (possibly partly due to rods seen endwise). A segment of such a mass somewhat diagrammatically represented is seen in Fig. V. If the individual

FIG. V.



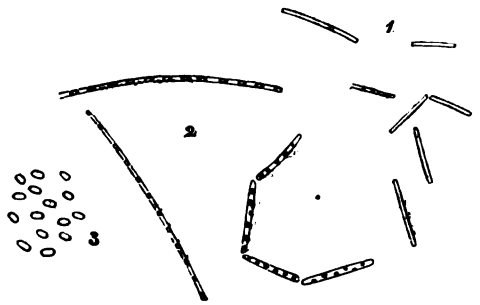
Segment of a circular zoogloea mass, composed of rods and spores.

elements are studied with a higher power, as at Fig. IV. 4, there will be found rods with two spores together in the centre, rods with terminal spores, some in course of division, and short rods with one spore at or near the end. These elements are identical in shape with those seen in other bacilli, and on these and other grounds I have agreed with Koch in including them in that class.[3]

The second class, that better known, consists of the group of bacilli which comprises bacillus anthracis. What I shall have to say with regard to the changes seen in bacillus anthracis holds good for the most part of several other bacilli. A bacillus, which I shall be able to show you in several stages, grown from the serous fluid of a "farcy bud," the bacillus of hay infusion described by Cohn, a bacillus shown by Timothy Lewis to develop in the blood of some healthy animals after death, the bacillus of pneumo-enteritis of swine discovered by Klein, the bacillus malariæ of Klebs, and probably many others, different in size, habitat, and pathological relations, varying also in some particulars, yet all follow much the same general course of growth under cultivation. These changes we may now study with the aid of Figs. VI. to X., most of which are from drawings of bacillus anthracis.

The bacillus rods, as seen in the blood (Fig. VI., 1), are

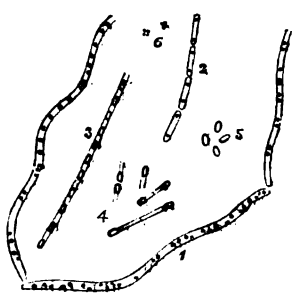
FIG. VI.



Bacillus anthracis. 1, Rods as seen in the blood, viewed with magnifying power of about 450 diameters, and enlarged to double the size of original drawing. 2, Rods formed in cultivation, magnified 500 diameters, enlarged. 3, Group of spores. (Semi-diagrammatic.)

long and slender, almost homogeneous or slightly granular in appearance. Frequently they are more or less curved or bent; they may be longer and jointed, in this case being made up of several segments in course of separation. In the animal body they usually multiply by elongation and transverse fission, and probably only in this way under the common conditions. But when artificially cultivated, and also under certain favourable conditions in the body during life or after death, a different course of multiplication is observed. The rods elongate to an enormous length, and form dense masses of filaments, which curve in various directions, sometimes forming spirals or loops, at others lying in parallel bundles, or various other arrangements. Sometimes also they merely form bundles of shorter parallel rods, the bundles often crossing each other obliquely. In the filaments thus formed various changes may ensue, which may be considered separately as modes of fission and modes of spore formation. The filaments may break up into short or long segments previously to spore formation, as at 1 and 2, Fig. VII., and 1, 3, and 4, Fig. IX.

FIG. VII.



Bacillus from farcy-bud. 1, Curving filaments, showing irregular granules, many situated laterally. 2, Filament breaking up into short rods, at the ends of which are commencing spores. 3, Filament with regularly arranged spores. 4, Parts of filament after breaking up. 5, Spores. 6, Sporules. (These are drawn too small. See Fig. X.)

More commonly spore formation occurs previously to complete fission, and the spores escape from the filaments, or the latter break up into spore-containing segments.

The mode of formation of spores can readily be watched in the bacillus anthracis, owing to its relatively large size. In Fig. IX. I have drawn a number of these stages, as seen in a recent cultivation. The filament or rod consists, as we know, of a delicate sheath, enclosing granular protoplasm. In the ordinary rod condition the separation of the two is often made out only with difficulty. When cultivated the central protoplasm becomes more distinct at certain points, and aggregates itself into masses, either uniformly or at irregular inter-

[3] To avoid further reference, I may say that this particular bacillus is a still one, so far as I have seen. I was able to cultivate it through seven successive generations. Its extreme minuteness makes its study a matter of extreme difficulty; the stages represented in Fig. IV. were only seen with 1-25th inch and very careful illumination. The measurements are, for the same reason, only approximative, and the figures are diagrammatic enlargements of my original sketches.

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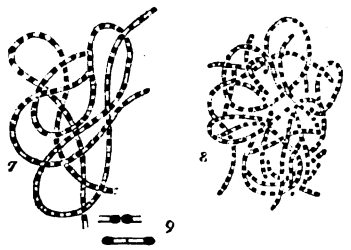
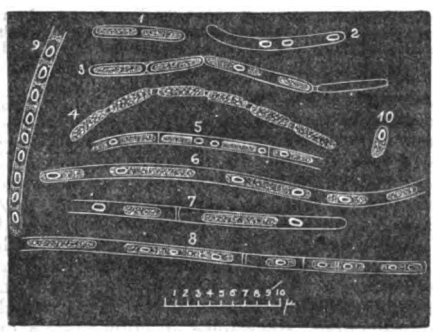
vals, the spaces between becoming clear, and some indication of commencing segmentation of the filament also appearing. In the granular protoplasm there now appear bright, highly-refractile, oily-looking points, which increase in size, and

FIG. VIII.



7, Convoluted filaments containing spores from bacillus anthracis. 8, Similar filaments from edge of a dense mass of convoluted bacillus from farcy. 9, Shape of portions of the filaments when broken up.

FIG. IX.



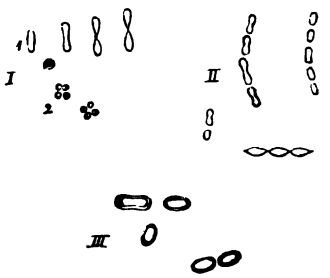
Drawing from a cultivation of bacillus anthracis (Zeiss., oil-imm. 1-12; Hartnack, oc. 4). 1, Short rod, in which the protoplasm is undergoing central segmentation. 2, Rod in which only spores are visible. 3, Filament separating into three rods, one clear, another showing partial spore-formation, that nearest the figure merely segmentation of protoplasm. 4, Filament dividing into short homogeneous masses of protoplasm. 5, 6, 7, and 8, show portions of long filaments in which various modes and stages of spore-formation are seen. 9, Filament containing numerous spores very close together. 10, From another cultivation containing sporules, one germinating into a rod.

(In the woodcut the space between the sheath of the filament and its contents is necessarily represented somewhat too wide. In 5 there was no visible separation between the two in the original drawing. The ends of the rods and of the protoplasmic contents should be more blunt, less rounded.)

form the spores. Sometimes the entire protoplasmic mass seems to be absorbed by the spore, at others a portion remains surrounding it. It is not uncommon to see the first sign of spore-formation at the sides of the filament, as in 1, Fig. VII. This has been made a ground of distinction of bacillus malariæ, but I have seen lateral spore-formation in two other kinds of bacilli. When formed, the spores may be arranged pretty close together or at regular and nearly equal intervals, or in pairs, or sometimes scattered more irregularly. (See Figs. VI., VII., VIII., and IX.) The spores may now become free by escape from the rod, and remain isolated, or form swarms, as at 3, Fig. VI. Or, again, the filament may waste, the spores remaining *in situ*, as at 8, Fig. VIII., or it may break up into pieces, each containing a spore near or at the end, as in Fig. VII. 4, and Fig. VIII. 9.

The spores thus formed are, in the case of bacillus anthracis, oblong bodies, very highly refractile, and, when examined under a very high power, seem to have an outer hyaline sheath (Fig. X. iii.) If kept under conditions favourable to slow germination, they are apt again to subdivide into smaller bodies (*Sporules*, Ewart). This change is seen in Fig. X. The spore elongates, becomes hour-glass-shaped, then divides, each segment again dividing laterally, so that a group of four, sarcina-like, is formed. This change was, I believe, first described by Ewart as occurring in bacillus anthracis; I have myself repeatedly observed it in the same, and also in the bacillus from farcy. I agree with Dr. Ewart that it is not a degenerative change, for the fluid from which the organisms in Fig. X. were drawn was used to inoculate a sheep with fatal effect, and I have been able to trace growth of bacillus rods from these sporules; as has Ewart also.

FIG. X.



Old cultivation of bacillus anthracis, containing spores in course of division. I. Stages of division. 1, Elongation and constriction in centre. 2, Sarcina-like groups of sporules. II. Rows of spores (probably remains of filament), some undergoing division. III. Spores and sporules more highly magnified.

Of the growth of the spores into bacillus rods I must say but little. Unquestionably they do grow into rods, for if a minute quantity of fluid containing no visible microscopic elements but spores be cultivated, rods are reproduced, and if the spores alone of bacillus anthracis are inoculated in a living animal, they reproduce the typical disease with enormous development of rods in the blood. But the precise mode of growth has been disputed. Some say that the central protoplasm of the spore elongates into the rods, bursting the capsule; others that the capsule also elongates; whilst others insist that the capsule, or remains of the filament, grow into the rod, the spore proper remaining unchanged. My own observations lead me to believe that the spore as a whole elongates into the rod, but I do not venture to offer a decided opinion.

I have thus sketched some of the more important morphological changes. The importance of the spore-formation, and of the division of the spores into sporules, become especially apparent when we have to deal with their durability, and their relations to disease. I have not described the flagella which exist in some forms—they need only be mentioned here.

I shall say nothing of spirillum, as I have not any facts to state derived from my own observation. For these and other details I may refer to the authorities already quoted.

ON LITHOTRITY;

WITH CASES ILLUSTRATING THE IMPORTANCE OF EARLY DETECTION OF THE STONE; AND STATISTICS OF STONE OPERATIONS IN THE HOSPITALS OF GLASGOW FROM 1795 TILL 1880.[1]

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THIS communication contains little that is new except the statistics of the Glasgow hospitals. The arguments in favour of lithotrity have been presented in nearly identical terms in many papers and treatises which have appeared in recent years; nevertheless I think that this is one of the subjects which should be brought before the profession periodically, as experience increases, say at intervals of ten or twenty years.

In 1859 I compiled, for the late Professor Lawrie, a statistical table of the operations in the Glasgow Royal Infirmary. The statistics were published in the *Glasgow Medical Journal* for April, 1859. In 1868 I read before this Society a paper on lithotrity, and in it gave the results of the operations contained in the records of the Royal Infirmary till that date. In the present communication I shall give the statistics of all the operations for stone performed in the hospitals of Glasgow, from the opening of the Royal Infirmary in 1795 and the Western Infirmary in 1874, till 1st January, 1880.

[1] Read before the Glasgow Medico-Chirurgical Society.

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The bringing forward of these figures, however, I intend to make the occasion for a few remarks on the operations for calculus; which indeed are but the reiteration of what has been said by Civiale, Sir B. Brodie, Sir W. Fergusson, Dr. Prout, Sir Henry Thompson, Mr. Coulson, and others, and in the various Systems of Surgery. Still, a profession constantly changing as ours is, by the addition of junior members, ought to have brought before it, from time to time, subjects admitting of discussion as this does, especially when the experience of later years is gradually substituting one operation for another, which was universal at a comparatively recent period.

The most recent conclusions arrived at may be best expressed in two propositions.

1. It is of the utmost importance that the presence of a calculus in the bladder should be ascertained before it has reached any considerable size; and as a corollary the bladder should always be explored with a sound, on the occurrence of the earliest symptom.

2. All small and moderate-sized calculi may be removed by the lithotrite, and, as a consequence, when this doctrine is accepted and carried into practice, lithotomy will gradually be abandoned, except in cases of an exceptional nature as regards the stone and patient.

On each of these propositions I shall make a few remarks.

First: the early detection of the stone. This is the key to the whole position. Of course it is true of all diseases that the sooner they are detected and their nature proved the better both for patient and surgeon. But it is true in a different sense for calculus, because it may make the difference between a nearly perfectly safe operation of lithotrity and a very dangerous one of lithotomy or lithotrity.

Let me recall for a moment the prominent symptoms.

(*a*) Pain in the perineum or the region of the base of the bladder, often accompanied by pain in the point of the penis. But pain is often altogether absent in early stages of calculus, and frequently present in cases of bladder disease in which there is no calculus; as in two cases under my care just now in which the patients describe the suffering at the orifice of the urethra as most acute.

(*b*) Frequent desire to pass urine. This is an accompaniment of irritation of the bladder from whatever cause, but being present, is a sufficient reason of itself to warrant a careful search for a stone.

(*c*) The presence of blood, either in the urine or coming in a few drops after urine has been passed. This also is present in many bladder and urethral affections, even in the second form mentioned.

(*d*) Interference with the continuity of the flow of urine—i.e., either partial or total interruption of the stream, which recommences after a short interval or by change of position.

(*e*) Easily observable changes in the urine, as in colour, clearness or rather muddiness, thickness, viscidity, odour, &c., which are often remarked by the patient himself, and are the cause of his consulting his medical attendant without any of the other symptoms referred to. These are the evidences of chronic cystitis, which is more often idiopathic than the consequence of stone, but in many examples are the only symptoms to indicate the presence of a stone.

Now, with regard to these five symptoms which I have enumerated, I presume that if any patient came under medical treatment with them all present, there are few if any medical men who would not at once suggest that an exploration of the bladder should be made at the very first. But I am not so sure that it would be recognised as a general principle, that so soon as a patient presents any one or even two of them, the exploration should be made.

It is generally believed that stone in the bladder is not so common in this country as it was fifty years ago, and if that is true the necessity of searching for it is, numerically, not so imperative as formerly, still it is sufficiently common to make it important to have it in view in presence of the symptoms referred to. I shall have something to say in a subsequent part of this paper with regard to statistics of stone, but with reference to its frequency I may here state that since 1858, the date of my first lithotomy, I have had eighty cases of calculus in the bladder besides a few in the urethra.

Now I can assert that while in most of the cases which have come under my notice, two or more of the symptoms were present, yet in several instances only one of them attracted notice and continued the sole evidence for a considerable period, till the introduction of the sound proved the presence of a stone. And what I think ought to be recognised as a principle in all urinary disorders is, that as soon as one of the known symptoms of stone is discovered, the bladder should be explored by a sound. The manipulation scarcely ever gives any annoyance if performed with a properly constructed sound and a gentle hand, and the information obtained, positive or negative, is of the utmost importance. If the calculus is very small it may elude detection at a first examination, so that if the symptoms either continue or recur the sounding should be repeated. By this means a stone could be discovered before it has grown larger than a garden bean, and if the practice referred to were generally adopted, few stones would ever come to be dealt with of a size to be seen in all collections at the present day, except where from gross neglect on the part of the patient the symptoms were concealed and endured till increasing suffering drove the patient for advice.

I think the importance of searching for stone on the occurrence of *one* of the first four symptoms alluded to—that is, before there are any symptoms of cystitis, which is almost always accompanied by alkalinity of the urine—is rendered evident by a knowledge of the intimate structure of calculi; for an examination of any considerable collection of calculi shows that in the vast majority of examples the nucleus of a calculus is uric acid or oxalate of lime, and that a phosphatic calculus is a very rare thing. When such a phosphatic stone does exist, it consists in almost every instance of an aggregation of smaller pieces held together by inspissated mucus, or which have become adherent to one another first by mutual pressure and then by consolidation of the intervening substance. Such calculi are somewhat porous, like pumice-stone. When in 1874 I removed my pathological collection to a room provided for me in the Western Infirmary, Dr. Foulis (at that time my house-surgeon), undertook to arrange and catalogue the preparations; and before arranging the calculi I got every one of them sawn through the centre, and thus exposed the internal as well as the external structure. And the examination of these sections convinced me of the almost universal prevalence of a nucleus of oxalates or urates, whatever the external shell of the stone might be. Dr. Foulis informs me that since he has been appointed the pathologist of the Royal Infirmary, he has examined the specimens there in a similar way with the same results. This corresponds with what has been found in the examination of all collections in which the calculi have been divided, so as to expose their internal structure. But in many collections this has not been done so uniformly as to make the observations complete.

Now, as oxalate and urate calculi are hard and presumably of slow growth compared with phosphatic, it follows that in the history of all calculi or nearly all, there is a time, and a considerable time, when they are small, hard, and of slow growth, and that is just the time when their presence may be indicated by the symptoms—pain, desire to micturate, blood, interference with the flow—occurring either singly or at considerable intervals, with intervening periods of total cessation of these symptoms, so as to throw the patient and even the medical adviser off their guard. And this is true to some degree even of the small number of calculi which are phosphatic from their first origin.

I think, then, we may conclude that if only the patient would apply on the first occurrence of anything unusual connected with his urine or the region of the bladder, and the medical attendant would have the bladder at once explored, calculi would be detected when of very small size, in almost all instances.

2. The second proposition I would bring forward is that all small and moderate-sized calculi may be removed with almost perfect certainty of a favourable result by lithotrity. This general statement must indeed be modified by the circumstances of each case, involving the condition of the patient and the nature of the stone. But I may state the case as follows: Given an adult in fair health, with a normal urethra, the bladder not too irritable, and containing a calculus not larger than a filbert,—any surgeon using the lithotrite with ordinary care may with confidence undertake to remove the stone by lithotrity with very little anxiety as to the result. But in the case of lithotomy it is different, as all practical surgeons know. There is anxiety as to the result even after an operation performed with dexterity and success, so far as the manipulation is concerned. Sir William Fergusson's words on this subject cannot be too thoughtfully considered—"There seems to me to be a mystery associated with lithotomy which has not yet been solved. For palpable

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errors there is an explanation; but when to all appearance there has been perfection in the operation, and yet death has been the issue, I confess I have been puzzled beyond measure." Again: "Working on inanimate material, no doubt precise manipulation must be of the most perfect effect; but when the phenomena of life are involved, the result seems in most instances beyond human control." I think every one who has had much experience of lithotomy will corroborate Sir William Fergusson's words.

I do not think that numerical results founded on the experience of any one in Scotland, as yet, will do much to help my argument; nor are the aggregate results as obtained from statistics of the Scottish hospitals sufficiently extensive to authorise any valid conclusion; still the experience of individual cases will often bias an operator in a way which is both intelligible and justifiable.

My first intimate connexion with lithotrity was in the case of a gentleman who in 1861, when sixty-four years of age, was cut for stone by Mr. Syme, who extracted two uric acid calculi. In 1864 a recurrence took place, so that in 1865 he had a stone removed by lithotrity by Sir Henry Thompson. In 1867 it again recurred, and I removed it by lithotrity in a fortnight, and from that time till his death in 1872 he continued perfectly free from all trouble in connexion with urination. Now a comparison of the pain and discomfort which he suffered after lithotomy with the relatively little annoyance while undergoing lithotrity, made a most powerful impression on me in favour of the latter. Previous to this operation I had done my first lithotrity on a patient in the Royal Infirmary, in July, 1866, with success. There are several gentlemen well up in years, from whom I have removed calculi by lithotrity with very little trouble or annoyance to them, now in perfect health; on whom, I confess, I would have performed lithotomy with very great anxiety and fear for the result. So that my own opinion is strongly in favour of lithotrity in favourable cases, and certainly always in the case of stones of small size.

(To be concluded.)

THE DIAGNOSIS OF TUMOURS OF THE CEREBELLUM.[1]

BY STEPHEN MACKENZIE, M.D., F.R.C.P.,
ASSISTANT PHYSICIAN TO, AND LECTURER ON PATHOLOGY AT, THE LONDON HOSPITAL.

BEFORE speaking of the symptoms which enable us to diagnose tumour of the cerebellum, it will be convenient to describe three cases which illustrate these symptoms, and in which post-mortem examination verified the diagnosis.

CASE 1.—J. G——, aged two years and eight months. Previous to the age of two years walked, and was quick in intellect. When seen for the first time, August 3rd, 1876, by Mr. Garrett, the clinical assistant at the London Hospital, it was elicited that the first symptoms noticed were staring of the eyes and stiffness of the neck. When these symptoms had lasted about two months, vomiting occurred, and the child became feverish and sleepy. She was said to have oxyurides. On August 31st double optic neuritis was observed. The child was constantly moaning, but was not then sick. I saw the patient on Sept. 4th, and found her wasted, moaning, and fretful. The head was large, and extremely retracted, and it could not be bent forward. There was well-marked double optic neuritis in an acute stage. Owing to the extreme retraction of the head, there was constant gurgling in the throat from bending and stretching of the trachea. When she swallowed liquids her mother said they came back through her nose. Her head had been persistently retracted about a week; previous to that she had leaned it upon her right hand. She had attacks in which she became quite stiff. There was no paralysis of the bladder. No affection of the sight had been observed when she was brought to the hospital. She could shut her eyes when told to do so. From the presence of double optic neuritis I inferred intracranial tumour. The enlargement and retraction of the head, and the history of tetanic seizures, led me to diagnose without hesitation tumour of the cerebellum. There was no index as to its nature. The case had been regarded as one of meningitis. I suggested the administration of iodide of potassium. She was seen on Sept. 7th and 14th, and her condition was practically the same. She resisted attempts to draw her head forward by putting up her hands. On the 14th there was doubtful drooping of the right eyelid. She died on the 16th. One week before her death she had two partial fits, in which "she went stiff, and turned up her eyes and her lips."

The necropsy was made ten hours after death by Mr. Garrett. The ventricles of the brain, including the fourth, were distended with fluid. The cerebellum was adherent to the occipital bone. On its inferior surface was an irregular flattened tumour spread out beneath both lateral lobes, and compressing antero-posteriorly the middle lobe.

Microscopical examination showed the tumour to be a myxomatous glioma.

CASE 2.—A. D——, aged three years and three months at time of death. Always thin and somewhat delicate. The child "always had a dreadful look in the eyes; they were beautiful but sunken and dark." When twelve months old, in climbing over the door-board, he fell, striking his head. It was thought from the direction in which he fell that he struck his head in the frontal region. He appeared to have no ill-effects from the fall, either at the time or subsequently. Was thought to have consumptive bowels when six months old, and at this time had some head symptoms. When a year and a half old he had a fit. "He lay quite stiff and firm, as if he was dead." He was so stiff that his father said, "It was no use getting a bath for him." He lay in the fit about twenty minutes, and it was followed at first by cerebral excitement, and afterwards by stupor and temporary strabismus. Three months later he had whooping-cough very badly, and the cough did not leave him for twelve months. His walking was not so good after the whooping-cough, and he used to sit down a good deal. He quickly lost the use of his legs. He did not reel nor stagger, or at least not much. He was brought to me at the London Hospital November 17th, 1877. He was then a well-nourished child with a large head. He was unable to stand. He was irritable and screamed a good deal. His head had not been observed to be enlarged when he was brought to the hospital, but after this was pointed out to the mother she tried on his caps and found them all too small, and he could only just wear his father's. Ophthalmoscopic examination showed the presence of double optic neuritis. The enlargement of the head, the loss of power in the lower extremities, and the history of convulsive seizures of a tetanic character led me to suspect a tumour of the cerebellum, involving probably the middle lobe. At subsequent visits the observations were confirmed, and the diagnosis made with greater confidence. In January, 1878, he had a fit, in which the left arm and right leg were quite stiff, the right arm and left leg being much less so. Soon after this the left arm was noticed to be weak, so that he never used it. Expedients were tried to induce him to do so, but he was tremulous with it. From this time he drooped more. His head was now so heavy that he could not raise it, and he always lay with the right side on the pillow. In February he had numerous convulsive attacks (indeed, almost whenever he was moved), in which his legs became stiffened and straight, with the toes turned in. From this time his dejections were passed under him; he had previously been continent. In July I noted the head had continued to enlarge greatly; it was 22½ in. in circumference at the centre of the forehead. The anterior fontanelle was widely opened. The enlargement of the head was chiefly at the back part, behind the ears. There was still lymph on the discs. From this time till his death in January, 1879, all his symptoms deepened. His head continued to enlarge; he became quite blind; he had frequent attacks in which all his extremities became quite rigid, the legs being extended, with the feet turned in, the arms being rigid and pronated to the utmost, or at other times (especially at an earlier period) flexed. He became affected with thrush, but it did not appear to add to his distress. For two or three months he took no notice of anything, did not open his mouth for food, did not cry or smile, but moaned. For the last three weeks "he took no food whatever." If fluids were placed in his mouth, they lay there without his making any attempts at swallowing. He now wasted rapidly. For the last three or four days he

[1] Read before the Hunterian Society, Nov. 26th, 1879.

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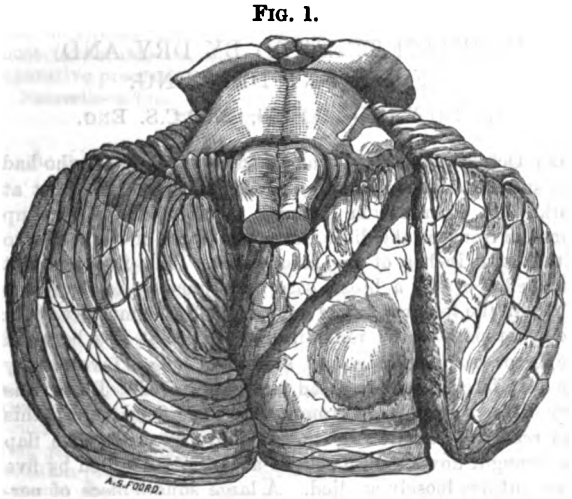
lay on his left side, his arms perfectly rigid, either pronated or supinated to the utmost. The fingers were extended to such a degree that his mother says, "No person could (voluntarily) put his hand into such a position." The legs were rigid, and perfectly extended. His eyes at times rolled up, at others were naturally directed. His head was drawn back occasionally, but not to an extreme degree.

Necropsy day following death.—Head greatly enlarged, measuring 23½ inches in circumference, 7¾ inches in antero-posterior axis, and 6¾ inches at the widest lateral diameter, behind the ears. Enlargement of head not quite symmetrical on two sides. Anterior and posterior fontanelles open over a space about the size of a shilling piece. Coronal and occipito-parietal sutures gaping, the bones nowhere meeting. The sagittal suture yielded slightly, but less so than the others. Fontanelles depressed, eyeballs sunken in orbits, features natural. Calvaria extremely thin—a mere shell, semi-translucent. Dura adherent to calvaria. Pia natural. Brain removed entire with great difficulty, owing to its fluid contents. Convolutions much flattened and almost translucent; tremulous from the fluid in ventricles. Infundibulum distended; when cut into about three pints (measured) of clear fluid escaped from the ventricles, and the brain collapsed into a flattened mass. The hemispheres were not thicker than a quarter of an inch. The lateral ventricles were enormously dilated, measuring almost six inches in the long diameter. They formed two large, almost spherical sacs. The other ventricles were all enormously dilated; the iter a tertio ad quartam ventriculum admitted a finger. In the floor of the left lateral ventricle was an irregular nodular mass of yellowish-green colour, with smaller excrescences, projecting into the ventricle from about the situation of the corpus striatum. The smaller nodules on the surface were white or whitish yellow. When cut into the mass was of a yellowish-green colour, and of about the consistence of cheese. When the posterior cerebral lobes were displaced the cerebellum was observed to be unsymmetrical, the left lobe projecting higher than the right. The left and middle lobes felt very dense. On turning the lower surface upwards there was found to be a large mass occupying the middle and left lobes, covered with membrane somewhat thickened and irregular, and attached to the occipital bone. When the tumour was cut into it was found to be a dense caseous mass of greenish-yellow colour, breaking down in a few places into irregular cavities. The tumour was quite as large as a full-sized billiard ball. The medulla oblongata was much flattened in its antero-posterior direction, so as to be almost riband-like. (Fig. 1.) The thoracic and abdominal organs

FIG. 1.



Showing tumour involving middle and left lobe of cerebellum, and compressing medulla.

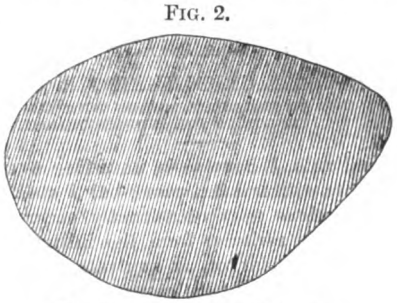
were examined and found to be healthy, except for a small patch of disintegrating caseous material at the posterior part of the right upper lobe—probably a caseous bronchial gland.

Microscopical examination showed the tumour to be a so-called "solitary tubercle," exhibiting its truly tubercular nature by perivascular lymphatic growths and giant-cells.

CASE 3.—F. A. H——, aged nineteen, admitted under my colleague, Mr. Couper, for necrosis of the jaw, toe, and tibia, in May, 1879. The notes are by Mr. Fenton Jones. He had had disease of his bones for upwards of a year. In January, 1879, headaches, to which he had always been subject, began to get worse, *his head was drawn back, and his back arched forwards, so that he rested on his shoulders and buttocks.* These symptoms—the headache, retraction of head, and arching of back—were aggravated at intervals in a paroxysmal manner, sometimes three or four times a day, the fits lasting from ten minutes to two hours. The patient had no warning of these attacks, which always occurred when he was in bed. He cried out loudly in the attacks. The only limb which was convulsed was the left hand, which he opened and shut continuously. He never passed water during a fit, and was not always quite unconscious. Always vomited freely after the fits, which relieved him, the headache disappearing, and a sound sleep following. I saw the patient on July 18th. The last fit he had had was on July 13th; it lasted longer than usual—nearly four hours. When he came under my observation he was perfectly intelligent and described well his condition. His headaches, he said, commenced at the root of the nose, radiating over the top of the head, and down the back of the neck to the situation of the seventh cervical spine. Sometimes he had pain in the temples. No motor or sensory paralysis. He could not, on account of the disease of his leg, be made to stand or walk. Sight had become defective since occurrence of fits. Objects on opposite wall of ward sometimes seemed double, sometimes as a bright spot. He could read small type—B, 0, 5—at a distance of two feet. Ophthalmoscopic examination showed double optic neuritis, each papilla being much swollen and ill-edged, the veins very large and tortuous. A few hæmorrhages were seen in vicinity of disc. Smell and taste tested and found good. Urgent vomiting now came on, which nothing relieved. He had some abdominal pain, his pulse became very rapid, and his temperature rose. He died on July 25th. The vomiting continued up to the time of his death, and his temperature when he died was 104°.

Necropsy.—A tumour of the size shown in diagram (Fig. 2) was found to occupy the left cerebellar fossa, and com-

FIG. 2.



Exact size and outline of tumour.

pressed the left lobe of cerebellum. For the following valuable report of its exact relations, and the drawings, I am indebted to my colleague, Mr. Frederick Treves:—"On examining the upper surface of the cerebellum nothing abnormal could be seen or felt. The cerebellum was removed with some difficulty, the left lobe being adherent to the dura mater, and when removed it was found that the tumour had been left behind in the cranial cavity, and was attached to the dura mater covering the occipital bone. The growth was perfectly smooth, regular in outline, and egg-shaped. No brain matter was adherent to its surface, and it gave the impression that it had been lying almost free in its cavity in the cerebellum. Examined *in situ* the growth was found to occupy the left cerebellar fossa, lying with its long axis coincident with the course of the occipital sinus; on its inner side it was bounded by the falx cerebelli, and its outer surface was about a finger's breadth from the lateral sinus, as it runs into the mastoid process; while its apex nearly touched the posterior margin of the foramen magnum. The tumour was adherent to the dura mater by a surface about the size of a fourpenny piece. On further examination it was found that the tumour had occupied the interior of the left lobe, inclining especially towards its under surface. A portion of the cortical matter, indicated in the diagram (Fig. 3) by the deep shading, was entirely absent; this portion coinciding with the spot at which the

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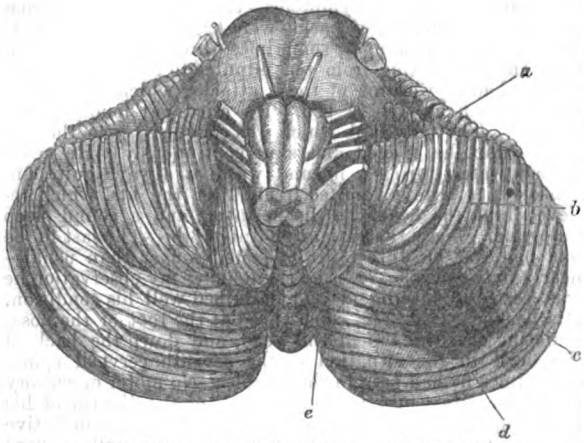
growth had become adherent to the dura mater. The faint shading indicates the extent and position of the hole left by the removal of the tumour and the extent of attenuated cortex. On replacing the brain matter torn in removing the

FIG. 3.



a, Flocculus. *b*, Digastric lobe. *c*, Slender lobe. *d*, Posterior inferior lobe. *e*, Tonsil.
The deep shading indicates the extent of complete destruction of cortex; the faint shading the extent of attenuated cortex.

left lobe it was found to be extremely thin, in some places a mere film. The 'tonsil' was quite free from encroachment. The nerves of the medulla were individually examined, but appeared quite normal. The dura mater appeared healthy; the attachment of the tumour to it was not very close." The growth was tubercular, similar to the last case.

(To be continued.)

A CASE OF GONORRHŒAL OPHTHALMIA, WITH SOME NOVEL SUGGESTIONS AS TO TREATMENT.[1]

BY GEORGE CRITCHETT, F.R.C.S.,
CONSULTING SURGEON TO THE ROYAL LONDON OPHTHALMIC HOSPITAL
OPHTHALMIC SURGEON TO THE MIDDLESEX HOSPITAL.

As a general rule I have been unwilling to encumber medical literature with isolated cases, but I am disposed to think that exceptions may occasionally occur in which, either from extreme rarity or from the initiation of some new method of treatment, or, at any rate, a method very rarely employed and but little known, some fresh starting point may be established. Acting on this principle, and influenced by these motives, I am induced to bring the following case before the notice of the profession:—

Louisa C——, aged two and a half years, was brought to me at the Middlesex Hospital on the 15th of May, 1878. Her left eye presented all the appearances of acute gonorrhœal ophthalmia, and the collateral circumstances confirmed this diagnosis, as the child had a profuse yellow discharge from the vagina, with considerable swelling and irritation of the mucous canal. The lids were of a bright red colour and much swollen, and so densely infiltrated that even when the child was placed under the influence of an anæsthetic it was found impossible to separate them so as to ascertain the condition of the cornea. Yellow and rather thick matter was exuding from between the lids.

Judging from past experience, seeing the extreme acuteness and severity of the symptoms, the difficulty in separating the lids or exposing the cornea, and the impossibility of getting any solution into contact with the conjunctival surface, I relinquished all hope of saving the sight. I have never in the course of my experience known such a condition eventuate otherwise than in the total destruction of the eye. Under these circumstances I determined to adopt a somewhat heroic and novel proceeding, and one that has not, I believe, been published. I passed a small silver director under the upper lid as far as the edge of the orbit, against which I kept it pressed; and then, with a small, sharp-pointed bistoury, I completely divided the lid perpendicularly as far as the margin of the eyebrow. In order more completely to uncover the cornea, I separated the two angles of the divided tarsus, and fixed them with fine sutures to the skin of the eyebrow. The cornea looked steamy, but not ulcerated, and was buried in chemosed conjunctiva. The immediate effect of this proceeding was to diminish the redness and swelling of the lids and conjunctival membrane and completely to expose the surface.

In the subsequent treatment of the case I was materially assisted by the house-surgeon, Mr. Dixon, who carried out my directions with great care, skill, and assiduity. A solution of nitrate of silver—thirty grains to one ounce—was painted over the entire surface of the conjunctiva three times daily, the eye was frequently cleansed and syringed with a solution of alum—ten grains to one ounce,—and a piece of linen moistened in the solution was kept constantly applied. This plan was continued, with gradual abatement of the symptoms, for a month; a weaker solution was then substituted, and at the end of six weeks from the commencement of the treatment the eye had recovered with a perfectly bright, healthy cornea.

At the termination of another fortnight the child was again placed under the influence of an anæsthetic, when I pared the edges of the divided lids and brought them together with fine sutures. Good union occurred, the deformity is very slight, and the lid perfectly performs its function.

I may add that during the early part of the treatment the other eye was kept carefully closed with strapping so as to prevent any risk of inoculation.

To some it may seem that this rather novel proceeding was of too heroic and severe a character, but it at least had the merit of success. Every case of gonorrhœal ophthalmia, the result of direct contagion, that has come either under my care or my observation has been so uniformly attended with loss of the affected eye that I should certainly adopt a similar proceeding on any future occasion, and I beg to commend it to the attention of the profession. It seems to fulfil every indication: it relieves the immediate tension, and the strangulation with which the cornea is threatened; it permits the free escape of the matter, and enables the surgeon to make a thorough use of caustic and astringent remedies; while the slight subsequent scar on the lid is a small price to pay for a rescued eye.

[1] Read at the Ophthalmic Congress at Amsterdam in 1879.

CASE OF SEVERE LACERATED WOUND OF RIGHT FOREARM TREATED BY DRY AND INFREQUENT DRESSING.

BY EDWARD POTTS, M.R.C.S. ENG.

ON October 11th last I was asked to see a man who had just sustained a severe injury to his right forearm whilst at work. On examination I found the integument torn up from the front of the limb, from the level of the wrist to within two inches of the elbow-joint. The flap was left attached above by a broad base corresponding to the whole width of the forearm. The superficial flexor muscles, with the lower part of the radial artery, where it lies between the flexor carpi radialis and supinator longus invested by the deep fascia, were exposed, but uninjured. There was very little hæmorrhage from a few superficial veins; this was readily controlled by torsion and pressure. The flap was brought down, and its edges accurately adapted by five silver sutures loosely applied. A large square piece of perfectly dry lint was laid over the wound, and the part was enveloped in a thick padding of cotton-wool. A straight wooden splint was then applied to back of forearm, and the whole carefully bandaged; the limb slung in an easy position, with the hand resting over middle third of sternum.

The patient had rather a restless night on the one succeeding the injury, but inasmuch as he complained of little pain, and there was an entire absence of traumatic pyrexia, the dressings were not removed until Oct. 17th—six days after the receipt of the injury. Then I found the lint slightly stained with blood and healthy pus. Hand slightly

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œdematous. No bagging, and very little pain on pressure. I redressed wound as at first; more thickly padded the hand with cotton-wool, and placed, in addition to the splint on back of arm, another one of gutta-percha over the dressing on flexor aspect.

On Oct. 20th I removed sutures and renewed the dressing. On making gentle but steady pressure on the flap from above downwards, about three teaspoonfuls of healthy pus escaped from margins of wound. Splints readjusted as before.

Oct. 23rd.—Dressing again renewed. Flap somewhat retracted, leaving small granulating surface at lower end of wound, otherwise doing well. Patient is anxious to know when he may go to work. Very little discharge. Union between flap and subjacent tissues seems tolerably firm.

27th.—Redressed as before. Very little discharge. Discontinued use of gutta-percha splint.

I consider that the man will be able to resume his employment in ten days or a fortnight.

Remarks.—I have had the opportunity of seeing many cases of severe mechanical injury, involving great laceration of soft parts, fractures of important bones, and injuries to nerve-centres, treated by means of "dry and infrequent dressings" by Mr. Gamgee in the wards of the Queen's Hospital, Birmingham; and I must say I was astonished at the almost unvarying success that attended this manner of treatment. I had not, however, before had the opportunity on my own responsibility of treating a case of any great severity by this method. I determined therefore—bearing in mind that the three great factors in the process of wound healing were "rest, position, and pressure"—to give the "dry and infrequent dressing" a thorough trial; and I think the result attained in this case would be sufficient to satisfy the most enthusiastic votaries of antiseptic surgery, and to justify us in regarding the "dry and infrequent method" as a step in the right direction and worthy of trial. From its simplicity, and the inexpensiveness of the materials, it is undoubtedly the dressing *par excellence* for the general practitioner. There is an entire absence in this method of any elaborate detail; we need only remember that, in order that the healing process may proceed satisfactorily, the injured part must be placed under those conditions which will insure the most perfect rest. Moisture favours the suppurative and delays the healing process: hence let our dressings be dry. We cannot renew our lint, cotton-wool, bandages, splints, or any other material generally used, without a disturbance of rest: hence let our dressings be infrequent. We must not, however, lose sight of the fact that general principles must ever guide us; that while no single method of treatment is universally applicable to all wounds, yet the "dry and infrequent method" places an injured part under the most favourable condition, and so best assists the natural reparative process.

Newcastle-on-Tyne.

A CASE OF CHRONIC DUODENITIS; ASCITES; JAUNDICE.

By BERNARD KELLY, M.D.

THE notes of the following case may be of interest as affording an instance of a somewhat rare cause of icterus, the symptoms of which, so far as they may lead to a correct diagnosis, must necessarily be obscure during life.

Margaret S——, aged forty-five, sent for me on March 28th last. The patient had been married about twenty-three years, but never bore a child, and had passed the critical period some two years previously. She had just left hospital, where she spent seven or eight weeks. The following condition presented itself. Her body was emaciated to an extreme degree and intensely jaundiced; the abdomen tense from ascitic fluid. The bowels were much relaxed, the fæces exhibiting the usual *putty-like* appearance characteristic of the disease. The pulse was 100, and never sank below this point till the final issue, a fact which proves conclusively that cholæmia does not always succeed in retarding the heart's action. The urine was scanty and deeply tinged with bile, so much so as almost to resemble porter. She complained of persistent and deep-seated pain in the right hypochondrium. There was slight œdema of the feet and ankles, notwithstanding the patient had been long and necessarily confined to the recumbent position. The appetite was all but abolished; but at no time had there been either nausea or vomiting, neither was there coloured vision, nor hyperæsthesia, although she had some time previously to my seeing her suffered much from the latter symptom, showing that in the long run the nervous system may lose much of its natural sensibility, or may adapt itself, so to speak, to the morbid conditions that surround it. Although the entire history and aspect of the case precluded even the shadow of a favourable prognosis, I deemed it my duty, nevertheless, to render the few days that remained to her of life as comfortable as possible, while giving her the benefit of any chance that might be derived from the only treatment which seemed rationally predicated. With this view the following mixture was ordered:—Bicarbonate of potash half an ounce, spirits of chloroform an ounce, tincture of opium a drachm, liquid taraxicum, concentrated, an ounce and a half, water to twelve ounces; a tablespoonful to be taken every two hours. The patient took well to the medicine, saying it warmed her (I should have mentioned that she experienced an irksome feeling of coldness), but, apart from this, the only sensible effect produced by its use was a slight alleviation of the hepatic pain; the bowels also were not quite so relaxed. The urine continued scanty, and saturated with bile. I visited the patient regularly every day till the 8th of April, when, observing no material improvement in her general condition, I omitted the potash, and substituted quinine in the proportion of twenty-four grains and iodide of potassium a drachm and a half, the other ingredients to be left unaltered. The distension of the abdomen being very great and impeding the respiration, I strenuously insisted upon the necessity of tapping, but all to no avail, as, to use her own words, "she knew she would die," and it would be only adding unnecessary torture to her last moments. The fatal issue was not long protracted, as she died on April 11th.

A partial necropsy was obtained by special favour, and was made three days subsequently. The abdomen contained about a gallon and a half of serous fluid of the same colour and consistence as the urine. The stomach and intestines, large and small, were quite healthy, empty, and distended with gas. The liver was enlarged and of a greyish slate colour; but otherwise presented nothing morbid or abnormal. The gall-bladder was enlarged and filled with fluid bile, but contained no calculi. The duodenum was greatly thickened and its tube much diminished, especially in its middle or perpendicular portion—the result of chronic inflammation—thereby completely obstructing the orifice of the ductus choledochus, and preventing the consequent passage of bile into the intestine.

Had the real state of things, as shown by post-mortem examination, been recognised before death, cholecystotomy might have been performed to some advantage, perhaps in prolonging the patient's life, by giving free exit to the long pent-up bile and relieving the passive congestion of the liver. In the present case, it could have been very easily accomplished, owing to the great turgescence of the gall-bladder, which extended considerably below the margin of the liver. The ascitic fluid could also have been evacuated in the same operation, thereby achieving a twofold object at a single stroke.

Rotherhithe.

RUPTURE OF FALLOPIAN TUBE.[1]

By C. J. RAYLEY OWEN, M.R.C.S., &c.,
LATELY RESIDENT OBSTETRIC OFFICER, ST. MARY'S HOSPITAL.

MARY D—— was taken ill on January 9th, 1880. She was thirty-nine years of age; married twenty years; had four children, no miscarriages. Youngest child is a year and three-quarters old. She had rheumatic fever when young, but heart was not affected. Catamenia began at fourteen, natural, every four weeks, lately every three weeks. She has "put on" a good deal of fat latterly, and her strength was severely taxed in the middle of December from nursing a sick child. Her last period in the beginning of December was natural, but ever since she has suffered much from pains in the back and stomach. On January 7th she thought her period had come on, but as there was only a slight discoloration of her diaper, concluded it had passed off.

[1] Paper read and specimen exhibited before the Harveian Society, Jan. 15th, 1880.

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On the morning of January 8th she had been reaching about a good deal, when she suddenly felt "something give" in her right side, and almost immediately fainted away. (This was only found out after death.)

In the afternoon, when my father first saw her, she had been very sick, and only recovered from one faint to go into another. In the intervals she was quite sensible, and complained of severe pain in right iliac and hypochondriac regions, not increased by pressure. Face and hands cold and moist. No pulse in radial, carotid, or temporal arteries. Tongue clean, pale, and flabby; heart's action intensified; no bruit; chest normal, also abdomen. He conjectured some small vessel had given way, but where it was impossible to say.

Ordinary remedies for collapse were ordered, with ammonia and champagne. At midnight, when I saw her, she had rallied from her collapse; pain in right side much less, not increased by pressure. Respiration 36, very "sighing;" temperature 96·6° in mouth. After free stimulation, radial was felt to be beating at 120. This condition lasted till six A.M. on the 9th, when nutrient enemata were ordered, as sickness had returned, but she became unconscious about mid-day, and died soon after.

A post-mortem was kindly allowed, and was made twenty-six hours after death by Mr. Marsh, of St. Mary's Hospital. The body was warm; rigor mortis slight; much adipose tissue on abdomen. Lungs and heart healthy, no fat or degeneration about latter, which was small. On opening abdomen it was found to be full of thin pale blood; organs healthy, but very pale; from the right side a quart of thick black clots were removed. While about to examine the uterus it was found that both ovaries were small, cystic, and atrophied. The left Fallopian tube was small; in the right one, a quarter of an inch from the uterus, an opening of the size of a horse-bean was seen, from which a little fibrinous material was oozing; the tube was enlarged throughout its entire length to the size of a pipe-stem, but where the opening existed it was as large as a No. 10 catheter. The uterus was somewhat stained and congested near the tube, while the uterine mucous membrane was much thickened; the opening was in only the upper aspect of the tube. Careful examination failed to detect any embryo.

Remarks.—In this fortunately rare case the entire absence of peritonitis is remarkable. Could it be due to the fact that the patient was so exhausted by hæmorrhage that there was not sufficient strength to set up inflammation? The length of time that the patient lived showed that the hæmorrhage was not proceeding from a large vessel. The most plausible theory of the rupture seems to be that the patient caught cold at her period in December; that inflammation of the tube followed, possibly ending in abscess; and that the over-exertion brought about the fatal result. It is somewhat a curious fact that before commencing the autopsy Mr. Marsh said almost the last private examination he had made was on the body of a young unmarried lady, who had caught cold at her period and died from rupture of the Fallopian tube; and here also there was no peritonitis. Although he had made some thousands of examinations, he had never seen a similar case.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

TWO CASES OF BONY ANCHYLOSIS OF THE ELBOW-JOINT TREATED BY SUBCUTANEOUS OSTEOTOMY OF THE LOWER END OF THE HUMERUS; UNION IN A USEFUL POSITION.

(Under the care of Mr. HAYNES WALTON.)

FOR the following report we are indebted to Mr. Henry Juler, F.R.C.S., demonstrator of anatomy at the hospital, late resident registrar:—

CASE 1.—E. S——, a domestic servant-girl, aged eighteen, ignited her dress, and her left arm was severely burned thereby. The arm did not heal for a year, and all the time it was kept straight. No details of importance respecting the nature and extent of the lesions could be obtained. For four years from the period of the accident she sought relief at St. Mary's Hospital on account of the great inconvenience and uselessness of the straight and stiff limb. Cicatrices were scattered over the limb from the shoulder to the wrist; and opposite the ulna the skin was replaced by cicatricial material. The elbow-joint was destroyed, and there was complete anchylosis. The limb was quite straight.

The patient being in good health, Mr. Walton decided on performing subcutaneous osteotomy, and endeavouring to get the limb in a bent and fixed position.

On February 1st the operation was done in the following manner:—On the outside of the arm, about the centre of the humerus and two inches above what was supposed to be the position of the outer condyle, a short vertical cut was made with a small scalpel through the soft parts down to the bone. A small saw (Adams's) was introduced in such a way as to insert the blade between periosteum and the bone, and the entire thickness of the bone was sawn through with as little disturbance as possible of the adherent parts, the finishing strokes being done slowly. A gush of venous hæmorrhage, which ensued when the saw was withdrawn, was readily arrested on the application of a small compress and plaster. The limb was bent only enough to give the assurance of the bone having been divided. In that slightly flexed state a splint was applied long enough to reach from the armpit to the wrist, and so bandaged as to insure immobility. It was bent a little more a week later, and at the end of three weeks it was placed at a right angle.

On March 1st there seemed to be very decided firmness of the limb. The patient would no longer stay in the hospital. She, however, returned three weeks later to have a photograph taken, as she promised. It was clear that bony union had been accomplished. She had cast aside her splint, and was much pleased with her treatment, and said that the arm was almost as useful as the other.

CASE 2.—An epileptic and delicate girl, aged seventeen, who had fallen into the fire three times, was in the hospital three years ago with scarlet fever, when her left elbow-joint suppurated. She returned with the arm anchylosed at an angle of 160°. The wrist was in extreme pronation and fixed. There were several scars on both arms from burns, and the left had in addition marks of incisions about the position of the elbow-joint. Mr. Haynes Walton decided on operating, and the preliminary steps were executed as in the first case, and the operation differed only in the sawing being discontinued before the bone was quite cut through, and what remained uncut being broken. Venous hæmorrhage was active till pressure was applied. The limb was bent at an angle of 90° and a long splint applied.

On the seventeenth day a very severe epileptic fit occurred. The clonic arm spasm disturbed the ends of the bones, hæmorrhage ensued, profuse suppuration followed, together with slight sloughing of the edges of the tegumentary wound. All this was accompanied by severe constitutional disturbance and threatened death of the patient. Mr. Walton thought it better not to alter the angle of the arm, and he did not, but allowed it to remain as originally placed all through. The outer wound healed very slowly, but constitutional recovery was quick. At the end of five weeks it was certain that anchylosis had set in. At the end of the eighth week the splint was left off, and merely a bandage was applied. The bones were now firmly knit in true anchylosis, and a photograph having been taken the girl left the hospital. She could feed herself with this arm.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

SEVERE WOUND OF GLOBE ON CILIARY REGION; RECOVERY WITH PERFECT VISION.

(Under the care of Mr. MACNAMARA.)

THE following case is reported by Mr. J. G. Mackinlay, registrar:—

F. B——, aged twenty, a barmaid, was opening a bottle of soda-water on the night of July 15th last, when the bottle burst and the left eye was struck by a piece of the broken glass. A doctor was sent for, and attended to the case the same night and the following day. On the 17th the patient applied to the hospital, and was admitted as an in-patient under Mr. Macnamara's care.

The condition of the left eye was as follows:—A wound

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through the conjunctiva and sclerotic a quarter of an inch in length, horizontal in direction, and commencing at the outer margin of the cornea just at the equator; the wound gaped, and the ciliary body and choroid were exposed and protruding into the wound; there was also a smaller wound, a line in length, extending downwards and slightly outwards from the corneal margin, just at the spot where the larger injury began. The smaller wound was not so deep as the other; the globe was somewhat injected at its outer half, and the patient stated that she had pain at times in the eye. Mr. Macnamara ordered pad and bandage to be applied.

Next day the pain was less; the pad and bandage were continued. The girl had increased pain during the night of the 19th, and Mr. Martin, the house-surgeon, gave a dose of chloral hydrate. On the following night the pain was more severe, and was not much relieved by chloral draught. At 4 AM. on the 21st Mr. Martin gave a hypodermic injection of morphia—one-third of a grain. This gave great ease. The lower wound was healing, and the larger one did not gape so much. On the 24th lachrymation had ceased from the right eye, and there was scarcely any from the left. There was a little injection of globe in the neighbourhood of the injury. The lower wound was quite healed, and the upper one was closing up well. There was no pain or photophobia. The patient was discharged.

On Oct. 22nd (fourteen weeks after the accident) the patient visited hospital. There was a small triangular patch, of a dusky yellow colour, and slightly vascular at the seat of injury, its base towards the cornea, and extending a little over its edge. The patient stated that she had no discomfort, and that the sight of the eye was as good as ever. Vision was tested, and Jaeger No. 1 was read rapidly at normal distance.

LAMBETH INFIRMARY.

CONGENITAL MALPOSITION OF HEART AND ABDOMINAL VISCERA.

(Under the care of Dr. ROBERT H. LLOYD.)

THE following case, though not very uncommon, is still of not such frequent occurrence but that its perusal may be of interest:—

T. L——, aged twenty-four, a coalheaver, was admitted into this infirmary on June 25th, 1878, suffering from secondary syphilis, and during the course of treatment the following abnormal position of the heart, and presumably of the abdominal viscera, was observed. The heart's apex was seen to beat between the seventh and eighth right ribs, about one inch and a half below, and external to the right nipple. The mitral sounds were heard most distinctly around that spot, and the aortic sounds over the sternum on a level with the third costal cartilages. An area of dulness corresponding to the outline of the liver lay in the left hypochondrium and the right hypochondrium was occupied by a resonant space presumed to be the stomach. The right testicle was lower than the left one.

The patient's previous history was to the effect that he had enjoyed good health from the age of twelve, but he had been told that up to that period he was a sickly child. He had three brothers and a sister, all older than himself, and enjoying good health.

Dr. Wodehouse of Reading, who also saw the patient, stated that he once had a similar case under his care at the dispensary at Reading.

STRATFORD-ON-AVON INFIRMARY.

EXTENSIVE WOUND OF OUTER SIDE OF THIGH BY THE HORN OF A BULL.

(Under the care of Mr. LUPTON.)

LEVI B——, aged forty-five, was admitted on Jan. 15th, 1879, with an extensive laceration of the skin and fascia on the outer side of the left thigh. It was a ⊢-shaped wound, the long arm extending from about two inches below the great trochanter some seven inches down the thigh, and laying bare the vastus externus; the short arm ran upwards at right angles to the long one across the front of the thigh for about four inches.

The wound was brought together by sutures, and carbolised lint was applied; but it did not do well, and by Jan. 24th was in a low, unhealthy, stinking state. The man was ordered six ounces of port wine daily. From this time the wound improved, and on Feb. 2nd the port wine was reduced to two ounces, and a pint and a half of porter was ordered. The wound had now all but healed. It should be noted that this was a poor half-witted man, who for some time regularly tore off his dressings, and kicked them down to the foot of the bed; not being fit for anything, he was set to look after a savage bull.

FRACTURED SPINE.

(Under the care of Mr. RICE.)

THOMAS B—— was admitted on Oct. 31st, 1878. He was helping to place a large tree on a timber carriage when it fell back, caught him along the line of the clavicles, and forcing him backwards, fairly doubled him up. His spine was fractured, apparently in two places, at about the eleventh dorsal and the second lumbar vertebræ. The line of sensation on admission corresponded to the distribution of ilio-inguinal nerve on each side; below this there was none. He had some idea when a motion was about to pass, but not the slightest control over the rectum; the urine dribbled away. After some weeks the urine was forcibly and spasmodically expelled, being projected to a great distance, and priapism occurred. This state lasted nearly a fortnight. He was subsequently able to pass urine by voluntary effort, but a puriform residuum had to be occasionally drawn off by catheter.

This case terminated fatally in November, 1879.

JERVIS STREET HOSPITAL, DUBLIN.

CASE OF INTRAVENOUS INJECTION OF MILK.

(Under the care of Dr. MELDON.)

FOR the following interesting notes we are indebted to Mr. John Cashin, L.R.C.S.I., resident-surgeon:—

Michael M——, aged forty, was admitted on Dec. 4th, 1879. About two years before symptoms of phthisis commenced, and gradually increased until May last, when his friends were in daily expectation of his death. Dr. Meldon injected three and a half ounces of milk into his veins. The operation, which was not followed by any obstruction of respiration, gave him almost immediate relief from the feeling of weakness from which he suffered. His appetite returned; he slept well, and in a few days he was able to sit up. Soon after he was sent to the convalescent hospital, where he continued to improve, and in about six weeks was able to resume his occupation of a pawnbroker's assistant. During the summer months he improved very much, and increased considerably in weight. In November last he was attacked with pneumonia, after which he had a constant cough. The other symptoms of phthisis also returned, and increased until, unable to continue his employment, he sought admission into the hospital.

On admission both lungs were extensively diseased, and there was constant diarrhœa, which had reduced the patient to an almost moribund condition. His cough was most distressing, and he was unable to take any nourishment. As all efforts to improve his condition were of no avail, Dr. Meldon, yielding to his patient's own urgent entreaty, consented to repeat the operation of injecting milk into the veins.

On the 13th of January, assisted by Drs. Cranny, Stoker, and Kelly, and in the presence of a large class of students, Dr. Meldon injected three and a half ounces of goat's milk, at a temperature of 100°, into one of the veins of the right arm. The milk, as usual, was rendered alkaline by the addition of carbonate of ammonia, and the goat was milked at the bedside of the patient. During the operation the man complained of pain and coldness in his back, but he stated he did not feel any difficulty in breathing or pain in the head. Soon after the operation the temperature rose from 99° to 104°; his breathing for a few hours was somewhat hurried, but there was no obstruction to respiration, as in many of the previous cases. The pain in the back and the coldness remained for some hours, but the patient slept well that night, and awoke next morning greatly improved in spirits and feeling much stronger. The diarrhœa was, as in all former cases, immediately checked by the operation. For some days he made steady progress towards recovery—his appetite increased, and his cough diminished.

Dr. MELDON, in his remarks to the students, said that the operation of intravenous injectment of milk had been

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received in Europe with very little encouragement, and even in New York, where there was every promise of the operation receiving a fair trial, it seemed to have fallen into disrepute. The present was the tenth case in which Dr. Meldon had performed the operation, and with a result that made him most hopeful of its success when performed in suitable cases and with proper precautions. As yet he had only resorted to it in cases where the patient's hours were already numbered. In all these cases life had been considerably prolonged, and in four the patients had been completely cured by the operation. The operation was quite free from danger if one or two points were attended to, besides those which had to be looked to in every case of transfusion. The two points which were peculiar to the transfusion of milk were, that care should be taken that the milk was alkaline, and that only a small quantity at a time, four and a half ounces being the largest amount that should be injected. Lately a good deal has been written against the operation. The opponents of the procedure might be classed under three heads. First, those who say it is *theoretically* wrong. Second, those who argue from experiments on lower animals, and, thirdly, those who believe the globules of the milk are two large to pass through capillaries. The first and last of these may be met by pointing to the fact that several cases have been successful, and in no case where the operation has been performed with proper care with regard to the two special points which Dr. Meldon mentioned have injurious results followed.

With regard to the comparative experiments on dogs, the great error had been that healthy dogs had been selected, and, comparatively speaking, an enormous quantity of milk had been injected.

Dr. Meldon stated that he had no doubt if a healthy country patient was selected for the operation, and say forty ounces of milk injected into his veins, the result would be almost necessarily fatal. This really had been the kind of experiment on dogs, and it was not surprising that the conclusions drawn from these experiments should be so unfavourable.

The cases which Dr. Meldon had cured were all cases of pernicious anæmia, and he stated he could easily understand how in that disease a small quantity of corpuscule-supplying fluid might alter the condition of the blood, and thereby effect a cure.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Estimation of Uric Acid by its reducing Action upon the Ammoniated Cupric Test.—The "Nietze-Leitner" Endoscope.

THE ordinary meeting of this Society was held on March 23rd, J. E. Erichsen, F.R.S., Esq., President, in the chair. A paper by Dr. Pavy, dealing with the quantitative determination of uric acid in the urine, was read, and the process demonstrated by the author. After this Sir H. Thompson described and demonstrated the application of the "Nietze-Leitner" Endoscope.

The following is an abstract of the paper on the Estimation of Uric Acid by its reducing Action upon the Ammoniated Cupric Test, by Dr. F. W. PAVY, F.R.S. The author first refers to the importance of being able to determine readily and with precision the amount of uric acid voided for the purpose of studying the conditions which tell favourably and unfavourably upon the uric-acid diathesis, and as a guide to treatment during the management of a case in which the uric-acid deposit occurs. The old methods of estimating uric acid could not be spoken of as meeting the requirements of the medical practitioner either as regards facility of application or precision. The method which the author desired to bring before the notice of the Society is founded upon the reducing action which uric acid, like sugar, exerts upon the oxide of copper. The ordinary form of copper test is most susceptible of application to the purpose, but the ammoniated cupric liquid, which the author has recently introduced[1] for the quantitative determination of sugar is perfectly available. With this test the reduced oxide, instead of falling as a precipitate, is held in solution by ammonia, and a simple decoloration of the liquid occurs as the reduction proceeds. The mode of preparation and employment of the test having been described, it is stated that the results obtained from observations conducted with known quantities of pure uric acid so closely harmonised with the expression that three atoms of oxide of copper are reduced by one atom of uric acid, as to justify this formula being adopted as the basis of calculation for the process. For the determination of the uric acid in a specimen of urine the reducing power is taken before and after treatment with acetate of lead. The first or total reducing action is in part due to uric acid and in part to the small amount of sugar which urine naturally contains. The addition of acetate of lead effects a precipitation of the uric acid, and the reducing power now obtained represents the reducing power of the urine, minus that of the uric acid it contained. By the difference between the two determinations the amount of uric acid is ascertained. The mode of calculation is given. Results are furnished showing the precision with which known quantities of uric acid added to urine are revealed by the process. To be certain that what is taken as expressing uric acid is in reality due solely to the presence of uric acid, the process was checked against the actual collection and subsequent determination of the uric acid. Results are first given to show that the collection and subsequent determination of uric acid can be carried out in a manner to afford reliable information, and then the two processes, the determination from the difference in the reducing power before and after precipitation with acetate of lead, and by actual separation of the uric acid, and its subsequent estimation, were applied to various specimens of urine, and the result compared. The figures obtained present a close accord, and justify confidence being placed in the results derived from the process brought forward. The author thus concludes his communication:—"This completes what I have to say about the process I have described for the estimation of uric acid. The next matter to deal with is the results obtained by its application to the urine under various conditions of health and disease. This is a matter of some magnitude which I must reserve for the subject of a future communication, but I may here state that according to the observations I have conducted, the figures that have been hitherto given as representing the amount of uric acid present will have to undergo considerable alteration." Dr. Pavy then exhibited the process above described to the Society, and further added some interesting remarks upon the estimation of the acidity of the urine by means of phenol-phthaline, a test which he also exhibited. He said that he had made comparative observations upon the amount of uric acid and the acidity, but his conclusions were not numerous enough for generalisation.

Sir HENRY THOMPSON exhibited a specimen of the "Nietze-Leitner" Endoscope. He commenced by observing that before giving a practical illustration of the new endoscope he would say a few words as to its origin and history. Endoscopy was a product of the present century. Bozzini of Frankfurt made the first attempt in 1805, and created a considerable interest in the subject. The next step was made by Tégalas of Strasburg in 1826; he applied it chiefly to the urethra and bladder. Some twenty years afterwards Cazenave in Paris, and Avery in London, experimented independently of each other. Avery constructed an instrument for examining the larynx, which has been but little modified even to the present day. He (Sir H. Thompson) had witnessed Avery's examination of the urethra in 1851. Meantime, Désormeaux of Paris carried urethroscopy further by the use of a lamp and an arrangement of mirrors for reflecting its light. For this he received a portion of the Argenteuil Prize in 1853; and obtaining subsequently the Clinique at Hôpital Necker, brought out a considerable work on "Endoscopy" in 1865. Cruise of Dublin used this apparatus, but adapted to it a stronger light. But some ten or twelve years ago Dr. Brucke of Breslau conceived the idea of carrying a platinum wire, maintained at a white heat by the galvanic current and cooled by a current of cold water, into the rectum, believing that he might then probably illuminate the interior of the abdomen, or at all events throw light enough into the bladder to enable him to see its contents through a

[1] Proceedings of the Royal Society, vol. xxviii., p. 260, and vol. xxix., p. 272.

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tube introduced there. He was, however, doomed to disappointment, the light being insufficient to penetrate the tissues. About three years ago a modification of this principle suggested itself to the mind of Dr. Nietze of Vienna, who was fortunate enough to find in Mr. Leitner, the very ingenious instrument maker of that city, a co-operator who spared neither time nor expense to realise the idea. This he has done by producing exceedingly delicate apparatus adapted to enter each of the different cavities of the body, containing the galvanic light described and the water-circulating apparatus, so that the wire heated to whiteness can be carried with perfect safety into the urethra and bladder, the rectum, the back of the pharynx and nasal cavities, and even into the stomach itself. Sir Henry Thompson then demonstrated the applicability of this apparatus to the exploration of the urethra and bladder on the living body of a patient, who was there for the purpose. Finally he stated that it was not to be supposed that the endoscope should be in any case lightly resorted to. The employment of such instruments, as he had shown, necessarily involved a certain amount of irritation in the organs, and nothing could be gained by such observations except from rare and particularly obscure cases. Thus, he could not conceive a case of lithotrity in which it could be useful: the "last fragment" of which so much had been often said and which was formerly a bugbear, if not an opprobrium to lithotrity, was perfectly amenable to the treatment of modern instruments, and if a surgeon felt himself unable to deal with it, he should not attempt lithotrity at all. The Nietze-Leitner endoscope was no more wanted for stricture, retention, or stone than were the previous endoscopes; if the surgeon had skilful hands, the endoscope was useless in these conditions; if he had not skilful hands, no endoscope could make him a competent surgeon. But the new instrument, with its vastly greater power of light, might do what other endoscopes would fail to do—namely, determine the nature of a foreign body such as we find occasionally introduced from without into the bladder, cases no doubt of extreme rarity; and it might also help us to identify the existence of a villous growth in the bladder, which was not to be accomplished by any known mechanical means. Great difficulties, however, surrounded an examination in such circumstances, for it is essential, in order to see at all clearly with an endoscope, that the bladder should be partially distended with clear urine, clear water, or air, the last-named being somewhat preferable. But it must be confessed that, in conditions of diseased bladder, the urine was generally cloudy from the presence of muco-pus and blood, and that the very employment of the instrument tended still further to produce thickness in the urine. Hence it is necessary in these cases to wash out the cavity completely, leave about four ounces of pure water within, and at once introduce the endoscope tube with the utmost care. Practically speaking, the difficulty of attaining the desired conditions was sometimes considerable. Sir Henry had had the opportunity through the kindness of Professor Dittel of Vienna, assisted by Dr. Nietze and Mr. Leitner themselves, of examining several cases at the Vienna Hospital last autumn, and had had the opportunity of testing his own instrument now present here in London. He was extremely indebted to Mr. Weiss, who was present, for his intelligent and careful management of the apparatus, since it was essential for this, as well as its maintenance in good working order, that it should be under the care of a person well versed in the use of galvanic apparatus and competent to adjust, or repair, if necessary, the very delicate details which formed essential parts of this somewhat complicated but very complete instrument.

MEDICAL SOCIETY OF LONDON.

Renal and Hepatic Colic—Impaction of Gall-stone in Ileum.—Genu Valgum treated by Tenotomy and Mechanical Appliances.—Cerebro-spinal Syphilis.

AT the meeting on March 22nd, Mr. F. J. Gant, President, in the chair,

DR. DE HAVILLAND HALL communicated for Dr. F. A. Hill notes of a case of Renal and Hepatic Colic. The patient, a stout woman aged fifty-eight, while riding in a cab was seized with severe bilious vomiting and became collapsed. No jaundice appeared. The fourth day (Jan. 20th) after the attack she had three rigors and two severe attacks of spasmodic pain in the cardiac region. On Jan. 27th she had a violent attack of pain in the left lumbar and inguinal region with rigors; and a similar attack on Feb. 2nd. On April 16th she had extreme pain all over the abdomen with constant vomiting, which became stercoraceous, and death ensued. A concretion the size of a hen's egg blocked the ileum two feet from its termination; a fistulous communication existed between the collapsed gall-bladder and the duodenum. Both kidneys were studded with small cysts, and in the pelvis of the left organ a calculus was lodged.

Mr. SAMUEL BENTON exhibited a severe case of Genu Valgum cured by instrumental means and tenotomy. The patient was a boy twelve years of age, who came under notice in July, 1879. When the bones were put close together the malleoli were eight and a quarter inches apart; the left leg being more bowed than the other. In August the biceps tendon of each leg was divided subcutaneously and an instrument suggested by Mr. Baker was applied. At the end of two months there was an interval of only two inches between the malleoli, the left leg not being quite straight, owing to the extension of the external lateral ligament of the knee-joint. In January the author divided this ligament, and the instrument was again applied for a month. The legs are now perfectly straight. Although the author was not opposed to Ogston's operation, he believed that in many cases a better result can be obtained by more simple means. Cutting into a joint and filling it with bone dust was an operation attended with more risk than simple subcutaneous tenotomy. He urged great care in the selection and supervision of the instrument applied.—The PRESIDENT said operations for this deformity were now common, and numerous successful results had been published; but he feared there were others unheard-of where death had occurred, or where recovery had been protracted. The procedure just recorded was certainly safer than that of removal of the internal condyles.—Sir JOSEPH FAYRER complimented Mr. Benton on his success, and expressed his opinion as to the value of this simple operation.—Mr. PEARCE GOULD said that having lately brought before the Society a successful case of excision of the inner condyles for this complaint, he wished to state that in a similar case now under his care suppuration had taken place, with slow recovery, leaving anchylosis of the joint. He intended to break down the adhesions, and expected a fair result. He exhibited another case, where there was a distance of sixteen inches between the malleoli. There might be some danger in dividing the nerve along with the muscle in this operation.—Mr. BAKER testified to the nature and extent of the deformity in Mr. Benton's case, and considered that in testing the straightness of the leg care should be taken to keep the patella uppermost. He had never seen the nerve divided.

Dr. DRYSDALE then read a paper on Cerebro-Spinal Syphilis. After a brief survey of the history of the subject he proceeded to point out the various forms into which cerebro-spinal syphilis was divided. In some pain was the principal feature; in others the symptoms were those of cerebral congestion; in others loss of intellect was the prominent fact; in some epilepsy predominates; in others paralysis. Syphilitic headache is deep and internal in character. The congestive form is accompanied by vertigo, low spirits, dim sight, buzzing in the ears, and lowered intelligence. More than three-fourths of all cases of epilepsy supervening for the first time in adults were attributable to syphilis; paralysis often follows; the convulsion may be partial. Aphasia conjoined with right hemiplegia, or without paralysis, may occur. Dementia, melancholia, and mania, and an affection closely resembling general paralysis of the insane might be produced by syphilis. The cranial nerves most affected are the third, the facial, and the hypoglossal, then the optic and auditory; the first and fifth rarely, and, least of all, the vagus and spinal accessory. Ptosis, mydriasis, and strabismus, with headache, were indications of cerebral syphilis; complete amaurosis was not rare. Labio-glosso-laryngeal paralysis, ataxia, and paraplegia were occasionally due to syphilis.—Dr. DE H. HALL asked whether the author had included embolism in the cases of right hemiplegia with aphasia. He mentioned a case of a young woman attacked with epilepsy preceded by paralysis of the right third nerves and of the left facial. Although no direct history could be obtained, he considered

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these conditions justified the diagnosis of syphilis.—Dr. C. T. WILLIAMS thought the author had tended to make the area of syphilis too large. He referred to a case of paraplegia, with lung symptoms, where a history of syphilis twelve years previously directed the diagnosis, borne out by the satisfactory result of treatment.—Dr. DEWAR mentioned a case of epilepsy with frequent spasms of the arms and legs, in which bromide of potassium had failed, but where a week's course of mercury was followed by cure.—Dr. GILBART SMITH deprecated attributing to syphilis all cases that showed rapid improvement under iodide of potassium. He mentioned a case (undoubtedly syphilitic) of incomplete hemiplegia, with aphasia and retinal changes, which quickly disappeared under the iodide. On being made an out-patient, the symptoms returned, with the addition of epileptiform attacks, but was again successfully treated by the same drug.—Dr. DRYSDALE, in reply, said that the cases of aphasia due to syphilis were those in which no cardiac affection was present, but evidences of syphilis were. The statistics of epilepsy he had given were those of Fournier, and he himself believed that epilepsy arising in adult life was probably due to syphilis. He wished to lay stress on the importance of specific treatment in doubtful cases.

THE DENTISTS ACT OF 1878.

WE understand that the subjoined memorial has been presented to the Executive Committee of the General Medical Council by the Association of Surgeons practising Dental Surgery:—

To the President and Council of the General Medical Council.

The Association of Surgeons practising Dental Surgery beg respectfully to ask your consideration of the Dentists Act of 1878, with a view to its amendment or repeal. We do so more especially at this time, as there are Medical Amendment Acts before Parliament.

We beg to point out that, as indicated in the preamble of the Act, it was intended to make provision for the registration of persons "specially qualified" to practise as dentists. That this result has not been obtained may be inferred from the fact that more than five thousand persons have been registered as dentists, whilst the highest estimate formed by those who were interested in the passing of the Dentists Act was, that not more than two thousand persons could be registered in Great Britain and Ireland to practise Dentistry. There can therefore be no doubt that a very large proportion of the persons registered do not possess the qualifications indicated in the preamble of the Act, and therefore that the registration is deceptive.

This result is due to the wording of Clause 6 of the Dentists Act, in which it is stated that "any person who (*c*) is at the passing of this Act *bonâ fide* engaged in the practice of dentistry or dental surgery . . . . shall be entitled to be registered under this Act." No interpretation of the terms "Dentistry or Dental Surgery" having been given, each person claiming registration has interpreted these words after his own fashion, and consequently many persons have been placed on the Dentists' Register without any claim to be "specially qualified."

It is quite true that the General Medical Council by Clause 13 can "cause to be erased from the Dentists' Register any entry which has been incorrectly or fraudulently made;" but until the words alluded to in the preceding section are clearly interpreted, it will be impossible for the General Medical Council to remove the names of persons who may be felt not to be "specially qualified" as Dentists.

Even if the General Medical Council could act under this clause, the delay and difficulties in carrying into operation the action of the clause are so great, that much harm will be done before the desired result can be obtained. For example, the Council of the Royal College of Surgeons in Ireland have represented to the General Medical Council that the name of a certain individual has been removed from the register of dental licentiates of that College on account of his "admitted unprofessional conduct," yet such are the arrangements by which this case can be brought before the General Medical Council and finally settled, that it may occupy more than a year from the present date, the name of such person remaining all this time on the Dentists' Register.

From this it may be seen that a large and important body like the General Medical Council, meeting at rare intervals, and having special and important business of its own to attend to, is not that best qualified to undertake the duties assigned to it by the Dentists Act.

That such was felt to be the case is made manifest by a reference to the Lord President's original Bill (1878), in which by Clause 23 the power was given to the General Medical Council to frame "a scheme for the examination, licensing, and registration of dentists," and such scheme, when approved by the Privy Council, shall have effect as part of this Act, subject to being from time to time revoked, altered, and added to by a subsequent scheme submitted by the General Medical Council to and approved by the Privy Council.

Under this clause it would have been possible for the General Medical Council to have established a board, the regulations of which, under the control of the Privy Council, would have had all the force of the clauses of an Act of Parliament, yet which could be modified according to circumstances.

This was evidently the object the General Medical Council had in view when it passed a resolution on the 4th of July, 1878, to the effect, "that the Council desires to express its wish that the Bill entitled the Dental Practitioners Bill be brought into conformity with the dental clauses of the Lord President's Bill." This recommendation of the General Medical Council has been disregarded, and instead of the Council being authorised to frame a scheme as above shown, the whole work of carrying the Act into operation has been thrown upon the Council itself, which has thereby been made an executive and not a legislative body.

Lastly, the Dentists Act enables certain Doctors of Dentistry to be registered, who can thus use the title of Doctor, a proceeding which will render it *impossible* to carry into effective operation the 24th Clause relating to unregistered persons in the Medical Act, 1858, Amendment Bill, 1879, of the Lord President, whereas also the Act does not prohibit persons from assuming the title of surgeon in conjunction with that of dentist by those who do not possess any surgical qualification whatever.

We, therefore, earnestly pray that the General Medical Council will be moved to take such measures with reference to the Medical Amendment Act now before Parliament as will secure a due interpretation of the terms "engaged in the practice of Dentistry or Dental Surgery" made use of in the Dentists Act, Clause 6.

That they will also be pleased to cause to be introduced in Clause 24, line 37, in the Lord President's Bill, after "takes, or uses," the words, either alone or conjunctively with any other word or words, "the designation," &c.

Finally, to consider whether it will be for the convenience of the Medical Council, and for the interests of dentists, that Clause 23 of the original Bill of the Lord President should not be made law, and the Dentists Act either repealed or modified accordingly.

Believing that such modifications are absolutely necessary, we earnestly and respectfully request the serious attention of your Council.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mr. G. Scorer of Piccadilly bequeathed £500 to the City of London Truss Society, £250 to the Cancer Hospital, £250 to the City of London Hospital for Diseases of the Chest, £200 each to St. George's Hospital, the Brompton Hospital for Consumption, the London Hospital, the Westminster Hospital, and the Charing-cross Hospital, £100 to the Royal National Hospital for Consumption at Ventnor, £100 to St. Mary's Hospital, and £50 to the Hospital for Sick Children; and 1000 guineas each to St. George's Hospital, the Brompton Hospital for Consumption, the London Hospital, the Westminster Hospital, and the Charing-cross Hospital, upon trust to invest the same in Three per Cent. Consols, and apply the annual dividends between fifteen patients of each hospital on leaving. Mr. William Fisher of Sheffield bequeathed £250 each to the Sheffield General Infirmary and the Jessop Hospital for Women, payable within six calendar months after the death of his wife. The Goldsmiths' Company have given another £100 to the Royal National Hospital for Consumption, &c., at Ventnor. The Arbroath Infirmary has become entitled to £500 under the will of the Rev. David R. Louson, minister of the Scotch Church, Carlisle.

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THE LANCET.

LONDON: SATURDAY, APRIL 3, 1880.

BY "qualified quacks" we mean persons duly qualified by the possession of a licence or diploma—in some instances of more than one of these legal instruments—to practise medicine, who, nevertheless, so conduct their business as to place themselves, practically, outside the pale of a profession governed by the unwritten, but perfectly well understood, laws of etiquette; and whom it is impossible to distinguish, by the simple fact that their names are to be found in the Medical Register, from the great camp-following of "quacks." It will, doubtless, at first sight appear that the possession of a legal qualification effectually relieves the practitioner from the imputation of quackery, and that being so "qualified" he must enjoy a citizen's liberty to order his life as it shall please him, or as may seem to his personal judgment most promising of success. Would a duly ordained minister of religion—we use the broad term purposely to include the recognised teachers and preachers of every church and sect—be considered free to exercise his calling wholly without regard to the rules of the ecclesiastical body from which he derived his "orders"? Surely the title is morally, if not *legally*, effaced by any act which practically severs connexion with the fount of honour! A peer who could not be summoned to the House of Lords or be received at Court because of some personal or social disability, would be virtually degraded from the ranks of nobility, although his title had not been suppressed by any formal act of the Sovereign, based on the ground of attainder, and he might, therefore, be restored to honour on amendment. The case stands thus with the holders of legal licences to practise medicine who do not conform to the laws and usages of the profession. They may be qualified, but they are not the less on that account quacks or pretenders in so far as they claim to be members of the profession to which the legal documents they undoubtedly possess would, in the absence of personal disability, give them a title to belong.

The doctrine that a man may be qualified in medicine, and yet not practically recognisable as a member of that profession, may, as we have said, strike the reader as a novelty, but it is, in truth, a recognised principle of all other professions except our own, and in regard to no other calling in life is it so necessary for the public welfare that the dogma should be promulgated and made to be generally understood. The barrister may be disbarred, the clergyman unfrocked, the holder of Her Majesty's commission in the Army or Navy cashiered, and after the withdrawal of titular powers there is an end of the delegated authority. Unhappily the senates, colleges, and corporations armed with the power to grant licences in medicine and surgery have of late years fallen into a practice of selling their diplomas very much as TEKEL dispensed his indulgences; and there is great need that a LUTHER should rise up and denounce a traffic which conflicts with the interests of public health, and is therefore antagonistic to the interests of the medical profession. The abnegation of control which the licensing bodies have so long practised with respect to their jurisdiction over their own graduates, fellows, members, and licentiates, cannot, however, absolve the profession itself from the responsible duty of watching over the public welfare. The general responsibility is, indeed, increased by the negligence of those upon whom it officially devolves to keep the great body of medical practitioners free from any stain of quackery! Never was there a time at which it was more important that the profession should discharge this incumbent duty than the present moment. It must, we fear, be accepted as a postulate in the argument that the bodies empowered by law to grant qualifications to practise refuse to exercise the cognate and implied function of controlling the practice of their licentiates. Neither the Colleges of Physicians—, corporations specially created to maintain the dignity and order the practice of the medical profession—the Colleges of Surgeons—called into existence with similar aims,—nor any one of the universities, will discharge their obvious duty in this matter. All these bodies are engaged in the competitive sale of licences, and it seems to be a subject of indifference to them what the holders of their diplomas do when once that bargain is concluded. Perhaps there is something essentially incompatible in the two functions of licensing and controlling. If that be true, the sooner an Academy of Medicine, or some body which shall be exclusively *censorial* in its function, is created, the better.

Scarcely a day passes in which we do not receive earnest appeals and remonstrances from acknowledged members of the profession against the misconduct of qualified quacks who advertise in the lay papers, send out circulars, and resort to the most flagrantly disreputable methods of touting for public patronage. It would be an extreme measure to hold the perpetrators of these offences against etiquette, and we take leave to say decency, up to the contempt they deserve, and we are, for the present, compelled to treat the just complaints of our correspondents with a reserve which is altogether opposed to our own feelings, and must, we fear, in a large number of instances, appear ungracious, or possibly, even, in some instances, may be misconstrued to imply a certain kind of acquiescence in the practices they denounce Certain it is that, from some cause, the evil against which the profession needs to make a new and determined stand is on the increase. It is difficult to take up a daily or weekly paper without finding advertisements aimed more or less directly to bring practising members of the profession under public notice as claimants to special favour. This is an evil which derives the strength by which it flourishes from the doubtful, though not easily denounceable, proceedings of men who are themselves respectable, but indirectly encourage the artifices of others who are not. It is vain to iterate the once received axiom that "no respectable member of the medical profession advertises," when the columns of the daily newspapers abound with advertisements of works bearing sensational titles, and addressed to the public by medical men, of instruments, preparations, and appliances, advertising, if not *intended* to advertise, the names, qualifications, and addresses of men who are not only engaged in, but who court, practice! Those who do such things should think how much beyond their own personal burden of responsibility is incurred by the course they take.

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Under the shadow of this practice of indirect advertising, carried on by men who are respectable and even eminent members of the profession, has sprung up the practice of open advertising by qualified quacks. If there were no respectable transgressors in this respect, it would be easy to denounce the whole body of "advertising doctors" as unworthy of public confidence; but, as the case now stands, whenever this wholesale denunciation is made, there is the consciousness that the next post may bring cuttings from newspapers showing how fully-qualified and really good men are among the delinquents.

We will not pursue the subject further into detail, although if there be not some marked change for the better in the practice of seeking publicity by sinister or at best equivocal means, such as advertising, and the distribution of circulars, we shall be compelled to consider whether it is not a duty which cannot be longer evaded to proceed to extremities and name those who make so light of professional honour as to drag it in the dirt before the eyes of the public. Meanwhile we appeal to the profession as a whole to make it clear to its members that conduct such as that to which we have alluded is not of a nature to be condoned or tolerated. If it be true, as the history of our profession certainly seems to show, that no practitioner, however temporarily sought-after, can be permanently successful unless he secures the respect and confidence of his compeers—in a word, of the only men competent to appraise his real merits—it should be in the power of the profession to control the conduct of its members in this particular. We are convinced it *is* well within the power of the profession to do so; and simply because the authority vested in the body of practitioners is not exercised this evil grows apace. The self-respect of the great majority must discountenance the practice of the few—we fear it may be said the *many*—who in the haste to be rich, or chagrined with a disappointment which is the recompense of their own impatience, are discrediting a vocation wherein only those who are strictly honourable deserve to succeed.

THE "sanitary organisation of nations" (we borrow the phrase from Dr. BOWDITCH, of Boston, Mass.) is about to become, it would appear, a mission of the United States of America. The initial step in carrying out this mission we take to be the joint resolution we had occasion to notice a short time ago, and which was introduced into the Senate and also into the House of Representatives in February, authorising the President to take the initiative in calling together an International Sanitary Conference at Washington. To this Conference it is proposed that the several Powers having jurisdiction of ports likely to be infected with yellow fever shall be invited to send delegates for the purpose of securing an international system of notification as to the actual sanitary condition of ports and places under the jurisdiction of such Powers, and of vessels sailing therefrom.

Hitherto the United States have, as a rule, abstained from taking, or have not had, part in the various International Sanitary Conferences held in Europe; and it is a curious feature in the sanitary activity developed in the States since the formation of the National Board of Health that one of the earliest outcomes should be the manifestation of a desire to cultivate sanitary administrative relations with other nations. To a race so pre-eminently practical as our Transatlantic brethren we should have imagined that the almost painful futility of the several International Sanitary Conferences which have been held in Europe in bringing about administrative accord in hygienic measures between the several Powers represented in them would have exercised a deterrent effect—if, indeed, it had not induced contempt for this apparently hopeless method of endeavouring to secure international sanitary concord by means of conferences. On the contrary, the United States propose to act as if they saw in our failures in this direction an additional argument for their intervention. Let us hope that their action in the matter rests on an accurate knowledge of the difficulties which have to be overcome in promoting an international sanitary organisation, and is not the mere product of a theoretical conception of the advantages that would arise if nations would combine against certain sanitary evils which concern them in common—a conception, it may be surmised, very apt early to occur, and to influence the first-formed Central Sanitary Organisation in the States.

But what prospect has the United States of prospering in her self-imposed mission, even when restricted at the outset to the single question, which so intimately concerns her, of yellow fever? Few things have excited so much surprise in this country in connexion with the administration of the United States Board of Health as the prominence which it has given, and is still giving, to measures of quarantine in its suggestions for the limitation of recent prevalences of yellow fever. It is true that a broader signification is given to the term than is commonly attached to it by European nations, in the sense that a system of medical inspection of ships and passengers is grafted on the quarantine regulations. Generally greater prominence is given to sanitary matters in regard to them, and the health officer is required to exercise some discretionary power. But the quarantine element is veneered rather than essentially modified by these changes. For example, in ships from foreign ports, it is sufficient that they should have sailed from a port, or touched at any port, or communicated with any ship on her voyage, in which either yellow fever, or cholera, or plague, or small-pox as an epidemic, or typhus fever also as an epidemic, has prevailed, in order to render them liable to quarantine. Here, true to the old quarantine fancies, the *possibilities* of infection, however remote and inconsistent with our actual knowledge of the mode of dissemination of communicable diseases, are made to govern the practice. The same is true of the regulations laid down in inland quarantine, and in a Bill now before the House of Representatives it is proposed that when a place shall have been officially recognised by the President to be dangerously infected with contagious or infectious disease, it shall be unlawful to transport goods or persons from such a place into a State other than that in which such a place is,—in other words, an endeavour is to be made to cut off all communication between the infected place and State and other States.

Unless human nature differs singularly across the Atlantic from what it does here, we may expect that these regulations will prove in practice of no higher value than other "paper

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plausibilities" of quarantine. If they have been devised with a view of conciliating the opposed schools, so to speak, of quarantinists and hygienists, we imagine that they will fail, for each will scarcely be prepared to assent to so much of its notions being overlapped by the notions of the other. In fact, we cannot but regard the views as to quarantine entertained by the National Board of Health as a retrogression, not an advance, in hygienic practice. The world is not so barren of experience as to quarantine that the system should be accepted as a sort of public-health necessity. In England we have been steadily endeavouring now for some years to bring our sanitary administration as to infectious diseases, whether ordinary or foreign, into such form that every locality shall be at all times in a state of preparedness to deal with them with the least amount of disturbance to the current affairs of life and the least need for the exercise of any special powers. We are not prepared to say that some greater powers of restraint in respect of foreign diseases than is possessed under the Public Health Act might not be desirable, but such restraint, if experience here goes for anything, should certainly not be of the nature of quarantine. We had hoped that English experience in this matter would have exercised much influence on medical opinion in the United States, and that the new National Board of Health, having nothing to unlearn, would have been able to approach the subject untrammeled by those traditional elements which go to make up the system of quarantine.

WHATEVER the party triumph to be achieved in the current elections, it is to be hoped that the Parliament that is to be will be more earnest in vital and sanitary questions than that which has just expired. The tendency of the late Parliament to put every duty of an urgent character into a permissive form nullified half of its Acts. One conspicuous example in point is to be found in a clause of the Poor-law Act of 1879, which was meant to provide better accommodation in the metropolis for infectious disease. The clause purports to give power to the Metropolitan Asylums Board to contract with the local authorities for the reception in hospital of persons suffering from dangerous infectious disorders; and further gives power to the local authority to recover any expenses for maintenance from such persons. This clause should have been followed by another requiring the local authorities to enter into such arrangements, and, failing to do so within a given time, giving power to the Local Government Board to do so for them. But such was not the manner of legislation in the late Parliament. Its domestic policy was not "spirited." It put into the clause we are criticising the word "may" instead of "must," and it entirely omitted to put any pressure on the local authority; so that it is a matter of will or disposition with them, and not of requirement. The consequence is, that men like Mr. GALSWORTHY and Sir EDMUND H. CURRIE, who spend a great amount of their valuable time at the fortnightly meetings of the Metropolitan Asylums Board, have to waste it in passing such resolutions as the following:—

"That a circular letter be now addressed to the various metropolitan vestries and district boards inquiring *whether they are desirous* of availing themselves of the provisions of Clause 15 of the Poor-law Act of 1879 by contracting with the managers, and, if so, to state the approximate number of beds which they would wish to be provided for them in the managers' establishments, if suitable arrangements can be made."

This resolution clearly shows that the whole thing is left to the option of the local authorities, who will act irregularly and without system. It is highly unjust to the members of the Metropolitan Asylums Board—most of them busy men—to make such weak laws, which can bring nothing but discredit and disaster on themselves and the local authorities.

A perusal of the minutes of the recent meetings of the managers of the Metropolitan Asylums District shows that they are embarrassed with the claims of rival epidemics, and have to shut out of one hospital cases for the treatment of which it was built, in order to make room for cases of another infectious disease for which it is not adapted, and that even then the accommodation is inadequate. Thus in last autumn it became necessary to close Homerton and Stockwell against small-pox cases, and to use them for the treatment of enteric fever cases. At Stockwell, in January, the demand for accommodation for scarlet fever cases was such that forty patients were admitted in excess of the certified capacity of that hospital, and as the cases still pressed, the accommodation for typhus had to be sacrificed to meet it. The great inconvenience resulting from these arrangements, and from the necessity of removing small-pox cases to either Deptford or Fulham, has given rise to much complaint. No doubt the managers have done the best they could; but they are hopelessly embarrassed by weak and inefficient laws. It would immensely facilitate their work if local authorities were required to make local provisions for the early ascertainment of infectious diseases and for the prompt isolation of sufferers from them, as in the recent outbreak of small-pox in St. Pancras. Until some laws to this effect of a stringent character are passed, we do not envy the position of the members of the Metropolitan Asylums Board, who are liable at any time to be overwhelmed with one or more epidemic diseases.

Annotations.

"Ne quid nimis."

AN INTERNATIONAL MEDICAL CONGRESS.

A MEETING of the delegates appointed by the Universities, Colleges, and public bodies in reference to the subject of an International Medical Congress was held at the Royal College of Physicians on Tuesday, March 30th, at four o'clock, when the following delegates were present: H. W. Acland, M.D., Regius Professor of Physic from Oxford; G. E. Paget, M.D., Regius Professor of Physic, Cambridge; R. Smith, M.D., University of Aberdeen; T.R. Fraser, M.D., University of Edinburgh; Alfred Hudson, M.D., University of Dublin; J. R. Bennett, M.D., President of the Royal College of Physicians, London; D. R. Haldane, M.D., President of the Royal College of Physicians, Edinburgh; Arthur Hudson, M.D., King and Queen's College of Physicians, Ireland; Luther Holden, Esq., President of the Royal College of Surgeons, England; F. B. Imlach, Esq., President of the Royal College of Surgeons, Edinburgh; A. Buchanan, M.D., President of the Faculty of Physicians and Surgeons, Glasgow; Professor Huxley, President of the Royal Society; E. H. Greenhow, M.D., President of the Clinical Society;

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W. S. Playfair, M.D., President of the Obstetrical Society; Sir Joseph Fayrer, M.D., President of the Epidemiological Society, and representing the Medical Department of the Indian Service; Alfred Carpenter, M.D., President of Council of the British Medical Association; T. G. Balfour, M.D., representing the Medical Department of the Army.

The meeting had been convened to consider the following questions:—

1. At what period in 1881 shall the Congress be held, bearing in mind that foreign professors can leave their duties at certain periods only—viz., during the Easter recess and the months of August and September,—and that British scientific men, especially those residing in London, are generally absent during these latter months?

2. By what method can the design of the Congress be best carried into effect, whether by the appointment of an Executive Council to organise the details, subject to the approval of the General Committee of Delegates, or in what other way?

3. What branches of medical science should be comprised in the subjects to be discussed at the Congress?

4. How are funds to be obtained for defraying the expenses of the Congress?

Dr. Bennett was requested to take the chair, and having briefly explained the purpose of the meeting, letters were read excusing the absence of certain delegates.

The following resolutions were adopted:—

1. That an International Congress be held in London in 1881.

2. That it be held between the 4th and 15th of October.

3. That a General Committee be formed, to consist of the delegates, with power to add to their number, who shall have authority to make necessary arrangements for organising and working the Congress, and who shall report from time to time as may seem necessary to the delegates for the information of the bodies by whom they have been appointed.

4. That each member of the Congress pay a sum of one guinea.

5. It was resolved that the following be requested to form part of the General Committee:—W. Bowman, Esq., Dr. Matthews Duncan, Dr. William Farr, C.B., Sir William Gull, Bart., M.D., Professor Humphry, Sir William Jenner, Bart., K.C.B., M.D., Professor Lister, Wm. MacCormac, Esq., Sir James Paget, Bart., Professor Rolleston, Dr. Sieveking, John Simon, Esq., Dr. Storrar, Dr. Allen Thomson, Dr. Hermann Weber, and Erasmus Wilson, Esq.

After a vote of thanks to the chairman, and a request that Dr. Pitman would for the present continue to act as honorary secretary, the meeting separated.

THE NEW TREATMENT FOR CANCER.

THE remarkable statement made by Professor Clay, of Birmingham, in a paper which appeared in our columns last week on the "Treatment of Cancer by a new Method," has naturally excited great attention, and will doubtless induce hospital physicians and surgeons, and practitioners generally, to make a prompt trial of the remedy, which is declared to have achieved highly satisfactory results in the relief, if not also the *cure*, of a disease that has hitherto baffled treatment. The matter is evidently one of more than common moment to the profession and the public. It will be important, under these circumstances, to make sure that the drug employed is certainly what it professes to be. As a matter of fact, it is by no means easy to obtain Chian, or Cyprus turpentine. So long ago as the date of the publication of the earlier editions of Pereira's Materia Medica there was so much difficulty in procuring the substance that the profession was especially warned against the almost inevitable substitution of Venice or Canada turpentine, or some other terebinth of totally different properties, in dispensing of prescriptions, for Chian turpentine. Probably there is scarcely any of the true resin in the market at present, and only druggists who happen to possess a small forgotten store *can* supply it. We think it desirable to make this intimation for the sake of medical practitioners who may be anxious to try the remedy, but who are almost sure to be disappointed, unless they take more than ordinary measures to ensure accuracy. As Professor Clay stated in his paper, no other terebinth except the Chian has been known, or can be expected, to produce the effects which have followed its use in his cases. The public should also be cautioned against resorting to the remedy, without skilled medical advice and supervision; and very earnestly must they be made to understand that probably not a tithe of the medicine likely to be sold under the name of "Chian turpentine" during the next few months will be genuine. The caution given to the profession years ago by the then highest authority on the subject of pharmacy, at a time when there was no special demand for the drug, will be doubly necessary now, when nothing but the accident of having a small reserve on hand can enable any druggist to dispense it. It only remains to add that some of the received descriptions of *Terebinthina Chia* seu *Cypria* are so faulty that identification of the genuine drug will be attended with more than ordinary difficulty. It is the gum of a tree growing thirty or thirty-five feet in height, and is obtained by cutting crosswise with a hatchet the trunks of the largest trees. The yield is very small, "not exceeding eight or ten ounces" for each tree; so that it must be obvious that the bulk of the material sold under this designation at two or three shillings a pound is not genuine. Its consistency is that of honey, but it is more glutinous. The colour is greenish-yellow. It has an agreeable turpentine-like odour, combined with the odour of fennel or citron and jasmine. Its taste is very mild. By keeping it resinifies, and, we may add, loses some of its virtue. The coniferous turpentines, which do not possess its special qualities, are usually sold for it.

THE DISTRESS IN IRELAND.

A LETTER which appeared in *The Times* of the 27th ult. gave to the English public, for the first time, perhaps, an adequate conception of the distress now existing in Ireland. It related to a part only of the districts affected, but the general details may be pretty safely taken as applying to the distressed populations as a whole. The writer is Mr. J. H. Tuke, of the Society of Friends, who had witnessed much of the awful distress of the famine of 1846-47, and who has just concluded a fortnight's personal investigation of the state of things in County Donegal. He tells us that during this investigation he witnessed none of the dreadful scenes that were observed in 1846-47, but he leaves the impression on the mind that we may be very likely to underrate, from the absence of obvious distress, the extent to which real destitution exists. It is clear that a superficial view of the district he visited would lead to a very insufficient notion of the misery prevailing, and he is obviously not satisfied that the Poor-law authorities have fully apprehended the mischief existing or in store. He describes a large population simply kept alive on Indian wheat-meal issued by the relief committees, and this meal alone. "Kept alive" is the proper word to use; for the amount of food which the relief committees can give is insufficient, and indeed not designed, to keep an individual in good working condition. There are still several months to run before other sources for feeding than the relief societies and the Poor-law can be looked for. It is painful to think what may be the ultimate result upon the distressed people of the sort of chronic starvation to which they must be subjected during this period

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At present there is singular freedom from serious disease in Donegal, but will this continue in the future? It behoves the Local Government Board for Ireland to look narrowly to this matter, lest, when least expected, there may be a sudden setting up of destructive disease in the most distressed districts. Mr. Tuke writes warmly of the excellent administration of the Duchess of Marlborough's fund, and the funds transmitted through Lord Mayor Sir F. Truscott.

ANCHYLOSTOMOSIS.

UNDER the rather misleading title of "Tunnel Trichinosis," the Geneva correspondent of a contemporary recently contributed some interesting particulars of an outbreak of parasitic disease, which we prefer to recognise by the term above given. The disease has nothing to do with flesh-worms, either as regards the habits of the parasites, or their mode of introduction into the human body. The affection attributed to the Gothard tunnel miners is common in warm countries, and has been variously called tropical anæmia, Dubini's worm-disease, Egyptian chlorosis, hypoæmia, and so forth. Its medical importance was first pointed out by Griesinger, who showed that the intestinal anchylostomes behaved like leeches, drawing the blood of their victims, and reducing them to an anæmic and perfectly helpless state. One of the best accounts of the disease as it occurs in Brazil was supplied by the late Dr. Wucherer, whose name is well known to our readers in connexion with filarial discoveries (*Ueber die Anchylostomumkrankheit*, &c.; *Deutsch. Arch. f. Klin. Med.*, 1872). According to the investigations of Leuckart and others, there seems to be no doubt that the disorder is contracted by drinking impure water, or rather by the swallowing of minute animalcules which are contained in the water, and which (as in the similar case of the guinea-worm larvæ) act as intermediate hosts or bearers. Dr. Cobbold's recent work on Parasites contains an abridged account of Wucherer's researches.

SPRING AILINGS.

THERE is much truth in the old prejudice against the spring as a season of special ailings and health troubles; and there was, and still is, a good deal to be said in favour of certain medical and hygienic precautions to be taken against these probable calamities. It is not only that, misled by the seeming "softness" of atmosphere and fitful gleams of sunshine, the unwary leave off their winter clothing too hastily, and take "cold"; even though this obvious danger may be escaped, there are disturbances of nervous system and disorderly states of the visceral organs, generally, which it is almost impossible to avoid and perilous to disregard. Without doubt the great bulk of the trouble experienced in living, and the pains that must be taken to battle with the enemies of health, are the fruits of our high civilisation. In a mode of existence more natural to the animal organism, not one tithe of what we now regard as necessary precautions would probably be required. It is, however, impossible to order the lives of the present generation in strict conformity with the laws of nature, and it remains to accept the situation with all its drawbacks. In face of this fact, those who would escape maladies incidental to the season, and which may, so to say, lay the foundations of grave and even permanent disease, must be content to undergo certain obvious inconveniences. Prominent among these is the prolonged wearing of thick and heavy clothes, a matter to which we drew attention on a recent occasion. Another burden that must be borne, more or less cheerfully, by the infirm of health, is the need of almost fidgety care to avoid sudden changes of temperature. At no other season is even a fairly strong person so likely to suffer what is termed a chill as now in the "spring weather." It may be too conjectural to hazard a belief that the atmosphere is at this season loaded with more than commonly active irritants, but experience attests the fact that those special irritations of the lining membrane of the throat, nasal cavities, and the air-passages, which are commonly classed under the popular term "influenza," are exceptionally prevalent. Disorders of the mucous membrane lining the stomach and intestinal canal are scarcely less general. All this points to a cause or to causes lying deeper than any mere variations of temperature, however potent this last-mentioned factor of morbid disturbances may be. A good safe maxim for the weakly during the next two months will be to live with more than ordinary watchfulness against the known perils of winter, and to add to this precaution a special carefulness to avoid close and impure atmospheres, badly or improperly cooked food, unfiltered water—in short, to stand on close guard against the assaults of disease, neglecting no symptom, however slight, which betokens an abnormal state of the organism. This is not a cheerful view of the season, but is one that is forced upon us by the prevalence of "ailings" and minor maladies, which in too many cases threaten to entail consequences of which it may be difficult to get rid. In the "good old days" materfamilias was on the alert with her "alteratives" and gentle aperients for the spring season. We are not sure the care bestowed was wasted, or that it has deservedly fallen into disuse.

DEATHS ON PLATFORMS AND WHEN SPEAKING.

SOME years ago Dr. George Johnson, of King's College, published a very interesting and important little paper which, so far as we are aware, has never received the attention it deserved, on the subject of giddiness and faintness while speaking, particularly when rising suddenly after long sitting, and immediately subsequent to a heavy meal. We have not the brochure at hand, but, speaking from memory, the explanation offered was to the effect that the special call made upon the lungs as vocal organs interfered with the respiratory oxygenation of the blood. A more rapid series of chest movements than continuous utterance renders possible is required, and to obviate this deficiency a few rapid breathings will generally suffice. This is an inadequate account of Dr. George Johnson's hypothesis, which we should be glad to see re-stated as a practical hint to inexperienced speakers. Our object in recalling the subject of this little paper is to point out that in an extension of the disorderly state described doubtless lies the cause of many a sudden death from exhaustion in the midst, or at the close of a speech. It is not easy for a weak heart to maintain the acceleration of pump-like movements required to propel the blood steadily through the head, and keep the current properly oxygenated.

SLIDING SEATS.

THAT Cambridge this year made so good a race against Oxford proved a surprise to many; certainly a victory by only four lengths did not justify the enormous odds laid on the winning crew. A close race, however, had been anticipated by many who had closely scrutinised the practice of the two crews, and had not given consideration only to the time test. Oxford, it is true, were the more taking crew, rowing a lively well-marked stroke, with a steady swing forward and clean finish, but it was noticed that the Cambridge men made better use of their legs in sliding, and had they pulled well together and avoided the "bucket forward," which has been such a fatal characteristic of many Cambridge crews, it is probable that the result would have been reversed. In the opinion of many well versed in aquatic matters the introduction of sliding seats will work a revolu-

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tion in the art of rowing, and that the use of the "slide" will be still further developed. Already a celebrated Canadian sculler has considerably lengthened his sliding range, and the pace he is able to maintain has as yet been unsurpassed. The sliding seat throws more work on the muscles of the thigh and leg, especially the hamstring muscles, than was the case with fixed seats, without in any way diminishing the amount of work done by the muscles at the upper and back part of the chest. As more muscular work is brought into play by the sliding seat it will probably be found that the adoption of a slower rate of stroke will be most favourable for obtaining the advantage resulting from the exercise of that power. Should this prove to be the case, then the sliding seat will make rowing more truly an exercise than it is at present, by developing muscular work and lessening the strain thrown on the lungs and organs of circulation.

FAMILY PREDISPOSITION TO DIPHTHERIA.

THE local journals contain an exceedingly interesting *interim* report, by Dr. W. N. Thursfield, the medical officer of health for the Shropshire combined district, on an outbreak of diphtheria amongst children in the Ludlow Workhouse. The total number of children in the workhouse at the time of the outbreak was fifty-eight, but the disease at the date of the report had confined itself to those children who were attending the school. Among these children, forty-eight in number, there occurred between February 15th and March 15th thirty-two cases of diphtheria—or, to use Dr. Thursfield's term, contagious cynanche; for by far the greater number of the cases had been classed by the medical officer of the workhouse as sore-throat; six only, if we understand the report aright, having been designated by him as diphtheria. Dr. Thursfield infers that the disease had been imported into the workhouse, and he concludes that it had been disseminated there by the necessarily intimate association in school, &c., of the sick with the well in the earlier stages of the disease—possibly latrine contamination helping somewhat. The outbreak afforded a remarkable illustration of the predisposition which some families appear to have to contract diphtheria and to suffer from it severely. There were amongst the children in the school seven members of one family; all seven were affected with the disease, and three of them died, being the only three fatal cases of the thirty-two attacked.

"BURIED ALIVE."

THE bare possibility that an apparently deceased person may be "buried alive" is too terrible to contemplate without the keenest sense of horror. The fear of this contingency has been revived by some recent communications made to the French Academy of Medicine, on the subject of recovery by the prolonged use of artificial respiration, in cases of supposed death. It is difficult to avoid the inferential belief in a lurking danger when the value of any measure to restore life after seeming death is extolled. Probably, however, the only moral to be drawn from the success of artificial respiration, and like methods of treatment in cases of poisoning, is that extreme efforts should always be made to prolong life through the crisis of a poisoning or the states of apnœa and asphyxia caused by drowning or suffocation from any cause and by any agency. It is always *possible* that if the organic vitality can be maintained during a sufficiently long period the life of the body as a whole will be rekindled. Again, it is possible that certain modes of death occurring in the course of acute disease may admit of treatment. To such possibilities the medical profession is fully alive. The public should be aware that treatment of "the agony" has long formed a topic of special attention in the therapy of disease. There is, therefore, no room for new anxiety as to the point of being "buried alive." No medical man can be at a loss to determine whether an apparently deceased person is really dead. The only need of increased attention relates to cases of poisoning, suffocation, and such forms of death by hanging as do not fracture or dislocate the vertebræ of the neck. The utmost care requires to be taken in cases of capital punishment by hanging, but the prison surgeons are alive to the danger, and the public have no ground for disquietude or fresh alarm.

TYPHUS AND DIPHTHERIA IN RUSSIA.

DURING the week ending March 6th, 661 deaths were reported in St. Petersburg, and of these 14 per cent. were stated to have been caused by maculated typhus. The greater number of the deaths assigned to this cause were among children under five years of age, and next in order of frequency were among individuals from twenty to twenty-nine years of age.

A sum of 480,000 roubles has been placed by the Imperial Treasury at the command of the Minister of the Interior, for the purpose of giving assistance to the governments in which diphtheria is prevailing. Local resources, even with the assistance given by the Red Cross Society, have proved inadequate to meet necessary requirements in attempts to arrest the progress of the disease, and an appeal has been made by the governors of the infected provinces for help to the Imperial Government. To this appeal the special grant above-mentioned is the reply.

THE EFFECTS OF COLD.

M. COLIN has recently published some interesting researches on the effect of various refrigerating media on the temperature of the skin in animals. Those exposed to the action of cold air presented different effects according to the species of the animal, and examination showed that if the cold air lowered the temperature of the skin considerably they rapidly died, whereas if the cold did not effect a notable diminution in the temperature of the skin, it was well borne, and appeared even inoffensive. After establishing this law M. Colin confirmed it by exposing dogs and rabbits for a certain number of hours or days to the severe cold of last December. He found the temperature, even at the surface, remained nearly normal. Young animals, on the contrary, placed under the same conditions, became rapidly chilled and died, although their skin was well covered with hair, a proof that the latter is only one element in the question. If the animal, instead of being placed in the open air, is enclosed in a hut of ice, it manifests great power of resistance, and even after some hours may present a temperature almost equal to that existing at first. Placed in snow, there is a considerable chilling for some hours, followed by a strong reaction, so that after twelve hours the temperature scarcely differs from the normal, and even in the rabbit it presents a fall of only one degree. On the other hand, young animals placed in the snow die rapidly. Hence we must assume that, under these circumstances, as in the open air, the resistance to cold in the animal is due to different factors, among which the presence of a thick furry coat is an important, but by no means the only, one.

THE LATE DR. JOHN DEAKIN HEATON.

THIS distinguished physician, whose death occurred on the 29th ult., besides holding many important professional appointments, took great interest in social and educational movements in Leeds. He was Justice of the Peace for the West Riding and Chairman of the Council of the Yorkshire School of Science. He was also a member of the first school board for the borough of Leeds, and formerly President of the Philosophical and Literary Society.

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WILLIAM FARR, C.B., M.D.

THE regulation C.B.—a distinction which is at once the smallest and least useful of honours—has been conferred on Dr. FARR. We congratulate a gentleman, whose merits are happily well-known to his profession, on this public recognition of his services, but we are no more grateful for the acknowledgment than for the ugly hall-marking sometimes graciously bestowed on pure gold.

URTICARIA.

M. VIDAL has published (*L'Union Médicale*, Feb. 24th) the results of an examination of a "wheal" excised during life from a patient suffering from urticaria. The superficial and deep network of vessels was found dilated and gorged with blood, without any alteration of their walls being discoverable. Both the bloodvessels and the lymphatic vessels were surrounded by leucocytes, which were also scattered through the whole thickness of the cutis, and massed together at certain points. A few were to be seen between the cells in the deepest layer of the epidermis. Here this structure was normal, but another piece of skin was excised from a wheal on which the epidermis had been raised in a vesicle. This vesicle contained a serous, albuminous liquid, and the débris of epithelial cells. In the middle layer the cells were vesicular, and those of the deeper layer granular. Leucocytes migrating among the cells in the deep layer of the epidermis were more numerous than in the other case.

M. Vidal remarks that from this pathological alteration we can see the nature of the morbid process. In a predisposed subject some internal or local cause excites the action of the vaso-motor nerves; this excitation is soon followed by contraction of the cutaneous capillaries, and this by their paresis and congestion, with retardation of the circulation. Hence, at the centre of the altered part, there is migration of leucocytes and serous effusion, the acute œdema causing the pale prominence. A similar lesion, a sort of acute œdema, may be produced artificially by injecting into the skin a few drops of water. What becomes of the leucocytes which have wandered out? Are they resorbed or are they carried towards the epidermic layer, as Biesiadecki suggests?

It will be observed that this theory ignores any participation of the muscular fibres of the skin, which has been assumed to account for the limitation of the œdema and consequent prominence of the wheal—a limitation which M. Vidal leaves unexplained.

A ROYAL DOCTOR.

IT is stated that the German Chancellor has caused the announcement to be made that His Royal Highness Duke Theodore of Bavaria, who recently took the degree of Doctor of Medicine at a German University, has received the certificate enabling him to practise as a surgeon without being required to undergo the additional examination to which intending practitioners are ordinarily liable under the German law. It may not be generally known that the Electoral Prince Charles, Count Palatine of the Rhine, was created a Doctor of Medicine at the University of Oxford just two hundred years ago—viz., 1680. The Duke of Montagu, who died in 1749, was a Fellow of the London College of Physicians, as was the Duke of Richmond, who died the following year.

THE CORONER FOR KENT.

WE are glad to hear that Dr. Theodore Maxwell, M.B. Cantab., of Woolwich, is a candidate for the coronership for the County of Kent, vacant by the death of Mr. Carttar. Dr. Maxwell's high professional standing ought to give him a strong claim with the freeholders of the county.

A CORRESPONDENT, in a letter dated Candahar, 2nd March 1880, states:—"Weather cool and pleasant, but has been very variable. Per cent. sick: Europeans 5·2, natives 7. Chest affections have been prevalent, and with natives sudden cerebral effusion has been observed in some instances. Since fall of rain and snow pneumonia has been less prevalent. Surgeon-Major R. H. Bolton, A.M.D., died on Feb. 27th, from abscess of the liver. He entered the service 30th September, 1863; was promoted Surgeon-Major 28th April, 1876. Surgeon McCartie, I.M.D., Med. Ch. 2nd B.C., was severely wounded on Feb. 29th. He was riding alone among the hills, and was fired at by a man supposed to be a hill robber; slug hit right clavicle and glancing off passed backwards, lodging deeply behind right shoulder, whence it was extracted; so far doing well. Preparations being made for advance, men of artillery have been put through a short course of bandaging and stretcher drill by Surgeon-Major Markey."

A LARGE meeting of medical students and others connected with St. Bartholomew's Hospital was held in one of the new lecture-rooms, on Wednesday, March 24th, to consider the advisability of forming a Medical Union Club, on the plan of the Oxford and Cambridge Unions, for medical men and students in London. The meeting was addressed by Mr. Luther Holden, President of the Royal College of Surgeons, and by Mr. Butlin. Mr. Savory also sent word to the meeting that the project, so far as it had been explained to him, received his warmest support and approval. A resolution was passed that the meeting considered it "desirable to establish a Medical Union Club."

MR. GEORGE HENRY JACKSON, house-surgeon of the Crumpsall Workhouse Infirmary, Manchester, contracted scarlet fever on Monday, the 23rd ult., which unfortunately terminated fatally on the Friday following. The deceased gentleman, thus cut off at the commencement of a promising career and in the midst of his beneficent exertions for the relief of the suffering poor, was educated at Liverpool, Edinburgh, and St. Thomas's, and obtained the licence of the Edinburgh College of Physicians and the membership of the London College of Surgeons only two years ago.

THE *Athenæum* states that the University of Aberdeen, stimulated by the recent move in advance made by her sister institutions in Edinburgh and Glasgow, has issued a report on certain changes and extensions which have been deemed desirable in the more northern seat of learning. Among these improvements are, the establishment of a botanical garden, the endowment of lectureships and higher scholarships, and the foundation of several new chairs, such as English Literature, History, and Pathological Anatomy.

A FAREWELL dinner to Surgeon-General H. H. Massey, C.B., on his retirement from the Army Medical Department, took place in the officers' mess-room, at Netley, on the 30th instant. Surgeon-General Massey has passed an honourable and distinguished career in the public service, and many brother officers and friends met together on the occasion to show their appreciation of the worth of his character, and to express their regrets at his quitting active employment in the army.

THE subject chosen by Dr. Symes Thompson for the course of lectures at Gresham College, to be delivered on April 6th and three following days, is "Digestion and Indigestion." The lectures are illustrated by diagrams, exhibited by means of the oxy-hydrogen lantern, are free to the public, and commence each evening at six o'clock. Lectures will also be delivered by the Gresham Professor of Medicine on October 12th, 13th, 14th, and 15th.

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THE analyst for Limehouse, Dr. Rogers, has drawn attention to the fact that the inspectors under the Adulteration Act had become so well known to the shopkeepers of the district that it was almost impossible to obtain samples of food and drink which fairly represented the bulk. He was convinced that adulteration was carried on to a considerable extent, and wished the public would aid him in his duties by sending to him samples for analysis. Out of 700 articles tested, not one had been received from the public.

A MOTION was carried at a recent meeting of the Metropolitan Asylums District Board as follows:—"It being desirable to ascertain the relative percentage of non-pauper patients (if any) to pauper patients sent to and treated at the several fever and small-pox hospitals of the managers, the various hospital committees are hereby instructed to cause inquiries to be made at their respective establishments, and to report the results to the managers."

THE United College, including the faculties of Arts and Medicines, in the University of St. Andrews, is in difficulties. A few thousand pounds are needed to repair the deficiency of the exchequer, impoverished by the depreciation of rents. Surely the Medical alumni of this University are numerous, and should be active enough to give substantial help in the emergency.

MR. MICHAEL H. STAPLETON died at his residence in Mountjoy-place, Dublin, on the 30th ult. Deceased was a graduate in medicine of the University of Dublin, a Fellow of the Royal College of Surgeons in Ireland, and formerly an examiner in the latter institution.

A PROPOSITION has emanated from the Kensington guardians that Lock patients should be placed under the care of the managers of the Metropolitan Asylums Board, in the same way as other cases of an infectious character.

DR. GRATTAN, one of the oldest Fellows of the Irish College of Physicians, is a candidate for the representation of Kildare in Parliament; and Dr. Robert D. Lyons, of Dublin, has intimated his intention of contesting that city.

THE death is announced of Dr. W. P. Schimper, corresponding member of the Académie des Sciences, and the author of numerous important geological and botanical works.

HEALTH OF LARGE ENGLISH TOWNS.

TWELFTH WEEK OF 1880.

ENGLISH urban mortality shows a slight increase on the rates which prevailed during the fortnight ending 20th March. In twenty of the largest towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5140 births and 3144 deaths were registered last week. The births were 45, and the deaths 131, below the average weekly numbers during 1879. The deaths exceeded by 69 the slightly increased number of the preceding week. The annual death-rate in the twenty towns, which had steadily declined from 37·0 to 21·4 per 1000 in the six weeks ending March 13th, and was again 21·4 in the following week, rose to 21·9 last week. During the past twelve weeks the death-rate in these towns averaged 25·6 per 1000, against 23·8, 25·1, and 27·4 in the corresponding periods of 1877, 1878, and 1879. The lowest death-rates in the twenty towns last week were 11·7 in Brighton, 17·5 in Portsmouth, 19·3 in Leicester, and 19·9 in Wolverhampton. The rates in the other towns ranged upwards to 23·7 in Liverpool and in Norwich, 24·0 in Manchester, 26·7 in Nottingham, and 32·0, the highest rate during the week, in the borough of Plymouth. Measles continues to be exceptionally fatal in Plymouth, and during the twelve weeks of the current year has caused 122 deaths in the borough.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had risen to 476 in the week ending March 20th from the steadily declining numbers of the previous weeks, fell last week to 424; these included 160 from whooping-cough, 108 from scarlet fever, 80 from measles, and 37 from fever, chiefly enteric. The annual death-rate from these diseases averaged 3·0 per 1000 in the twenty towns. There were no deaths from the seven zymotic diseases registered in Brighton last week. The zymotic rate was but 0·4 per 1000 in Portsmouth, whereas it ranged upwards to 6·6 in Nottingham, and 8·4 in Plymouth. Whooping-cough showed the largest proportional fatality in Salford, London, and Newcastle-upon-Tyne; scarlet fever in Nottingham, Salford, Norwich, and Sunderland; and measles in Hull, Nottingham, and Plymouth. Fever, principally enteric, caused 18 deaths last week in London, 5 in Liverpool, and 4 in Sheffield. The 8 deaths from diphtheria in the twenty towns included 5 in London. Small-pox caused 4 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had declined from 188 to 171 in the three preceding weeks, were 167 on Saturday last; 31 new cases of small-pox were admitted to these hospitals during last week, against 41 and 25 in the two previous weeks. The Highgate Small-pox Hospital contained 14 patients on Saturday last.

The fatality of lung diseases showed a slight increase last week. The deaths referred to diseases of the respiratory organs in London, which were 315 in each of the two preceding weeks, rose to 333 last week, but were no less than 141 below the corrected weekly average; 207 resulted from bronchitis, and 85 from pneumonia. The annual death-rate from diseases of this class in London last week was equal to 4·7 per 1000, against 5·9 from the same diseases in Liverpool.

Correspondence.

"Audi alteram partem."

THE SCOTCH UNIVERSITIES AND MEDICAL REFORM.

To the Editor of THE LANCET.

SIR,—I am glad to find that you give me credit for so much as is implied in your remark that, "if more closely cross-examined," I might "have come out as a very good medical reformer." I have always considered myself a reformer, medical and other, by hereditary as well as personal leanings, and it would be extremely contrary to all my best instincts to attack anything that was really of the nature of a reform, or to defend anything that was of the nature of an abuse. But I hold, none the less, that the so-called reforms set forth in the Government and the other medical Bills before the late Parliament, have been framed with a most reckless disregard of the interests of the Scotch universities; and by this I mean not the interest of the professors, but still more of the students, and of the education and discipline which are the very life of their system. And when it is considered that the extra-academical medical schools in Scotland are becoming every day more and more a part of the university system—inasmuch as their teaching is largely recognised by the universities, and their rivalry is such as to stimulate rather than to antagonise the university schools, to which, indeed, most of the extra-academical teachers look for their promotion when they attain distinction—I think I am not assuming too much in arguing that what is opposed to the interest of the one is also opposed to that of the other.

Now, Sir, I don't wish to boast. It is always unbecoming, and it is not a style of argument very likely to accomplish my present purposes. But surely I may appeal to THE LANCET as having on several occasions borne a very generous and most ample testimony to the efficiency of our Scotch schools, and particularly to the serious diligence with which the work both of teaching and of learning is

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carried on in all the three teaching universities. The evidence given by Professor Turner on behalf of Edinburgh, and by Professor Struthers and myself on behalf of the other two, ought, I think, to be accepted as conclusive upon one point at least—viz., that our great prosperity since the Medical Act has not been the result of a lowering of our standard, either of discipline or of examination; but, on the contrary, of a great increase in the thoroughness and stringency of both. I venture to claim for the Scotch universities, for instance, to have been both earlier in adopting, and more resolute and systematic in carrying out, clinical and practical methods of examination and of instruction, than any of the London Boards. This distinction we owe, not to the personal qualifications of our teachers or examiners individually, but to the compactness of our system, which allows of all the means both of teaching and examination being available at one point, as it were; while in London they are distributed over a number of different centres; and it is notorious that the colleges in particular, in dealing with their large numbers of candidates, have found the greatest practical difficulties in even coming up to the demands of the Medical Council in this respect. We are able to accomplish what we do with comparatively little strain, because we have our laboratories, museums, hospitals, pathological departments, &c. &c., all subject to one set of conditions, in one locality, though not necessarily under one roof, or one set of authorities. It is the *university* which is at once the centre, and the regulating principle, round which all these means, so far as they subserve medical education, are grouped. It is the university which, by creating a stimulus and a demand for them, secures like advantages, indirectly, even for the extra-academical schools. And it is mainly owing to the university having within itself the powers of conferring a complete legal qualification, that these means and opportunities, alike for instruction and for examination, have arisen around it, and not as an adventitious growth around individual hospitals, having no relation, in the first instance, with any academic centre.

It is no part of my wish to make invidious comparisons, and I am very far from undervaluing, as all my friends in London and elsewhere know well, the splendid names and labours which have illustrated, and still illustrate, medical science in the metropolis. But the greater the eminence of these individual names, the more it becomes remarkable that a small and thinly-peopled country like Scotland, having a scattered population less than that of London alone, not to speak of England, should have been able to maintain in three separate centres of universities medical instruction, a system of elementary biological training on the one hand and of clinical and practical discipline on the other, which have so largely influenced professional thought and medical and surgical practice, even in the metropolis itself. Let any candid and impartial man cast his eye over the list of London celebrities, and ask himself how many of these have owed some part, or the whole, of their medical education to the Scotch universities. May we not fairly argue that a corrupt tree cannot bring forth such good fruits?

Nor is it any part of my purpose to disparage the English universities, least of all the University of London, the high-class medical degrees of which are justly valued and sought by the most eminent men in London itself and elsewhere. But it is important for my purpose to note that, with all this most legitimate prestige as regards its degrees, the University of London exercises almost no influence, directly, over the medical schools of London. It neither contributes to their status, nor strengthens their discipline, nor interferes with their curriculum of study, nor binds them in any way together in an organised whole. It leaves them, as it found them, what might almost be termed a fortuitous concourse of atoms. In other words, it is not a teaching university. I do not stop here to argue whether this is right or wrong in principle. My own opinion is that the University of London might do an unknown amount of good by affiliating the schools and taking some practical charge of them. But the fact remains that the system in Scotland has been from first to last *not* that of England, or of London; and it will not be denied that the three Scotch universities are at this moment exercising a far more widely diffused influence for good over the whole field of medical education in the profession at large than the University of London, or than all the four English universities taken together. This influence they owe, I maintain, entirely to the fact that they have been always so constituted as to have their degrees practically recognised, while the Medical Act of 1858 enabled them to give a complete and independent legal qualification to practise, and the Universities Act of 1859 raised the status of the Scotch medical degree generally, so as to represent a very varied, solid, and thorough medical training, which only the power of giving a complete legal qualification would have enabled them to exact from their students.

If any of your readers calling themselves medical reformers are ignorant of these facts, or unwilling to acknowledge them, I will respectfully ask them to do one of two things—viz., either to study carefully and impartially the evidence given before the Committee on the Medical Bills on behalf of the Scotch universities, or, still better, to come down to Scotland and see with their own eyes what we are doing, both as regards teaching and examination. But that many English medical reformers and legislators are utterly ignorant of the facts with which they have to do, so far at least as reforms affecting the Scotch universities are concerned, is too manifest to require proof. And it is not at all surprising that it should be so. For while the Scotch system of university medical education is, allowing for national differences, in the main that of almost all Europe, the English system is a thing entirely and absolutely of English growth, and differing from that of all other countries under the sun; and the *double* qualification (which I agree with you in thinking ought to be not *double*, but *single*, and *complete*), is the index, or at least one of the notes, of the difference. In England the medical profession has gradually emerged out of trading guilds, and royal monopolies of practice, conceded to incorporated bodies of physicians, surgeons, and apothecaries. These have all of them done good service in lifting the profession out of the dust, but they have failed to give it, broadly speaking, an academic status. The universities were too high-minded, too expensive, and too socially exclusive, for this work. In Scotland the universities condescended to the wants of humanity in a practical way; condescended, perhaps, too much in the first instance. But they have nevertheless infused into the whole of the medical schools an academic element, which, now that it has been strengthened and purified from abuses by time and the useful legislation of 1859, is an influence of the first importance in all the medical education of the united kingdom. The new legislation proposed, under the name of medical reform, by Englishmen for England, may or may not be suitable for remedying the errors and deficiencies of their "double qualifications;" but, as applied to the Scotch universities, it would be a wholly retrograde measure of "medical reform;" as it would rob them of a legal privilege which is already carefully guarded by statute against abuse, and is the very keystone of their whole system.

To *compel*, by law, our Glasgow University students, for example, to seek a licence to practise elsewhere than in Glasgow, and from a body of examiners wholly unconnected with the university, is practically to disturb and distract mischievously the course of their studies, to relax their academic discipline, and to turn them in the last years of their education from hospital and practical work, to attending grinders' classes, and getting up grinders' books. The regular academic training and examinations in Glasgow have not this effect, at least to any considerable extent, because they are carefully founded on what experience, as between teacher and pupil, has shown to be the most practical and most instructive; and the clinical examinations in particular react on the hospital training, so as to give it a thoroughness and regularity which, so far as I know, are unattainable except in a university, which is also a large medical school. The conjoint board system takes no note of these delicate adjustments, delicate alike for the teacher and the pupil, and lying at the very root of the Scotch university system. It simply assumes that all manner of candidates for a medical licence can be uniformly tested by a board as you test herrings in a barrel—i.e., so as to eliminate all that are below a certain minimum; or, as Mr. Simon, I think, put it more politely perhaps, but not more truly, as sovereigns are minted so as to secure a certain average of weight and quality of gold. My reply to this illustration is that it omits altogether to take count of one little circumstance. The herring is there, and the gold is there; the one has been drawn out of the sea, and the other out of the mine; but in neither case has the assaying, or the branding, or the minting any effect whatever on the growth or the production of the article. But the medical graduate or licentiate is the complex re-

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sult of a costly and elaborate system of discipline applied to the mind variously over many years, and the whole course of that discipline is apt to be controlled and regulated by the nature of the tests applied at the end of it. It is not a question of minimum, but a question of the reflex influence of the test. Or, as I said in the Committee, it is not the *minting* of the student, but the *making* of him, that is really of the greatest consequence to all of us, and to the public.

You say, very justly, that raising the base of a pyramid will not diminish the height of the pyramid. Certainly not, if the pyramid remains secure. But raising the base of a pyramid in a rash and inconsiderate way may shake the whole edifice from top to bottom.

I adhere, however, to the general idea of the suggestion I made in my evidence, and which is so far in conformity with the principle, if not of the details, of the modified *Staats Examen* now existing in Germany. If there must be a system of central control over all examinations, emanating from the Medical Council or from any other authority, let the examiners be sent to Glasgow to co-operate with ours, instead of compelling our students to pass a double series of examinations. It is surely more reasonable that the three or four or half-a-dozen men wanted for this purpose should go to reinforce the university examiners, and aid them with their opinion, than that 80, 100, or 150 candidates should be obliged to keep in view two distinct series of examinations where one would suffice. Further, I expect that the board examiners would learn something from us, as well as we something from them, which would be a material advantage, and would enable them to transfer to other examinations the experience gained in ours, and to ours the suggestions arising from other examinations. Finally, I have personally no objection to binding the university, under these circumstances, not to pass, as a graduate, any candidate whom the board examiners would reject. A minimum in this shape would, indeed, do us no harm. But if, this proposal being made, you[1] do not fairly consider it, and endeavour to give it effect, then I say you are bent not on raising the base of the pyramid, but on demolishing the pyramid; not on strengthening the Scotch universities for doing their useful and necessary work, but on destroying that legal position which enables them to do their work effectually; not on medical reform, in any genuine sense of the word, but on a mere arbitrary programme which a certain number of English authorities have agreed upon as suitable for England, and which you insist on our accepting in spite of both reason and common-sense.

I am, Sir, yours, &c.,

Edinburgh, March, 1880. W. T. GAIRDNER.

SALICYLATE OF QUININE.

To the Editor of THE LANCET.

SIR,—Salicin, salicylic acid, and salicylate of soda have obtained a reputation in the treatment of rheumatism. But so far as I have been able to ascertain no notice has yet been taken, in this country at all events, of another salicylate, which seems likely to secure a high place in the treatment of that malady—I mean salicylate of quinine.

The first mention I had of it was made to me in a letter by a patient resident with her family in Paris during the past winter. One of her sons had a sharp attack of rheumatic gout. Salicylate of quinine was prescribed for him, and she wrote of the effects as wonderfully rapid and satisfactory. Ten days ago she returned to London and sent for me to attend one of her family, who had suffered severely in their rough passage across the Channel. For three days previously I had been suffering from rheumatism in the left knee and thigh. It had steadily increased to such an extent that I could hardly walk at all; and when I sat down it cost me much pain and difficulty to rise up, and still more to make any progress. My movements were awkward and distressing to myself and to lookers-on. My good friend was very sympathetic. In her usual kind and practical way she ordered me "home to bed," and early next day, as soon as she could get to her boxes, she sent me a note with a bottle of the salicylate of quinine, which she had brought over with her. Pressing engagements prevented me remaining in bed that forenoon. But by four o'clock in the afternoon I was dead beat, and quite incapable of further work. Between four and five I retired to bed. For two days previously I had fever on me, which had gradually increased, and now my temperature stood at 101°. My usual temperature is 97·5° to 98.° I at once took a dose of salicylate of quinine—twenty centigrammes—as directed on the bottle. In bed I could not move my leg or turn myself without the greatest difficulty and suffering. During the night I perspired freely. Next morning, Feb. 22nd, there were still fever and pain, but the temperature was considerably less. All that day I remained in bed, and I took three doses of salicylate of quinine at intervals of four hours. In the evening and during the night I felt I could move myself altogether with greater ease, and I had a quiet good night. Next morning, Feb. 23rd, I felt completely relieved. To my astonishment (for this was not my first attack), I got out of bed and walked across the bedroom without the slightest limp. The posterior muscles of my thigh certainly felt sore as if they had been severely strained and bruised, but I felt as able for my work that day as if nothing had happened, and I did a long day's work.

On Tuesday, the 24th, I felt really quite well, only, as I was informed, looking very pale and thin. By this time I had finished all my stock of salicylate of quinine, and I did not think it necessary to take any more. However, in three or four days after, I began to feel again a slight soreness and stiffness of the same muscles. This seemed to confirm the necessity for the caution which my kind benefactress laid on me at the first—namely, not to discontinue the medicine too suddenly.

Salicylate of quinine, though not usually employed hitherto in London, is to be procured. The difficulty I have found is to get it easily dissolved, and kept in solution. Mons. L. Midy, a pharmacien of Paris, 113, Faubourg St. Honoré, has made an elegant preparation of this drug. It is one I have used, and I can recommend it. But I have no doubt our expert London chemists will be able also to master any difficulty that may appear at first sight to exist.

I think this is an opportune moment wherein at once to bring the evidently valuable drug to the notice of the profession.

I remain, Sir, your obedient servant,

ARCHIBALD HEWAN, M.D.

Chester-square, March, 1880.

TYPHOID FEVER IN THE EAST.

To the Editor of THE LANCET.

SIR,—The enclosed letter is interesting in reference to the etiology of typhoid fever in the East and tropics. As you have published others on the same subject, perhaps you will kindly give this a place also.

I am, Sir, yours truly,

J. FAYRER.

Granville-place, Portman-square, W., March 16th, 1880.

Calcutta, Feb. 25th, 1880.

DEAR SIR,—I too have long been of opinion that typhoid fever may have origin in other causes than the filth to which in most cases it is rightly assigned. Or, as I have frequently expressed it, that the problem—given a fever, required a stench—is not universally capable of being solved, and this more especially in tropical and subtropical climates. During a service of twenty-seven years I have treated typhoid fever in the Mauritius, Barbadoes, and Bermudas, and this conviction has gained strength as my experience has extended. I was much pleased to see it obtain the support of your authority.

I have often felt tempted to express my opinion in the medical periodicals, but have been deterred by the difficulty of proving a negative, or of obtaining sufficiently exhaustive evidence to render the position practically unassailable.

Being now separated from my notes, and not having by me a copy of my official report on a severe visitation of typhoid fever from which my late regiment (1st Battalion, 15th Foot) suffered in Bermuda in 1868-69, I can only give from memory a general outline of the facts, which, however, may possess some interest.

The regiment was ordered from New Brunswick to Bermuda in April, 1868, as supernumerary to the garrison, to be employed on the works (fortifications). When we left New Brunswick the frost was still on the ground; in four days we

[1] I trust it is scarcely necessary to explain that I do not mean by *you* the Editor of THE LANCET, but the originators and promoters of the Medical Bills.—W. T. G.

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were in the commencement of a very hot season in Bermuda. A portion of the regiment was encamped. The head-quarters was in barracks at St. George's. Dysenteric cases shortly appeared in both parties, followed by typhoid fever in the companies under canvas, and this so severely that the encampment had to be broken up, and the men were put into barracks at Boaz Island, and not employed on the works. The fever then ceased.

At a later period another party were encamped at another part of the islands, relieving a party of the 61st Regiment. The 61st party had been free from fever. They were acclimatised. Fever (typhoid) broke out again so severely in my regiment that the party had to be withdrawn. About the same time it broke out at head-quarters, and was very severe. I stated in my report my inability to trace it to any defective sanitary arrangement.

In the encampments the dry-earth system of conservancy was adopted. The water used was rain, collected in tanks, removed from any possible source of pollution. At head-quarters the tanks were of iron. Every possible attention was paid to the sanitary condition of camps and quarters. The 61st acclimatised party had been free from fever with the same arrangements in the same encampment. At head-quarters the barracks were favourably situated, above and outside the town, and were exposed to wind from every quarter. The town, with its narrow lanes, dense population, cut off from the wind on two sides, by the hill on which the barracks stood, and with certainly inferior sanitary arrangements, was at this time free from typhoid fever.

The only universally applicable explanation of these cases appeared to me to be "climatic causes affecting new-comers." A very sad case in support of this view occurred on the relief of my regiment in 1870. A young officer of the relieving regiment, lately married, took a detached cottage near my own house. It had been occupied for more than two years, to my knowledge, by an officer of engineers, his wife and child, without any case of fever. The *new-comers* had not been in it two months before this officer lost his young wife of typhoid fever.

I remain, dear Sir, faithfully yours,

JOHNSTON FERGUSON, Surgeon-Major.

Sir Joseph Fayrer, K.C.S.I.

TWO CASES OF VACCINATION WITH LYMPH FROM THE CALF.

To the Editor of THE LANCET.

SIR,—As the question of the introduction of calf lymph for vaccination is now being discussed, the report of the two following cases, which occurred in my practice within the last three weeks, may prove instructive and worthy of perusal.

1. On Feb. 20th, 1880, I vaccinated a healthy male child of Mrs. F——, aged three months. It was small, being a seven-months' child. As the mother objected to both arms being scarified, three marks were placed on one arm, the ordinary cross scarifications being made, and the lymph from the tube blown upon the lancet and rubbed in. That day week, on calling, I found that each of the three places had taken, the usual groups of vesicles resulting—in one mark remaining distinct, in the other two running into one large pock. The marks were in no way unusual, free from all areola, and could be described as good vaccine vesicles. I took several tubes for future use, and learned from the mother that the child had been very well, save the night before, when it was fretful and slightly feverish. The vesicles followed the ordinary course, drying and scabbing without any unusual irritation, and leaving good marks.

2. On Feb. 25th, a tube of the same lymph was used to vaccinate the male child of Mrs. A——, aged six months. This was stronger and healthier than the above, being born at full time, and the first child of its parents. The arm was scarified in exactly the same way as before, three marks being made, and the blood scarcely drawn in any one of the places. That day week, March 3rd, on calling I found one fair vesicle formed, the other two being small and partially scabbed over. A slight erythematous blush was noticed around the spots, but not more than a marked areola. On inquiry the mother informed me that the vesicles had been accidentally rubbed the day before, the lymph escaping. I was somewhat dissatisfied at the result, and warned her that the inflammation and small pocks were the result of the vesicles being injured and ruptured the day before.

March 5th.—Sent for to find the child in great pain, crying for half an hour at a time, with the arm swollen and erysipelatous at the elbow and on the contiguous parts above and below. Area of the vesicles free, but disease was evidently spreading down the forearm. Ordered lead and opium lotion, with compound chalk powder.

March 7th.—Pain unrelieved, arm swollen to twice its usual size and erysipelatous to the wrist. No action about the vesicles; child feverish and refusing its food. Ordered drop doses of laudanum, and continued lead lotion. In evening fingers contracted, with swelling of hand. Inflammation somewhat less; the pain was greatly relieved; the child seemed better, taking the breast.

March 10th.—Erysipelas reappeared at the site of the vesicles, spreading up on to the shoulder; the child had some difficulty in swallowing, and the neck seemed painful and stiff on the affected side. Arm still much swollen and inflamed. Ordered the limb to be covered with flour, and wrapped carefully in cotton wadding, and gave child minim and a half doses of tincture of steel, with half minim of tincture of opium, and a calomel powder, as the bowels were confined. Without following out the case daily, I may say that for the next four days the disease remained stationary, appearing now on the forearm and again on the shoulder, the swelling being undiminished, and the tenderness increasing.

On the 14th the arm was less red, but at the elbow swollen and very tender, at an indurated spot on the inner aspect of the forearm. The child's general health was, however, better, the bowels acted well, and he took his food. A bread and hop poultice was applied, and a saline given. Hardness on the following day was felt above the bend of the elbow on its inner side, the forearm being softer and smaller. Under poulticing these suspicious spots gradually passed away, the vesicles, which at one time were large, ulcerated, unhealthy sores, dried up and formed scabs. The arm decreased rapidly in size, and on the 18th of March was desquamating and of natural colour. The child is now well. The lymph was obtained in tubes from Messrs. Corbyn and Co., of High Holborn. It is not often that two cases occur at the same time offering such points of interest as the above, and although the results of the first case were very satisfactory, I have never seen from ordinary vaccinations (and as public vaccinator I have had some experience) so severe an attack of erysipelas as resulted in Case 2.

I remain, Sir, your obedient servant,

Hailsham, March 22nd, 1880. J. H. BOGLE, M.B.

TREATMENT OF CANCER BY CHIAN TURPENTINE.

To the Editor of THE LANCET.

SIR,—The valuable and exceedingly interesting paper of Professor Clay in THE LANCET of March 27th on the treatment of cancer of the uterus by the internal administration of Chian turpentine is certain to lead to a sudden and large demand for this substance.

Under these circumstances it does not seem to me impertinent to remind the profession that genuine Chian turpentine is hardly to be met with at present in the English market. What is sold as such is either greatly adulterated or a wholly factitious article manufactured from black resin, Canada balsam, and the essential oils of fennel and juniper.

Many disappointments and discrepancies may perhaps be avoided by keeping this fact in mind in ordering, and exacting an assurance from the wholesale chemist that what is supplied is, the genuine, unsophisticated, Levantine product. I am, Sir, yours, &c.,

Blackpool, March 28th, 1880. WM. HARDMAN.

*** See our remarks on this subject elsewhere.—ED. L.

THE NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—It appears to me that some at least of your suggestions in regard to the Medical Service of the Royal Navy would only tend to make complication more complicated. I speak more particularly of the number of examinations a medical man would have to undergo after he has become fully qualified to practise his profession.

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Take, for example, an ordinary College and Hall man. He has to pass separately his "Prelim.," first Hall, first College, final Hall, and final College—*five* in all; then if he enters the Navy he will have to pass first at the Admiralty, then go to Netley for a term, at the end of which another examination confronts him—making *seven* before he is fairly launched in the service; next, after four or six years' service, he has to go back to "school" at Netley, attend a course of lectures and pass another examination; and after ten or twelve years more he passes his "final," and has done with examinations (at least as far as this world is concerned)—making a total of *nine*.

If by this means you think you will benefit either the profession or the Navy, all I can say is I don't agree with you; on the contrary, I believe that a man qualified to practise medicine and surgery is fit to do his duty in any part of the world, assisted by a good library, so that he may look up any particular diseases incidental to certain climates, which any one would naturally do.

In conclusion I will remark, that there are men of retentive memories, but possessing few other faculties, who would pass examination after examination and be of as little use afterwards as they were before. Original genius is rarely the property of the dull plodder, for as a rule he is little more than a copy of the books he has read.

I remain, Sir, yours truly,

CANDIDATE.

*** We have not advised any additional examinations. As the matter stands, there are those which every student must undergo for qualification to practise medicine and surgery; then for the public services there are the competitive examinations for entry to, and after special tuition at, Netley. Beyond these there is in the navy the final examination for promotion to the rank of staff-surgeon. Relying on the opinions of officers of standing in the service, we believe it would not be judicious to relax the present regulation for the last, of which it is even said that, had it existed in the army also, the greatest of all late difficulties in that service would have been precluded. In order to give the navy surgeon the best means of preparation for it, we have suggested that he should, while on full pay, be allowed to attend a Netley course, which at mature age would be, as we think, of still greater value than the actual course before admission. We would recommend candidates not to dwell too much on the requirements to afford proof of having maintained their professional knowledge, for at least a few years, up to the standard exacted from them at the termination of their pupilage, and to remember that the best of practitioners never cease to be students.—ED. L.

To the Editor of THE LANCET.

SIR,—The Naval Medical Service is now in the very perils of parturition, and THE LANCET is acting the part of a kind and skilful accoucheur. It is to be hoped that more than a "mus ridiculus" will be born. There is one point that particularly interests me, and all of my rank, and that is, that in carrying into effect this compulsory retirement of fleet surgeons at fifty-five instead of sixty years of age, we may not be treated in the same arbitrary and uncompensated style as our seniors were in 1875, forming a blot on the administration that undermined all confidence of thinking officers in its good faith. Hoping you will afford a constant reader room for this,

I remain, Sir, yours, &c.,

ONE OF THEM.

TRANSVERSE DEPRESSIONS ON THE NAILS.

To the Editor of THE LANCET.

SIR,—I am glad the communications of Dr. Thin and Dr. Dyce Duckworth have drawn attention to the clinical and forensic importance of transverse depressions on the nails. Many years ago Professor Sanders showed me these furrows in the Edinburgh Royal Infirmary, and I have been accustomed since to look for them in the patients who have come under my care. I agree with Dr. Duckworth that "there is a rather more rapid formation of nail than that of two complete growths in a year." From my own observations I should say that from three to four months are usually occupied in the passage of a furrow from the lunula to the end of the nail. These grooves are very common. They are sometimes to be seen on all the finger-nails; often they occur only on the thumb-nails. If a person's nails be free from transverse furrows, we may conclude, almost with absolute certainty, that he has not had a serious illness in the last three or four months. I have found three or four of these depressions, equidistant and parallel, on the thumb-nails of women who are the subjects of dysmenorrhœa—a furrow marking each painful "period."

I am, Sir, your obedient servant,

JAMES SAWYER, M.D. LOND.

Birmingham, March 26th, 1880.

PARIS.

(From our own Correspondent.)

SINCE the beginning of the present year eight hundred persons have died of small-pox in Paris, and this number represents a twentieth of the whole mortality. At present the epidemic shows no signs of abatement, the week ending March 18th giving about the same average in an aggregate of sixty-six deaths from this cause. A more opportune moment could scarcely have been chosen for the presentation of a Bill to make vaccination compulsory in France, and if the Parliament sanctions the *projet de loi* which has been placed on the table of the Chamber of Deputies by Dr. Lionville, the epidemic will have been a means to the end of making France the best vaccinated country in the world. The proposed law consists of ten clauses, which are as follows:—1. Vaccination is compulsory; it must be performed during the first six months of existence. 2. Revaccination is compulsory every ten years; in the 10th, 20th, 30th, 40th, 50th years of the person's age. 3. When a birth is registered, a vaccination paper (*bulletin de vaccine*) will be given to the parties registering, and this must be returned within six months, stating the result of the vaccination, and signed by a medical practitioner of the locality. The signature must be *visé* by the authorities (*légalisée*). 4. The vaccination paper must be shown to the registrar every ten years, and must bear the mention of the subsequent revaccinations. 5. Parents and guardians as well as those convicted of infringing the 3rd and 4th Clauses of this Act, are liable to a fine of from 1 to 25 francs, and on a second conviction to a fine of from 25 to 100 francs. 6. This vaccination paper must be presented before entrance into a primary, secondary, or higher school, and also for the army and civil services. 7. Infractions of the preceding clause are punishable by Clause 5. 8. The registrars shall make a list of those whose certificate is in default each year, and this list shall be sent in to the magistrates, and the offenders prosecuted. 9. A *règlement d'administration publique* shall provide for the execution of this law, conformably to the royal ordinance of December 20th, 1820, the Ministerial decree of July 16th, 1823, and the decrees of August 10th, 1848, and October 7th, 1879. 10. The present law shall come into force within a year after its enactment. It is probable that some parts of this Act will be modified in the Chamber. It will be difficult, for instance, to apply the 4th Clause in its full rigour to those not revaccinated who have changed their place of residence, and more especially in large towns where it is of greater importance that no material for small-pox should be found. There is no doubt, however, that the fate of the proposed law will be decided on its merits. In sanitary matters the French are slow—much behind some of her neighbours; but when matters are under consideration they are generally referred to and decided by competent authority, unmindful of the agitation raised by leagues and societies of mischievous fanatics, too often mistaken in England for public opinion.

In spite of the Academy of Medicine, which officially condemned the project a few years since, the municipal authorities have decided to establish a model nursery in connexion with the Children's Hospital to experiment the system of *allaitement artificiel*, and the direction of this will be given to Professor Parrot. The high infantile mortality of Paris is a standing scandal. The number of deaths per annum amongst

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children under a year old in Paris averages 338 per 1000, but last week it attained the proportion of 585 per 1000, mostly due to gastro-enteritis and "athrepsia." These are in many instances the technical expressions for improper and insufficient feeding, and it will be well if the lower classes can be taught that children who cannot suck may still be able to swallow.

At the Academy of Medicine it was announced that the widow of the late Professor Louis had left by will a sum sufficient to found a triennial prize of 8000 francs. This is to be awarded for work in therapeutics. Dr. Clement of Lyons claims to have used a cooling apparatus for the last three years analogous to that described by M. Dumontpallier, and which was the subject of an article in THE LANCET of the 27th of March, but, according to the secretary of the Academy, who has examined into the matter, there are essential differences between the apparatus of the two claimants. Apropos of a communication made at the preceding meeting by M. Jules Guérin, about a lady whose triceps femoralis was ruptured, and who, after having been treated by a distinguished surgeon in Paris by mistake for arthritis, consulted him, and had an elastic appliance fitted, which restored the power of extension, M. Tillaux said that he had seen the lady in question for arthritis, and maintained the correctness of this diagnosis. M. Guéneau de Mussy added, that it had come to his knowledge through the attending physician, that the patient was incapable of walking whilst in M. Guérin's apparatus, but since she had taken it off and resorted to *massage* she has been able to walk. To which M. Guérin replied, that she cannot, nor will she ever walk again. This is a specimen of an Academy "discussion."

Obituary.

HENRY EDWARD FRIPP, M.D., M.R.C.P.

THE medical profession of Bristol has sustained a severe loss by the sudden death, on March 23rd, of Dr. Henry Edward Fripp, in his sixty fourth year. While standing by the bedside of a patient on the previous night Dr. Fripp was seized with hemiplegia, which proved fatal within a few hours by the extension of the hæmorrhage towards the medulla.

Dr. Fripp was born in 1816, and passed through his curriculum at the Bristol Medical School, being a pupil of the late Dr. Symonds, at the Bristol General Hospital. In 1838 he became a member of the Royal College of Surgeons, and then began practice in Wales as medical officer to the iron works at Ynisceedwyn, near Swansea. Shortly after this he went to Germany as medical officer to the iron works at Nisterthal, in the Duchy of Nassau. By nature a mechanical genius, Dr. Fripp took so great an interest in these works that, in addition to his professional responsibilities, at the request of the directors, he accepted the office of chief engineer, and held this post till 1848, when these works were closed owing to disturbances consequent upon the unsettled state of the political atmosphere. After this Dr. Fripp spent some years on the Continent in medical and scientific study and research, and in 1855 took the degree of M.D. at Würtzburg. While abroad he worked for some considerable time under Kölliker. In 1836 he obtained the Membership of the Royal College of Physicians of London, and settled in Clifton as a physician. He was soon elected physician to the Bristol General Hospital, and held this post till 1873, when he was made consulting physician to this institution. He occupied the chair of physiology in the Bristol Medical School from 1857 to 1869.

Dr. Fripp was an active member of the various local medical and scientific societies. For some years he was president of the Bristol Naturalists' Society, in the proceedings of which Society he always manifested great interest and took a leading part. He also held the post of president of the Bristol Microscopical Society. During the year 1878–79 he was president of the Bristol Medico-Chirurgical Society, and his inaugural address was a learned dissertation on "The Doctrine of *Contagium Vivum* in its Relation to Parasitic Disease." Under his auspices the first volume of the Transactions of this Society was published.

Dr. Fripp was well known for his great scientific learning and practical knowledge. A most able physiologist and pathologist, there were probably but few men in this country whose acquaintance with the microscope was so thorough. The following list of some of his published papers will best indicate the nature of his knowledge of this instrument—communicated to the Bristol Naturalists' Society: "On the Physiological Limits of Microscopic Vision;" "On Aperture, and Definition of the Microscope Object-Glass;" "On the Limits of the Optical Capacity of the Microscope" (translated from Helmholtz); "Is there a Science of Microscopy?" In his hands the microscope was not merely an instrument by means of which certain things could be demonstrated, but he brought to bear upon it a profound knowledge of the physical laws which govern and modify and limit its revelations. In the department of Natural History Dr. Fripp was an original and enthusiastic writer. Amongst his various papers are the following (communicated to the Bristol Naturalists' Society): "On Insect Anatomy," "On Insect Sounds," "On the Faculty of Hearing and the Tympanic Organ of certain Orthoptera."

Dr. Fripp was a great lover of music, and was himself an accomplished musician, and as an illustration of his mechanical skill it may be mentioned that he possessed an organ which he had himself built.

As a physician Dr. Fripp had a well-earned reputation for skill and acumen. Amongst the members of his profession his uniform genial kindliness made him a universal favourite, and to his patients he was not only the able physician in whose hands they placed themselves with the utmost confidence, but the beloved friend to whom they looked and on whom they relied.

JAMES HINDMARSH BARNES, L.R.C.P. EDIN., M.R.C.S. ENG.

THE lamented death of this esteemed practitioner took place on the 19th ult. at his residence, Pembroke-place, Liverpool, at the early age of forty-seven. His fatal illness was the result of blood-poisoning, contracted thirteen years ago while attending professionally upon a syphilitic patient at the workhouse infirmary, and which not only prevented him from following his profession, in which he was taking a foremost place, but, in spite of the advice and treatment of some of the leading medical men of the day, caused him for years to endure great physical suffering. He was seen at various times by Mr. Jonathan Hutchinson, Dr. Hughlings Jackson, Mr. Berkeley Hill, and others, all of whom were much interested in his case. The deceased gentleman published a pamphlet describing the various symptoms of his disorder, which was read before the Medical Society at Liverpool; and in 1874 he was appointed superintendent registrar of Liverpool, as some compensation for the injuries he had received, which post he has only retained five years. Mr. Barnes was the second son of a medical man at Bath, and for some time held the post of consulting surgeon to the workhouse, succeeding Dr. Fletcher in that office. He was much respected not only for his professional ability, but for his genial and intellectual qualities.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on March 25th:—

Honman, Andrew, Weymouth-street.
Newnham, Ernest Edmund, Charing-cross Hospital.
Permewan, Arthur Edward, Redruth.
Rout, Charles, Silwood-place, South Kensington.

The following gentlemen on the same day passed the Primary Professional Examination:—

Joseph Adams, Edinburgh Royal Infirmary; Charles Robert Crane, Charing-cross Hospital.

THE Hospital for Imbeciles and Lunatics at Darenth will, it is announced, be opened for the reception of patients some time in the present month.

SMALL-POX is said to have appeared in Aberdeen. The cases already reported, three in number, have been removed to the hospital for infectious diseases in the town.

DR. G. R. BARNES, medical officer of the Ewell district of the Epsom Union, has been awarded a gratuity of £10 10s. for extra services consequent on the recent fever epidemic at Ewell.

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THE salary of Dr. Pitt, medical officer of District No. 1 of St. George's in the East, has been increased to £280, in consideration of the additional area included in his district.

AN examination for cadetships at the Royal Military College, Sandhurst, is announced to take place at the University of London, on Monday, July 5th, and following days, the first day being devoted to the medical examination of the candidates.

IN the North-West provinces and Oudh during the past year (says the *Bombay Gazette*), 1051 persons and 7214 head of cattle were killed by wild animals, and 3168 persons died from snake bites. Wolves and leopards were most destructive, both among men and cattle. The total number of wild animals returned as destroyed is 4495, and the number of snakes killed is set down as 1697, the amount paid in rewards for their destruction being about Rs. 11,000. The number of snakes returned as destroyed (1697) gives a very imperfect representation of the number actually killed.

SUNDAY LECTURE SOCIETY.—In connexion with this society, a lecture is announced to be delivered at St. George's Hall, Langham-place, on April 4th, at four o'clock, by Dr. Spencer Cobbold, F.R.S., on "Trichinosis, and on the dangers arising from the consumption of Flesh Food."

BRISTOL EYE HOSPITAL.—The report of this Charity, read at the sixty-ninth annual meeting of its friends and subscribers, stated the number of fresh cases treated during the past year as 2592, 2535 out-patients and 57 in-patients. The total number of recipients of the benefits of the hospital since its establishment amounted to 83,514.

THE ABERDEEN HOSPITAL FOR INCURABLES is doing a good, though unostentatious, work. Thirty-one patients were enjoying its welcome succour at the beginning of the present year. The total expenditure during the twelvemonth had been £707 12*s.*, and £1200 had been added to the endowment fund, which now amounts to £12,000.

QUEEN'S UNIVERSITY IN IRELAND.—At a meeting of the Senate, held in Dublin Castle on Tuesday, the 30th ult., the following were elected examiners in the undermentioned subjects:—In Medicine: Professor O'Connor. In Surgery: William Thomson. In Midwifery: William K. McMordie. In Materia Medica: G. F. Duffey. In Medical Jurisprudence: M. O'Keefe.

ST. JOHN'S AMBULANCE ASSOCIATION.—It is reported that several new centres in connexion with this Association are in course of formation. Among the latest established, that of Dublin is likely to prove a great success. Altogether there are now seventy-seven centres in different parts of the United Kingdom, besides fifty-nine detached classes formed pending the institution of regular centres.

DEVONSHIRE HOSPITAL, BUXTON.—In recognition of Dr. Robertson's assiduous services to the institution, the committee of management of this hospital propose to complete the buildings of the hospital, now in course of extension, under the grant of £24,000 from the Governors of the Cotton Districts Convalescent Fund, by the erection of a portico and clock tower at the principal entrance, and an additional lodge, essential and integral parts of the plan of the architect, in accordance with the strongly and repeatedly-expressed wish of Dr. Robertson, consulting physician to the hospital, and chairman of the board of trustees and committee of management.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ANDREWS, Mr. T. M., has been appointed Medical Officer for the Workhouse of the Pontardawe Union.

BENTLEY, C. E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Kirton District of the Boston Union.

BLACKER, E. J. L., M.D., has been appointed Medical Officer to the B District of the Thrapstone Union, vice Bird.

BLOOD, Mr. F. W., has been appointed House-Surgeon to the Bucks Infirmary.

BROOKFIELD, J. S., B.A., M.D., has been appointed one of the Honorary Physicians to the Kilburn, Maida-vale, and St. John's-wood General Dispensary, vice Gawith, resigned.

COOPER, W., F.R.C.S.E., has been appointed Consulting Ophthalmic Surgeon to the Hospital for Epilepsy and Paralysis, Regent's-park, vice Wells, deceased.

DONOVAN, J., M.D., has been appointed Medical Officer to Skibbereen Dispensary and Workhouse, vice Donovan, deceased.

GEORGE, G. A., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer for the Workhouse and the Dorchester District of the Dorchester Union, vice Emson, resigned.

HARGREAVES, M. K., M.B., C.M., has been appointed Resident Assistant Medical Officer to Shoreditch Infirmary, vice F. H. Walmsley, M.D.

LUNDY, L. F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Sunbury District of the Staines Union.

MACGREGOR, P., L.R.C.P.Ed., has been appointed Medical Officer to the Crossland Moor Workhouse, Huddersfield Union, vice Rhodes, resigned.

MCLINTOCK, J., M.B., C.M., has been appointed Medical Officer for the two Marsden Townships of the Huddersfield Union, vice Hesslegrave, deceased.

MURRAY, Mr. H., has been appointed House-Surgeon to the Royal Westminster Ophthalmic Hospital, vice Martin, whose term of office has expired.

STURGE, A., M.D., has been appointed Physician to the Hospital for Epilepsy and Paralysis, Regent's-park, vice Clarke, deceased.

TAYLOR, M., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Workhouse of the Cannock Union, vice Blackford, resigned.

TITLEY, J., M.D., L.R.C.S.Ed., has been appointed Medical Officer for the Broughton District of the Glanford Brigg Union.

WALMSLEY, F. H., M.D., has been appointed Resident Assistant to Leavesden Asylum.

Births, Marriages, and Deaths.

BIRTHS.

BAKER.—On the 19th ult., at The Cedars, Tenterden, Kent, the wife of Charles Eaton Baker, M.R.C.S.E. &c., of a son.

DEANE.—On the 23rd ult., at 42, Albion-road, Stoke Newington, N., the wife of John Deane, M.R.C.S.E., L.R.C.P.Ed., of a son.

DICKSON.—On the 20th ult., at 33, Albany-street, Edinburgh, the wife of Frank K. Dickson, F.R.C.P.E., of Wye House, Buxton, of a son (Francis Henry).

LYLE.—On the 23rd ult., at Westbourne-square, Bayswater, the wife of William Vacy Lyle, M.D., of a daughter.

PILGRIM.—On the 20th ult., at Bridge-road, Leighton Buzzard, the wife of Forster John Pilgrim, of a son, which survived its birth but a few hours.

SALT.—On the 26th ult., at Egremont, Bournemouth, the wife of Henry Salt, M.D., of a daughter.

WALKER.—On the 28th ult., the wife of Arthur de Noé Walker, M.D., of a son.

MARRIAGES.

HODSON—WIENHOLT.—On the 30th ult., at St. Paul's, Herne-hill, Henry Algernon Hodson, M.R.C.S.E., L.R.C.P., of Bovey Tracey, South Devon, to Sarah Wormald, only child of William Wienholt, Esq., J.P., of Llanwern, Monmouthshire.

MARRIAN—WATKINS.—On the 17th ult., at the Parish Church, Wellington, by the Vicar (the Rev. Thomas Shepherd), James R. Marrian, L.R.C.P.Ed., of Birmingham, to Eliza, elder daughter of the late Richard Watkins, Esq., of Adzor House, Wellington, in the County of Hereford.

VIVIAN—SUGDEN.—On the 31st ult., at St. Paul's, Winchmore-hill, by the Rev. A. C. A. Drought, M.A., Vicar, assisted by the Rev. James Baird, M.A., Vicar of Southgate, R. T. Vivian, Surgeon, of Chase Side, Southgate, to Annie, daughter of Samuel Sugden, Esq., of Oak Lodge, Southgate, N.

DEATHS.

ADAMS.—On the 30th ult., at Eastham-street, Bungay, Suffolk, from acute pneumonia, Edward Burman Adams, M.R.C.S.E., L.S.A.L., aged 54.

BARLOW.—On the 18th ult., at Norfolk House, Albion-road, Dalston, Matilda Mary Ann (Mary), wife of Robert Barlow, M.R.C.S.E. Friends will kindly accept this intimation. Colonial papers, please copy.

CORBETT.—On the 25th ult., at the Garrison Hospital, Haslar, Brigade-Surgeon A. P. M. Corbett, M.D., aged 49.

HEATON.—On the 25th ult., at Stockwell House, Leek, Charles Heaton, M.D., in his 64th year.

KINGSTON.—On the 27th ult., at his residence, Sunnylands, Bath, Strickland Kearney Kingston, M.D., in his 78th year.

NASH.—On the 24th ult., at his residence, Pulteney-street, Bath, Joseph Nash, M.D., also of Brockley Hall, near Bristol, and Major 1st Somerset Volunteer Engineers, aged 58.

PILGRIM.—On the 24th ult., Charlotte Madeline (Lottie), the beloved wife of Forster J. Pilgrim, and daughter of the late G. S. D. Harris, Surgeons, both of Leighton Buzzard.

ROBINSON.—On the 28th ult., of typhus fever, after a short illness, Samuel Robinson, M.R.C.S.E., of Skibbereen.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, April 1st, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Mar. 26	30·04	E.	51	45	93	63	38	..	Bright
,, 27	30·15	E.	40	38	68	49	34	..	Overcast
,, 28	30·08	S.E.	41	38	68	46	34	..	Overcast
,, 29	29·97	S.W.	35	35	72	58	32	..	Foggy
,, 30	30·00	W.	43	41	72	58	32	..	Foggy
,, 31	29·61	S.W.	50	47	77	57	36	..	Bright
April 1	29·50	N.W.	46	43	80	54	41	0·17	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

"HOW A FLOWER MISSION WAS STARTED IN BIRMINGHAM."

THE above is the title of a small pamphlet published by Caswell, 200, Broad-street, Birmingham, giving particulars of the Flower Mission established in that town by the benevolent lady who writes under the initials H. R. During a six months' visit to America she saw the working of a Flower Mission in Chicago, and on taking up her residence in Birmingham began, in a small way at first, to imitate her American sisters. The work soon became known and talked of, and she was then able to proceed on a larger scale. A room in a central music warehouse was kindly placed at her disposal by the proprietors, and here the kind foundress and her band of willing workers meet every Friday. The first day, May 9th, 1879, seven ladies met, and, with the flowers kindly given by friends, made up forty-two bouquets, each with a card attached, on which a text was clearly written, and these were at once distributed to the different hospitals. More and more interest was taken in the benevolent scheme, and an ambulance of flowers has each week been sent. There is no lack of helpers, and on December 24th, the last day of meeting for the year, thirteen ladies made up 853 little bouquets, each with a Christmas card attached, which were distributed to six hospitals, five almshouses, three workhouses, two missions, and to the sick poor in twelve parishes. Nobody who has been in the habit of visiting invalids can have failed to see how much pleasure a few flowers give; and when we find that in the nine months the Flower Mission has been at work in Birmingham no less than 10,796 bouquets have been distributed, we can form some idea of the good work being done, and of the brightness that has been carried to hundreds of bedsides. So many people living in the suburbs of our large towns have flowers to spare for many months in the year, and the trouble of leaving or sending them to some central place once a week is so little, that we cannot but think the example of the ladies of Birmingham will be followed in other towns.

Mr. W. Freeborn.—We can only refer to our advertising columns.

FACTORY SURGEONCIES.

To the Editor of THE LANCET.

SIR,—Can any of your readers inform me if I have any right of appeal under the following circumstances? About a month ago the factory surgeonship for the township in which I reside became vacant. I made application for the office, but was passed over in favour of a practitioner residing in a neighbouring village, two and a half miles distant, and possessing the single qualification, L.S.A. I may mention that I have been practising for rather more than a year, and am the only registered practitioner in the village.

Yours &c.,

March, 1880. J. M.

MEDICAL CO-OPERATION IN THE UNITED STATES.

A MOVEMENT has been set on foot in San Francisco for the establishment of co-operative dispensaries, owned and supervised by prominent physicians. A number of these gentlemen, say ten or twelve, whose "offices" are in the same neighbourhood, associate for the purchase of a stock of drugs, rent a room, and employ a competent pharmacist, whose duty consists in simply making up their prescriptions. "The advantages to the physician of thus dispensing his own medicines," says the *Western Lancet*, "is unquestionable."

M.D.—Sir Trevor Lawrence, Bart., one of the Conservative candidates for Mid-Sussex, is the only son of the late Sir William Lawrence, under whom he received his professional studies at St. Bartholomew's Hospital, and was admitted a member of the Royal College of Surgeons in 1853.

Dr. A. Sheen.—We have no recollection of the paper.

"SHEEP ROT."

To the Editor of THE LANCET.

SIR,—Allow me space for a few remarks in reference to your annotation on "Sheep Rot" in your issue of March 13th.

You say "that 'rot' is in reality due to the presence in the liver and hepatic canals of numbers of Distoma." I have never seen "flukes" in the liver—i.e., in its structure; neither have I seen any sign of their having been located there. I have only seen them in the bile-ducts, which are undoubtedly their natural habitat, and to which they, doubtless, gain access by means of the common biliary duct. At least this would seem to be a more natural mode of access than by burrowing, as it is sometimes asserted they do, through the coats of the stomach, or by passing through the circulation to the liver. You also observe "that the parenchyma of the liver becomes atrophied from the compression the 'flukes' exercise upon it." Now, if this were the case, we should expect to find the amount of parenchymal disease bearing some proportion to the number of "flukes" in the biliary ducts; but this, practically, is not by any means a universal fact—frequently quite the contrary. There can, I think, be little doubt that the embryonic flukes find their way to the extreme peripheries of the ducts, and during their subsequent development set up a large amount of irritation and inflammation of the parietes of the canals and of the contiguous liver structure, which quickly leads to blocking up of the minute biliary outlets, and thus prevents the flow of bile into its natural channel, hyperæmia of the greater part of the liver being established, followed primarily by hypertrophy, and secondarily by atrophy and cirrhosis. In this form of verminous hepatitis, another result of inflammation—viz., fatty degeneration—is often seen.

Lastly, as reference has been made in several publications to the existence of "fluke disease" in the horse, I may observe that it has not been my lot as yet to discover a single specimen of Distoma in the liver of that animal, though I am quite prepared to admit that in colts feeding on contaminated pastures there is no physiological or other reason why they should not become infected; but I rather fancy the difference in the structure of the stomach of the horse as compared with that of ruminants would make it less favourable to the lodgment and further development of the "flukes." Cattle, both foreign and native, are frequently the subjects of "fluke disease"; but the influence it exerts upon them is far less deleterious than in the case of the sheep, owing to their greater constitutional strength, and to the fact that the entozoa are usually fewer in number, and a large extent of chronic liver disease may exist in the ox—as seen in hydatid disease and tubercle—without materially influencing the nutrition of the animal's body.

Your obedient servant,

THOMAS WALLEY,

March, 1880. Principal, Royal Veterinary College, Edinburgh.

Juvenis.—1. Yes, with moderate care and prudence.—2. Lodging money and servant's allowance, estimated at about £60 per annum.—3. Probably about £60.—4. No. The money allowance is the same. Quarters, when provided, are given according to rank.

Mr. Jas. Maitland.—We know nothing of the medicine named.

THE OPERATION OF TURNING IN MIDWIFERY.

To the Editor of THE LANCET.

SIR,—I believe that many young and inexperienced obstetric practitioners, as well as not a few old and experienced ones, are deterred from attempting the operation of turning with only one or two fingers in the uterus by the impression that the procedure is difficult and success unattainable, save by an expert such as Dr. Barnes or Dr. Braxton Hicks. Such an impression is erroneous, and probably tends to the loss of many lives. In my last five cases of turning I have successfully adopted the method referred to. In four of the cases there was not the slightest difficulty, and even external manipulative aid was unnecessary. In the fifth case contraction of the uterus and escape of the liquor amnii necessitated a little patience and also assistance from without, as directed by Dr. Barnes. The advantages of this method of turning are well known. Above all, risk to the mother—the most important of obstetric considerations—seems reduced to nothing, and the numerous cases in which turning is desirable before the os uteri will admit the operator's hand are successfully met.

I am, Sir, yours &c.,

Shipley, Yorkshire, March, 1880. W. J. SMYTH, M.D.

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A FOREIGN BODY IN THE EYE FOR TWENTY-THREE YEARS.

DR. J. S. CHISOLM, of Baltimore, publishes, in the *Boston Medical and Surgical Journal*, a case in which a fragment of metal remained in the eye for twenty-three years without producing sympathetic ophthalmia. The patient, when a lad of sixteen, sustained the injury by the explosion of a gun-cap, a part of which struck him on the eye, cutting the cornea, and causing iride-cyclitis, through which inflammation the eyesight was lost. The irritation, however, subsided, and the organ, retaining almost its normal appearance, remained in a passive state till the man attained the age of thirty-nine, when he presented himself for treatment. The eyeball was then partially atrophic, somewhat corrugated, the cornea smaller than natural, but clear, and surrounded by a zone of ciliary injection, with some large sub-conjunctival vessels advancing from the back of the eye to the corneal border. The pupil was closed by old deposit, and upon the iritic surface near the centre was a yellowish-white spot about two lines in diameter. The organ was painful and very sensitive to the touch. The left and sound eye gave evidence of irritation. Extirpation was performed under chloroform. On examining the iris, especially with reference to the glistening spot upon its anterior face, a fragment of the cap was found imbedded in lymph.

Staff Surgeon.—Lieut. Charles Fergusson, who has just arrived in London with the loss of an eye, is the youngest son of the late Sir William Fergusson. The ball entered between his eyebrows, wounding the nose, and completely destroying the right eye.

TREATMENT OF PUERPERAL CONVULSIONS.

To the Editor of THE LANCET.

SIR,—I read the case of puerperal convulsions during labour, under the care of Dr. King, in last week's LANCET with much interest, especially as I had a somewhat similar case a few days since, and which unfortunately ended fatally.

In my case the convulsions set in two hours after labour. The person in question was a young woman, aged twenty-two years, the wife of a labourer, and her first confinement. The labour lasted about ten hours without any untoward symptom whatever, and the placenta came away in ten minutes after the birth of the child easily, and without any loss to notify. I left the woman doing well, cheerful, and with every prospect of continuing so. However, in about two hours, quite unexpectedly, convulsions having commenced, I was speedily sent for, and finding the pulse hard and full, face congested, and accompanying stertorous breathing, with partially dilated pupils, I immediately bled her, and ordered mustard poultices to the neck, calves of the legs, and cold applications to the head. This so far succeeded as to arrest the attacks for three hours, when they set in again. I had recourse to a further abstraction of blood, and gave her ten grains of calomel and one drop of croton oil, which relieved the bowels well twice. Notwithstanding the remedies, I regret to say the woman died in about twelve hours from the beginning of the attacks. I must add that she was of a plethoric habit, short-necked, stout, &c.

My chief reason for troubling you with a recital of this case is to bring before the profession for their opinion the following question:—Whether an hypodermic injection of morphia and atropia would have been appropriate treatment? having found such most effectual in arresting the most violent epileptic convulsions, the patients, in fact, being so violent as to require four persons to hold them down previous to inserting the injection; then the convulsions ceased immediately, and sleep for a few hours quite restored and refreshed the sufferer. Would it be prudent to adopt the same treatment in puerperal convulsions?

Yours truly,

Sarratt, Watford, March 29th, 1880. J. WRIXON, M.R.C.S.E., &c.

To the Editor of THE LANCET.

SIR,—In reference to the letter of Dr. King, on the subject of Puerperal Convulsions, which appeared in your last issue, I beg to instance a case lately under my care, in which a different treatment was tried.

The subject was a young woman, in fair health, pregnant with her first child, and three weeks short of her full time. I was called at 3 A.M., and found her in a state of eclampsia; her face livid, and frightfully distorted; pupils dilated; breathing loud and stertorous; the convulsions strong, unintermittent, and uniformly from the right to left side. On examination I discovered the os undilated. As the patient was totally unable to swallow, I ordered sinapisms to the calves and cold applications to the head, with the only result of slight mitigation of the symptoms. Calomel was tried on the tongue, but no deglutition was possible. The convulsions continued through the day, recurring about every quarter of an hour. In the afternoon I applied three or four leeches to the right temple, and, as the friends objected to chloroform, I prescribed an injection of chloral hydrate, forty grains, which was administered in the evening. A complete cessation of the convulsions ensued and a tranquil calm. Labour now set in, the os becoming normally dilated, and at 5 A.M. she was naturally delivered of a dead child. Unconsciousness continued for two days. I administered bromide of potassium in fifteen to twenty grain doses thrice daily for a few days, subsequently tonics. She made a good recovery. I might add that her father is a confirmed epileptic.

I am, Sir, yours obediently,

St. Faiths, Norwich, March, 1880. J. HAWKES, M.D.

THE DARMSTADT ALICE HOSPITAL.

THE *Quiver* for April contains the following brief account of this institution:—

"In an out-of-the way corner of the town, seldom or never visited by an ordinary tourist, stands a house in the Mauer Strasse which will ever be associated with the loved memory of the Princess Alice. Hither the Princess would come herself, unattended, constantly to see how the work of the place was going on, and to speak words of encouragement to the nurses, and read the word of Eternal Life to the poor and weary sufferers. The history of this institution is brief and simple. The late Princess Alice, Grand Duchess of Hesse, founded an institution named the Alice Frauen-Verein, or, as we should call it in English, the Ladies' Society. It embraces a school for training girls in industrial pursuits, an institution for orphans, and this hospital and school for training nurses. When the lamented Grand Duchess determined, in 1867, to organise a school for training nurses, there existed in the Mauer Strasse an old house, which had for some years been used as a small private hospital by some rising young physicians, who were anxious to have a place where they could themselves treat any poor cases which otherwise should have gone to the town hospital, and so passed out of their hands. These gentlemen made over the hospital to the Alice Frauen-Verein in 1867, after the war between Prussia and South Germany. In 1870, when the funds subscribed in England for the relief of the sufferers in the Franco-German war had been disbursed, there remained a considerable balance, and, through the influence of the Grand Duchess, it was arranged to devote this balance to building an addition to the old house, where the Training School for Nurses could exist in connexion with the hospital."

Mr. G. H. Macnamara.—Our abstract in English of M. Richet's paper was made from the original French. There is no English translation so far as we are aware.

An Intending Candidate should make application to the Secretary of the Brussels Medical Graduates' Association, Dr. Pocock, 20, Golborne-road, Upper Westbourne-park, W.

THE TREATMENT OF LATERAL CURVATURE OF THE SPINE BY ELONGATION.

To the Editor of THE LANCET.

SIR,—On reading the essay[1] on which I subjoin a few notes, I was much struck with the coincidence between the views expressed and those of Dr. Sayre. Mr. Stafford not only recognises the rotary displacement of the vertebræ, but figures a machine for the treatment of the patient by suspension. In the preface he says that the essays are part of the Jacksonian Prize of the Royal College of Surgeons, and adds: "In lateral curvature I flatter myself I have simplified and offered an original method of treatment—a method which at once takes these cases out of the hands of the charlatan and pretender, and places them in the power of the profession at large. I have only to add that my experience has proved the utility of the plan adopted."

In the essay (No. 2) he attributes lateral curvature to the inability of the spinal column to support the weight of the head and trunk. He recognises primary and secondary curves and their relation to the maintenance of gravity, and states that the primary curve is usually lumbar, but occasionally dorsal. He remarks that the cause of weak spine is deficient spinal muscle, which he attributes to the use of artificial support, and advises that girls be left without stays till they arrive at the age of fourteen or fifteen, so that all the muscles of the frame should be allowed their freest play. He calls attention to the shortening of the trunk and rotary displacement of the individual vertebræ: "In very bad cases of lateral curvature the bodies of the vertebræ are so thrown out of their situations that they are, as it were, rotated on the intervertebral substances, and instead of their anterior surfaces looking forward, they are turned laterally." After referring to the usual gymnastic exercises, and particularly exercise of the weak side, he describes and figures a machine, which he terms the "lateral rocker," which he says should be employed at least three times a day for a quarter or half an hour at a time. He details five cases of success with this machine. In addition to this, he says: "Lateral exercise, however, will not always recover a lateral curvature....More must be done. The spine itself must be elongated, and the best method of accomplishing this is by gravitation of the body. To effect this object I have invented a machine, by which the patient can be raised up from the ground by the upper part of the body, while the lower part hangs suspended." This he calls his "spine elongator." The machine consists not only of axillary supports, but of head and chin supports; in fact, his "spine elongator" is in every respect similar to Sayre's, excepting its tripod form. He only details two cases of its use, but says: "Several other cases of the same description, which it would be tedious to relate, and only repeating the same facts, I have treated in the same manner, and with equal success." It appears to me that these essays are well worthy of a more general recognition.

I am, Sir, yours &c.,

Guernsey, March 20th, 1880. JOHN AIKMAN.

[1] Two Essays on Diseases of the Spine. (1) On Angular Curvature of the Spine and its Treatment. (2) On the Treatment of Lateral Curvature by Gravitation, Lateral Exercise, &c. By R. A. Stafford, F.R.C.S. Eng., Surgeon Extraordinary to H.R.H. the Duke of Cambridge, &c. London: Longmans. 1844.

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THE LATE DR. FAIRBANK.

IT should have been mentioned in our obituary notice of the late Dr. Fairbank (see THE LANCET, March 6th) that Dr. Ellison, who was in partnership with Dr. Fairbank, was appointed, jointly with the latter gentleman, as surgeon to Her Majesty's Household.

J. W. R.—1. Ranald Martin, or J. A. B. Horton on Tropical Diseases.—2. Sir J. Fayrer on the Relation of Filaria to Endemic Disease in India (THE LANCET, Feb. 8th and 15th, 1879).

A CASE ILLUSTRATING THE PATHOLOGY OF HERPES ZOSTER.

To the Editor of THE LANCET.

SIR,—The view usually held as to the pathology of zona is, as is well known, that the eruption is due to some irritation propagated along the course of the sensory nerves supplying the skin, and originating, according to von Barensprung, in the ganglia in the posterior roots of the spinal nerves. Trousseau, following Bazin, describes (very meagrely) a form of the affection, to which he gives the name of "arthritic zona," and which he considers to be rheumatic in its origin, and Hebra appears to hold a similar view. In the following case no history of rheumatism could be elicited, nor was the joint effusion which accompanied the eruption (and indeed preceded it) arthritic in regard to the symptoms which accompanied it, consisting as they did in mere pain and effusion, without diffused redness or heat or tenderness.

K. B——, a healthy-looking girl, aged twelve, presented herself for treatment, suffering from pain in the knee-joint (right). On examining the joint it was found to be swollen, and the patella "rode" freely, whilst there was a small patch of redness over the inner border of the patella. As already mentioned, there was no tenderness, nor was the joint hotter than the other; but, as there was no ground for adopting any other theory than that of a rheumatic cause, the joint was painted with iodine, and iodide and bicarbonate of potass administered internally. When seen the next morning, the patch of redness was found to have developed all the characters of herpes, and similar patches showed themselves all down the thigh in the course of the ilio-inguinal and anterior crural nerves. The knee was less painful, but otherwise there was no change in its condition. Next day the course of the long saphenous nerve, down to the heel, was involved in the eruption, and the fluid in the joint had diminished in amount. The treatment had previously been changed to the local application of collodion, and quinine and iron internally. On the fourth day the joint had regained its normal condition, and the eruption got rapidly well from that time. All possible care was taken to find out the causes which might have produced the effusion into the joint; but the only one which had facts in its favour was that the same irritation which had caused the eruption in the course of all the cutaneous branches of the anterior crural trunk (and must therefore have been considerable in amount) had been able, by its propagation along the branches of the same trunk (the nerves to the vasti internus et externus) which help to supply the knee-joint, to produce an analogous effect on the synovial membrane of that joint, and cause an effusion of fluid, accompanied by a very small amount of inflammatory action, and followed by rapid absorption. Such a condition in herpes zoster is sufficiently unusual to have remained unmentioned, though probably not unnoticed, hitherto; and the whole case may help to throw a light on the somewhat obscure operation of nervous irritation in producing the disorder in question.

Yours &c.,
EDWARD C. BOUSFIELD, L.R.C.P. Lond., &c.

Wandsworth, March 23rd, 1880.

Mr. H. Butler.—The portrait of Mr. Luther Holden, President of the Royal College of Surgeons, which has just been painted by Mr. J. E. Millais, will be exhibited this year in the Royal Academy. The portrait of Sir Wm. Fergusson was presented to the College.

VOTING PAPERS FOR UNIVERSITIES.

To the Editor of THE LANCET.

SIR,—I think attention should be drawn to the wording of the voting-paper for the Universities. In it the magistrate has to certify that the voter signs the paper in his presence and "*is personally known to him.*" It is this clause which I have italicized that I complain of. To-day I visited a resident magistrate for the purpose of swearing in my vote, but he refused to administer an oath to me or certify my signature on the ground that I was not "*personally known*" to him; and as I was not "*personally known*" to any magistrate in London I was prohibited from voting, and had to return the paper as useless.

I see by a morning paper that several persons met with a similar fate to mine at Hammersmith Police Court, and I was informed that others had been so treated at the police-station, Marlborough Street, where I attended.

I would recommend the re-wording of this clause in the voting-paper, for by its operation numbers must have been prevented from using their privilege at the recent elections.

I remain, your obedient servant,
R. VACY ASH, M.B. Aberd.

Naval and Military Club, Piccadilly, W., March 31st, 1880.

*** Instead of returning voting-papers as useless (!), graduates should apply at the offices of the local committee of the candidate they desire to support.—ED. L.

Junius.—It is a "standing order" of the General Medical Council that "the Registrar shall every year, within one month after the meeting of the Council, send to the various Bodies the names of those who have been struck off the Register." On referring to the last published list, the name of the person mentioned does not appear in that list.

Sarsiensis.—The article on the subject in "Cassell's Household Guide" is as good as any we are acquainted with.

"CARBOLIC ACID IN TYPHOID FEVER."

To the Editor of THE LANCET.

SIR,—In your number of Feb. 28th there is a case reported under the above heading, the result of which is quite at variance with my own experience.

In the early part of 1872 I treated almost simultaneously four cases of typhoid fever with carbolic acid internally, and regret to say that, as I had anticipated, the duration of the disease was not shortened at all. Since that date I have never had a case of typhoid in which I have not used carbolic acid internally, not, however, with the hope of limiting the duration of the fever, but to arrest decomposition of food.

While on the subject, may I suggest the case quoted by Mr. Weekes to have been one of "febris nervosa" or "abortive typhoid," the identity of which with typhoid I most positively deny; for the more I see of typhoid the more I am certain that, whether it runs a severe or light course, treatment will not shorten the period or render the disease abortive.

Faithfully yours,
Staunton-on-Wye, Hereford, March, 1880. PETER GILES, Jun.

A Fellow.—The statement in the Calendar of the College of Surgeons that the annual elections into the Council, and of President and Vice-Presidents, take place on a *Friday*, is evidently an error. These elections are held on the first and second *Thursday* in July respectively.

Delta should make application to Professor Liveing, Cambridge.

ELECTIONS AT THE COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—May I ask you to insert in your next issue the following statement of facts?

Mr. T. H. Bartleet, a well-known Birmingham surgeon, who has taught Anatomy and Physiology in our school for eighteen years, was nominated, for the recently vacant office of Examiner in Physiology at the Royal College of Surgeons, by Mr. Henry Power, who had special knowledge of Mr. Bartleet's capabilities for the post, and whose judgment on such a matter is, I presume, above cavil. Mr. Bartleet had been nominated on at least one previous occasion. He was prepared to fulfil the duties of the office at any sacrifice. On Thursday last the Council accepted the recommendation of the Examination Committee, and elected Mr. Jeremiah M'Carthy, of St. Mary's Hospital. Mr. M'Carthy is two years Mr. Bartleet's junior as a Fellow, and six years his junior as a Member of the College. There is not, I believe, a single provincial surgeon or representative of a provincial medical school on the Board of Examiners.

Yours faithfully,
Birmingham, March 15th, 1880. JOHN ARCHER, F.R.C.S.

MEDICAL CHARGES.

To the Editor of THE LANCET.

SIR,—As a general practitioner, my account for the attendance, as detailed by "Extra-urban Practitioner," would have been five guineas. I always charge a double fee for the first visit, as it is then time has to be spent in diagnosis, giving directions, &c. I also charge extra (generally double) in special visits, and never less than a guinea for consultation. I also charge double visiting fees in contagious cases. My experience is that half a guinea is just as cheerfully paid for a visit as 7*s.* 6*d.*; but (and I think this very important) my patients know that I never pay them an unnecessary visit.—Yours obediently,

ONE WHO WOULD ENTREAT THE PROFESSION
March 30th, 1880. TO RAISE THE STANDARD OF FEES.

Medical Student.—The Registrar of the General Medical Council, 315, Oxford-street, will give all information on the subject.

Dr. Edwin Dobson. — 1. Austin Flint, Williams, Douglas Powell.—2. Dickinson.

A DISCLAIMER.

To the Editor of THE LANCET.

SIR,—Would you oblige me by allowing me to state that, owing to similarity of names, a misunderstanding has arisen in some quarters that I have resigned my appointment as one of the physicians of King's College Hospital; whereas, as you are aware, it is my colleague, Professor Gerald Yeo, who has resigned the office of assistant-surgeon.

Yours truly,
Hertford-street, Mayfair, March 27th, 1880. I. BURNEY YEO.

HORSE FURNITURE, ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET,

SIR,—I take advantage of your pages to draw attention to the very ugly horse furniture laid down for A.M.D. officers. The following changes are needed:—Bosses on the bit, bearskin wallet-covers, and departmental gold-lace on saddle-cloth. Nothing can be uglier than the present trappings; they are utterly funereal.—Yours, &c.,

March, 1880. I. V. R. C.

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Mr. Johnson.—1. There are 1233 Fellows of the College of Surgeons, including 549 who have received the distinction by examination.—2. Fellows only vote for election into the Council.—3. Mr. Erichsen is the Senior Vice-President.

W. M. E. had better not attach much importance to medical advertisements in the daily press; rather let him consult a duly-qualified practitioner in the case he mentions.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Gowers, London; Mr. Hitchings, Oxford; Mr. Harrison, Liverpool; Mr. Cragie, London; Mr. Davies, Liverpool; Mr. F. Canton, London; Mr. Nixon, London; Major Freeborn, Manningtree; Dr. H. L. Snow, London; Mr. Southam, Manchester; Dr. Maclachlan, Dumbarton; Mr. Hillis, Mahaica; Mr. Manners, Rugeley; Dr. Bulkley, New York; Dr. Cutter, Boston, U.S.; Mr. Maitland; Dr. Godson, London; Mr. R. Lucas, London; Mr. Gray, Ottery St. Mary; Mr. Wrixon, Sarratt; Mr. Orr, Scarborough; Mr. Taylor, Buxton; Mr. Van Abbott; Mr. Mackenzie, London; Messrs. Letts and Son, London; Mr. Shone, Great Marlow; Dr. A. Sheen, Cardiff; Mr. Whitford, London; Mr. Austin, London; Mr. J. Howell, London; Dr. Brookfield, Brondesbury; Mr. Baber, Brighton; Dr. W. J. Smyth, Shipley; Mr. Kemp, London; Dr. Sawyer, Birmingham; Dr. Allanson, Edinburgh; Dr. Roberts, Manchester; Mr. A. E. Barker, London; Dr. Skerritt, Dr. E. M. Nelson, St. Louis; Dr. Steavenson, Ben Rhydding; Mr. G. H. Macnamara, Uxbridge; Mr. Hardman, Blackpool; Mrs. Cookson, Cambs; Messrs. Milner, Lancaster; Mr. Gotelee, Odiham; Messrs. Griffin and Co., London; Messrs. Fannin and Co., Dublin; Mr. Logan, Newcastle; Mr. Wright, Leeds; Mr. Stilliard, Birmingham; Mr. Piet, Baltimore; Mr. Hall, Aberystwith; Mr. Simpson, Pontefract; Messrs. Hennig Brothers; Mr. Jones, Chepstow; Dr. Poole, Sidcup; Mr. Marriott; Mr. Cox; Mr. Dodd, Brighton; Mr. Chadwick, Leeds; Dr. Struthers, Leith; Dr. Eberle, Easingwold; Dr. Hartree, Strantown; Mr. Edgill, Manchester; Mr. Thorpe, Sheffield; Mr. J. Real, Brighton; Mr. Finlay; Mr. Milne, Aberdeen; Mr. Venman; Mr. Keith; Dr. W. Fairbank; Dr. Tatham, Salford; Mr. Murray, London; Dr. Pedlow; Dr. Markey; Mr. Ash, London; Mr. Walsh; Mr. Croly; Mr. Hargreaves, London; Mr. Yorkshire, Caherciveen; Dr. Brushfield; Mr. Powell, Bromyard; Dr. W. S. Playfair; Surgeon-Major; M.D. Edin.; Candidate; One who would entreat the Profession to Raise the Standard of Fees; Sarniensis; Juvenis; Delta; The Dean of the College of Preceptors; The Manager, Hardwick Mansions; X.; J. M.; Intending Candidate; Æsculapius; M.R.C.S.; L. V. R. C.; J. W. R.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Taylor, Glasgow; Dr. Squire, London; Mr. Newen, Forest-gate; Dr. Keeling, Sheffield; Mr. Stevens, St. Austell; Dr. Fausset; Mr. Parsons, Tamworth; Mr. Girling, Birmingham; Dr. Maxwell, Woolwich; Dr. Alkin, Denton; Mr. Brady, Romford; Mr. Beatton, Tingwall; Mr. Turner, Hingham; Major Searman, Newcastle; Dr. Thomson, Ampthill; Messrs. Harrison and Brass, Newcastle; Messrs. Harvey and Reynolds, Leeds; Mr. Cook, Leeds; Mrs. Harris, Leighton; Mr. Hyde, Buxton; Dr. Kennedy, Dublin; Mr. Brough, West Kensington; Mr. Barlow, Dalston; Mr. Vivian, Southgate; Mr. Wilson, Eastbourne; Mr. Farrar, Bradford; Mr. Sawyer, Bradford; Mr. Astley, Hungerford; Mr. Brend, Bethnal-green; Mr. Silverlock, London; Medicus, Dartford; M. M., Kington; M. M. A.; C. A. B., Salisbury; Hollingbrook; Medicus, Southport; Deltoid, Old Brompton; M. D. M., Worksop; Dispenser, Hyde-park; M.D., Regent's-park; Surgeon; S. T., Sheffield; Medicus, York; Dr. G.; Cymro; April; Alpha; M.D., Hanover-square; S. H.; Assistant, Charlton; Delta, Old Trafford; W. J., York Town; Statem, Bow; &c.

Bristol Mercury, East-End Observer, Lincoln Gazette, Record, Manchester Guardian, Liverpool Daily Post, Surrey Advertiser, Students' Journal, Newcastle Daily Chronicle, Western Morning News, Medical Herald, Gazetta degli Ospitali, Los Avisos, Indian Medical Gazette, Australian Medidal Journal, Gazeta Medica da Bahia, Pharmaceutical Journal, Apotheker Zeitung, Western Lancet, El Medico y Cirurjano Centro-Americano, &c. &c., have been received.

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NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

Agent for the Advertising Department in France—
M. BERTHIER, 104, Boulevard St. Germain, Paris.

Medical Diary for the ensuing Week.

Monday, April 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. C. T. Williams, "On a Case of Gastric Ulcer treated by Nutritive Injection."—Mr. Malcolm Morris, "On the Therapeutical Value of Arsenic in Cutaneous Disease."

Tuesday, April 6.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Huxley, "On Dogs, and the Problems connected with them."
PATHOLOGICAL SOCIETY OF LONDON. — 8½ P.M. The following Specimens will be shown:—Sections of Molluscum Contagiosum; Sections and Photographs of Elephantiasis; Horny Growth from Eyelids; Melanosis of Finger; Congenital Syphilitic Disease of Larynx; Section of Spinal Cord from a Case of Tetanus after Ovariotomy; Multiple Ivory-patch Morphœa in process of rapid Recovery (living specimen); Skin Disease, probably Lichen Ruber (living specimen); Recent Division of the Tendo Achillis; Ramifying Cyst in the Brain; Calcareous Tumour loose in Abdominal Cavity; Aneurism by Anastomosis of the Ear; Laryngeal Perichondritis in Typhoid Fever and in Small-pox; Elongation of Limb in connexion with Knee-joint Disease; Aortic, Mitral, and Tricuspid Constriction; &c.

Wednesday, April 7.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
HUNTERIAN SOCIETY.—7½ P.M. Council Meeting.—8 P.M. Mr. Jacobson will show a Case of Gastrostomy.—Dr. Fletcher Beach, "On Types of Imbecility."
EPIDEMIOLOGICAL SOCIETY. — 8 P.M. Dr. G. B. Longstaff, "On some Statistical Indications of a Relationship between Scarlatina, Puerperal Fever, Erysipelas, and certain other Diseases."
OBSTETRICAL SOCIETY OF LONDON. — 8 P.M. Specimens will be shown by Drs. Galabin, Bantock, Godson, Murphy, and Roper.—Papers: Dr. Godson: "Removal of Fibroid Out-growth from Fundus Uteri; Recovery."—Mr. Knowsley Thornton: "Removal of Uterine Fibroids by Laparotomy."—Dr. John Williams, "On some Periodical Changes which occur in Fibroid Tumours of the Uterus, and their Significance."

Thursday, April 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Tyndall, "On Light as a Mode of Motion."

Friday, April 9.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—7 P.M. Conversation and Exhibition of Objects.
ROYAL INSTITUTION.—8 P.M. Evening Meeting.—9 P.M. Professor Huxley: "Coming of Age of the Origin of Species."
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Nettleship, "On two Cases of Sympathetic Ophthalmitis, setting in three weeks after Excision of the other Eye."—Mr. Marsh, "On some Cases of Bone-setting, with Remarks."—Mr. Barwell, "On Section of the Femur above the Small Trochanter for Angular Anchylosis of the Hip."—Mr. Clutton, "On a Case of acquired Hypertrophy of one Limb."—Dr. Stephen Mackenzie will exhibit a Case of Elephantiasis treated by Elastic Bandages.

Saturday, April 10.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. James Sully, "On Art and Vision."

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THE

Lumleian Lectures

ON

THE DIGESTIVE FERMENTS, AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians,

BY WM. ROBERTS, M.D., F.R.C.P., F.R.S.,

PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY; PROFESSOR OF CLINICAL MEDICINE TO THE OWENS COLLEGE.

LECTURE I.—PART II.

DIASTATIC FERMENTS—DIGESTION OF STARCH.

THE importance of starch as an article of human food has, perhaps, scarcely been duly recognised. If we regard the enormous proportion in which the seeds of cereals and leguminous plants and the tuber of the potato enter into our dietary, and the immense percentage of starch in these articles, it is probably not too much to say that fully two-thirds of the food of mankind consists of starch.

In the raw state, starch is to man an almost indigestible substance; but when previously subjected to the operation of cooking it is digested with great facility.

Diastase has only a feeble action on the unbroken starch granule, even at the temperature of the body. In the lower animals, and in germinating seeds, the starch granule is probably attacked in the first instance by some other solvent, which penetrates its outer membranes, and thus enables the diastase to reach and act on the starchy matter contained within. By the aid of heat and moisture in the process of cooking, the starch granule is much more effectively broken up. Its contents swell out enormously by imbibition of water, and the whole is converted, more or less completely, into a paste, or jelly, or mucilaginous gruel. It is in this gelatinous form exclusively, or almost exclusively, that starch is presented for digestion to man.

The digestion of starch is accomplished by the saliva and pancreatic juice, both of which are rich in diastase. Diastase also exists abundantly in the liver, and in smaller quantities in the intestinal juice, in the blood, the urine, and apparently in all the interstitial juices. Diastase from all these diverse sources appears to act substantially in the same manner on starch, changing it by a progressive hydrolysis into sugar and dextrine.

If the action of a fluid containing diastase—say saliva or extract of pancreas—on starch paste be watched, the first effect observed is the liquefaction of the paste and the production of a diffluent solution. This change is effected with great celerity—in two or three minutes the stiff paste becomes a watery liquid. This is evidently a distinct act—and antecedent to the saccharifying process which follows. By operating with small proportions of diastase and large proportions of pure starch paste it is possible to hit on a moment when liquefaction is complete and saccharification is not yet begun. At this moment the solution yields a pure starch reaction, and no reaction of dextrine nor of sugar. The process of saccharification follows immediately on the heels of liquefaction; and in ordinary manipulations the one process runs into the other.

The speed of the action depends primarily on the proportion of the diastase. By adjusting the proportions of diastase and starch in such degrees that saccharification will be completed in about a couple of hours, the successive steps of the process can be leisurely followed by applying from time to time the appropriate tests.

If you test as soon as liquefaction is complete you get a pure blue with iodine and a slight reaction of sugar with Fehling's solution. In a few minutes the sugar reacti n becomes more decided; and, although you still get a pure blue with iodine in the ordinary way of testing, you will get, by greatly diluting the blue solution and then adding more iodine, a deep violet tint—showing the presence of erythro-dextrine mixed with starch. The next step is the total disappearance of the blue reaction with iodine, and the substitution for it of an intense reddish-brown colouration of erythro-dextrine. By and by the reddish-brown colour is replaced by a yellowish-brown—indicating the preponderating presence of a different kind of erythro-dextrine. Meanwhile the sugar reaction goes on increasing. The next step is the entire disappearance of any kind of colouration with iodine. But the action is still very far from complete—the proportion of sugar goes on increasing for a considerable time after iodine has ceased to tint the solution. At length however matters come to a standstill, and the proportion of sugar ceases to increase.

The explanation of this series of reactions is impossible on the old view of the constitution of starch. Until recently it was supposed that the starch molecule was represented by the comparatively simple formula $C_{12}H_{20}O_{10}$, and that under the influence of diastase this molecule was resolved by hydration into two molecules, one of dextrine and one of grape-sugar.

The researches of Musculus and O'Sullivan[1] have shown that this is not a correct account of the transformation. In the first place it was found that the sugar produced was not grape-sugar (dextrose), but another kind of sugar called *maltose*. It was also found that the dextrines first produced, and which were coloured red or brown by iodine, were progressively changed, with simultaneous production of sugar, into a series of dextrines of a lower type which did not yield any colouration with iodine. To these latter kinds of dextrine the term achroo-dextrines has been applied.

As maltose is now ascertained to be the kind of sugar which is mainly produced in the digestion of starch by diastase, this body assumes a new and considerable importance in physiological chemistry, and it will not be out of place here to give some description of its properties. Maltose is a fermentescible, crystalline sugar of the saccharose (cane-sugar) class, having very little sweetening power, and possessing one atom less water than grape-sugar. Its formula is $C_{12}H_{22}O_{11}$. It possesses more rotatory power on polarised light than grape-sugar, but has considerably less power of reducing cupric oxide. The rotatory power of maltose is +150, that of grape-sugar +58. The reducing power of maltose is 61 compared to that of grape-sugar as 100. Maltose can be hydrolysed into grape-sugar by prolonged boiling with dilute acids. Malt-diastase does not possess this power, but we shall presently see that the diastatic ferments of the small intestine are able slowly to effect the same change.

The researches of Musculus and O'Sullivan have rendered it necessary to assume that the molecule of soluble or liquefied starch is a composite molecule, containing several members of the group $C_{12}H_{20}O_{10}$—which is to be regarded as the constituent radical of the composite starch molecule. The starch molecule must in the future be represented by the formula $n(C_{12}H_{20}O_{10})$—the value of n not being yet definitely agreed upon.

Two able chemists of Burton-on-Trent, H. T. Brown and J. Heron, have extended these researches, and fully confirmed the main conclusions of Musculus and O'Sullivan. In a recent publication (*Journ. Chem. Soc.*, Sept. 1879), they have for the first time presented a fairly complete scheme of the succession of changes undergone by starch under the action of diastase. These chemists assume that the molecule of soluble starch consists of ten members of the group $C_{12}H_{20}O_{10}$, and that its formula should be written $10(C_{12}H_{20}O_{10})$. This view greatly facilitates the comprehension of the progressive hydrolysis of starch by diastase.

We have seen that starch in the condition of paste or jelly is distinguished sharply by its physical properties from liquefied or soluble starch. There must therefore in all probability be some difference of molecular aggregation between starch in these two states—and it will not be a very bold assumption to suppose that starch in the gelatinous state consists of still more complex molecules than soluble starch—and that several molecules of soluble starch are grouped together to form the molecule of starch in the gelatinous state.

On the ground of these assumptions we may represent the successive steps of the digestion of gelatinous starch by the following series of equations.

The molecule of gelatinous starch $= n(C_{12}H_{20}O_{10})$ is first resolved into n molecules of soluble starch. The molecule

[1] O'Sullivan's papers are published in the Journal of the Chemical Society, from 1872 to 1876. A full account of these researches is given in a paper in the same journal for September, 1879, by T. H. Brown and J. Heron.

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of soluble starch is then resolved by progressive deduplication and hydration into dextrine and maltose by the following succession of steps :—

One molecule of soluble starch $= 10(C_{12}H_{20}O_{10}) + 8(H_2O) =$

1. Erythro-dextrine α $9(C_{12}H_{20}O_{10}) + (C_{12}H_{22}O_{11})$ maltose.
2. Erythro-dextrine β $8(C_{12}H_{20}O_{10}) + 2(C_{12}H_{22}O_{11})$,,
3. Achroo-dextrine α $7(C_{12}H_{20}O_{10}) + 3(C_{12}H_{22}O_{11})$,,
4. Achroo-dextrine β $6(C_{12}H_{20}O_{10}) + 4(C_{12}H_{22}O_{11})$,,
5. Achroo-dextrine γ $5(C_{12}H_{20}O_{10}) + 5(C_{12}H_{22}O_{11})$,,
6. Achroo-dextrine δ $4(C_{12}H_{20}O_{10}) + 6(C_{12}H_{22}O_{11})$,,
7. Achroo-dextrine ϵ $3(C_{12}H_{20}O_{10}) + 7(C_{12}H_{22}O_{11})$,,
8. Achroo-dextrine θ $2(C_{12}H_{20}O_{10}) + 8(C_{12}H_{22}O_{11})$,,

The final result of the transformation is represented by the equation $10(C_{12}H_{20}O_{10}) + 8H_2O = 8(C_{12}H_{22}O_{11}) + 2(C_{12}H_{20}O_{10})$.
Soluble Starch. Water. Maltose. Achroo-dextrine.

We must conceive that the energy of the ferment is exercised in gradually pulling asunder the component groups or radicals of the unstable molecule of soluble starch, detaching one after another from the parent molecule, each radical as soon as detached assuming an atom of water and becoming an atom of maltose. At each detachment the parent molecule draws its remaining groups together to form a new kind of dextrine. As the process goes on the dextrine molecule becomes smaller and smaller—that is, contains fewer and fewer component radicals; the higher dextrines giving a red or brown colouration with iodine, but the lower dextrines giving no reaction with iodine.

It is to be noted that after the transformation has reached its final term there still remains a portion of achroo-dextrine unconverted into maltose. Upon this remnant diastase has only a very slow action. The percentage result, when the reaction is completed, gives, in round numbers, eighty parts of maltose and twenty parts of achroo-dextrine. The eight varieties of dextrine indicated in the above table of equations have not all been obtained in the separate state, but there is strong evidence of the existence of at least several of them as distinct bodies.

The account just given of the transformation of starch has been deduced from a study of the action of diastase derived from malt. The question arises—physiologically an important question—whether the action of salivary and pancreatic diastase is identical with that of malt-diastase. The researches of Musculus and V. Mering[2] give an affirmative answer to this question. These observers found that saliva and pancreatic extract act on starch paste in the same way as malt-diastase, the final products in all cases being achroo-dextrine and maltose, and not dextrose (grape-sugar). At my suggestion Mr. H. T. Brown was good enough to submit the question to a fresh examination in regard to pancreatic extract. His results fully confirm the conclusions of Musculus and V. Mering. He found, however, that there was a slight difference in the results when the action of pancreatic extract and malt-diastase on starch were continued a long time. The pancreatic ferment, in addition to the power, which it shares with malt-diastase, of slowly converting the lowest achroo-dextrine into maltose, exhibited a power of slowly changing maltose into dextrose (grape-sugar) which is not possessed in any degree by malt-diastase. Mr. Brown also informs me that there is in the small intestine a ferment which possesses similar properties.

The respective shares of Saliva and Pancreatic Juice in the Digestion of Starch.

The respective shares of saliva and pancreatic juice in the digestion of our farinaceous food is probably variable and perhaps not quite identical.

As all our farinaceous food is eaten after being cooked, the starch in it is more or less completely gelatinised; it is, therefore, probable that one of the chief uses of salivary diastase in man is to liquefy starch jelly. A very brief contact suffices for this, and it is manifest that the accomplishment of this change is an important advantage in the subsequent operations in the stomach. Our gruels, blancmanges, puddings, and similar farinaceous dishes owe their thick pasty condition to starch in the gelatinous state, and nothing can be imagined more resistent to the rapid permeation of the meal by the gastric juice, and to the pulping of it into a uniform chyme, than the presence of coherent masses of starch paste. If the saliva performed no other service than this it would furnish an important aid to digestion of a meal.

[2] Maly's Jahresbericht für Thier-Chemie for 1878, p. 40.

There has been considerable dispute as to whether, and how far, the saccharification of starch goes on in the stomach. My observations lead to the conclusion that this depends on the degree of acidity of the contents of the stomach, and it is known that this varies within very wide limits. When a meal is swallowed it takes some time for the gastric juice to permeate the mass, and the acidity of the gastric contents is for some time very feeble. As digestion proceeds the contents of the stomach tend to become more and more acid. This is a point which each one can observe for himself. The stomach is by no means reticent of its doings. The posseting which we see in infants goes on in a less degree in the adult, and we are perforce made aware, sometimes inconveniently so by our palates, of the ascending scale of acidity in the stomach. Saliva acts energetically in neutral and in slightly acid media, but its activity is checked and finally arrested when the acidity becomes pronounced. When digestion is proceeding comfortably and normally a certain interval elapses before the acidity of the stomach becomes considerable, and during this interval the salivary diatase continues active, and has time to accomplish a good deal of work. But we must remember that our farinaceous food is, for the most part, not in the most favourable condition for rapid digestion. It is not generally in a state of mucilage, but in the form of a solid paste, as in bread, puddings, and pastry. A good deal of it, too, is imperfectly cooked. Consequently, the larger part of our starchy food reaches the duodenum still unchanged, or only partially changed, and this larger part of the work is consummated by the pancreatic juice in the alkaline medium of the small intestine. I shall have to return to this point in speaking of gastric digestion.

It has been noted as curious that the saliva of man possesses more diastatic power than that of almost any other animal. Among the herbivora, which are such large consumers of starch, the saliva has comparatively little diastatic power; and in some, as in the horse, it is almost or altogether wanting. I apprehend that this is due to the fact that man alone has learnt to cook his starchy food, and that the diastatic power of his saliva has become developed with the opportunity for its exercise. Diastatic power would be thrown away in the saliva of the horse, because he eats his food in the raw or uncooked state, and saliva is without action on raw starch.

When can Starch be said to be fully Digested?

Seeing that in the digestion of starch a number of intermediate products are evolved, the question arises when can the digestion of starch be said to be accomplished? Is maltose the only product absorbed, or are not the dextrines, especially the achroo-dextrines, also absorbed? The dextrines, even those coloured by iodine, are highly diffusible, and pass freely through parchment paper in dialysis. In this respect they contrast strongly with starch jelly, and even with liquefied (or soluble) starch, both of which are undialysable. It seems not improbable that the lower dextrines are largely absorbed. Because if we follow the history of starch after it has been transformed by digestion, and absorbed, we are confronted with the remarkable fact that after absorption the products of starch digestion, or at least a large portion of them, undergo a reconversion in the liver into a substance closely resembling undigested starch. Glycogen, in its essential features, is an exact counterpart of soluble starch. It forms an opalescent solution in water; it is undialysable, and it is transformed by diastase into dextrine and maltose.

It appears reasonable to suppose that it would be an advantage to the economy if that portion of our starchy food which is destined to be stocked in the liver as glycogen should be absorbed at an early period of the digestion, because the less removed the digested product is from starch at the moment of absorption the fewer steps it will have to retrace in recovering the amylaceous state after absorption.

It is not necessary to suppose that the ascending steps of the reconversion are identical with the descending steps of digestion, but it is probable that they are fundamentally alike, seeing the close similarity of the products at the two ends of the journey. At any rate, there is no warrant in the present state of knowledge for the opinion that sugar is the only absorbable product of starch digestion.

Absolute Energy of Diastase.

The notion that the energy of diastase is not consumed in action seems, on *à priori* grounds, to be quite untenable; such a notion contravenes a general principle in physics,

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that energy in performing work is expended and finally exhausted. It is easy to show experimentally that diastase is no exception to this rule. Payen and Persoz estimated that malt diastase was able to convert two thousand times its weight of starch into sugar. My own experiments with extract of pancreas indicated a much higher power than this. The following experiment illustrates at the same time the enormous diastatic power of pancreatic diastase and the fact that this power is strictly limited.

A quantity of starch mucilage was prepared, containing one per cent. of pure potato starch—100 cubic centimetres of this mucilage contained exactly one gramme of dry starch. The pancreatic extract employed was prepared in the following manner:—Fresh pig's pancreas, freed from fat, was rubbed up with an equal weight of fine sand until it became a smooth uniform pulp. This pulp was spread out very thinly on sheets of glass, and allowed to dry in the open air for a fortnight. It was then scraped off with a knife, and formed a rough shreddy sort of powder. 125 grammes of this mixture of pancreas and sand were infused, at the temperature of the room, in 1000 cubic centimetres of saturated chloroform water, with a little more chloroform added to insure against decomposition. The mixture was allowed to stand for four days with occasional agitation, and the product was then filtered clear through paper. The extract of pancreas thus prepared proved a very serviceable preparation, and most of my observations on pancreatic digestion were made with it.

This extract was found to be so extremely active that it was necessary to dilute it largely in order to bring the quantities of starch operated on within due compass. Accordingly a dilution was made of one cubic centimetre of the extract in 1000 cubic centimetres of water. Five numbered phials were then severally charged with 100 cubic centimetres of the prepared starch mucilage—so that each phial contained exactly one gramme of dry starch. One cubic centimetre of the diluted pancreatic extract was added to phial No. 1, two cubic centimetres to No. 2, four cubic centimetres to No. 3, six cubic centimetres to No. 4, and eight cubic centimetres of the same diluted extract to phial No. 5. The phials were then corked and placed in a warm chamber, where the temperature was steadily maintained by a Page's regulator at 100° F. (38° C.)

At the end of twenty hours the contents of the phials were examined. All of them were perfectly transparent, and had entirely lost the opalescent appearance of the original starch mucilage, and not a vestige of sediment existed in any of them. The following reactions indicated the progress of the transformation.

No. 1 gave an intense blue colouration with iodine, and when the blue solution was largely diluted and more iodine added, it developed a violet tint which showed the presence of erythro-dextrine; it also reduced the cupro-potassic solution freely.

No. 2 gave a strong blue reaction with iodine, and by diluting and adding more iodine, the colour changed to a deep claret-red, indicative of abundance of erythro-dextrine. This and all the rest gave a strong sugar reaction with Fehling's solution.

No. 3 yielded no blue reaction with iodine, but an intense port-wine colouration of erythro-dextrine.

No. 4 gave no blue reaction with iodine, and only the faintest possible brown colouration with that reagent, showing only traces of erythro-dextrine.

No. 5 exhibited not a vestige of reaction with iodine. It contained neither starch nor erythro-dextrine, but it yielded a strong sugar reaction.

The transformation of No. 5 might be regarded as complete, but the rest still contained starch or erythro-dextrine, or both. Nos. 1, 2, 3, and 4 were restored to the warm chamber and re-examined at the expiration of seven hours. No. 4 no longer gave the slightest reaction with iodine, but Nos. 1, 2, and 3 showed only slight signs of further alteration, and were returned to the warm chamber.

At the end of forty-eight hours from the commencement of the experiment, Nos. 1, 2, and 3 were examined again. No. 1 showed a strong blue colouration with iodine, and also a strong reaction of erythro-dextrine. No. 2 no longer gave any blue tint with iodine, but it exhibited an intense erythro-dextrine reaction. No. 3 only gave a yellowish-brown reaction with iodine of moderate intensity.

After a further sojourn in the warm chamber of seventy hours the contents of the three phials were not found to be sensibly altered; they gave exactly the same reactions as before. It was evident that in these phials the diastatic action had run its course to an end within the period of forty-eight hours, and that the solutions had then come to a state of rest, the ferment had liberated all its energy, the limits of its power had been reached, and the task allotted to it was left unfinished. Nevertheless it had accomplished an amount of work which, considering its infinitesimally minute mass, appears marvellous. We shall now endeavour to measure approximatively the amount of this work as indicated by the above experiments.

The original pancreatic extract, when evaporated to dryness in a water-bath, was found to leave a residue of 1·5 per cent. of organic matter. This organic matter included, besides diastase, a quantity of proteolytic ferment (trypsin) and a certain quantity of the milk-curdling ferment. It also included a certain quantity of digested proteid matter, for in making an extract of the pancreas there is always accomplished some self-digestion of the glandular tissue.

Taking into account these various admixtures, it would appear a very liberal allowance to estimate the diastatic ferment as amounting to one-fourth of the total organic matter. This would give us for the original extract a proportion of diastase in round numbers of 0·4 per cent., and for the diluted extract of 0·0004 per cent.

The proportion of diastase added to phial No. 4 seems to have hit off with precision the limit of quantity required to transform one gramme (15·5 grains) of starch in forty-eight hours at a temperature of 100° F. (38° C.) The amount of diluted extract added to this phial was six cubic centimetres, and on the basis of the above estimate, this represents a quantity of net diastase amounting to 0·000024 gramme. This yields us, by an easy calculation, the astounding result that pancreatic diastase is able to transform into sugar and dextrine no less than 40,000 times its own weight of starch!

The speed at which a given quantity of starch is transformed by diastase depends essentially on the proportion of ferment brought to act upon it. In the above experiments the proportion of diastase was very minute in comparison with the amount of starch, and the action went on slowly for forty-eight hours. But if we reverse these proportions and mix a small amount of starch with a large amount of diastase the transformation is instantaneously accomplished.

If a test-tube be half filled with an active extract of pancreas and a few drops of starch mucilage be quickly shaken therewith, you cannot detect the reaction of starch or dextrine in the mixture, however prompt you may be with the testing—the transformation has followed on the admixture as instantaneously as the explosion of the charge follows the fall of the trigger. Between these extremes there are all gradations. This mode of action differs entirely from what is seen in the operation of ordinary chemical affinity. If you add a drop of acid to an excess of alkali, the acid is instantly neutralized and the action comes to an end; and conversely, if you add a drop of alkali to an excess of acid, the action is equally instantaneous; the affinity of the two bodies for each other is a mutual affinity. But this is not the case with the action of diastase on starch. The starch appears entirely passive in the process; all the energy is on the side of the diastase, and this energy can only be liberated gradually. There is something in this strikingly suggestive or reminiscent of the action of living organisms. To illustrate my meaning, let us compare the particles of the ferment to a band of living workmen whose function is to scatter little heaps of stones. If the heaps are few and the workmen many, all the heaps will be scattered at once, and the energy of the workmen will still remain sensibly unimpaired. But if the heaps are millions and the workmen hundreds, and if the workmen are doomed to labour on until they fall exhausted at their task, the scattering of the heaps will go on for a comparatively long time, and the process of exhaustion will be a gradual one.

I may here mention that the diastatic ferment does not exist in the saliva and pancreatic juice of young suckling animals, except in minute proportions. Its quantity increases when the teeth are cut. In the human infant diastase does not appear to exist in sufficient abundance to digest starchy matters effectively until about the sixth or seventh month. Until this period it is therefore not advisable to administer farinaceous food to infants.

DIGESTION OF CANE-SUGAR—INVERSIVE FERMENT.

Bernard[3] first called attention to the fact, already mentioned, that cane-sugar (saccharose) required digestion both

[3] Claude Bernard, Leçons sur les Phénomènes de la Vie, tom. ii. p. 36. Paris, 1879.

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in animals and plants before it could be utilized in nutrition. The cane-sugar stored up in beet-root and in the sugar-cane is changed by ferment-action into invert-sugar before it is permitted to circulate in the sap, and take part in the nutritive operations of the plant. He found also that an analogous transformation was requisite before cane-sugar could be assimilated by animals. He states that when cane-sugar is injected into the blood it circulates therein as an inert body, and is in no degree used as nutriment by the tissues, but is eventually entirely removed unchanged with the urine. Cane-sugar is, however, an important article of food, and is consumed by us in large quantities every day; and we know that when thus consumed it does not behave like an inert matter, circulating a while in the blood, and then being eliminated by the kidneys as a waste product. It is evidently absorbed and assimilated, and must, therefore, somewhere or other be transformed or digested in animals as it is in plants. Reasoning this way, Bernard sought for an inversive ferment for cane-sugar in the alimentary tract; and after searching in the saliva, in the stomach, and in the pancreas in vain, he at length discovered it in the small intestine. In the small intestine he found that cane-sugar was transformed into invert-sugar, and by a similar ferment with that destined for analogous purposes in yeast, in beet-root, and in the sugar-cane.

The transformation of cane-sugar into invert-sugar is represented by a very simple equation:—

$$\underset{\text{Saccharose.}}{2C_{12}H_{22}O_{11}} + \underset{\text{Water.}}{2H_2O} = \underset{\text{Dextrose.}}{C_{12}H_{24}O_{12}} + \underset{\text{Lævulose.}}{C_{12}H_{24}O_{12}}$$

The inversive ferment was detected by Bernard in the small intestine of dogs, rabbits, birds, and frogs. Balbiani found it in the intestine of the silk-worm. It was recognised by myself in an extract of the small intestine of the pig, the fowl, and the hare. It does not exist in the large intestine.

But, although my observations on this subject coincided in the main with those of Bernard, I noted two points which I think merit further attention. The first was that while a piece of small intestine infused in water yielded a mixture which was capable of inverting cane-sugar, the same infusion when filtered through paper until it was perfectly clear had no such power. It seemed as if the inversive ferment did not pass freely, if at all, into true solution, but remained attached to some of the formed elements contained in the intestine. The second point I noted was the extreme slowness of the action. When cane-sugar was added to the unfiltered infusion of intestine, and the mixture maintained at blood heat, it generally took a couple of hours before a reducing effect with the copper test could be obtained. Both these circumstances reminded one of the action of formed ferments, and I could not help thinking that there was here something which required clearing up at some future time.

THE

Gulstonian Lectures

ON

EPILEPSY.

Delivered before the Royal College of Physicians,

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LECTURE III.—PART III.

THE treatment of epilepsy is a subject on which numerical analysis gives little help. A large number of cases are under observation too short a time to enable the effect of remedies to be fairly estimated; and of the cases in which benefit is derived, we have no means of ascertaining how many relapse when treatment is discontinued. My notes of the result of treatment in this series of cases extend to 562 cases only. In the remainder, either the period of observation was too short for a just conclusion to be drawn, or, in the press of out-patient work, the influence of remedies was not noted with sufficient precision. The effect of treatment is more likely to be recorded when it is distinct and considerable than when it is slight. Hence the following figures have no relative value. Of the 562 cases, the attacks ceased while the treatment was maintained in 241; doubtless many of these relapsed when treatment was discontinued, but in a few I have been able to ascertain that the patients remained free from fits even for years after they ceased to take medicine. In 266 cases improvement short of arrest was obtained; the fits being reduced in many to $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, and even $\frac{1}{10}$ of their former frequency. In 55 cases little improvement was obtained by any method of treatment.

Time forbids me to enter at any length on the details of treatment, and I can do little more than mention the remedies which in this series of cases were of most distinct service. The subject of possible modes of action it is better to leave almost untouched. It may be doubted whether a rational therapeutics of epilepsy is yet possible. At any rate, up to the present time remedies used empirically have been of most service.

Although the results show that we must not only rely exclusively upon bromides in our treatment of epilepsy, they show also, as might be expected, that on these our chief trust must still be placed. Of the arrests of fits, 66 per cent., and of the improvements short of arrest, 62 per cent., were due to bromides given alone. Of the three alkaline salts of bromide, that of potassium deserves, I think, as it has popularly received, the first place. I have made a careful comparison between the salt of sodium and potassium in a series of about fifty cases, substituting the one for the other. In a few cases the sodic salt appeared to do better; in the great majority it was distinctly less useful. Bromide of ammonium possesses slightly more power than bromide of potassium, but this is not greater than the larger quantity of bromine which it contains will account for.

The period after its administration at which maximum effect of a dose of bromide is obtained varies, I believe, with the dose. The larger the dose the longer is maximum effect deferred; the smaller the dose the sooner does it occur, and the sooner is its action over. When small doses are employed in cases in which attacks occur at regular times, they should not therefore be given more than two or three hours before the attack is expected. This is contrary to some opinions which have been expressed, but I have several times known attacks arrested when a dose was given some two or three hours before the fit was expected, which were not arrested when the same dose was given twelve hours earlier.

The effect of bromide upon fits appears to be for a time cumulative, just as is, indeed, its action in causing bromism. Attacks may continue under its administration for a time, and yet ultimately cease without any increase in the dose. On the other hand, still later, tolerance, or rather indifference, may be established, and attacks which have been for a time arrested may ultimately recur.

Drugs which increase reflex action, such as strychnia, are now believed to do so by lessening the resistance in the nerve-centres involved. Bromide diminishes reflex action, antagonises strychnia, and it is probable that it does so by increasing the resistance in the centres. If the view above expressed be correct, that the morbid state in epilepsy is essentially an instability of the resistance in the cells, it is also probable that bromide acts by increasing the stability of this resistance.

Bromide is commonly administered in a continuous course, in such moderate doses as will just suffice to keep the fits in check. Given thus it needs to be given frequently. I have more than once observed that a daily quantity which given in two doses did not quite arrest the fits, arrested them completely when given in three doses. If, therefore, the greater convenience of infrequent doses, one or two daily, is preferred, a somewhat larger quantity needs to be given.

When bromide is thus given continuously, it has not seemed to me desirable to increase the daily dose beyond a drachm or a drachm and a half. If this does not arrest the fits, I have very rarely found that larger doses succeed so well as the combination of bromide with other drugs. But it is, I think, open to question whether this method of administration, using doses only just sufficient to arrest the fits, is the wisest in all cases. If bromide cures epilepsy, as without doubt it does sometimes, it must be by effecting a nutritive change in the nerve-cells corresponding to its action, whereby they are rendered permanently more stable. That it, or any other drug, does good in epilepsy by influencing the vascular state of the brain, appears to me without even probable proof. Even if such were its action, we are only driven back to a similar influence in increasing the

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stability of the cells of the vaso-motor centre. There are, I think, many grounds for the belief that the change in the nutrition of the cells may be produced more effectually by subjecting the patient *for a time* to the full influence of bromide, giving doses much larger than are needed to arrest the fits, in the hope of producing more readily a permanent nutritive change. In giving bromide thus I have preferred large doses at intervals of two or three days, gradually increasing the dose until it is as large as can be well borne, and then diminishing it. The largest single doses which I have given in this way have been doses of one ounce. This in some patients produces slight stupor, sometimes reaching its maximum on the second day after the dose. In other cases it produces very little disturbance beyond headache. From the marked differences which patients present in their tolerance, it is not well to begin this method of treatment with a larger dose than four drachms.

The value of the various combinations of bromide with other drugs was tested, as far as possible, on a uniform plan. First, bromide was given alone for several months, and then additional drug was added to the same dose of bromide, and the result watched for several months longer. Of the various combinations which are in common use, those with digitalis and belladonna unquestionably deserve, as they have commonly received, the first place. Digitalis is one of the oldest remedies for epilepsy. It was recommended by Parkinson two hundred years ago, and has been perhaps for a still longer time a popular remedy for this disease in certain rural districts in the west of England. I have met with no case in which, given alone, digitalis arrested the fits for more than a few months, but in several cases it effected very distinct improvement. The combination of digitalis and bromide, however, was distinctly more useful than bromide only, in no less than sixty-three cases. In more than half of these, thirty-seven cases, the attacks ceased under its use, although they had continued under bromide alone. In the cases in which cardiac disturbance was associated the combination was almost always superior to bromide alone; but its use is not confined to these cases. Many cases of nocturnal and other forms of epilepsy yielded to the combination, although the attacks had continued under bromide, and this when there was no evidence of cardiac disease. I know of one patient with nocturnal epilepsy who, for two years, under this combination, has not had a single fit, although the attacks occurred every few weeks on bromide only.

In rare cases belladonna alone will arrest attacks. I have met with only one case in which attacks, which continued on bromide, ceased entirely when belladonna was substituted, and this was a case with hystero-epileptic symptoms. The combination of bromide and belladonna, however, was distinctly better than bromide alone in 35 cases, and in 15 of these arrest of the fits was thus obtained.

Indian hemp was first employed in epilepsy by Dr. Reynolds, and is sometimes of clear valu e. In one case the attacks were invariably arrested for many months by its use, recurring only when the patient ceased attendance, but twice on his resuming attendance the drug instantly arrested the attacks. When bromide was substituted for the Indian hemp the attacks at once recurred. Combined with bromide it is also sometimes useful, and seems to exercise most influence over attacks in cases in which there is persistent headache. The same fact has seemed true of the combination with gelseminum, which is occasionally of marked service.

The use of opium in epilepsy has long been advocated by Dr. Radcliffe, and in some cases it is certainly effective. The combination of bromide and morphia I have rarely found to present special advantages. In the status epilepticus in which attacks occur with great frequency and severity, and where bromide, even in large doses, was useless, I have found small hypodermic injections of morphia of great service.

The combination of bromide with aconite and hydrocyanic acid I have also tried, and found in some cases slightly better than bromide only. The addition of iodide to bromide has been lately said to increase its effect. Occasionally this is true, and in four cases of the series the combination was distinctly better than bromide only, but in many other cases it was ineffective. Even in the cases on the subjects of inherited syphilis it has not appeared of special value.

Zinc unquestionably deserves some of the repute it has enjoyed for more than a hundred years as an anti-epileptic. Of the cases of this series in which it was employed it was distinctly useful in ten, but in only three did the attacks cease. In three other cases attacks which continued under bromide ceased under bromide and zinc, and in a fourth they ceased under zinc, digitalis, and bromide. The oxide of zinc was the form commonly employed. Its nauseating influence constitutes a serious drawback to its use, as toleration is difficult to establish, and I have rarely succeeded in giving more than twenty grains a day. Bromide of zinc has seemed of small value, and is borne badly. The addition of arsenic to bromide in no case produced any marked effect on the attacks. It was used in a large number of cases on account of the readiness with which, it was found, the bromide rash could be prevented by its use.

Bromide of camphor, highly praised by Bourneville, was tried in a considerable number of cases, but without any good results. Turpentine has been recommended by Dr. Radcliffe, and I have seen it produce very striking benefit, but only in cases of hystero-epilepsy.

The use of iron in epilepsy has been discountenanced by high authorities, on grounds which are not altogether beyond question. In rare cases it increased the frequency of attacks; in the majority of cases in which it was used it was borne without any ill result; in many the addition of iron to bromide was attended with a marked and permanent improvement, and in some cases iron alone arrested the fits. The series includes 4 cases which ceased under iron only, and 8 others in which iron alone was distinctly better than bromide, and 19 cases in which the addition of iron to bromide exercised a marked influence. In no less than 11 cases attacks which persisted on bromide, ceased on the addition of iron, and remained absent as long as the treatment was continued.

In several inveterate cases of epilepsy in which bromide had no effect, I have tried borax. In some cases it did no good, but in 12 its value was most distinct. I may mention one or two. In one, fits which had continued on bromide and on zinc ceased entirely on borax for three months, and then only recurred when the medicine was discontinued. In another case the fits continued, about one weekly, during three months' treatment on bromide and on belladonna. Borax was then substituted, the fits at once ceased, and for five months the patient had not a single fit; then he had one in each of the two following months; the dose of borax was increased, and up to the present time, eight months later, no other attack has occurred. In a third case, one or two attacks occurred once a fortnight on bromide. Borax was substituted, and for five months the patient had not a single fit. The doses given have been ten or fifteen grains twice or three times a day. It produces in some patients gastro-intestinal disturbance, and rarely, a form of dysenteric diarrhœa. By others it is well borne, and one of my patients has taken forty-five grains a day for twelve months without the slightest inconvenience, and says that no medicine has ever done him so much good. In cases in which bromide fails, borax certainly deserves a trial.

The use of cocculus indicus in epilepsy, recommended by Dujardin-Beaumetz, has lately attracted attention in consequence of the recommendation of Planat. I have tried the alkaloid picrotoxine in a few instances, but in only one case has it appeared to do good. My own experience of its use has, however, been small, and I am very much indebted to my colleague, Dr. Ramskill, for permitting me to mention some interesting results which he has obtained by the hypodermic injection of picrotoxine. His experience of its effect on the fits when given through the skin is nearly the same as my own of its employment by the mouth. In seven cases in which it was injected, in daily doses of from one to four milligrammes, no beneficial result was obtained; in most cases, indeed, the attacks were rather more frequent and severe. Of course, we are not justified in assuming that the effect of picrotoxine and of the cocculus indicus itself are identical. A very interesting fact has, however, been ascertained by Dr. Ramskill—viz., that picrotoxine in larger doses of from fifteen to eighteen milligrammes will almost invariably produce a fit in twenty or thirty minutes. In one patient, for instance (according to the notes of Mr. Broster, who carried out the experiments), the dose was daily increased, and when more than five milligrammes were injected a sensation of giddiness followed, similar to that with which the attacks commenced. The same effect followed larger injections, and when the dose reached eighteen milligrammes a severe attack occurred thirty minutes later, and an attack always

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followed the injection of this dose. In another patient a similar progressive increase of the dose was followed by giddiness and headache, when eight milligrammes were injected. When the dose of fifteen milligrammes was reached a severe epileptic fit followed. Next day a second dose of fifteen milligrammes did not cause a fit, but eighteen milligrammes, two days later, caused a fit in half an hour. After a week's intermission, twenty-four milligrammes were injected, and a severe fit occurred in twenty-five minutes. In a third patient a fit occurred after one injection of eight milligrammes, but ten milligrammes next day caused no fit. Fifteen milligrammes, however, were followed by a fit in thirty minutes, and a second injection of the same dose the following day caused a fit in fifteen minutes. Seventeen milligrammes next day caused a fit in thirty minutes. In a fourth patient a single dose of eighteen milligrammes caused, in ten minutes, giddiness and slight dazzling before the eyes, and in thirty minutes there occurred the usual aura of an attack—a sensation of something creeping up the right arm to the top of the head, and numbness and twitching in the right thigh, but no fit followed, although the patient was stupid and dull for a time just as after a fit.

Among other drugs which I have tried and found useless I may mention benzoate of soda and nitro-glycerine.

In hystero-epilepsy bromides, sometimes useful, fail entirely much more frequently than in simple epilepsy, and the combinations with digitalis and belladonna are also less frequently useful. Iron, especially guarded by aloes, is often of the highest value, quite apart from the existence of anæmia, and next to it valerianate of zinc, morphia, and turpentine.

High authorities have urged on different grounds that the diet of epileptics should contain little or no animal food. In a few observations which I have made by keeping a patient under unaltered medicinal treatment for alternate periods on a diet with and without animal food, I could observe no difference in the attacks, except that in one patient they were slightly more frequent in the periods when animal food was excluded, and in one patient hystero-epileptic attacks on ordinary diet became, when meat was excluded, severe epileptic fits, and again became hystero-epileptic when animal food was restored.

In pure epilepsy the only treatment needed during the attacks is such care as shall secure the patient, as far as possible, from injury. It is very different with the attacks of hystero-epilepsy, which, from their character, severity, and long duration, often furnish the attendants with a task of no small difficulty, and which can, almost always, be cut short by appropriate treatment. The patients often hurt themselves during the attacks, and some control is absolutely necessary. But, as already stated, restraint tends to increase the violence and makes the paroxysm last longer. Hence considerable judgment is often required, so to adjust control as to be efficient and not too much. I have seen these patients put within padded partitions and left alone, but I have never myself found this necessary.

The slighter attacks can be arrested by closing the mouth and nose with a towel for some thirty seconds, after Dr. Hare's method. The profound effect on the respiratory centre, and the related higher centres, caused by the anoxæmia, seems to arrest the convulsive action. Cold water over the head is often successful if applied freely; in severe attacks a moderate quantity only excites redoubled violence, while a second gallon is often more effectual than the first. This has the disadvantage of drenching the patient's head, and often giving cold. When the mouth is open during the attacks a small quantity of water poured into it is often effectual. A much more convenient and more effectual remedy than water, however, is strong faradisation to the skin; applied almost anywhere it will commonly quickly stop the attack. Of ovarian compression I spoke in the last lecture. In this country it is rare that ovarian pressure will arrest an attack. In some cases all these means fail, even when thoroughly used, and I have known such attacks go on, in spite of skilled treatment, for several hours. Chloroform is of little use; its administration is a matter of extreme difficulty, often impossibility, and the attack is commonly renewed when the influence of the anæsthetic passes off. The remarkable effect of nausea in relaxing spasm, led me some years ago to try the effect of injections of apomorphia, and I have found in it an unfailing means of arresting the attacks. After the injection of a twelfth of a grain in four minutes with certainty all spasm ceases, and normal consciousness is restored; in six minutes the patient will get up and go to the sink; in eight minutes will vomit, and afterwards, except for slight nausea, is well. A twentieth of a grain has the same action, but is rather longer in its operation. Moreover, I have found that the treatment is, so far as the hysteroid symptoms are concerned, curative as well as palliative, for the attacks in many cases ceased after a few paroxysms had been thus cut short.

I regret that in this survey of some points in the clinical history of these diseases it has been necessary to omit all reference to many facts regarding symptoms, diagnosis, and prognosis, which are presented by the series of cases analysed. I am conscious that as it is, in the details I have introduced, I have made a large demand upon your patience. But it is only by ascertaining the facts of these diseases that we can hope to learn their nature, or to find the guidance in our efforts at prevention or at cure.

Whatever may have been the nature of the demoniacal possessions of old, few who have watched an epileptic fit can doubt that they have their representatives among us still. The old power of casting them out has gone from the earth; and it is only by the study of their origin and history, and careful experiment in their treatment that we can hope to regain over them such power as may still be possible to man. And the present generation has witnessed an advance in the treatment of these diseases, equalled in perhaps no other branch of therapeutics. Thanks to the influence of one drug, the use of which in epilepsy is due wholly to Fellows of this College, hundreds of epileptics have been cured, and thousands are leading useful lives who would otherwise have been incapacitated by the disease. Although the condition of many sufferers is still gloomy enough, it is not without hope, and to them also, we may surely trust, the progress of the recent past is the dawn of a brighter day.

Lectures
ON THE
PHYSICAL EXAMINATION OF THE MOUTH AND THROAT.

Delivered to the Junior Class of Clinical Medicine, University College,

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LECTURE I.

THE PHYSICAL SIGNS DERIVABLE FROM THE BREATH, LIPS, TEETH, AND MOUTH.

GENTLEMEN,—It is my duty to bring to your notice the various physical signs of disease which are to be obtained from an examination of the throat and windpipe; but inasmuch as it is impossible to properly examine the throat without at the same time examining the mouth and nose, I think I shall be best fulfilling my duty by dealing methodically not only with the throat, but also with the oral and nasal cavities which lie above it.

The physical signs met with in these regions of the body appeal not only to the sight, touch, and hearing, but occasionally to the sense of smell as well; and the first thing which forces itself on our attention is often the odour of the breath.

The *smell of the breath* is a valuable physical sign, and in many diseases is so characteristic as to enable the man of experience to form a diagnosis from it alone with almost absolute certainty. It is impossible to describe the various odours of the breath; experience alone will enable you to distinguish one from the other, and I shall merely content myself with cataloguing some of the most distinctive of them. The smell of drink is the most common of all, and in cases of insensibility is often a valuable indication of the cause. It may give a valuable hint as

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to the habits of the patient; and I would here remind you that over-indulgence in alcoholic liquors is one of the most common causes of congestion and catarrh both of the pharynx and larynx. You must not run too quickly to the conclusion that because a man's breath smells of drink he is necessarily a drunkard, for a single glass of wine or beer is sufficient to impart an odour to the breath for some time after it has been taken. When directing your attention to the alcoholic smell of the breath in the presence of the patient, I am in the habit of speaking of it as *oinosmia* (from *οἶνος*, wine, and *ὀσμή*, an aroma), since patients naturally resent having attention bluntly called to the fact that they smell of drink.

The presence of carious teeth imparts an odour to the breath which is quite characteristic, and which, according to Mr. Salter, resembles no other odour except that given off by the genus of neuropterous insects called Chrysopa. Want of attention to the mouth, and allowing food to lie between the teeth and decompose, or the presence of decomposing matters in the crypts of the tonsils, imparts a foul odour to the breath. A disordered stomach also causes the breath to be fetid.

A peculiarly disgusting and perfectly characteristic odour of the breath is present in those cases of chronic inflammation of the nasal and pharyngeal cavities, which are known from this fact as ozæna, and which are most often due to caries or necrosis of the nasal bones which is generally of syphilitic origin. The smell, however, may be present without any disease of the bones in cases of chronic inflammation of the cavities occurring in scrofulous subjects.

In cases of dilatation of the bronchial tubes accompanied by ulceration and copious purulent discharge, the smell of the breath is peculiar and almost diagnostic of the condition, and in gangrene of the lung the odour of the breath reaches a degree of foulness which once smelt can never be forgotten.

In cases of fever, with high temperature, a dry mouth, and the accumulation of sordes on the teeth and gums, the smell of the breath is peculiar. In pyæmia and in diabetes the breath has a sweet odour, but the odour in each of these diseases is perfectly distinguishable.

With inflamed gums the breath is apt to smell. This is peculiarly the case in patients under the influence of mercury, and the term mercurial odour of the breath is one in common use. In scurvy the breath is apt to be very foul. It is needless to say that certain articles of diet, as garlic and onions, and certain drugs, as turpentine, copaiba, and some of the essential oils, are detectable in the breath.

The *inspection of the lips* is capable of furnishing many facts which are of great service in forming a diagnosis. The *form* of the lips is characteristic in different races; thus the thick lips of the African negroes and the thin lips of most European races are well known. In conditions of general plethora the lips look swollen and big. A few cases have been recorded of great hypertrophy of the lips and neighbouring parts, a notable example being given by Mr. Barwell in the eighth volume of the Clinical Society's Transactions.

The *colour* of the lips is a matter of great importance. After great loss of blood the lips may appear of a waxy whiteness, and such an appearance should at once lead to questions likely to elucidate this point. A recent confinement attended by hæmorrhage is the most common cause of this appearance in women. Anæmia and leucocythæmia, arising from no matter what cause, produce a pallor of the lips, and in investigating cases of anæmia, we invariably look to the mucous surfaces of these parts. It is right to remind you, however, that undoubted evidence of hydræmia may be present without any very obvious alteration of the tint of the lips.

The lips are often unduly red in cases of general plethora and in the early stages of many febrile conditions. A cyanotic tint of the lips may be due to extreme cold, to those malformations of the heart which give rise to the condition known as cyanosis, and to a mal-aeration of the blood arising from no matter what cause, atmospheric, pulmonary, or cardiac. A patch of herpes on the lips (herpes labialis) is very commonly seen. It is a common accompaniment of an ordinary cold, and it is well to bear in mind that such an appearance may be indicative of more serious trouble, such as pneumonia. It is sufficiently often an accompaniment of pneumonia to make it incumbent upon us always to investigate this point when we are confronted with a patch of herpes on the lips.

In febrile conditions the lips get dry and cracked, and sordes accumulate upon them. Sordes are collections of dried mucus, evaporated saliva, and food particles, which cannot be removed, owing to the general dryness of the mouth and the paucity of the salivary secretions. This condition of the lips is seen in the most extreme degree in the state known as the typhoid condition, in which also the lips are often brown or almost black.

Round the margins of the lips are occasionally seen cracks, white lines, and little pits, the latter reminding one of the appearance known as the linea albicantes which occurs on the abdomen after pregnancy. These appearances occurring on the lips are sufficient to raise a suspicion of congenital syphilis. The other indications of syphilis which we may find upon the lips are: (1) a true infecting sore or hard chancre, which is happily rare; and (2) mucous tubercles, which may be present in cases of congenital or acquired syphilis. These mucous tubercles have the same appearance when seen here as when seen elsewhere—flat, slightly elevated patches, with a dirty-whitish surface, surrounded by a congested areola. Epithelioma is among the more rare diseases of the lips, concerning which one should be on one's guard.

The *movement* of the lips is a matter of great diagnostic importance. The muscular power of the lips may be impaired or abolished in several distinct conditions, such as hemiplegia, facial palsy, bulbar or labio-glosso-laryngeal paralysis, and general paralysis of the insane.

In hemiplegia the lip palsy is often slight, and in very slight cases which have partially recovered, a trifling drooping of the prolabium of the upper lip on one side, just sufficient to destroy the symmetry of the "Cupid's bow," is all that we can detect. The observation of this slight drooping and want of symmetry should always lead to an investigation into the history of the patient, and to questions likely to elucidate the question of hemiplegia. In marked cases of hemiplegia, and in cases of facial palsy from disease or injury to the trunk of the facial nerve, the paralysis of one-half of the lips is easily demonstrated, and on asking the patient to show the teeth it will be observed that the teeth are imperfectly exposed on the paralysed side, and the angle of the mouth is drawn over to the sound side. Facial palsy may be double, and then this want of symmetry is not observed, but the face is expressionless, and the teeth and gums cannot be exposed.

In bulbar paralysis the condition is usually bilateral, and the patient is quite unable to move the lips. In the later stages of this disease the lips waste, and the under lip droops so as to expose the gums and allow the saliva to run out of the mouth.

In general paralysis of the insane there is a paretic condition of the lips, and when they move they do so in a hesitating, jerky manner which is very characteristic.

In alcoholism the movement of the lips is also often tremulous. In chorea the lips are liable to those uncertain jerky movements which are so characteristic of this condition. In "muscular tic" one side of the mouth may be the seat of spasmodic movement. Lastly, in tetanus and spinal meningitis there occurs that condition which is called the risus sardonicus, which is caused by a spasmodic retraction of the angles of the mouth.

Dribbling of saliva is a symptom which is due to many causes. It may be due to an excessive secretion of saliva, a condition seen in cases of mercurial poisoning, and in some other states. It is present in cases where there is deficient movement of the lips and tongue, as in bulbar paralysis, or in cases where movement of the tongue is rendered impossible or painful by the presence of sores and ulcers. In patients also with whom the act of swallowing is impaired or painful, as in cases of paralysis or stricture of the pharynx, or inflammation of the tonsils or throat, dribbling of saliva is apt to occur. In children dribbling is a physiological condition, owing to a want of vigour and purpose in the movements of their lips and tongues, and in idiots this infantile condition would seem to be permanent. Old writers considered the dribbling of saliva to be characteristic of idiots and madmen.

An *inspection of the gums* occasionally affords important evidence of disease. Their *colour*, like the colour of the lips, may be pale or red or livid, and is an indication of anæmia or plethora or those conditions mentioned in connexion with the lips which give rise to a cyanotic tint. The gums are sometimes spongy and congested, and liable to bleed at slight causes. This is often the case in depressed conditions of health, arising from whatever cause. It is

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present in a marked degree in persons who are under the influence of mercury, and to a less extent in those who are taking iodide of potassium. In leucocythæmia and in Hodgkin's disease the gums are often swollen and pale, and occasionally they are stated to become gangrenous. In purpura hæmorrhage from the gums is a common occurrence. In scurvy the gums are very greatly and remarkably affected. They become sore and apt to bleed at the slightest touch, and get swollen, spongy, and livid. The lividity is stated to be most marked at the free edges. The swelling of the gums is so great as occasionally to obscure the teeth, and in extreme cases they protrude between the lips. They get livid and almost black, and undergo sloughing and ulceration, which causes the breath to be peculiarly offensive. The sloughing may leave the crowns of the teeth exposed, and in such cases the teeth commonly fall out. Dr. Buzzard states that this condition of the gums is by no means invariably present in scurvy, and that all the other symptoms of the disease may be present in a marked degree, while the gums are not noticeably affected. Indeed, the gums in scurvy may occasionally be paler than usual and contracted.

A blue line upon the gum may, in the vast majority of cases, be taken as certain evidence that the patient is suffering to a greater or less extent from lead-poisoning. This "blue line" is due to a deposit of lead sulphide in the tissues of the gum. Dr. Hilton Fagge has made sections of the margin of a gum affected with a lead line, and by the aid of the lower powers of the microscope was able to see that the discoloration was not uniform, but was distributed in the form of rounded loops. The pigmentation was seen to be due to minute granules, and these granules were situated sometimes in the interior of the smaller bloodvessels, and sometimes outside them in the tissue immediately adjacent. The deposit is in reality black, its blue appearance being due to the fact that it is seen through a thin translucent layer of gum. Care must be taken not to mistake the purple congested edge of the gum of persons who do not clean their teeth for the deep blue line which is caused by lead. The blue line is produced by the action of hydrogen sulphide upon the lead which is presumably circulating in the blood. The hydrogen sulphide is produced by the decomposition of food particles lodging between the teeth, and adhering to the tartar. Persons who are careful to keep the teeth clean, and in whom no decomposition of the food particles takes place, may be suffering from lead-poisoning and yet have no lead-line upon the gums. The lead-line once formed, and being due to the deposit of an insoluble salt, may remain for months after the system has been freed from lead. Persons who have been exposed to the action of lead may exhibit no line upon the gums until after the administration of iodide of potassium. This is difficult of explanation, but the fact admits of little doubt. The blue or black discoloration caused by lead is not always limited to the margin of the gums, but may occasionally form black patches on the inside of the lips or cheeks.

Occasionally among the ill-fed and dirtily-kept children of the poor, and especially during the first dentition, the gums become swollen and the edges ulcerate, the ulcerated surface being covered with a dirty-grey secretion. This condition is known as gingivitis accompanied by offensive breath, and some increase in the flow of saliva.

The *teeth* often afford valuable evidence of constitutional conditions. Delayed dentition is apt to occur in children that are debilitated from any cause, but more particularly is this the case in rickets. Finding the dentition delayed, we should always search for other evidence of rickets. The milk teeth should begin to appear at the seventh month, and should be all "cut" by the end of the second year. The teeth appear in the following order—central incisors, lateral incisors, anterior molars, canine and posterior molars; and each of these five groups appears by the seventh, ninth, twelfth, eighteenth, and twenty-fourth month; the number of teeth which a child should have at the end of the months named being four, eight, twelve, sixteen, twenty. It may be some help to the memory to call attention to the fact that when a child is twelve months old there should be twelve teeth in the mouth. These numbers are liable to great deviation even in health. Some healthy children are precocious, while others are backward in the matter of dentition. The teeth may be wholly or in part deficient as the result of congenital defect. Caries or decay of the teeth is so common in this country that very few escape from it. It is more common in women than men, and is predisposed to by pregnancy and by the scrofulous and tuberculous constitutions. It is said to be caused by the generation of acid from the fermentation of food particles lodged between the teeth. There is a condition known as "rocky" enamel, in which the enamel of the teeth is grooved and pitted and honeycombed. This condition is brought about by rickets, or by any depressing illness occurring during dentition. Occasionally the teeth get excessively worn, so that they appear truncated, and the dental arch presents the appearance of a flat level border, the exposed dentine presenting a yellowish appearance. This condition, of which a very good sample was lately attending in my out-patient room, is rare, and is said to be predisposed to by syphilis, and to be favoured by the use of gritty food. Mr. Jonathan Hutchinson has pointed out that a peculiar condition of the permanent teeth often exists in patients who are the subjects of inherited syphilis. The incisors and canine teeth are small, peg-like in shape, narrow at the free edge, and either excavated by a crescentic notch at the margin or marked by a crescentic groove. The conical condition is most marked, according to Salter, in the lower, and the crescentic notch is most conspicuous in the upper incisors. When the teeth are lost very early in life, inquiry should always be made as to whether the patient has taken much mercury, and, if so, for what reason.

The *mucous membrane of the mouth* is sometimes swollen and red as part of a general catarrh. It may be swollen in consequence of gastric irritation, brought about by errors in diet. In children who are ill fed, and especially during dentition, small, circular, painful ulcers called aphthæ very frequently appear upon the gums and the internal surface of the cheeks. They are almost always an indication of gastric disturbance from injudicious feeding. When we get the mucous membrane of the mouth inflamed, and upon the inflamed surface a parasitic fungus (the oidium albicans) growing, we have the well known disease called thrush. The mouth, tongue, and palate and pharynx may be covered with white patches, and we may be in doubt whether these patches are due to curdled milk or diphtheria, but if a small quantity be placed under the microscope with a drop of caustic potash, the well known mycelium and spores of the oidium albicans are easily seen, and serve to clear up all doubts. Whether the fungus is the cause of the inflamed condition or whether the inflamed patches form a fitting nidus for the growth of the fungus is an open question. Thrush never occurs in well nursed children, and if a young child is fed upon good milk and nothing else, thrush seldom appears. When, however, mothers give farinaceous matter to very young children, often combined with milk which is slightly sour, this sticky mixture adheres to the inside of the mouth, and if the mouth be not very carefully cleansed out after every meal, the decomposing food particles irritate the mouth, cause it to inflame, and form a soil upon which the oidium grows luxuriantly.

Thrush is liable to occur in adults towards the termination of chronic illnesses, when they are too weak to cleanse their mouths by vigorous movements of the tongue. I have seen patches of thrush also occurring in a patient the subject of labio-glosso-laryngeal paralysis, because the movements of the mouth were too feeble for the purpose of properly cleansing it. The lesson to be learnt from these facts is that in feeble persons the mouth needs to be artificially cleansed after feeding by being sponged out with some antiseptic, such as a solution of borax, or, perhaps, there is nothing better than peppermint water, which to many persons is agreeable and refreshing.

ON LITHOTRITY;

WITH CASES ILLUSTRATING THE IMPORTANCE OF EARLY DETECTION OF THE STONE; AND STATISTICS OF STONE OPERATIONS IN THE HOSPITALS OF GLASGOW FROM 1795 TILL 1880.

BY GEORGE BUCHANAN,

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(Concluded from p. 523.)

NUMERICALLY stated, my experience is far too limited to be of any value; still I give it for what it is worth. I have performed lithotomy fifty-five times, with eight deaths, or one in about seven operated on, a proportion very similar to that obtained by examining tables of lithotomy at all ages,

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and involving large numbers of operations. But when we separate cases under from those over puberty, the contrast is striking. Of the whole number, twenty-nine were over fifteen years of age, and the mortality after lithotomy in them was six, or one in five. There were twenty-six cases under fifteen years of age, and the mortality was two, or one in thirteen. On the other hand, I have had twenty-four cases of lithotrity with three deaths, or one in eight. Of these three, one died of apoplexy in twelve hours, some days after the stone was removed. The other two were, I confess, cases that should not have been operated on at all, either by one way or the other; the state of the patient and bladder being very unfavourable to any operative interference. This is just one of the difficulties a surgeon often meets with. His patient has arrived at a stage of suffering when life is unsupportable without relief, and he prefers to accept the remotest chance of success rather than to endure any longer the agony he is undergoing. In such circumstances lithotomy is very likely to be fatal, but if any operation is to be made, it ought to be selected. But these are just some of the cases which in the future will be the subjects of lithotomy, so that in proportion as lithotrity gains ground, and the suitable cases are chosen for it, in the same proportion lithotomy will become less frequent, and, being only reserved for cases unsuitable for lithotrity, will become more fatal.

It is clear, therefore, that the statistics of lithotrity ought yearly to become more favourable in consequence of being restricted to selected cases, while lithotomy will show a higher mortality than heretofore, in consequence of being performed only in cases unsuitable for the other. This must of course, even now, be taken into account in comparing extensive tables of lithotrity and lithotomy. But the concurrent testimony of all who have had large experience of both operations, as Civiale, Sir B. Brodie, Sir W. Fergusson, Sir Henry Thompson, &c., is decidedly in favour of the crushing operation.

Sir B. Brodie performed lithotrity 115 times, with a mortality of 1 in 12. Sir William Fergusson had 109 cases of lithotrity, with a mortality of 1 in 9. His mortality in adult lithotomy in 110 cases was 1 in 3⅓. Sir Henry Thompson, in 1878, reported 500 cases of stone operated on in the adult male—the total number of his operations up to that date. The total mortality was 1 in 8½. Of these, 78 were lithotomy, with a mortality of 2¾; the rest, 422, were lithotrity, with a mortality of 1 in 13. The total of these three operators is 646 cases of lithotrity, with a mortality of 53, or 1 in 12¼. These were all in adult males.

As a contrast, I quote Sir Henry Thompson's table showing the results of lithotomy as performed in a number of hospitals taken together. This table was compiled with the most scrupulous accuracy, all returns being rejected which did not specify the ages of the patients. The table contains 1827 cases of lateral lithotomy of all ages. The total mortality is 1 in 8. But when the cases under puberty are separated from those over that age the result is: under fifteen, mortality 1 in 15½; over fifteen, mortality 1 in 5.

I think therefore that it may be accepted as established that lithotrity is a very safe operation for all suitable cases; and that therefore it is of the utmost importance to detect the presence of stone at a stage when lithotrity is admissible—lithotomy being reserved for cases under puberty, and for stones which have by negligence been allowed to escape notice till they are too large to be safely dealt with by the lithotrite. Like all general propositions, this admits of some exceptions. In the case of very young boys with very small calculi the lithotrite may be used with safety, even though it be necessary to reduce the size by crushing before extraction. Again, in the adult the size of the calculus to be dealt with by the lithotrite must be decided by the composition of the concretion and the manual dexterity of the operator. But the details of these exceptions are too extensive for the scope of this paper.

I shall now illustrate some of the points in the two propositions by a few of the cases which have come under my care.

1. A stone may remain in the bladder for years without causing symptoms demanding an examination of the bladder, if that has not been done on the occurrence of the first symptoms.

In November, 1861, I removed by lithotomy two stones, together weighing 1¼ oz., from a boy aged eleven. Three years before he had for a few days very acute pain with passing of blood, but that passed off. Since then he had remained perfectly well till a few weeks before I saw him, when, after a long walk, the former symptoms came on.

2. A stone may be in the bladder for a long time, single symptoms recurring at long intervals, while during the intervening periods it may cause no annoyance at all.

Mr. —— while in London in the summer of 1871 noticed accidentally on one or two occasions a few drops of blood after passing water. He consulted his medical attendant, who took Dr. —— in consultation. They agreed that it was something accidental which did not require treatment. In a few days Mr. —— was quite well. In the summer of 1872, Mr. —— was again in London. One evening he suddenly experienced a desire to pass water with a sharp pain, shooting to the point of the urethra. On relieving himself he observed some blood as formerly. This occurred two or three times during the evening, but next morning he was better. He consulted another physician, who took a light view of his case, told Mr. —— to rest a few days, and have no anxiety. The symptoms passed off, and, as before, Mr. —— was quite well. In the summer of 1873 the same thing occurred in precisely similar circumstances. Mr. —— being a little alarmed this time went to a third physician, who hearing of what had happened formerly gave the same advice—rest for a few days before going back to Scotland, rest for a few days after the journey home. Again the symptoms passed off, and Mr. —— was as well as ever. In October, 1873, Mr. —— was out shooting, when the old occurrence took place—a sudden pain at the point of the urethra, intense desire to pass urine, some drops of blood at the end and after the flow. Mr. —— went to Dr. P. A. Simpson, whom he was in the habit of consulting, who at once suggested the probability of a stone, and asked me to sound him. I detected a stone the size of a Spanish nut. In November I removed it by lithotrity in three weeks, since which Mr. —— has continued in perfect health, and free from all urinary symptoms.

3. Symptoms of chronic cystitis may predominate to such an extent as to withdraw the attention from the necessity of examining the bladder to ascertain if the symptoms are not caused or aggravated by the presence of a stone.

M——, aged thirty-five, had suffered for several years from renal calculi, which caused pain in their passage to and from the bladder. For more than a year he was free from his complaint, but in the spring of 1872 the old suffering returned, and the urine was muddy. He took no account of it until he was on the eve of a visit to London, when he mentioned it to Dr. Fergus, his ordinary medical attendant, who warned him against delay in undergoing medical treatment, and advised him as soon as he got to London to put himself under the care of a medical practitioner whom he had consulted on former visits to London. He was treated for what he was told was inflammation and irritation of the bladder. His symptoms continued to get worse, and there was added occasional obstruction to the flow of urine. He was told that most probably there was a small calculus in his urethra which would come away as the former had done. He was advised to go to Harrogate and use the chalybeate waters before he returned to Scotland. But his symptoms getting worse he came away at once, and on his arrival sent for Dr. Fergus, who expressed his opinion that there must be a stone retained in the bladder. I visited him with Dr. Fergus, and we detected the presence of a stone. This I removed by lithotrity in three weeks, and the urinary symptoms rapidly improved. In a month M—— was walking about free from pain and trouble. The stone was about the size of an almond.

4. An examination of the bladder on the first occurrence of the symptoms detects the stone, when it can be removed with the greatest facility and safety.

Mr. ——, aged sixty-five, suffered from the passage of a renal calculus in 1867. Some time after there was difficulty and pain in passing urine. Now he consulted his medical attendant, Dr. Alexander of Dundonald, who sent him to me. I detected a small hard calculus. A few days after I went to his residence with Dr. Alexander to operate. With a thin-bladed lithotrite I grasped a stone, which I extracted entire, the urethra yielding to the steadily-applied traction. The stone was oxalate, about the size and shape of a damson stone.

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W. G——, aged fifty-five, after a few months of inconvenience in passing urine, consulted Dr. James Adams, who detected a stone and sent him to my wards in the Royal Infirmary. On Feb. 21st, 1868, I performed lithotrity, and again on three other occasions. He was dismissed cured on March 8th. Weight of débris of calculus detected thirty-five grains.

5. Postponement of sounding allows the stone to grow to a size difficult and troublesome for lithotrity.

A. W——, aged twenty-seven, had urinary symptoms for more than a year before he mentioned his state to his medical attendant: pain, blood, muddiness of the urine. He was treated for many months with internal remedies, for what he was told was irritation of the bladder. Failing to obtain relief, he applied elsewhere, and he was recommended to go to Bridge of Allan and use the saline waters. Before going he consulted Dr. James Adams, who, suspecting stone, sounded him, detected the stone, and sent him to me. As the stone was larger than medium, it took from the 4th June till the 2nd July to remove it entirely. The débris collected weighed five drachms twenty-five grains.

6. When the bladder is fairly healthy and the urethra capacious, lithotrity is available for the removal of even large stones.

Mr. ——, aged sixty-five, suffered for many years from symptoms of stone before he consulted the late Dr. Fleming, who sent him to me. The stone was large and smooth, but I determined to crush it, as the urethra was large and not irritable. It took a month's time and repeated applications of the lithotrite to remove it, but it was successfully ended. The weight of the calculous matter collected was one ounce and one drachm.

7. When a very small stone is detected in the bladder of a child, it can be removed with ease and safety by a thin-bladed lithotrite.

In November, 1879, Dr. Crawford, of Uddingstone, brought to my house a little patient aged nine years, who had formerly passed uric-acid calculi. Now he was continually crying, and could not retain his urine. On sounding him, I found a small stone retained in the bladder. I put him under chloroform, and grasped the little stone in a thin-bladed lithotrite, and endeavoured to pull it through the urethra; but it was too large to leave the bladder. I therefore crushed it in pieces, some of which came away in the scoop, the rest were washed out with the first and second flow of urine.

The foregoing cases are ordinary examples of what are common occurrences; they are introduced, not as presenting anything new, but as good illustrations of the various points referred to in the two propositions with which I commenced this paper.

Statistics of the Operations for Stone in the Glasgow Hospitals.

The following *résumé*, though stated in a very few figures, represents an amount of labour which I had no idea of when I began, and which I could not have accomplished without the kind assistance of the house-surgeons in the Royal and Western Infirmaries, and particularly of Drs. M'Lachlan and Harkness.

The figures till 1859 are copied from a paper which I laboriously compiled, and published in the *Glasgow Medical Journal* for April, 1859.

From that date till 1870 the figures are taken from the printed annual reports of the Glasgow Royal Infirmary, the tables of which contain the numbers, sexes, and results, but not the ages. The ward journals and operation books during the period referred to are most imperfect; many have been lost; in others cases are omitted or not completed.

From 1870 till 1880 I have been able to make an accurate table. I first got all the cases collected from the hospital records, and submitted them to the surgeons themselves (except one who died in 1875), so that we have a clear starting-point for future statistics from Jan. 1st, 1870.

From the opening of the Royal Infirmary in 1795 till 1859 accurate records have been found of 159 cases of lithotomy in the male, with 23 deaths, or 1 in about 7 operations. Of these 95 were under fifteen years of age, with 6 deaths, or 1 in 15⅔ operations. There were 64 above fifteen years of age; of these 16 died, or about 1 in 5 operations.

From 1859 till Jan. 1st, 1870, there were 84 cases of lithotomy in the male, but the ages cannot be accurately ascertained; of these 8 died, or 1 in every 10½ operations.

THE DIAGNOSIS OF TUMOURS OF THE CEREBELLUM.

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(Continued from p. 524.)

THE most valuable signs of intracranial tumour are headache, vomiting, and pain in the head, especially when associated with convulsive or paralytic affections. I cannot here discuss the qualifications as to the value of these symptoms beyond remarking that the seat of the headache bears no necessary relation to the seat of the lesion, that vomiting is not always a pronounced symptom in children, and that optic neuritis (though not absolutely conclusive) is the best evidence of the existence of some intracranial growth.

Assuming that the presence of these symptoms assures us of the existence of an intracranial tumour, it must be borne in mind that they tell us nothing as to its situation or nature. These have to be determined by other signs and symptoms. The most important signs of the location of a tumour in the cerebellum are—(1) a reeling gait, (2) tonic convulsions, (3) movements of the eyeballs, (4) enlargement of the head.

1. *Reeling gait.*—This is usually one of the earliest and most characteristic symptoms of cerebellar disease. The "cerebellar reel," or stagger, differs entirely from the walk in locomotor ataxy, and is most like the reel of a drunken man. I have known persons with cerebellar tumour to be accused of indulging. This reeling has been attributed by Dr. Hughlings Jackson to paresis of the spinal muscles. "The seemingly erratic action of the legs in some cases of cerebellar disease is for the preservation of the balance consequent on the spinal paralysis: the patients keep their legs widely apart, and, so to speak, their legs run after the trunk to underpin it in its various inclinings from side to side and from back to front." Later in the progress of the case the spinal weakness increases to such a degree that the legs are no longer able to prop up the trunk, and the patient becomes unable to walk or stand. At the same time all movements of the legs are preserved when the patient is in the recumbent position.

2. *Tonic convulsions.*—This symptom is of the greatest importance as distinctive of cerebellar disease. It may be broadly stated that clonic convulsion is associated with cerebral disease, tonic convulsions with cerebellar disease. The degree of tonic spasm met with in connexion with cerebellar tumours is variable. Sometimes it is limited to retraction of the head, as in Case 1. Usually with this there is extension of the spine—opisthotonos,—which in some instances, as in Case 3, is as extreme as in surgical tetanus, and the range of the two is so much alike as to afford the strongest reasons for the belief that tetanus is an affection of the cerebellum. The tonic contractions are not limited to the muscles of the limbs and trunk; when the convulsion is carried a stage further the legs are extended, often to an extreme degree, and the toes are turned in, whilst the arms are semiflexed and rigid, the fingers being tightly clenched upon the thumbs. In fact, the whole of the muscular apparatus concerned in locomotion is involved, and, as in extreme locomotory efforts, nearly every muscle of the body is brought into play, we find nearly every muscle rigidly contracted. Not only are the muscles of the trunk and extremities rigid, but the abdominal muscles are hard and board-like. In some cases the facial muscles are contracted, giving rise to the so-called "risus sardonicus." This tonic contraction is at first, usually, paroxysmal, the patient between the attacks being able to move the neck, trunk, and extremities. Later in the progress of the case there is permanent rigidity, the patient maintaining the "cerebellar position," but there occur paroxysmal exacerbations of the contractions. The reeling gait and tonic spasms are both expressions of disorder of the locomotory apparatus, of which the cerebellum is the chief governing centre. I shall discuss later how disease brings about its effects.

3. *Movements of the eyeballs.*—These are frequently observed in connexion with cerebellar tumours. The movements of the eyes are generally parallel, and may be upwards, downwards, horizontal, or oblique—most commonly the

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latter. Sometimes they are only noticed during the convulsive attacks, when the eyes may be fixed in one or other direction, or may oscillate backwards and forwards in some particular direction. Later, when there is permanent rigidity, the eyes may incline strongly and persistently in one direction, with parallel oscillatory movements. These movements of the eyeballs from cerebellar disease are very interesting in connexion with the results of the experiments of Majendie, Ferrier, Hitzig, &c., and have important physiological bearings, Dr. Hughlings Jackson pointing out that the cerebellum contains processes of the eye movements and locomotor movements for estimation of distance.[1]

4. *Enlargement of the head.*—Though not invariably present, and when present not absolutely pathognomonic of cerebellar tumour, enlargement of the head, in association with the other localising symptoms, is a sign of the greatest value. The enlargement, in character, resembles that of hydrocephalus, being of exactly the same nature. The bulging is greatest above the ears, the forehead protrudes, the fontanelles open, and the sutures gape. The integument of the head becomes very thin and transparent, and the superficial veins are prominent (anastomosis?). The cause of the enlargement of the head is an internal hydrocephalus, as described at some length in Case 2. All the ventricles are found enormously dilated and deformed; full of fluid, generally clear, sometimes straw-coloured. The brain is squeezed out into a thin sac or capsule, containing the fluid: its substance is sometimes softened. The hydrocephalus is usually ascribed to pressure on the veins of Galen, which by increasing the lateral pressure on its radicles causes exudation of their fluid contents, in the same way that pressure on the portal vein causes ascites. It will be readily seen from the diagram, Fig. 4, that a tumour of the cerebellum, especially of its middle lobe—a favourite situation—will be extremely likely to compress the venæ Galeni. But I believe that whilst this may be a contributory factor in the production of the hydrocephalus, it is neither the sole nor essential one.

FIG. 4.

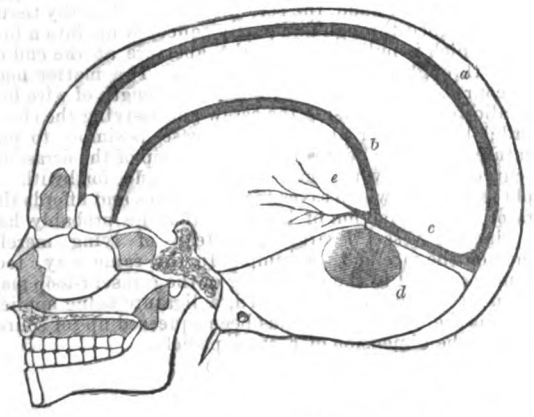

Diagram to show compression of veins of Galen by tumour of cerebellum, especially of middle lobe. *a*, Superior longitudinal sinus. *b*, Inferior longitudinal sinus. *c*, Straight sinus. *d*, Tumour beneath tentorium. *e*, Veins of Galen.

Granting that a tumour pressing upon the veins of Galen causes dropsy of the ventricles, as long as the outlet of the general ventricular cavity remains patent, as the fluid collects it will flow away. Moreover, if the pressure be extreme, it will cause obliteration of the vein. But it will readily be seen by reference to the diagram, Fig. 5, that subtentorial tumours, especially when involving the middle lobe, will be extremely likely to cause constriction or obliteration of the cerebro-spinal foramen or some point above this—the fourth ventricle or aqueduct of Sylvius. Such was certainly the condition in Case 2, where the medulla oblongata was strongly squeezed antero-posteriorly. I have seen the same condition in other cases. When the communication between the general ventricular cavity and the subarachnoid space is obliterated, the fluid poured out by the choroid plexuses, and possibly the obstructed venæ Galeni is dammed up, distends the ventricles, and causes the extreme hydrocephalus sometimes found. This view

1. Clinical and Physiological Researches on the Nervous System, p. 25.

was entertained by the late Mr. Hilton, and some instructive cases are mentioned by Wilks and Moxon.[2] As these authors remark, we see a like result brought about sometimes in chronic internal hydrocephalus. I recently made a necropsy in such a case, and found old and recent basilar meningitis glueing the membranes and obstructing the cerebro-spinal foramen. Some valuable observations on this subject have been made by Drs. Gee and Barlow.[3]

FIG. 5.

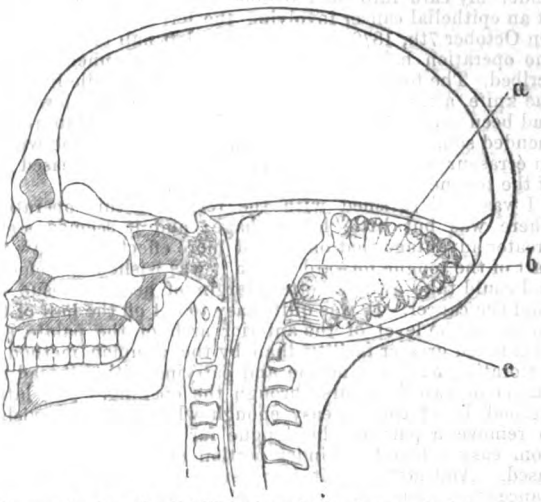

Diagram to show the liability of cerebellar tumour to interrupt the communication between ventricular cavities and subarachnoid space. *a*, Tentorium cerebelli. *b*, Fourth ventricle. *c*, Cerebro-spinal foramen. A tumour in situation of the cross would obliterate the cerebro-spinal foramen, above that point, the fourth ventricle.

The effects of this dropsy of the ventricles is very interesting and characteristic. The very gradual and equable (water) pressure to which all parts of the brain are subjected causes a gradual "blotting out" or dissolution of what mental faculties have been obtained, and the order of this blotting out is very instructive to the psychologist. From a conscious volitional being, the patient is reduced to a mere automaton, or to a vegetative existence. In this condition he may continue for a considerable time.

(To be concluded.)

ON REMOVAL OF THE TONGUE BY MEDIAN DIVISION OR SPLITTING.

By W. MORRANT BAKER, F.R.C.S.,

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A FEW years since I read with much interest in an address on Clinical Surgery, delivered in the University of Glasgow by Dr. George Buchanan, that he had found it a good plan, in removing one-half only of the tongue for cancer, to divide the organ in the middle line with the knife, after sawing through the lower jaw at the symphysis. Dr. Buchanan claims for this operation the advantage of being able to remove in many cases all the disease, and of saving, in part, those muscular attachments of the hyoid bone to the lower jaw, the complete severance of which had led to so much trouble in Mr. Syme's earlier cases in which he divided this bone as a preliminary measure to removal of the tongue.

It seemed to me, after reading Dr. Buchanan's paper, that the method of dividing the tongue in the middle line with the knife was capable of much wider application than to those cases only in which it was requisite to saw through the lower jaw. In other words, the use of the knife could be advantageously combined with that of the écraseur in cases in which the latter instrument had been hitherto used to the exclusion of the knife, on account of the fear of trouble-

2. Pathological Anatomy, p. 215.
3. Cervical Opisthotonos of Infants, St. Bartholomew's Hospital Reports, vol. xiv., p. 23.

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some hæmorrhage. The anatomical fact that there is but a sparse anastomosis of the branches of the lingual vessels across the middle line of the tongue could be turned to good account, it seemed to me, so far as the employment of the knife was concerned; while the écraseur could be slipped, after division of the tongue in the median line, over the half which it was desired to remove and complete the operation.

I soon had an opportunity of performing the operation in the case of a woman aged thirty-seven, who was admitted under my care into St. Bartholomew's Hospital on account of an epithelial cancer involving the left side of the tongue. On October 7th, 1876, I removed the left half of the tongue, the operation being performed after the manner just described. The tongue was divided along the middle line with the knife, after its attachments in front to the lower jaw had been partially severed, according to the plan recommended some years since by Sir James Paget. The wire of an écraseur was then applied far back over the diseased half of the tongue beyond the seat of disease.

I was well satisfied with the result of this operation. There was but little hæmorrhage; and it seemed a still greater advantage that one could more effectually draw the part of the tongue forward which it was wished to remove, and could take away a better margin of healthy tissue behind the cancer. It was quite easy to cut off the half of the tongue at the level of the anterior arch of the palate, and with much greater facility than by the common method of perforating with the needle and carrying with a thread the chains of two écraseurs through the opening. The latter method is, of course, easy enough when it is not wished to remove a part of the tongue far back, but it is far from easy when the hinder portion of the tongue is diseased. And although it is possible under these circumstances to loop the wire or cord of the écraseur behind the disease with the help of curved needles thrust through the tongue behind the cancer, yet the loop when tightened up is almost certain to squeeze forward the needles; and the back part of the disease and not healthy tissue is apt, after all, to be crushed through, and a portion, therefore, to be left behind—a result which it is impossible to take too much care to avoid; for if there be one part of the body more than another in which a wide margin must be given to malignant disease, in an operation for its removal, it is the tongue. To remove only just so much of the organ as can be seen to be diseased with the naked eye is a useless procedure, so far as any long immunity from recurrence is concerned.

It may be well to mention here a few details, which render the performance of the operation easier, and may prevent some of the minor troubles which occasionally occur in the course of it. And I shall presume that a case is being dealt with in which the cancerous disease is extensive and reaches somewhat far back.

After the introduction of a suitable gag and the removal of any sharp or jagged teeth which might be in the way of the operator, two threads are passed through the tongue about an inch behind the tip and half an inch on each side of the middle line. The tongue being now drawn forwards and upwards, the frænum and, as far as it may seem necessary, some of the muscular attachments of the tongue to the lower jaw in front are now snipped through with strong, rather curved, blunt-pointed scissors, and the scissors are then "run" along the floor of the mouth at the side, beneath the mucous membrane, as far back as may seem requisite, keeping close to the lower jaw both for the avoidance of hæmorrhage and for the sake of being clear of the disease. The operator now with his forefinger clears the tongue in front and at the sides, and drawing it well forward again and giving one thread to his assistant while he holds the other himself, he cuts steadily along the middle line of the tongue from the tip backwards, and farthest along the mucous membrane. On the withdrawal of the knife, the finger is now again introduced, and it will be found quite easy to complete with it the median division of the tongue by a little tearing or splitting between the two halves. The only part which cannot be thus torn is the mucous membrane of the dorsum. Hence the advice just given to divide this with the knife as far as may seem necessary for getting beyond the level of the disease. The écraseur is now slipped over the diseased half of the tongue; the assistant turning the screw while the operator keeps the loop as far behind the disease as possible. This is, of course, one of the most important parts of the operation; any want of care at this stage being shown afterwards by the narrow margin of healthy tissue, or by none at all, left attached to the diseased mass. The insertion of curved needles behind the disease, in order to ensure the division by the écraseur of healthy tissue, is often advisable, but, for the reasons previously given, must not be considered a sufficient safeguard in the absence of free separation of the tongue's attachments in front and at the sides.

The écraseur employed should be one curved "on the flat," and a strand of twisted wire or strong whipcord will be found more serviceable than the linked chain, which, from working only in one plane or nearly so, is much less readily looped far back.

In all cases in which, from the extent of the disease backward, or in the floor of the mouth, any difficulty is anticipated in placing the loop of the écraseur well beyond the tumour, the cheek may be divided with advantage by an incision extending from the front border of the masseter to the angle of the mouth. This measure, indeed, though not uncommon, is, I am inclined to believe, much less frequently adopted than it might be, especially in cases in which the cancerous affection has invaded the floor of the mouth.

If combined with division of the frænum, and as much of the muscular structures which tether the tongue in front as may be safely divided, and if, at the same time, the mucous membrane of the floor of the mouth be cut through, so as to form a sound boundary-line for division in this direction, I have found that division of the tongue along its middle line is an excellent preliminary measure, not only in operations for removal of half the tongue, but of the whole organ also. The two halves are more completely under control than the tongue as a whole, and by working with two écraseurs simultaneously no time will be lost.

It sometimes happens, and especially when wire or whipcord is used instead of the jointed chain, that the portion of the tongue which has been noosed is not completely severed, even when the écraseur has been screwed up to the hilt; and this is much more likely to happen when the part of the tongue which is being divided is healthy than when the loop has been placed only just beyond, or not beyond, the diseased tissue. In the latter case the comparatively hard and brittle cancerous structure is easily crushed through; while, on the other hand, the soft and yielding healthy tissue is partly crushed through and partly squeezed up into a fine pedicle, which is pulled through the aperture at the end of écraseur through which the cord works. The matter may be, of course, remedied when too great a length of wire has been allowed, by reversing the screw and re-tying the chain or cord;[1] but a better plan in many cases is simply to put a ligature round the pedicle beyond the loop of the écraseur, and cut off the severed half of the tongue forthwith—a simple procedure, which saves many minutes and affords the operator the satisfaction of knowing that he probably has the principal vessel ligatured, instead of lying merely crushed on the face of the stump. In the same way, too, the time occupied in the tightening of the écraseur-loop may be often advantageously shortened, a ligature being applied so soon as the tongue-tissue has been squeezed up (of course slowly) to the dimension of a small pedicle.

(To be concluded.)

A MEDICO-TOPOGRAPHICAL REMINISCENCE OF THE WEST INDIES;

BEING CHIEFLY AN ACCOUNT OF THE HILL STATION OF NEWCASTLE, JAMAICA, WITH SPECIAL REFERENCE TO ITS CLIMATE AND ITS FLORA; IN CONNEXION WITH THE EXCEPTIONAL IMMUNITY FROM MORTALITY ENJOYED BY THE 29TH REGIMENT DURING THE YEARS IT WAS STATIONED IN THE COMMAND.

BY SURGEON-MAJOR BOILEAU, B.A., M.D.,
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DURING a continuous residence of three years and three months in the West Indies, it was my good fortune to lose by the hand of death but one of the men entrusted to my professional keeping. The fatal case was that of a young recruit who died of acute hæmorrhagic phthisis a few months after landing from England. Such experience was all the

[1] An écraseur well adapted for this purpose has been constructed for my colleague, Mr. Harrison Cripps, by Messrs. Arnold, West Smithfield

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more gratifying from the fact that there was no *primâ facie* reason to expect it, but quite the contrary; for the climate of the West Indies was until very recent years notoriously a most unhealthy one, and even the 84th Regiment, which the 29th relieved in Dec. 1869, suffered most severely. I shall dwell on two other factors adverse to favourable anticipations: first, that Newcastle, Jamaica, as an inhabited locality, is not 4000 feet above sea level, as it is generally represented to be; and secondly, that its climate is not temperate, as it has been described to be, but tropical.

Fifteen months of my residence in the West Indies was spent in Barbadoes in medical charge of the head-quarters of the 29th Regiment, the remaining two years in Jamaica, where for part of the time I was in charge of the whole regiment, and subsequently of a three-company detachment. I believe I am safe in saying that no regiment ever spent three years in the West Indies with so little fatality as the 29th Foot during the early part of the present decade. I shall endeavour to account for its immunity when I have concluded my remarks on the climatology of the station. I hope that my observations may be found of some value by those interested in the welfare of our troops abroad. It is interesting to know and profitable to reflect upon the fact, that the 29th Regiment, in the early part of the present century, was, in the very same quarter of the globe, in a few years almost annihilated by mortal diseases.

The military station of Newcastle, Jamaica, is situated on the Port Royal range of mountains, eighteen degrees north of the equator, seventeen miles from the sea, and about 3600 feet above it. From boreal influences it is quite protected by an amphitheatre of high hills, and it is of great importance to bear in mind that the station is not situated on an elevated plateau many miles from the lower lands, but that it is built on a hill ridge having very deep valleys on either side converging towards the south. The station is consequently exposed to the exhalations and other influences of a region the altitude of which is much less than 3000 feet above sea level. The air of these valleys is constantly swept upwards, and I might draw a very tropical picture of their vegetation, such, indeed, as might be expected of any place having the same altitude, latitude, and aspect.

The elevation of Newcastle is generally accepted to be 4000 feet above sea level, but in reality this is not the case, and a consideration of the height of the station is of importance in connexion with the fact that surprise is manifested when yellow fever invades the place. Only a very small portion of the cantonment is at or above 4000 feet. The quarters of the married people, and of the non-commissioned officers and men, are all below the altitude at which the hospital stands—viz., 3800 feet. Above 4000 feet the only occupation consisted of a few officers' quarters, the offices and the workshops of the Royal Engineers, and the garrison stables. Thus, more than nine-tenths of the inhabitants lived below 3800 feet. It is, therefore, evident that the old rule, an elevation of 4000 feet confers immunity from yellow fever, is not invalidated by the occurrence of the disease at Newcastle, Jamaica.

The whole station commands towards the south a widely extended view, stretching over the lower range of hills, with the plains of Mona, and of Liguanea beyond, and farther off the Caribbean sea, bounded by the horizon, eighty-three miles distant. The semicircular range of hills which within a couple of thousand yards northward of the station half encompasses and protects it, culminates in St. Catherine's peak, a summit which rises to the height of 5000 feet above sea level.

The buildings consist of wooden huts, well constructed and well ventilated, and well exposed to light, in which very important respect no station could be more favourably situated.

I will not dwell on the geology, the physical geography, or the natural features of the place. A perusal of Sawkins' "Geology of Jamaica" will repay those interested in such subjects. The useful mineral products of the place are almost nil, even stone for building purposes being procured with difficulty; it is required for the construction of foundations and for the strong retaining walls, without which the station would soon be swept away by the tremendous rains which occasionally deluge it.

The flora of the place may be studied in Grisebach's "Flora of the West Indies," or in Macfayden's "Flora of Jamaica." The learned professor of Göttingen, whose work has been published under the auspices of the Secretary of State for the Colonies, laboured under the apparent disadvantage of never having been in the West Indies; a fact hardly to be suspected, so accurate are his descriptions of its plants. Macfayden's work was never completed; it is difficult to procure. A work published by Dr. D'Anzer about the beginning of the century contains an interesting account of all the plants of the island reputed for their curative powers.

The vegetable productions of the immediate neighbourhood of Newcastle include the following:—Coffee. Yam; the edible tubers of which are largely used in place of potatoes; it is a species of *Dioscorea*. Bananas; plantains; sweet potatoes, or tubers of the *Ipomœa Batatas*, a convolvulaceous trailing plant. Oranges; limes; lemons. Various herbs of the *Brassica* family. Ochra (*Abelmoschus esculentus*), a malvaceous herb, the capsules of which contain a nutritive mucilage, much used in soups. Cherimolia, and several other most agreeable fruits of the custard-apple order. Melons, mangoes, pine-apples, and the Avocado pear, a fruit much esteemed, and known as "subaltern's butter"; the tree which bears it (*Persea gratissima*) is a species of *Laurineæ*. The myrtle family provides guavas, allspice, pomegranates, and rose-apples (*Jambosa vulgaris*). The allied family *Melastomaceæ* yields the American gooseberry (*Heterotrichum patens*), and the *Rosaceæ* supplies blackberries and strawberries in abundance. The winter cherry, better known as the Cape gooseberry (*Physalis Peruviana*), grows wild; it is an agreeable subacid fruit, resembling our own grossularia, but it belongs to a very different order—viz., *Solaneæ*. The tobacco plant attains a height of five or six feet, and flowers freely. The annual thorn-apple (*Datura stramonium*) flowers a little below the station, whilst its arborescent relative, the *Brugmansia*, or *Datura suaveolens* of Peru, is the commonest of all plants about the cantonment; it is known as the "bell-flower," and is often mistaken for another "bell-flower," the *Solandra grandiflora*: the latter is, however, a scandent plant, with terminal flowers. The castor-oil plant is quite common, and the showy bracts of *Poinsettia pulcherrima* are perhaps the most conspicuous objects on the hill. Another of these equinoctial spurgeworts which thrives there is the *Euphorbia splendens*, an obnoxiously-spiky plant, and one that has a fitting companion in the *Cæsalpinia horrida*, a most prickly shrub introduced from the East Indies for growing fences.

Amongst other well-known medicinal plants that the climate suits is the *Cissampelos pareira*, most appropriately called "velvet leaf." I found it forcing its way through the tangled mass of under-shrubs, which contend for existence below the Warwickshire-road. Growing near it I found an annual herb, which the negroes call "semencontra;" it is not, however, an *Artemesia*. It is *Chenopodium ambrosiodes*, sometimes known as Mexican goosefoot. It is reputed to possess anthelmintic powers. The arnotta (*Bixa orillana*), which yields the well-known dye, may be found just below Newcastle, and indigo grows abundantly in its immediate vicinity. Cardamoms ripen their seeds, and wild ginger (*Canna*) abounds so as to be a perfect nuisance. Yuccas flower, and bamboos attain a height of twenty-five or thirty feet. Guinea-grass (*Panicum maximum*), an excellent food for horses, and Bahama-grass (*Cynodon dactylon*), equally good for cattle, might be extensively grown. Foxtail-grass (*Anatherum*) reaches the height of five or six feet, and is, I believe, prized for thatching purposes, in consequence of its enduring properties. Lemon-grass (*Andropogon Schœnanthus*) abounds. The natives make an antipyretic and diaphoretic drink from it. Its odour is very agreeable and powerful; in fact, it is one of the three most strongly-smelling plants of the hill, the second being *Micromeria obovata*, a common wild labiate shrub, known also as *Zygia aromatica*, and smelling powerfully of peppermint, and the third is a most fragrant, yellowish-flowered plant belonging to the *Scitamineæ*, and which, I presume, is *Hedychium coronarium*, or the sweet-smelling garland flower.

The fauna of the station I will not dwell on. It may be studied in those two excellent works of the accomplished naturalist P. H. Gosse—viz., "Birds of Jamaica" and "A Naturalist's Sojourn in Jamaica."

The climate of Newcastle is equable; and, as far as our experience enabled us to judge, very healthy; but the sad experience of other regiments prove how foolish it is to generalise concerning any place, even after a three years' residence. The 29th Regiment did not lose a single officer, man, woman, or child from any disease attributable directly

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or indirectly to climatic, epidemic, or endemic causes. We had, it is true, some fifty cases of fever amongst the men alone during our first year at the station, and many more subsequently, but all did well, not even one being invalided. Whilst Clotho and Lachesis were busy, Atropos slumbered.

The annual rainfall at the station is large. I have measured twelve inches in one day; yet, although the place may be said to be in the region of clouds, the climate is not always damp. Generally speaking, a cloudless sky was constant between sunset and 9 or 10 o'clock the following morning; rain during the night was an uncommon occurrence. The permeable and absorbent soil and the sloping declivities contribute greatly to the prevention of a humid atmosphere. The upper part of the station is certainly more moist than the lower, as may be inferred from the fact that ferns of the *Hymenophylleæ* tribe may be gathered in abundance a little above the cantonment and the upper huts, whilst in the neighbourhood of the lower ones none can be found. The barometric column varies little. At the highest point of the station it stands about four inches lower than at the sea level. The reaction of the ozone papers I frequently found to be near the maximum. The electrical state of the atmosphere varied extremely. In one year disturbances were constant and often very great, the storms being occasionally exceptionally severe, whilst in another year the sound of thunder was heard but seldom. On the 15th September, 1870, there occurred an unusually magnificent thunder-storm. On the 17th and 18th of the following November there was a very large rainfall—viz., eighteen inches. The damage to the station caused by this flood cost upwards of one thousand pounds to make good. The direction of the wind was variable, but generally from the north-east, as might be expected from the latitude of the place. Currents blew up and down the gullies, and in and out of the passes in all directions, so that it is only by observing the movements of the clouds that the prevailing direction of the wind can be ascertained.

(To be concluded.)

FRACTURE OF SPINE FROM DIVING INTO SHALLOW WATER.

BY J. H. WILSON, M.R.C.S., L.S.A.

A BRIEF record of the following case may be read with interest:—

P. S——, aged eighteen, a pupil at the Oundle Grammar School, whilst bathing on July 15th, 1878, took a header into between three and four feet of water. It being observed that he did not rise to the surface, the attendant (who is always present to look after the safety of the boys) dived in and fetched him out in a state of insensibility. After a few moments he rallied from the concussion and was conveyed home perfectly sensible, but helpless.

Examination revealed complete loss of motion and sensation of the lower extremities and the trunk up to two inches above the mammary line, with great pain over the cervical vertebræ, inability to support the body in the erect position, or move the spine in any way. No displacement of the vertebræ could be detected. There was partial paralysis of the upper extremities, and sensation was more pronounced on the ulnar than the radial aspects of the arms. There was retention of urine with priapism; *breathing almost entirely diaphragmatic.*

The usual treatment for fractured spine was carried out—skilled nurses were obtained; every possible attention was paid the patient to promote recovery.

At first there was considerable constitutional disturbance: pyrexia, loss of appetite, &c.; periodic attacks of dyspnœa, complicating the diaphragmatic breathing; ammoniacal urine (catheterism being continued). This condition of things was followed after a time by sloughing of tissues, which progressed steadily to the termination of the case. For five months we had to compete with severe bedsores, wholesale sloughs, disintegration of the knee-joints, the attachments of which became quite disorganised, and other signs of low vitality, the patient succumbing to his injury on Dec. 24th, or twenty-three weeks after the accident.

Post-mortem.—At the autopsy on Dec. 26th the fifth cervical vertebra was found to be fractured vertically through the body. The fracture had apparently partly united towards the posterior part of the spinal canal. Spinal cord at this point was reduced to a mere slender thread, only a few fibres remaining by which either motion or sensation could be conveyed.

The points of interest in the case are: (1) the position of the fracture—vertically through the body; (2) the length of time the patient lived, taking into consideration the seat of the fracture and the severity of the injury to the spinal cord.

Oundle.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo nascendi via, nisi quam plurimarum et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

[OBSTETRIC WARD.]

TWO CASES OF RETENTION OF URINE; REMARKS.

(Under the care of Dr. BRAXTON HICKS.)

CASE 1. *Enormous Distension of Bladder; Retroversion of Uterus; Pregnancy three months and a half; Œdema of Vulva and Lower Extremities, ceasing on Catheterisation; Restoration of position of Uterus; Recovery.* (From notes taken by Mr. J. Poland, obstetric resident).—A. F——, aged twenty, had a child in April, 1878. In April, 1879, she ceased to menstruate. In October following, about a month before admission, she fell down on her face and abdomen, and was much shaken, and about a week after the abdomen increased. She had some medicine and got better, but about a fortnight before admission the abdomen again began to swell, and it remained enlarged at the time of admission. She had suffered from the uneasiness and tension, but within a few days the urine had been scantily passed.

On admission, the abdomen was distended as large as in the eighth month of pregnancy, but it was more tense, and the skin was shiny. The vulva and legs were œdematous. On examining per vaginam a firm swelling was found to the posterior part of the pelvis, the os uteri being close to the symphysis pubis. A catheter was passed, and 146 ounces of urine were drawn off, thereby removing the swelling above the pubes, but showing more plainly that in the pelvis, which rose somewhat, and was evidently the pregnant uterus. In ten hours, however, the bladder had enlarged again, and 120 ounces of urine were drawn off; *four hours* after seventy ounces; in three hours and a half, fifty ounces; and at the end of the twenty-fourth hour, forty ounces more, making altogether in the twenty-four hours over twenty-one pints, of which fourteen were actually secreted in the twenty-four hours. The woman was kept in bed, and shortly the œdema subsided. An air-ball pessary was placed in the vagina, and kept in position by a bandage and pad outside. She was kept prone as much as possible, and the uterus by the second day rose into the abdomen, and there continued. No further trouble occurred.

Dr. Hicks remarked that it was seldom, if ever, the distended bladder had been found so large, or producing such an effect, as in this case. He said that the history made the diagnosis easy, assisted by the catheter, which should in all cases of tumour of the lower abdomen be passed as a matter of routine. He cited a number of cases where the employment of this rule would have saved mistakes, for in these cases complete retention seldom occurs, and then a small quantity passing, it is not considered that any is retained. The passing of the catheter makes this matter clear. Dr. Hicks remarked that it is not always an easy matter for beginners to find the meatus urinarius, nor when found to get the instrument into the bladder. He had generally found the urethra drawn upwards, and so the meatus was behind the symphysis pubis, and he had found that when the point had entered the handle should be carried backwards

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close to the perineum as it was passed in; indeed, this movement generally caused it to pass into the bladder.

He also said that he had found the air-ball pessary sufficient to restore the uterus in such cases; it was gentler in its operation than any other, though sometimes the keeping the patient in bed, in the prone position, and keeping the bladder fairly empty for a few days, were generally sufficient. It was an interesting feature in this case that, with such severe distension of the bladder, no inflammatory symptoms followed; neither was there any decomposition of the urine, which was also healthy in all other respects. It formed a strong contrast with those cases of retention following labour, where, after twenty-four to forty-eight hours, extreme purgency of the urine takes place, with severe cystitis. In these probably the cystitis is the result of the bruising of the tissue of the bladder. Dr. Hicks said that he had not been able to detect any alternation in the tension of the bladder-wall when distended, such as occurs in the pregnant uterus, nor had he in other similar cases. As this was the only other organ which might have done so, he said that up to the present time the alternating contractions and relaxations of the uterus may be held diagnostic of distension of that organ.

CASE 2. *Retention of Urine from Pressure of a Descending Fibroid; Excessive Vomiting; Aphthous Mouth; Death.*—This case occurred in an Irishwoman, about forty years old, admitted into Mary ward extremely ill, with very quick pulse, high temperature, and excessive vomiting. The mouth was covered with aphthæ, and the body emaciated. There was a *hard* firm tumour above the symphysis, extending half-way to umbilicus, and subfluctuating. Per vaginam there was a large mass above, which so firmly filled the vagina that at first sight it appeared like a solid infiltration of the upper part of the canal; but after some trouble the finger was found to pass by the side of the mass, which ultimately proved a fibroid tumour, having a polypoid shape. Offensive grumous secretions escaped during the examination. The tumour above the symphysis seemed at first sight to be attached to the vaginal tumour, and to be firmly fixed in the pelvis. This appearance was increased by the unyielding nature of the abdominal swelling, which seemed of the same consistence as an ordinary fibroma of the uterus. But by following Dr. Hicks's invariable rule of passing a catheter, this tumour was found to be the distended bladder, from which was drawn about forty ounces of urine, upon which the swelling disappeared.

As the patient was too ill then to bear an attempt to remove the fibroma, attention was paid to lessening the irritation and removing the ichorous offensive discharge by antiseptic lotions. This treatment was, in a week, so far successful that the vomiting and irritative fever had ceased, and she was placed under chloroform for operation. As the vaginal tumour could not be removed *en masse*, it was attempted by écrasement, but the instrument was damaged before the whole growth was removed, and the rest had to be removed two days after. After these operations, however, either by the disturbance locally or by the anæsthetics, vomiting returned, collapse came on, and the woman died about the fifth day.

As no post-mortem examination was permitted, the exact cause of death could not be ascertained; but it was thought that not improbably some of the symptoms were owing to pressure on the ureters, which effect was not infrequently found to arise in similar cases. However, Dr. Hicks drew especial attention to the condition of the bladder, which was hard and firm, thereby presenting a strong contrast to the case above, and much more liable to deceive. In this instance this firmness did not intermit with any relaxation, nor was there any special symptoms of retention of urine.

WESTMINSTER HOSPITAL.

GANGRENE OF THE LUNG; RECOVERY.

(Under the care of Dr. STURGES.)

FOR the following notes we are indebted to Mr. Charles Hibbert, clinical assistant:—

Stephen M——, aged twenty-seven, a barman, was admitted into Burdett ward on the 7th October, 1879. He had rheumatic fever when a child, but no other illness previous to the one complained of. Five weeks before admission he had been much exposed, and caught cold, complaining of cough, pain in the left side of the chest, profuse expectoration, and dyspnœa. These symptoms became more marked, and the patient also complained that his breath and sputa were very offensive, and that the dyspnœa frequently came on in severe paroxysms.

He was very anæmic in appearance, and seemed very weak, having lost flesh considerably. His breath and sputa were of the characteristic odour of pulmonary gangrene; the fetor was so intolerable as to make it most difficult to approach him, and was noticeable throughout the ward. The sputa were frothy at the surface, but had a blackish-grey layer below, the sputa having the same odour as the breath. On percussion, there was a patch of dulness over the left base behind, about three inches square, and on auscultating over this patch crepitation of medium character was heard during inspiration and expiration. The other parts of the lungs gave evidence of bronchitis.

Dr. Sturges diagnosed the case as gangrene of the lung, and ordered the patient to be placed in a complete atmosphere of carbolic acid vapour. A tent was placed round the bed head, and vapour of carbolic acid was passed into the tent. The strength of the solution was one per cent. One drachm to half a pint of water was used for vapouriaing, and then gradually strengthened.

The patient was kept in this atmosphere for five weeks; for the first fourteen days the symptoms of cough and dyspnœa were no better, but the offensive odour of the expectoration disappeared; sputa still giving evidence of pulmonary breakdown. During the remaining three weeks of this treatment the symptoms gradually improved, and the patient became better and stronger, and increased in weight.

On November 12th he was examined, and it was found that the physical signs at the left base had much improved, the breathing being fairly healthy. The sputa were no longer black and offensive.

On the 20th the patient was discharged in fair health.

There was nothing to remark about the temperature; the diet was mainly milk, beef-tea, and light puddings; meat during convalescence. The carbolised vapour had evidently prevented the gangrene from spreading after the slough had been thrown off in the sputa; the lung gradually regained its normal character.

GENERAL INFIRMARY, HEREFORD.

SUB-ACUTE SPINAL PARALYSIS OF ADULTS (POLIOMYELITIS ANTERIOR).

(Under the care of Dr. BULL.)

FOR these notes we are indebted to Mr. Charles Davis, house surgeon:—

W. W——, aged thirty, a shepherd, married, father of two children, was admitted on Feb. 24th, 1879. The patient was a well-developed, healthy-looking man of sanguineous temperament, and possessed of more than average intelligence for the class to which he belonged. His family history was good, without evidence of nervous disease. He had himself always been strong and healthy until the present illness; temperate, not syphilitic, nor given to venereal excesses. He had lived fairly well, but had been much exposed to the weather.

On admission he had total loss of voluntary motion in the upper and lower limbs, back, neck, and abdomen, and impairment of the muscles acting on the lips. There was no paralysis of the bladder or sphincter ani. Reflex action, including the tendon reflexes, was entirely wanting. There were no muscular contractions, fibrillar or otherwise. The muscles were soft, flabby, and considerably diminished in volume, by comparison with a healthy subject of the same build. Sensation was everywhere perfect, the points of compasses being detected at normal distances with great precision. There were no paræsthesiæ of any kind; cold and heat sensations being correctly distinguished, and no constricting band or tenderness to bedsore. There was decided defect in pronunciation of labials, but no difficulty in swallowing. The fundus oculi was healthy, but the pupils were rather sluggish. Electro-muscular contractility to both galvanic and faradic currents was entirely absent in both upper and lower limbs. Pressure, heat, and cold elicited no spinal tenderness. The urine was ammoniacal, containing copious catarrhal deposit. The bowels were variable; skin moist and warm. Temperature 99·2° F.

Of the onset of his illness the patient gave the following account:—Early in February last he was exposed to severe

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cold and wet for twelve consecutive hours, getting very cold and numbed. On returning home he soon regained warmth, his feet feeling all right, but his hands were very stiff and numbed. He had no shivering or pain. On attempting to walk he found his left leg weak at the knee, and his calf a little painful. He slept well during the night, and on waking next morning he felt stiff and sore all over, not being able to move his limbs properly. He could walk across the room, but with much stiffness of the legs. He was unable to grasp anything firmly, or to button his clothes. He returned to bed, and whilst there found the stiffness and weakness increase, and by the same evening was unable to stand without support, his knees and hips bending beneath him. On the following morning he could not move his limbs in the least, and on the day after—the fourth from the day of exposure—he could not raise his head from the pillow, and lay quite helpless. At about the tenth day retention of urine occurred, and he lost control over his rectum, its contents escaping involuntarily. This last symptom only lasted two days, and the retention of urine a few days longer. The urine, which was drawn off by a catheter, was very thick and sticky, but no blood was ever passed. He never had any loss of sensation, nor any feeling of numbness, formication, &c. He had no pains in the limbs, and could always recognise the pressure of the bedclothes and of his book-rest. He had no cramps or spasms of the muscles, nor any trembling. He did not suffer at any time from headache or pain in the back. He stated that he felt quite warm throughout his illness, sweating profusely at times, but never feeling chilly. His secretions were always active. He had lost a great deal of flesh. His general health did not suffer in the least.

April 11th.—The patient was able to perform the following movements: arching of the spine between the shoulders and the hips, slight raising of the head from the pillow, drawing the legs up by acting from the abdomen on the pelvis, slight shrugging of the shoulders, and slight extension of the fingers; the improvement in muscular action being in the above order. Electro-contractility was reappearing in the forearms, but not in the lower limbs; the reaction being to galvanism, but not to faradism. A few days before he developed inflammatory conditions of the nail matrix on those fingers only that were exposed to the friction of the bedclothes—viz., the thumb, ring and little fingers of the right hand, and the ring and little fingers of the left hand. This condition came on before ergot, which was ordered, was given.

On the 19th, mobility in the forearm, muscles, and flexors of the elbow-joint had much improved, galvanic excitability in these having increased. The lower limbs showed no improvement. The toes were becoming much pointed, partly from the weight of the bedclothes.

On May 2nd there was great improvement in the upper limbs; extension of fingers being most rapidly advanced towards recovery; some signs of extension of toes and flexion of knee-joint. The reaction to galvanism was much greater in the upper limbs, slight in the thigh, and absent in the legs. Faradism produced a just perceptible contraction in the forearm extensors, and this only with the strongest current obtainable.

From this time until June 14th, when the patient left the infirmary, the limbs continued to improve slowly, the upper limbs by far the most, and on his discharge he was able to raise his hands above his head, though flexion and extension of the fingers were yet very imperfect. The improvement in the lower limbs was most marked in the flexion of the knee-joint. Reaction to galvanism still improving, to faradism still very slight, in forearms only.

As regards treatment, until April 10th the patient took iron and strychnine without apparently any effect. On that date the liquid extract of ergot in fifteen-minim doses was given three times a day, with belladonna in addition to the former drugs, the ergot being subsequently increased to twenty-five minims each dose on May 3rd, and thirty minims on May 13th; this dose being continued until June 14th without producing symptoms of ergotism. Active counter-irritation was employed along the spine with galvanism (thirty cells of Stohrer's battery), the current being passed from the nape of the neck to the sacrum, and from the sternum to the spine. Faradism was applied to the muscles.

The patient continued to progress uninterruptedly towards recovery, and had no abnormal sensations of any kind. On Jan. 7th, 1880, he was in good health, had gained in flesh, his muscles being larger and firmer than when he left the infirmary in June. He could walk a considerable distance with the aid of a stick in each hand, he was able to use his upper limbs well, and could write a fairly good hand, and was capable of a considerable amount of muscular resistance, the chief defect being in the muscles acting on the ankle joint and toes. There was still evidence that great wasting had existed. An electrical examination showed that the faradic irritability was still very low, especially in the lower limbs. A galvanic current of thirty cells only produced moderate contraction in the forearms and feeble contraction in the legs; in addition the anodal closure contraction was quite equal to that of the cathodal closure, AnSZ = KaSZ being the formula for the forearm muscles, and AnSz = KaSz that for the leg muscles. Reflex action of lower limbs was still very low; no tendo reflex (patellar and tendo Achillis) could be elicited. There was a slight tendency to talipes equinus from the contraction of the calf muscles, and there was also some hyper-extension of the knees when the patient was on his leg.

Remarks.—The diagnosis of sub-acute spinal paralysis rested on the marked absence of constitutional disturbance, of cerebral symptoms, of pain in the back, and of disturbances of sensation, all of which occur in the acute form of the disease, on the rapidly-increasing paralysis of almost all the muscles of the body, with their subsequent rapid atrophy, with loss of their electric excitability, and, further, the comparatively rapid recovery of muscular action accompanied by the increasing and qualitatively altered galvanic excitability, the reaction to faradism still remaining almost *nil*.

In two points the case much resembled the acute form of the disease—namely, in the very rapid though progressive onset of the paralysis, and in the disturbance of the bladder and rectum. An interesting feature of the case was the undoubted causal relation to the attack of severe exposure.

The completeness of the recovery was somewhat remarkable, as was also the absence of general disturbance in such a rapid onset of a profound alteration of nerve-tissue. Of the incontinence of fæces no mention of a similar condition seems to be made by the authorities.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Molluscum Contagiosum.—Elephantiasis.—Horny Growth.—Recent Division of Tendo Achillis.—Calcareous Tumour in Peritoneal Cavity.—Melanosis.—Old Excision of Knee.—Disease of Larynx in Congenital Syphilis.—Spinal Cord in Tetanus.

THE ordinary meeting of the Pathological Society was held on Tuesday, the 6th inst., J. Hutchinson, Esq., in the chair. Professor Ball of Paris was unanimously elected an ordinary member of the Society.

The first business of the meeting was the reading of a report of the Morbid Growths Committee on Dr. Abercrombie's specimen of Tumour of the Skull, by Mr. R. J. GODLEE, who, with Mr. Marcus Beck, had examined the specimen. The report showed that the tumour was a "round-cell sarcoma," growing from the deeper layers of the periosteum and dura mater, not from the bone.

Mr. STARTIN showed some drawings of a case of Molluscum Contagiosum, and of the microscopical appearances he had observed in it. A child, thirteen months old, was affected with the disease below the right eye; it had existed for two weeks when he first saw the case, and was apparently caught from her sister. An examination of the contents of the tumours showed them to consist of molluscous bodies, and clear highly refractile epidermic cells. A vertical section through one of the growths showed the same molluscous bodies in the centre, with vacuolation in some of the cells, hyperactivity of gland tissue, and abortive attempt at hypertrophy of gland elements. He considered these tumours glandular in origin, but developed from abortive rather than normal glands. They are always found where sebaceous glands

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abound; the molluscous bodies are not seen outside the tumour; in structure, too, they are just like glands with the exception of the molluscous bodies, and all three layers of the epidermis can be seen in them. He thought they were most often met with in patients showing other signs of perverted nutrition.—Dr. THIN had advanced the view that these growths were glandular in nature, but arising independently of glands, at the Medico-Chirurgical Society, and was surprised Mr. Startin had spoken of it as if it were original with him. He did not, however, think the view of much value.—Dr. PYE-SMITH would be glad to learn what view the President held of these growths. Was it to be supposed that the tumours are all of sebaceous origin, for he had thought that there were two separate affections included in the term molluscum contagiosum? The first consisted of the glands distended with their own secretion as a result of obstruction of the ducts, while in the second there was a distinct new growth of glandular tissue without any evidence of retained secretion, the columnar cells having undergone molluscous degeneration. There were facts connected with treatment which also bore out this view.—The PRESIDENT remarked that the Germans, and lately Dr. Sangster in a very able paper, had taught that these growths originated from the rete Malpighii quite independently of pre-existing gland tissues. His own view was that they most probably always originated in the same way, for the cases were so closely alike, and he thought there was much to be said in favour of their originating from inactive abortive sebaceous glands. Dr. Sangster, who most strenuously denies this connexion with glands, thinks that the central opening in the growths is the aperture of a hair-follicle, and he thought that if so there was strong presumption in favour of their arising from the neighbouring sebaceous glands. Their close resemblance to glands in intimate structure was strong presumptive evidence of their origin from that source.—Dr. TAYLOR could not recognise the two forms of disease described by Dr. Pye-Smith as both molluscum; he thought most dermatologists would consider the first as sebaceous cysts, and only the second as really molluscum. He did not think the fact of a central orifice was of value in showing their origin from a gland, as he had seen as many as three, and even he thought four, orifices on one small tumour, and he had a microscopical specimen showing three openings, each communicating with its separate acinus, but apparently not separate follicles. The sebaceous glands were originally developed by an infolding of the rete Malpighii, and it was not difficult to imagine a similar process occurring in later life, and leading to the formation of these tumours.—Dr. PYE-SMITH had purposely avoided speaking of the origin of the growths; he was inclined to think both forms grew from pre-existing glands.—The PRESIDENT asked Dr. Pye-Smith whether he had ever seen the two forms he had mentioned occurring on the same patient.—Dr. PYE-SMITH had not seen them. He thought the yellow very contagious nodules often found on the scrotum the most typical example of one variety, and so-called molluscum verucosum of the other.—Mr. STARTIN stated that his view differed from Dr. Thin's, for he believed the growth began in an abortive inactive gland, while Dr. Thin held that it sprang from the rete Malpighii. In many cases he had been unable to find an opening in any part of the little tumours.

Dr. THIN showed photographs, illustrative of elephantiasis, for Dr. Henderson of Shanghai. One group showed the disease existing at the same time in three generations, the grandfather, son, and grandson. Other photographs illustrated the effects of treatment by the elastic bandage. The effect of pressure was to greatly modify the disease, but not to remove it. A photograph showed a complete and permanent cure in a man who had had the disease in both legs. In one leg the limb had become so painful and useless that it was amputated at the thigh through diseased tissue. The result was that the disease disappeared both from the stump of the amputated limb and from the other leg. This effect, Dr. Thin suggested, was due to diminished blood-pressure in the vascular system, consequent on the effect of the operation. Dr. Thin further showed sections and drawings illustrative of the minute anatomy of elephantiasis, the tissue examined being taken from a specimen of elephantiasis of the prepuce recently shown to the Society by the President. The structure was that of an immature fibrous tissue. The cells were distinguished by an unbroken contour and a single nucleus, there being nothing resembling a cell process, nor any appearance suggestive of cell division. They varied in size from that of a lymph corpuscle to the fully-developed cell, which was a typical, flat, endothelial cell of some size. The smaller cells were indistinguishable from lymph-corpuscles, and all gradations of growth to the larger forms were observed. The cells were in all stages distinct from the fibrous tissue, although they were found closely applied to the incompletely-formed bundles. The stellate cells, with dividing nuclei and appearances of proliferation, described by Rindfleisch and Hebra and Kaposi, were not found, Dr. Thin believing that such appearances were produced by unsuccessful hardening. The substantia propria of the tissue had not advanced to the stage of fully-formed bundles. Large masses of involuntary muscle were found distributed through the tissue. In the tissue, near the bloodvessels, the cells were found at places in layers, like endothelial layers. Dr. Thin compared the cells found in elephantiasis with those of normal fibrous tissue, and showed that they agreed in form with the connective-tissue cell, as it had been described by Key and Retzius, and by himself—namely, as an even-contoured, flat endothelium, without processes. The connective-tissue corpuscle of Virchow and Stricker he believed to be formed by the presence of the nucleus of an endothelial cell in the interstices of the tissue, that of Waldeyer and Ranvier by the endothelial cell, with more or less membranous substance adherent to the cell, although some of the cells figured by Ranvier were perfect endothelial cells.—Dr. CAVAFY thought the subject of the shape of the connective-tissue corpuscles of considerable interest. If Virchow's branched cells were really spaces, there was no doubt that in mucous membrane and in cornea the cells were branched. If flat cells were folded or pinched by bundles of fibrous tissue, they would exhibit the winged appearance observed by Ranvier. He regarded all connective tissue as a form of lymphatic tissue. All interfibrillar spaces are lined by flat endothelial cells, and where these cells are found abundant we have to do with an hypertrophy of these lymphatic spaces. Dr. Thin's flat cells were closely allied to endothelium. If the lymphatics were greatly hypertrophied in elephantiasis we should expect a development of muscular fibres in their walls. Had Dr. Thin found the plain muscle thus arranged.—The PRESIDENT observed that Sir J. Fayrer, on seeing the specimen when recent, had informed him that he would be sure to find a large amount of muscular tissue in it.—Dr. CAVAFY asked Dr. Thin if he had employed nitrate of silver as a staining agent in any of his preparations.—Dr. THIN, in reply, said that he did not believe that all the forms alluded to by Dr. Cavafy were found in connective tissue. The one form—the flat endothelium—was the cell; the others were compounds of the cell and other elements. The so-called branched cells of the cornea were not cells at all, but were simply spaces in the same sense as the connective-tissue corpuscles, described by Virchow in a transverse section of tendon, were spaces. He had preparations of the cornea, showing the existence in its substance of complete endothelial layers. In one, a mouse's cornea, he could focus three separate layers at different depths, and in addition there was on the anterior surface of the same cornea from which the epithelium had been removed, a complete delicate endothelium—the sub-epithelial endothelium which had been described in the intestine. In regard to the lymph-canalicular system, he thought the term an unhappy one and conducive of confusion. There were no canals in the sense of walled tubes, and there was not evidence to show that these spaces in the interstices of the tissues are in direct continuity with the lymphatic capillaries, which, as far as we yet know, formed a closed system of vessels in the same sense in which the blood-vessels form a closed system.

Mr. WALSHAM exhibited a Horny Growth, removed by his friend Dr. Marshall from the lower eyelid of an old lady aged eighty-seven. It had originated from a small wart or sebaceous cyst, and had been only two months growing. He brought it forward on account of its exceedingly rapid growth, and because there was no description of the microscopical characters of these growths to be found in the Transactions of the Society. He found the growth to be composed entirely of epidermic cells arranged in columns, which, when cut transversely, showed a concentric arrangement simulating "nests." He had been unable to determine exactly the origin of the growth, but thought it had sprung from a wart.

Mr. GODLEE showed drawings and described a case of

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Melanosis of the Finger. The girl in whom it occurred was nine years of age, under Mr. C. Heath's care, to whom he was indebted for the specimen. Four years ago the last joint of one finger was noticed to be swollen, and a year later a black spot, the size of a pin's head, was seen in it. This grew a very little, and two years later several other similar very small spots appeared close round it. Mr. Heath amputated the finger, and Mr. Godlee expected to find the growths Melanotic Sarcomata, but he found that the black colouration was only on the epidermis. There was a trabecular arrangement of the deeper epidermis, and the spaces which became more flattened towards the surface contained a dark-red material which was probably altered blood, for on tearing it out he had been able to see blood-corpuscles and altered epidermic cells. The deeper epidermic cells contained brown pigment and oily matter. He had never met with a similar growth, and was at a loss to know in what category of new growths to place it.

Dr. BARLOW showed a Larynx removed from a child eleven months old, the subject of congenital syphilis. When five months old the voice was noticed to be rather weak and hoarse, especially when she cried; there was also a hoarse cough, but no sign of laryngeal dyspnœa. These symptoms varied a good deal, at times passing away entirely and relapsing, probably from catarrh. The child eventually died suddenly after three or four days' illness, apparently connected with the larynx. At the post-mortem examination there was found to be some œdema of the aryteno-epiglottidean folds, very slight erosion of the mucous membrane above and below the vocal cords, and in the ventricles, and some very scanty, thin, and closely-adherent laminæ of false membrane. The cause of death appeared to be the supervention of membranous inflammation upon a chronic laryngitis. He was induced to bring the case forward because Dr. Sémon had recently stated that disease of the larynx in congenital syphilis was very rare. In his experience he had found it of quite common occurrence that syphilitic children, when first brought for treatment with snuffles, thrush, and so on, had also a hoarse, weak voice; but as this rapidly improved under mercurial treatment but little attention was paid to it. In several cases he had noticed that after apparent recovery any fresh catarrh at once affected the larynx, as if a subacute condition were left, which was prone to take on acute change. His colleague, Dr. Warner, had shown him a case of true warty growths in a syphilitic child.—Dr. ALLEN STURGE showed the Larynx of a boy two years and a half old, who came to him suffering from intense inspiratory and expiratory dyspnœa, stridor, and cyanosis; the voice was reduced to a harsh whisper. He had evident signs of congenital syphilis inherited from his father, who had laryngitis severely during the second stage of the disease. The boy improved under treatment by mercurial inunction, but died suddenly while being brought to the hospital. The mucous membrane of the left half of the glottis was much swollen quite down to the rima glottidis; there had been extensive ulceration, which had destroyed both the true and false vocal cords, particularly on the left side, and by cicatrisation had left symmetrical deep fissures and commencing stenosis of the upper part of the trachea.—Dr. LEES was able to confirm Dr. Barlow's statement as to the frequency of affections of the larynx in the course of congenital syphilis. He remembered three cases in which the affection was evidently severe: in one he had been able to see that the epiglottis was thickened and ulcerated; another case had been admitted to the hospital three or four times with urgent dyspnœa, for which it was feared tracheotomy would be required, but the symptoms were relieved each time by mercurials; any catarrh brought them back. This child's sister suffered in the same way till she was two years old, when she died from measles.—Dr. SÉMON had been misunderstood by Dr. Barlow, for he had only stated that in congenital syphilis deeper lesions were rare; superficial catarrh was, no doubt, common enough. Not only were the records of the deep lesions very few, but it was a noteworthy fact that in cases of congenital syphilis with signs of destruction of the nose or palate, only very few examples of destructive disease of the larynx had been found, he himself had never seen any.—Dr. BARLOW mentioned that Dr. Bumstead had observed six cases of very deep ulceration. On the invitation of the President, Dr. John Mackenzie (America), who had specially studied this question, stated that in all he had collected 78 or 80 cases of marked congenital syphilitic disease of the larynx, which he hoped shortly to publish. He thought the affection was as common in congenital as in acquired syphilis; twenty years ago examples of the latter were looked upon as pathological curiosities, as those of the former are now. Many cases were overlooked from neglecting to use the laryngoscope, and because they fell under the notice of the general practitioner rather than the throat specialist.

Mr. ALBAN DORAN and Dr. VINCENT HARRIS showed several microscopical specimens of a Spinal Cord from a fatal case of Tetanus occurring after Ovariotomy, in which the disease had apparently arisen from a cold draught. The tetanic symptoms were well marked, and caused death from asphyxia. The stump of the pedicle was found to be in every way healthy. After careful examination they had failed to find disintegration of the grey cornua described by Lockhart-Clarke, but they had found one or two of the isolated transparent unstained patches described by Dickinson, Coates, and others. These patches were also seen in another cord from a case of tetanus that they had examined. In addition, they had noted proliferation of the small neuroglia nuclei beneath the epithelium of the central canal in the lumbar region; in the cervical region a band of exudation was seen passing quite across this canal, and there were evident signs of exudation in the cervico-dorsal region. They had not found a shrinking of the stellate cells of the grey matter.

The following card specimens were exhibited:—1. Recent Division of Tendo Achillis; by Mr. S. G. Shattock. 2. Calcareous Tumour in Peritoneal Cavity; by Mr. Eve. 3. Specimen of Excision of Knee twelve years ago by Sir W. Fergusson; by Dr. Ledlard.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Nutritive Enemata in Gastric Disease.—Arsenic in Skin Diseases.

AT the meeting of this Society on the 5th inst.—Mr. F. J. Gant, President, in the chair—a paper was read by Dr. THEODORE WILLIAMS upon two cases of Gastric Disease treated successfully by nutritive injections. The first was that of a widow aged twenty-eight, cook by occupation, suffering from symptoms of ulcer of the stomach of some months' standing—hæmatemesis, pain after swallowing food and even cold water, and persistent vomiting. She was extremely anæmic, and had a well-defined area of tenderness on deep pressure in the left hypochondrium. The amount of blood vomited had never been large, recently it was in the form of clots. Various drugs were tried during her attendance as an out-patient at the Brompton Hospital, and a liquid diet enjoined; but the symptoms persisting, she was admitted into the hospital, kept in bed, and fed only by enemata of beef-tea, eggs, and brandy, given twice daily. In the course of sixteen days the vomiting, pain, and localised tenderness disappeared, and she was allowed some solid food by the mouth. This, however, causing symptoms of indigestion, a return was made to the injection treatment for two days. She was discharged cured three weeks later. The second was a case of hysterical vomiting in a young woman aged twenty-two, suffering from chronic phthisis. Here vomiting after food came on and persisted in spite of various alterations in diet and the use of different drugs. Nutrient injections without stimulant were used for eleven days, and then gradually omitted, and in this case also a return to this mode of feeding was rendered necessary for a short time before the case was completed. Dr. Williams urged the advantages of physiological rest in the treatment of gastric affections, as of diseases of other organs; especially as the rectum proves in many cases quite sufficient to flourish the body temporarily.—Dr. DAY remarked upon the difficulty of diagnosis in some cases of persistent vomiting. He mentioned several in which he had obtained good results from the use of nutritive enemata, and considered this treatment especially valuable in the obstinate vomiting of ovarian disease. He recommended that the injection should be small in quantity, consisting of a tablespoonful of port wine, two tablespoonfuls of beef-tea, with five drops of laudanum if required.—Dr. DE H. HALL advocated the use of enemata not exceeding six or eight ounces, combined with pepsine and dilute hydrochloric acid. He advised the use of such injections in advanced laryngeal disease, and mentioned a

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case of syphilitic disease of the larynx with almost complete stenosis, recently under his care at the Westminster Hospital. When admitted, the patient was extremely emaciated, having been unable to swallow for some time. Iodide of potassium in large doses, ice to suck and nutritive enemata, were ordered, and in a fortnight of this treatment the patient had gained weight, and was able to breathe freely and swallow well. He suggested similar treatment in the advanced stages of laryngeal disease.—Dr. ROUTH pointed out that pain in the left side was frequent in anæmic women, and in these cases the hæmorrhage came from the liver. In one case he diagnosed gastric ulcer from the severe local pain produced by the interrupted current at one spot in the epigastrium. He recommended the use of raw beef-juice every four hours in quantities varying from four to ten ounces, and advised the use of water enemata on alternate days for the purpose of cleaning out the bowel. The white of egg was a good addition; and wine was preferable to brandy.—Dr. DEWAR found the alkaline treatment, with the use of Carlsbad salts, most efficient in gastric ulcer.—Dr. STEVENS mentioned a case where the use of setons had succeeded in the cure of obstinate vomiting.—Dr. ROGERS had tried moxa in these cases with good results.—Dr. FOTHERGILL pointed out the difficulty in diagnosing actual disease of the stomach from reflex disorders due to pelvic irritation. The latter were not uncommon in young females, who complained, in addition to the gastric symptoms, of headache and a feeling of heat in the vagina. He reminded the Society of Dr. W. Robert's method, and stated that he himself had not found it necessary to resort to nutritive enemata for the cure of gastric ulcer.—Dr. GILBART SMITH had at present under his care at the London Hospital a young unmarried woman, who for twelve months had suffered from obstinate vomiting and gastric pain. The usual remedies having failed, a vaginal examination revealed ulceration of the cervix uteri. This was treated in the ordinary way, and the vomiting ceased. Another similar case, with a like result, was still under his care.—Dr. WILLIAMS, in reply, thought that two injections per diem of large quantities were better than small ones given more frequently. He had used this plan of treatment in laryngeal phthisis with great benefit. The use of blisters, moxa, and setons no doubt did good, but they were less efficacious than the treatment he advocated.

Mr. MALCOLM MORRIS read a paper on the "History and Therapeutical Value of Arsenic in Skin Diseases." It was first brought before the profession by Dr. Girdlestone, of Yarmouth, in 1806, and was at once recognised as a valuable remedy in England. Biett introduced it from the English hospitals to that of St. Louis, in Paris, and, following him, the French physicians, especially Cazenave, have been among the first to advocate its use and examine its action. In Germany, however, it has not been so well received, and even at the present time Hebra uses it but slightly. Among English physicians Hunt is the most representative of those who used it very largely and in every disease, and Erasmus Wilson, who believes it to be a valuable remedy, but not to the same extent. Its physiological effects have been examined by Claude Bernard, Lolliot, Sée, and Dr. Binger. They were described according to the action of arsenic on nutrition, respiration, circulation, and the nervous system, and its elimination by the skin, mucous membranes, liver, and kidneys. The increase of appetite is due rather to diminished oxidation than to any direct action on the intestinal mucous membrane. This diminished oxidation is caused by the fact that arsenic has the power, to a great extent, of taking the place of oxygen in the coloured blood corpuscles, and so prevents the blood from receiving its usual amount of oxygen in the lungs. Its action on respiration is also due to its action on the blood—for diminished oxidation means greater freedom of the respiratory movements, and decrease of oxygen in the blood means a greater stimulation of the respiratory centre. Its action on the circulation and the nervous system is more obscure, but in the former there is a marked fall in the blood pressure. That arsenic is eliminated by the liver, kidneys, and mucous membranes is proved by its discovery in the bile and urine, and by its causing bronchitis, conjunctivitis, and diarrhœa. That it is eliminated by the skin has also been proved by its discovery in the serum of a blister and in the sweat; and its special action in large doses on the epidermic cells has been examined by Miss Nunn and Dr. Ringer. Psoriasis is the disease of all others in which arsenic has been most universally used, and its action in many cases is undoubted, though not in all. The author believes this due to the action it exerts on the blood by diminishing not only the oxidation in the tissues, but by absolutely diminishing the number of coloured corpuscles. He had also used it with advantage in lichen planus, pemphigus, and chronic urticaria; but it must not be thought by any means a universal cure for all skin diseases. As some individuals have an intolerance of arsenic, various preparations should be tried before it is abandoned, and it is sometimes useful to combine it with other drugs, even iron. It should always be taken during or after food; should never be pushed to produce the slightest constitutional symptom, and should be continued, to prevent relapses, for a length of time after all traces of the disease have disappeared.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

AT the meeting on March 17th (W. A. N. Cattlin, F.R.C.S., President, in the chair) Mr. FRANCIS FOX read a paper on "Irregularities of the Teeth, and their Surgical Treatment." The early decay of teeth which marks the present generation is due, the author thought, to mal-nutrition occurring in the earlier periods of life. At about seven months after birth a process of absorption is set up in the walls of the crypt and parts superimposed, and by this process the crowns of the temporary teeth become visible above the surface of the gums. When the crowns of the teeth have erupted this absorptive action for a time ceases, and a renewal of the developmental process ensues, by which the alveoli are built up around the fangs of the teeth. At about four years of age the temporary dentition is perfected, and soon after this perfection is reached absorption again sets in, commencing now in the fangs of the teeth, and these, together with their alveolar processes, are gradually removed, their permanent successors replacing them by a similar process of absorption of crypt and development of alveolar structures. The important point to bear in mind is the fact that the alveolar portion of the jaws is developed with each dentition, so that a previous alveolar structure can have little to do with the position of the succeeding teeth, except as it may present an obstacle to their onward progress in consequence of its non-absorption. As to the development of the jaw bones, Mr. Fox remarked that these bones consist of two portions, (1) an alveolar structure, developed with the temporary teeth, absorbed with them, and again redeveloped with the permanent teeth, and (2) a basal portion. This base is more prominently marked in the lower jaw, in which the inferior dental canal very emphatically indicates the junction between the two portions of the bone. The base of the jaw when once formed remains in pretty much the same condition throughout life, except in advanced old age when the muscles of mastication are no longer in full use, and then in a slight degree it becomes wasted. In the superior maxillæ at birth the alveolar processes descend but little below the level of the palatal plates, and the anterior and posterior parts are but little developed. As age advances the alveoli lengthen, the tuberosities increase in size, and an active development of bone takes place in these situations. The tuberosities are to the upper maxillæ what the coronoid processes are to the lower jaw. From these points the alveolar line is lengthened. In the lower jaw an alteration in the position of its articular surfaces and ascending rami, together with an absorption of the coronoid processes, accompanies the development of the posterior permanent teeth. The jaw elongates by additions to its posterior cornua. The capacity of the jaws in childhood is nearly equal to the anterior portions of the adult bones; for the ten anterior teeth of the permanent set in each jaw replace the temporary, and occupy the same position as these, so that this part of the jaw in adult life is pretty much the same as in childhood. If contracted then it will remain so throughout life, and no subsequent development in the posterior regions will tend to expand it. The replacement of the temporary teeth by their successors is effected by a purely physiological process, and is absolutely independent of pressure. There seems to be a physiological

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law by which the cells composing the absorbent papilla in the neighbourhood of a developing tissue have the power of absorbing a mature structure. That pressure has nothing to do with the process may be proved by the fact, that in cases in which the shedding of the first teeth has taken place prematurely, a layer of bone has often been observed to intervene between the crown of the advancing tooth and the base of the socket of its predecessor. At the time when the temporary teeth are about to be shed, in the well-developed jaw a decided separation between contiguous teeth is noticeable: and this circumstance is a fair indication of a future regularity in the succeeding dentition, and a proof that this portion of the jaw has already been prepared to receive the larger permanent teeth. If the process of absorption continues uninterruptedly, the fangs of the temporary teeth will be gradually removed, leaving little more than the shells of the crowns, which readily drop from the gum as their successors are in turn ready to occupy their places. But should any arrest in this process occur (and such is far from an uncommon circumstance), these temporarary organs are liable to offer very considerable obstacles to the regular advance of their permanent successors. The causes of irregularity in the position of the teeth may arise during the developmental periods of life, and are then due to a want of proportion in the size of the teeth and jaws, or to a faulty development of the jaw bones; or the displacement may depend upon some accidental circumstances arising subsequently, such as the prolonged retention of the temporary teeth, the presence of supernumerary teeth, the habit of "thumb-sucking," or the undue pressure from an hypertrophied tongue. There is abundant evidence to prove how frequently such deformity depends upon hereditary influences. The conditions of life to which our race has for so many generations been subjected seems to have lessened the necessity for the broad and well-formed jaws which were so characteristic of our ancestors, and for many years the advances in civilisation have been marked by a deterioration in the capacity of our jaw-bones. Mr. Coleman, in some interesting investigations made several years ago, found that the percentage of contracted jaws was immeasurably greater in the children of the well-bred population than in those of less refined cultivation. The prolonged retention of temporary teeth is frequently associated with irregularity in their successors, and is probably often the cause of such irregularity. The presence of supernumerary teeth in the dental arch may prevent the normal members from assuming their proper places; but doubtless a disproportion of size between the teeth and jaws is of all causes of irregularity the most common. This disparity leads to a crowding of the teeth, sometimes to such an extent as to altogether prevent the eruption of some one or more of the dental series, such remaining impacted in the substance of the jaws. Certain injuries in early life may occasion displacement of the teeth, especially in the lower maxilla, such as the contraction of cicatrices about the face and neck. Mr. Salter, in his work on Dental Pathology and Surgery, treats the subject of irregularity of the teeth under two heads—(*a*) simple irregularity in which the misplacement is confined to one jaw, and is independent of the position of the teeth in the opposite jaw; (*b*) compound irregularity, which depends upon the position of the teeth in the opposing jaw. In "simple irregularity"—that is, where the misplacement is confined to one jaw, the crown only of the tooth may be irregularly placed, the apex of the root retaining its normal position; or the entire tooth may be displaced, or faulty in its development. Such irregular teeth are often entirely removed from the dental arch, and may be impacted in the substance of the jaw-bones. In the former condition, when the apex of the root retains its normal position, much good may be effected by judicious treatment, but in the latter case little can be done to remedy the evil, except by the removal of the displaced tooth. As examples of "simple irregularity," we may mention the appearance of the upper canines above the alveolar ridge, or in the palate, owing to insufficient room for them in the dental arch. An early loss of their temporary predecessors, by permitting the first bicuspid and the lateral incisor to approach each other, is not infrequently the immediate cause of this displacement. Sometimes, however, the retention of the temporary canine, or the presence of a supernumerary tooth, will occasion its deformity. An overlapping of the incisors is another form of "simple irregularity," and frequently requires for its treatment a resort to some mechanical appliance in order to obtain regularity in the position of these teeth. Another not uncommon form of irregularity is where an incisor tooth is more or less twisted, sometimes to such a degree that the side of the crown will occupy the position of its anterior surface. A forcible twisting of the tooth into its right position is very generally adopted. Some, however, are averse to this prompt treatment, and suggest the employment of a plate carefully adjusted to the palate, and having certain properly-constructed points of resistance. An unsightly separation of the central incisors in the upper jaw sometimes occurs, and the teeth may be readily drawn together, but have a great tendency to return to their former position. In treating these cases great care should be taken to prevent the ligature from slipping below the edge of the gum—between the necks of the teeth and the gum,—for the irritation set up by such a mishap has been known to cause the death of the tooth. In order to prevent this displacement of the ligature, a small vulcanite plate may be constructed to which the ligature can be attached, and thus prevented from shifting its position. The second form of irregularity of the teeth—that depending upon the position of the teeth in the opposing jaw—is much more complicated. As an example might be cited the "underhung jaw," in which the "bite" is intersecting; some or all of the six front upper teeth being shut behind the corresponding teeth in the lower jaw. This condition, in its extreme extent, arises from an undue development of the lower over the upper jaw, or from a want of development in the superior maxillary bones. It may also arise from a retardation in the eruption of the superior incisors, or by these teeth being pushed inwards by the prolonged occupation of the dental arch by their temporary predecessors. An early treatment of this irregularity is all-important, and should consist in preventing the contact of the opposing teeth. An opposite condition of the lower jaw sometimes occurs, in which the lower incisor teeth bite close up to the palate, so that they press against the necks of the upper teeth, and push them forward. A separation of the teeth in the anterior portions of the jaws has been described, and is occasioned by a congenital malformation of the lower jaw. The early obliquity in the position of the ascending rami is unduly maintained, and there is a want of development in the alveolar portions of the jaws, especially in the regions of the molar teeth. This irregularity may be caused by the contraction of a cicatrix in the throat or neck. The bicuspid teeth are not infrequently misplaced, and, when so, they usually occupy a too inward position. This may arise solely from their having been prevented from assuming their proper position in the dental arch by the prolonged retention of the temporary molars. But usually it is dependent upon a diminished capacity of the jaw, and in the upper jaw is generally associated with a projection of the incisors, and a more or less elevation of the palate constituting the V-shaped jaw, or "rabbit-mouth." This malformation is congenital, but, except in very exaggerated cases, is not very manifest until the posterior permanent teeth are about to be erupted, when the additions to the superior maxilla have been made in the posterior regions. The newly-formed bone, which has been gradually developing, is now found to be placed at an angle with the pre-existing alveolar line. This abnormal development has arisen in order to effect an harmonious arrangement with the other bones of the cranium. The maxillary bones having been imperfectly developed during early childhood, their posterior borders not being sufficiently divergent, the subsequent additions for adult conformation are placed in a wider circle; hence the point of junction between the two parts (the old and the new, so to speak) is marked by an angle of more or less extent. It is usually associated with great delicacy of constitution, and may occur in those of weak mental powers, but is often observed in persons of great intellectual capacity. The treatment of these cases consists in endeavouring to gain increased space in the dental arch, and to diminish the projection of the upper front teeth; but is, as a rule, more or less unsatisfactory. Irregularity in the wisdom teeth is sometimes met with, and may occasion most serious mischief, when extraction is the remedy. Transposition of the teeth is rare, and is usually met with anteriorly; and also inversion, which is still rarer.

A discussion ensued, in which the President, Mr. E. Bartlett, Mr. Gaine, Mr. Parson, and others took part. The President then announced that at the next meeting, on April 21st, Mr. Christopher Heath would read a paper on "Thirty-five Years' History of a Maxillary Tumour."

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Reviews and Notices of Books.

A Treatise on Hygiene and Public Health. Edited by ALBERT H. BUCK, M.D., American Editor of "Ziemssen's Cyclopædia of the Practice of Medicine," Instructor in Otology in the College of Physicians and Surgeons of New York. Two vols. large 8vo; pp. 792 and 657. New York: Wm. Wood and Co. London: Sampson Low, Marston, and Co. [FIRST NOTICE.]

IN a prefatory note to this work Dr. Buck tells us that in the preparation of the scheme announcing a translation of "Ziemssen's Cyclopædia of the Practice of Medicine" (to use the title given to the American translation), it was thought advisable to omit the first volume of the series, that which relates to the subject of health. This section of the work, treating the subject almost entirely from a German standpoint, failed to satisfy the materially different requirements which existed in the United States. It was determined, therefore, to substitute for the volume belonging to the original series of the Cyclopædia the present treatise written with special reference to the different characters and conditions of soil, habitations, modes of life, and laws of the United States. This judgment was a sound one, and we owe to it the independent treatise now before us. It would be more accurate to say series of treatises, for such the work really is, and it has the additional interest of being entirely written by American writers. Although written, as already mentioned, with a special view to the public-health requirements, legal and other, of the United States, this in no sense detracts from its general interest. The work makes no pretence of treating in other than the broadest sense of the sanitary laws of the United States. The want of uniformity in such of the various States as have legislated on sanitary matters would forbid this. Moreover, so far as the work deals with different conditions of climate, soil, and habitations and special modes of life, this is mainly in illustration of general principles. Hence the book is only in a very limited sense restricted to the peculiar requirements of the United States, and the statement of the prefatory note is somewhat misleading in this respect. Indeed, we are inclined to think that readers of the book on this side of the Atlantic will be disappointed to find that American experience has contributed so little to the whole. But be this as it may, the work is, in reality, a general treatise on the subjects to which it relates, and it is executed with a general uniformity of excellence not always found in works which are the results of the labours of many writers. We may say, indeed, at the outset that the work takes at once a leading place among text-books on hygiene and public health, and that it should become a necessary part of sanitary workers' and sanitary students' libraries. In the latter regard it may be especially noted that subjects are included not usually (if we mistake not, never) found in English text-books; for example, the hygiene of the naval and merchant marine, of coal mines, of metal mines, syphilis, schools, quarantine (both maritime and inland), &c.

We have already said that the work is more accurately described as consisting of a series of treatises, written, as a rule, by different authors. We propose briefly to glance at the several treatises, adding such occasional comments as the limit of our space will admit of.

The first volume opens with an "introduction," and is divided into two parts, relating respectively to "individual hygiene" and to "habitations." The introduction is devoted to a general examination of the causes of disease and the jurisprudence of hygiene, and it is simply necessary to state that it is the work of Dr. John S. Billings to give our readers to know that it is an admirable bit of work. It is especially noteworthy for the clear and thoughtful mode in which some of the most advanced and recondite questions of intimate pathology are treated. The part on individual hygiene is divided into five sections—to wit, infant hygiene (Professor Jacobi, M.D., New York); food and drink (Professor James Tyson, M.D., Pennsylvania); drinking water, and public water supplies (Professor William Ripley Nicholls, Boston, Mass.); physical exercise (Dr. Brayton Hall, New York); and the care of the person (Dr. Arthur van Harlingen, Philadelphia). The several articles are excellent, forming important contributions to our knowledge of the subjects to which they relate. The one on infant hygiene, by Professor Jacobi, is of peculiar value, especially as it concerns infant feeding. Here the author gives us the result of an exceptional experience on the subject which will be novel to most English readers, and which is in the highest degree suggestive. The article on physical exercise is a very able one, and of considerable interest. The other articles rest largely upon data common to Europe and the United States, but their mode of treatment gives a freshness to them which will be highly appreciated here. The second part of the volume, relating to habitations, is divided into three sections—to wit, soil and water (Dr. W. H. Ford, President of the Board of Health, Philadelphia); the atmosphere (Dr. D. F. Lincoln, Boston, Mass.); the general principles of hospital construction (Dr. Francis H. Brown, Boston, Mass.). Dr. Ford's article is a very comprehensive one, including the pollution of the soil in relation to defilement of the air and the drinking-water, and the whole subject of excrement removal. American experience appears to add little to European experience on this important subject, and the impression is left on the mind that the States lag much behind England in readiness of adaptation to particular local exigencies. Or rather it would appear as if the results of English experience on this subject were not as fully apprehended as they might be. Apart, however, from this consideration, the article is of peculiar excellence. Of the articles on the atmosphere and on hospital construction it may be said generally that they are welcome additions to the literature of the subjects.

We reserve our remarks on the second volume for another occasion.

Du Cancroïde des Lèvres et de son Traitement. Par le Dr. ALBERT PEILLON, Chef de Clinique Chirurgicale à la Faculté de Médecine de Lyon. J. B. Baillière et Fils, 1880.

ALTHOUGH we fail to find any new matter in the chapters on the etiology, pathology, symptoms and cause of this common cancerous affection, Dr. Peillon has certainly succeeded in stating well and concisely all the more important facts about the disease. He deals more fully with the subject of treatment, and dismisses as worthless, sometimes harmful, and at the best only palliative, the many external applications that have from time to time been vaunted as specifics for epithelioma. He especially discusses the value of chlorate of potash, and states that its internal administration is certainly useless, but that when applied externally it has in some cases been followed by cure, and should be used where operation is out of the question. He describes clearly and well several useful ways of removing epitheliomata of the lips, and especially describes an operation just introduced by M. Desgrorges of Lyons, and called cheiloplasty. If a large part or the whole of the lower lip be removed by a V-shaped incision, and the flaps brought together along the middle line, it is obvious that the upper lip will be pouted forwards and the buccal orifice much deformed. Desgrorges remedies this by removing a triangular piece from each end of the upper lip; he first widens the orifice by an incision outwards on each side, and the removal of the flaps shorten the lip sufficiently to restore the

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appearance of the mouth very fairly. We should certainly be inclined to try this method of operating in suitable cases.

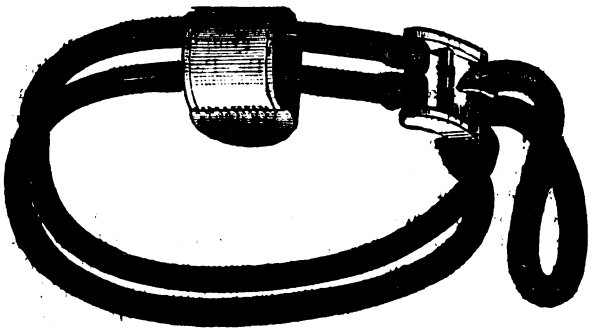
Harvey: La Circulation du Sang; des Mouvements du Cœur chez l'Homme et chez les Animaux. Traduction Française. Par Charles Richet. Paris: G. Masson. 1879.

Englishmen ought to be grateful to M. Richet for being the first to render into his native language the masterpiece of Harvey. It is strange that two centuries and a half have been allowed to elapse before our neighbours should have thought it necessary to have Harvey's writings in a more accessible form than the original Latin version. We congratulate M. Richet on his praiseworthy and successful effort, the value of which is considerably enhanced by the introductory chapter, in which he reviews the theories of the circulation among the ancients and the immediate predecessors of Harvey. He shows how the work of Fabricius, Servetus, and Cæsalpinus had raised the perception of the truth, but it was Harvey, and he alone, who demonstrated it by experiment and formularised a theory which had already been floating in the minds of a few learned men. M. Richet further concisely sums up the directions in which knowledge upon the subject has been advanced since Harvey's day, and he has added to the value of his book by appending some notes upon the mechanism of the circulation interpreted by the light of modern physiology. Altogether the book is worthy of as wide a perusal in England as we hope it may gain in France.

NEW TOURNIQUETS.

We have probably to thank the Ambulance movement for much of the ingenuity that has lately been exhibited in inventing simple apparatus for encountering surgical emergencies. Among the latest results of the movement are two new tourniquets, one on the plan of the india-rubber band, and the other a modification of Petit's well-known instrument.

The india-rubber tourniquet is the invention of Dr. Ward Cousins of Southsea, and is of very simple mechanism and construction. It consists of a movable pad, strong elastic tubing, and a special buckle, and it can be very rapidly adjusted to a limb so as to completely control the circulation. The buckle can also be easily opened and shut, and the



rubber tubing tightened or relaxed *with one hand*. The tourniquet, at once simple and powerful, is suitable to all surgical operations in which such an instrument is required. It will be found particularly serviceable to surgeons in the country, who are liable to be called upon to operate with very limited assistance. In amputating a limb for example, the tourniquet can be opened with the left hand, and a bleeding vessel seized with the forceps by the right; it can then be instantly closed again, and the vessel secured by torsion or ligature. In many accidents attended with bleeding it will be generally useful, inasmuch as it may be applied efficiently even by unskilled persons. We would suggest that a stitch or button in the leather between the two pieces of tubing as they pass over the pad, so as to keep them apart, would add to the safety and utility of the instrument.

The other tourniquet is by Mr. M'Clure, and seems, as already hinted, to be a cheap and simple modification of Petit's instrument. The materials in both are similar, but Mr. M'Clure has substituted for the handle in Petit's tourniquet a large wheel, within which the strong screw works.

The instruments are applied in a similar way, but in the new one a hard wooden pad is attached to the screw, and is powerfully acted upon by a very small action of the wheel. We must, however, point out that in the specimen submitted to us the webbing is too narrow and the pad too small, thereby involving a liability to rolling of the pad on any movement of the limb to which the instrument may be applied.

PUBLIC HEALTH AND THE SOCIETY OF ARTS.

In consequence of the general election, it has been considered advisable to fix the date for the Conference on this subject—which has been held annually by the Society of Arts since 1876—somewhat later than was originally intended, or than has been the case in former years. It will, therefore, be held in the beginning of June. As at the previous Conferences, the Right Hon. James Stansfeld, M.P., late President of the Local Government Board, will be in the chair.

A programme of subjects for discussion has been drawn up by the Executive Committee, and will be submitted to the Conference. The following are the subjects included:—1. The development of Local Government administration, especially by the constitution of County Boards. 2. The extension of the powers of the local authorities of urban and rural sanitary districts. Amendments in the Public Health Act. 3. Sanitary inspection and classification of dwellings. 4. Amendments in the Rivers Pollution Prevention Act. 5. The advisability of strengthening the administrative organisation of the Local Government Board. Local Government Board Administration Areas. 6. Further suggestions by sanitary authorities.

It is announced that the detailed programme will be issued shortly, and that copies can be obtained, when ready, from the Secretary of the Society of Arts, by any person who applies. The programme will also be issued to sanitary authorities throughout the kingdom.

It is not proposed to make any attempt to procure papers which may be read and discussed; but the Committee state that they will be glad to receive any communications containing fresh information, or giving accounts of progress made since the last Conference. Such communications, if approved by the Committee, will be printed and circulated at the Conference, but it is probable that time will not admit of any discussion being taken upon them.

Steevens's Hospital, Dublin.—At the termination of the Winter Session, 1879-80, the following honours were awarded:—Gold Medals: Senior Class, William J. Trotter; Middle Class, William J. Cuthbert; Junior Class, Glascott H. Symes. Honorary Certificates: Messrs. Blackham, Carroll, Clarke, Cruise, Smith, and Wells.

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THE LANCET.

LONDON: SATURDAY, APRIL 10, 1880.

THE political crisis through which we are passing will offer a rare and instant opportunity for reform, with which the incoming Premier may illustrate his administrative capacity, sweep from his path many difficulties, and at the outset of his career establish a strong claim to confidence, while he confers on his country a general boon. The weak point in the English system of government as at present constituted, is the isolation of the department which *theoretically* gathers up the reins of local self-government and places them in the hands of the Ministry, but which *practically* not only fails to perform that necessary function, but entangles the ribbons and frets the team. During the last twenty years there has been a fitful and irregular, but, on the whole, continuous and rapid growth of the principle of local self-government, and, strange to say, successive Ministries have been bewildered and embarrassed rather than helped by the circumstance. Instead of looking closely into the phenomenon, accepting it as inevitable, and converting it into a new source of political strength, statesmen have been scared. They have, indeed, made a show of accepting the increased responsibilities thrust upon them, but the action taken has generally appeared to the country, if it has not been in fact, a clumsy piece of centralisation; and while with timid hand they have added to the confusion and trouble at Whitehall, they have been compelled by pressure or moved by fear to throw some new sop or placebo to the local authorities. This position of affairs cannot be much longer tolerated. It is a source of daily increasing dissatisfaction to the country, and the policy of concession to local demands which it necessitates is undignified, and in the end must be ineffectual.

It is easy to cut the Gordian knot of this difficulty, and to render the process of reconstruction facile by the simple and timely precaution of *placing a strong and wise man at the head of the Local Government Board, and making him a member of the Cabinet.* There is no lack of good men at the disposal of the next Premier, whoever he may be. If a statesman in whom the country has confidence—for example, Mr. FORSTER—were appointed President of the Local Government Board, with a seat in the Cabinet, one of the most formidable of difficulties would be removed out of the way of the new Ministry. We have long and importunately insisted on the claims of the country to a Ministry of Public Health. This need would be satisfied if the Minister upon whom it devolves to carry out the provisions of the Public Health Acts were a member of the Cabinet. The immediate effect of such an arrangement would be to make the health interests of the country an integral part of the Ministerial policy. It could not be otherwise. And thus we should gain in fact what the country has been repeatedly promised in a figure of speech, a policy having for its maxim *Sanitas sanitatum omnia est sanitas.* Nor would it be less convenient on general grounds that the member of the Government who is officially in the closest relations with local interests, and who ought therefore to be especially well acquainted with the working details of the economic system, should have a seat in the innermost council of the State, and be able to bring his practical knowledge to bear on the ordinary business of the country.

Domestic considerations play too small a part in the counsels of the nation. It would go far to amend this fault of our traditional policy if the President of the Local Government Board could be admitted to the Cabinet. That Minister, although at present subordinate, is the chief in authority as censor of local improvements throughout England and Wales. He is the judge of appeal in all questions of expediency, as between the executive bodies empowered under the Local Government Acts and the ratepayers. He is at the head of the Poor-law machinery, and commands, in chief, the army of Health-officers. Nothing is wanting but to give the office to a thoroughly good and trusted statesmen, and to include him in the Cabinet. This last point is essential; upon it everything turns. It would be perplexing rather than useful to send an energetic administrator to this department on the old footing, as was done in years past by the two political parties in succession. The work that waits in the office now held by Mr. SCLATER-BOOTH is of a class which can only be done effectively by a Cabinet Minister who would be able to make his influence felt, and to assert the claims of his department, if need be, against the Privy Council itself. The relations into which the Local Government Board must in any great health crisis be thrown with the Privy Council are simply impracticable. In the ordinary discharge of its routine duty even, the friction to which this department is subjected in collision with other nominally, though in no real sense actually, higher branches of the Administration, is destructive to its efficiency. It is a vast Ministry of the Interior, and has claims to a first place in the Government which are unquestionably greater than those of more than one of the departments, which no Prime Minister has yet had the courage to exclude from the Cabinet. What, for example, are the pretensions of the Postmaster-General to a seat at the Council-table, as compared with those of the President of the Local Government Board? The eminent chief of the letter-carrying and telegraphic system might, for any claims his office gives him to a voice in the policy of the country, be a non-political personage. It is a strange anomaly that while this dignitary claims a seat in the Cabinet by right, the head of the local self-government system throughout the country should be an outsider.

We feel it to be a duty to press this matter on the consideration of those who are likely to be at an early date engaged in the construction of a new Government, because the opportunity which exists is very great, and the moment is propitious for the step proposed. The local authorities everywhere are disquieted, many of the Acts which bear directly on local business are working uneasily, and much of the domestic business which presses for attention is of a nature to tax the skill and energy of the new President of the Local Government Board severely. It will, we are convinced, be a blunder to appoint a simply good man, and leave him outside the Cabinet. The sagacity of statesmanship will be better shown by offering the post to a man of proved ability, with a seat in the Cabinet. All that could

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be necessary at the outset would be to make the appointment. The country would, we are persuaded, hail the procedure as a token of that spirited domestic policy which it, above all things, desires to see inaugurated. Parliament would not grudge the increase of emolument which must be, and, looking to the amount of work now falling on the President of the Local Government Board, ought to be, attached to his office, if it is to be filled by a Cabinet Minister. There might be a saving in some other direction, and it would be easy, if it were not invidious, to point to more than one office of the highest Ministerial rank in which such an economy might be conveniently carried into effect. Enough, however, has been said to place the matter under the consideration of the Ministers of the future, and of public opinion. Our suggestion is made under a strong sense of duty, and because this department of the Government is that with which the great body of medical men are brought into very close relations, and in regard to which they entertain feelings of interest and expectancy. The whole health question may be placed on an entirely new footing by the step we recommend; and it is certainly one which must have a keen interest for the medical profession and the country at large, because it would create a Ministry and give us a Minister of Health—a double boon, which political policy and public expediency both urgently crave.

A RECENT telegram from India describes a fatality which illustrates, only too exactly, the perils of the hypodermic use of morphia. The Italian Consul at Bombay was suffering from a pain in his leg, and called in an Italian doctor, who sent a prescription to a chemist's for a solution of morphia. In this prescription two "grana" of morphia were ordered. The chemist, misled by the word being written at full-length, mistook it for "grammes." An injection was given, which contained, of course, fifteen times the amount of morphia intended. The mistake was, it is said, at once discovered, and remedies applied, but the patient sank rapidly and died the same evening. The accident illustrates, in a striking manner, the danger of error, on which we have often commented, arising from the similarity of the words "grana" and "grammes," whether written at full-length or in abbreviation—a danger which may well make us hesitate in the adoption of the metrical system. Such mistakes, equally facile and equally fatal, will of necessity attend the change of terms, unless a synonym for gramme can be introduced of less dangerous similarity to the word in present use. But the accident illustrates also, in an emphatic manner, a peril which is incidental to, and inseparable from, the use of morphia by hypodermic injection. An over-dose, once administered, is beyond recall. An excessive quantity, given by the mouth, may be removed if, as in this case, the accident is at once discovered. But if injected through the skin, the only resource is the uncertain influence of antidotal agents. We doubt whether the members of our profession are adequately alive to the risks of death which attend this method of using morphia, or whether they are, as a body, aware of the best method of treatment should an accident occur. To other risks attending the subcutaneous use of morphia attention has been of late fully called. By the labours of LEVINSTEIN and others, the danger of habituation, until the daily dose becomes a necessity, is well known. But the comparative rarity with which an injection is followed by dangerous narcotism may easily cause the risk, real and grave as it is, to be underrated. If recognised by all, it is, we think, adequately estimated by few, especially of the younger members of the profession.

Of the reality of the danger, and of its degree, important evidence is afforded by a recent valuable collection of facts, regarding the hypodermic use of morphia, which has been published in New York by Dr. KANE. Our readers may remember that, some years ago, that gentleman published a series of questions on this subject, and the replies which he has received (357 in number) constitute the material of the work to which we refer. It contains information of interest regarding many points connected with the subject, but of incomparably greatest importance are the facts brought together regarding the occurrence of narcotism and death after what we are accustomed to regard as safe doses, the probable causes of these alarming consequences, and the means by which they may be prevented.

In all, thirty-six cases were reported to Dr. KANE, in which death was ascribed to the hypodermic injection, but in only twenty-five of these were the circumstances sufficiently decisive to leave no reasonable doubt of the relation between the supposed cause and effect. "Many of these cases are as well established as it is possible to establish anything of the kind." Moreover we are reminded, and justly, that recorded cases are probably but a small percentage of those in which death results from this cause. "There is a natural delicacy about exposing one's blunders to the world, especially blunders that have compromised the life or caused the death of a human being. Crimes these will be considered, however much the physician may offer in extenuation, or however great a part may have been played by the idiosyncrasy of the patient." In support of this, Dr. KANE adds that he knows of cases other than those reported, where death was attributed to the hypodermic use of morphia, and yet the physicians will not allow the histories, or even the main facts of the cases, to be used anonymously.

An examination of the causes to which the fatal result was due is very instructive. The smallest single dose, which appears to have been, alone, the cause of death, is a quarter of a grain. In one case, however, in which there existed a natural susceptibility to the influence of opium, death apparently resulted from a twelfth of a grain being administered by the skin, after a quarter of a grain had been given by the mouth. In three cases the patients were suffering from delirium tremens, and in one of these, in which the morphia narcosis unmistakably preceded death, only two eighths of a grain had been given. In the vast majority of cases, however, the toxic effect was distinctly due to the repetition of the hypodermic injection, or to its employment after a fair dose of opium had been given by the mouth. In one instance, for an attack of myalgia in a man who was believed to be healthy, though not quite temperate, a quarter of a grain of morphia was given by the mouth, and then a quarter of a grain by the skin. The patient died. In another case one-sixth of a grain was administered by injection to relieve an attack of asthma, and just after it had been given, the administrator learned that half a drachm of laudanum had been given by the

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mouth before his arrival. This patient also died in spite of treatment.

An important practical point, which is well illustrated by several of the cases, is the fact that tolerance of opium or morphia by the mouth does not prove that it will be tolerated equally well by the skin. Another fact, of equal importance, is that tolerance of morphia by hypodermic injection at one time is no ground for inferring that at another time the same dose would be equally well borne. For instance, a robust farmer had had several attacks of biliary colic, for which he was treated by large doses of morphia, &c., by the mouth. In the last of the series two half-grain doses of morphia were injected, without any ill effect. Six months passed without an attack, and then occurred one of great severity, for which a single injection of one grain was given. But the tolerance which had enabled the two half-grain doses to be so well borne, had disappeared in the interval. Deep narcotism followed, and artificial respiration had to be kept up for six hours. He ultimately recovered.

The data collected illustrate very clearly the known fact that in certain morbid states the use of morphia is peculiarly dangerous. Foremost among these is chronic alcoholism. In a considerable number of cases in which death resulted the patients had been intemperate. This renders its use in delirium tremens peculiarly hazardous, and, as we have said, in three of the fatal cases the remedy was given for this disorder. The existence of chronic Bright's disease also increases the danger, and so also does the existence of disease of the heart or lungs, interfering with circulation and respiration. An important fact which is established by the facts collected, and which is contrary to the opinion sometimes expressed, is that the existence of severe pain does not render large doses better borne. In several cases, as soon as the pain disappeared, the patient passed into a state of imminent danger.

But in a considerable number of the cases in which dangerous symptoms or death occurred, the accident was clearly the result of gross carelessness. Indeed, the inexact manner in which so powerful an agent is employed by some Transatlantic physicians cannot but occasion astonishment, and has, we hope and believe, no parallel in this country. In one case, for instance, a patient, after an operation, received an injection of ten minims of a saturated solution of morphia, and died, deeply narcotised, in two hours. The exact dose of morphia was not known (!), but ten minims of water at 60° F. were found to dissolve six grains and a half. No less than three of the medical men who replied to Dr. KANE'S circular are in the habit of carrying the morphia, for convenience, as a loose powder; and when they have occasion to administer it, they guess at the dose of powder, dissolve it in water, and inject it!

The subject of the treatment of morphia-narcosis is well considered in Dr. KANE'S book, in a chapter which, while presenting nothing that is new, brings together the evidence on the subject in a useful manner. The fact that atropine is capable to some extent of counteracting the influence of morphia must be considered as established beyond dispute; and so also is the fact that it must not be regarded as a simple and complete antagonist. We cannot expect that atropine will do all the work in saving a patient. It may assist, but it needs to be supplemented by the other remedies in common use, and its action may also be assisted by the hypodermic injection of strychnia. But care is necessary to administer only the dose of atropine which is necessary to antagonise the quantity of morphia, and this is 1-25th of a grain of atropine to every grain of morphia. Patients have been killed by atropine given to antagonise morphia. A woman, for instance, was deeply narcotised by half a grain of morphia, and repeated injections of atropia were given to counteract the morphia, until half a grain of atropine had been administered. This was sufficient to antagonise six grains of morphia. The woman died with all the signs of atropine poisoning. Strychnia ought not to be used in larger total quantity than 1-20th of a grain, and a much smaller dose should be first administered. Artificial respiration, electricity, and coffee or caffeine, remedies in common use, may, of course, be necessary in addition.

Another accident which sometimes follows an injection is dangerous syncope. It is often assumed that this is due to the injection of the solution into a vein. It may be so in the cases in which the syncopal symptoms occur with great rapidity, but it is doubtful whether the explanation suffices for all cases. The syncope sometimes occurs only after some minutes, and is apparently due to an unusual susceptibility of the pneumogastric centres for the drug, analogous to that which gives rise to vomiting. Instructive examples of both these forms of syncope are given by Dr. KANE. A fourth of a grain was injected into the arm of a weakly woman for neuralgia. "Within a few seconds the breathing became stertorous, the pulse failed, the lips and countenance became livid, the eyes were set; respiration ceased; the radial and cardiac pulsations were lost; the heart-sounds could not be distinguished. The woman was to all appearances dead." By prompt treatment she was, however, revived. Again, a sixth of a grain was injected into a healthy man for lumbago. In five minutes he was relieved of the pain, but in five minutes more he said, "I think I am going to vomit." "He grew deadly pale, his eyes rolled up in his head so that only the whites were visible, the jaws were clenched, the head was drawn back, and the whole body stiffened, respiration ceasing also." With water to the face, &c., he revived in a few minutes.

Whenever there is reason to think, from the rapidity with which such symptoms come on, that the injection has been directly into a vein, the circulation in the limb should be arrested by a ligature above the place of injection. Moreover, the suggestion is worth consideration, whether in such cases as that reported from Bombay, in which the fact of an overdose is at once discovered, something may not be done by local treatment to arrest absorption. Because symptoms manifest themselves a few minutes after an injection into the subcutaneous cellular tissue, we are not justified in assuming that the whole of the morphia injected is absorbed so rapidly. It seems probable that if a ligature were at once placed on the limb, an incision made through the skin at the seat of the injection, and the part freely washed or even freely cauterised, the amount of morphia absorbed might be reduced to a degree in which its antagonism is possible, and the patient's life might be saved.

THE Indian press publish this week some further details of the reforms and reorganisations proposed by the Simla

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Army Commission. We have already indicated the principal changes suggested, which embrace the fusion of the Military Medical Service of India with the Army Medical Department, the Civil branch of the Indian Service remaining as at present a semi-distinct body with military commissions and rank, liable to be retransferred to military employ, and acting in times of emergency as a medical reserve. Sir ASHLEY EDEN'S Committee, however, are not content with these proposals, but go still further in their proposals, and would abolish the Royal Service altogether, as far as India is concerned, establishing instead of the present systems a "Local Medical Corps for India." This is to take over the whole medical work, civil and military, of the Empire. The mode of entry into this local service is to be through the British Medical Department, in which all officers must first serve for two years. This notion, we presume, is based on the Indian Staff Corps, which is officered by candidates and volunteers from Queen's regiments of two years' standing. They further suggest that fifty young British medical officers should always be kept in the country to see how the climate and work suit them, and from these, vacancies in the "Local Medical Corps" would be filled. They estimate a saving to the Indian Exchequer of Rs. 2,547,600 annually. As we understand the Committee negative the idea of a local Indian Army (European), we are at a loss to see why they should make an exception for the Medical Department of the Army. The information, however, at present furnished to the Indian Press is so meagre, that we must await fuller and possibly more accurate knowledge before pronouncing a formal judgment on a scheme which may be sweeping and wholesale in its reductions.

The details now furnished modify considerably the statements previously published, and show that the indignation which has been excited on the subject of the proposed changes has been, to some extent at least, uncalled for. It would appear that when the separation is effected between the civil and military services, the loss of the Surgeon-General by the Indian Services in each of the Presidencies, which has been the subject of so many severe comments, will be made up by the creation of a Surgeon-General for the administration of the civil service in each province, in addition to the Sanitary Commissioners and their present staff of medical officers. The Commission propose that, after these officers have been removed from the military branch of the Indian Medical Service, it shall—as previously suggested—be amalgamated with the Army Medical Service, the two forming one list from which the promotions to the administrative ranks shall be made. So that, if this scheme be carried out, the officers of the Army Medical Department will be the losers, for while they will obtain none of the new prizes secured for the civil branch, they will have to share with the military branch the appointments which have heretofore been their portion.

So far as the proposed remedies are known, they seem likely to prove injurious to the Army Medical Department, by abolishing many of their lucrative appointments in India. It should, however, be remembered that these are as yet merely recommendations, which must undergo the scrutiny of the authorities at home, and we are greatly mistaken if they will be sanctioned in the form in which they have been put forward. The necessity for an amalgamation of the two medical services is generally admitted, but it must be carried out on principles of even-handed justice. Neither service must be allowed to bear away an undue proportion of the prizes, and if the Indian service is to come in for a share of the rewards in the military branch, at the expense of the British Medical Department, it would only be justice to admit the latter to a fair share of the lucrative civil appointments. It is stated that in lieu of the course at Netley, young medical officers of the Indian Army will have to undergo a short term of training at one of the Presidency General Hospitals. We trust that the military authorities will never sanction an arrangement so injurious to the best interests alike of the medical officer and of the soldier. The Indian authorities may choose to adopt such a course for the Civil Medical Service, but we cannot believe they will be permitted to introduce a system so prejudicial to the Army.

We opine that the suggestion to form a "Local Medical Corps" will never become *au fait accompli*.

MR. W. H. POWER'S official report to the Local Government Board on an outbreak of typhoid on board the reformatory school-ship *Cornwall*, moored off Purfleet in the Thames, has been issued, and proves to be of even greater importance than was anticipated. It records not merely a singularly successful inquiry into the origin and nature of an obscure outbreak of disease, but it is in the highest degree suggestive of certain lines of further clinical and pathological research of the greatest moment. The report, like previous reports of the same writer (notably his report on the relation of the localised outbreak of diphtheria in the north-western districts of the metropolis last year to the distribution of a particular milk-supply), is an example of the sort of etiological inquiry for which the medical department of the Local Government Board has made itself famous, and of which it is difficult to say whether the acumen of the investigator in seizing upon and following out obscure clues, the severity of the reasoning, or the seemingly inexhaustible industry displayed excite most admiration.

Our readers will probably remember that in the fall of last year the Local Government Board had been requested to send one of its medical inspectors to the assistance of the governing body and medical officer of the *Cornwall* in investigating what was believed to be a renewed outbreak of enteric fever among the children on board. Two or three years before the ship had been the scene of a considerable outbreak of that disease, suspected to have been caused by fouling of the water-supply with excremental matter from a patient sick of the malady. This outbreak had at the time been made the subject of an independent inquiry by the late Mr. HARRY LEACH, and at his suggestion many improvements were carried out in the hygienic arrangements of the ship. Some time afterwards Mr. NETTEN RADCLIFFE had been directed by the Local Government Board to make an inquiry as to the health of the boys on the ship, and as to possible detriment thereto from the position in which the vessel was moored with reference to the overflows of the metropolitan sewage into the rivers at Crossness and Barking, several miles above. Mr. RADCLIFFE'S inquiry, although it is stated that

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he was unable to complete it, appears to have tended generally to confirm the conclusions MR. HARRY LEACH had arrived at, and to have led to the adoption of a better system for recording any sickness which might happen on board. There is no room for wonder then that the occurrence of apparently another considerable outbreak of enteric fever among the boys was a cause of grave uneasiness and serious disappointment to the governing body, and that aid was early sought from the Local Government Board, through the Home Secretary, for assistance in searching for the source of this seemingly inexplicable reappearance of a disease against which all possible precautions had been taken under highly competent advice. Mr. W. H. POWER was directed to give this assistance; and, in Mr. MORTIMER DE BRENT, the medical officer of the ship, he found a very able coadjutor. Mr. DE BRENT had kept careful records of the most marked cases, and temperature readings of many. The substance of these records is given in a memorandum annexed to the report, and, together with a series of temperature charts constructed by Mr. POWER from Mr. DE BRENT'S notes, form a peculiarly valuable part of it. At the outset of the inquiry, and for some little time after it had been in progress, nothing appeared that suggested a doubt to Mr. POWER'S mind that he was not dealing with ordinary enteric fever. Certainly sundry anomalies in the progress of the disease early struck the mind, particularly in reference to its fatality (one case only having proved fatal in forty-three cases)—its unusual duration in some cases, its triviality in others, &c.; but the diarrhœa observed in several of the severer cases, an eruption of rose-spots, and at times free hæmorrhage from the bowels appeared to set the question of the nature of the disease at rest. Moreover, in the fatal case death was preceded by symptoms which seemed to betoken perforation of the bowel. But in endeavouring to elucidate the conditions which could foster or determine enteric fever among the boys, whether collectively or individually, or in groups, all efforts failed until the question of the possible influence of food as a condition was entered upon. Here it was presently ascertained that the recurrence of cases, or rather groups of cases, had a very definite relation to the use, at intervals of weeks, of a particular form of food—namely, salt meat,—and that this salt meat might have been, and certainly was during a part of the period over which the inquiry had to extend, salt pork. The question immediately suggested itself to Mr. POWER'S mind, Could this pork have been trichinised? Following out this new line of thought, it quickly became apparent that the order of occurrence of the cases was readily explicable on this assumption; that it not improbably would furnish a clue to the observed anomalies in the progress of the disease; and that it might be the outbreak was one of trichinosis, and not of enteric fever. Under these circumstances, permission was sought of the Home Secretary, and granted, to exhume the body of the lad who had died, and who had been buried two months before; and an examination of the body disclosed that there were none of the pathological changes indicative of enteric fever, and that there had been no perforation of the intestine; while, on the other hand, trichinæ were found largely in the muscles, particularly in the diaphragm, some fully grown and *one wandering and living*, others in different stages of less development, and considerable numbers of brood trichinæ were discovered beneath the under-surface of the mucous membrane of the intestine. Here, then, was proof that Mr. POWER'S assumption had been the right one. There could be no reasonable question that the lad had died from trichinosis, not from enteric fever; and the inference naturally followed that the supposed outbreak of enteric fever had been an outbreak of trichinosis following most probably upon the consumption of trichinised pork. The whole course of this inquiry, as detailed in the report, is one of the completest examples we are acquainted with of a true scientific method successfully applied in etiological research.

But the important question remains of the meaning of trichinosis thus closely simulating, as was the case in this outbreak, enteric fever. On the clinical importance of this semblance we need hardly dwell. It must be obvious that in future the possibility of a confusion between the two diseases will have to be present to all practitioners. But Mr. POWER opens another and more recondite view of the question, which he justly designated as of "supreme importance." In view of the symptoms exhibited in the fatal cases, and other sufferers on board the *Cornwall*, he suggests possible relations of enteric fever to a muscular parasite which require investigation, and which might require material modification of current views respecting the etiology and pathology of that disease. We may be assured that this suggestion will not be suffered to remain sterile in the Medical Department of the Local Board.

On the practical side, moreover, the report is far from barren. Meat for the numerous boys on board the *Cornwall* is cooked in bulk, and it is apparent that portions of trichinised meat so cooked escaped the full amount of heat requisite for the destruction of the parasite. Here, then, arises the question of the method in which meat should be cooked for large bodies of persons, in order to obviate such a danger. Again, it should be practicable in all large establishments to secure an efficient examination of imported pork (the sort of meat, it is inferred, here in question), in view of possible infection with trichinæ.

An interesting memorandum, by Mr. POWER in conjunction with Dr. ROBERT CORY, on the microscopical examination of the parasite discovered in the fatal case, with illustrations, is appended to the report.

Annotations.

"Ne quid nimis."

HEALTH IN SCHOOLS.

It will be a happy moment for the health interests of humanity when the process of "education" is made to include training with a view to the eradication of inherited disease, the repression of morbid idiosyncrasies, and the scientific—that is, physiological and psychological—culture of such faculties and attributes of the mental and bodily organism as shall conduce to perfect health. One step in this direction will be taken when the professional trainers of youth, and managers of schools generally, are brought to recognise the scope and importance of the work in which they are engaged. At first we must probably be content to struggle for a better hygienic condition of schools and school-houses

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than at present prevails. Although Russian authorities on this subject think the English school system perfect from a health point of view, and envy us our advanced position, it would be folly to shut our eyes to the fact that there is much in the *régime* of child-life which is eminently unsatisfactory both in families and "at school." In respect to the food, the clothing, and the habits of the young much remains to be accomplished before we shall even approximate to a perfect system. Meanwhile, it is, perhaps, in respect to the ventilation of schoolrooms, the length of time spent in study, the method of studying, the posture of body long maintained, and the management of light, with the consequent strain on the eyesight of children and of growing youths of both sexes, improvement is most urgently necessary. There is much to be said on these topics, and with a view to lay a solid basis for some practical remarks on the subject, we venture to call teachers and trainers of the young, and schoolkeepers generally, to supply us with brief statements of the system employed in their several establishments. We shall be prepared to classify these statements, and in due season will give the results of our inquiries, with such comments as the data may suggest. The special points to which we have above alluded, together with details of the system of dietary, discipline, and punishments, should form the staple of the communications we invite. It is not opinion we seek, but facts.

THE ACTION OF ALCOHOL.

AN interesting series of experiments on the physiological action of alcohol in its relation to animal heat, and its influence upon the vaso-motor nervous system, has been carried out at the West Riding Asylum by Dr. Bevan Lewis, who has described the results of his investigation in the current number of the *Journal of Mental Science*. Large doses of alcohol lower the temperature of the body, and as Binz has proved that this action is not through the nervous system, it has been inferred that they check tissue metamorphosis. But this involves the assumption that the escape of heat from the surface is not altered. Parkes and Wollowicz, however, could find no evidence that small doses of alcohol check metabolism, and it would therefore seem that, if the two statements are correct, large doses of alcohol lower temperature by lessening tissue change, small doses do not lessen tissue change, and that the action of small and large doses is not the same. But since body heat is the balance between the heat produced and the heat lost, it is evident that the amount of heat which escapes, under the action of alcohol, is an important element in the problem. It is this which Dr. Lewis has investigated, the experiments having been made upon rabbits. The observations were carried on in each experiment in eight successive periods of a quarter of an hour. The heat formation under normal conditions having been ascertained, observations were made after ninety minims of alcohol had been injected. During the first period the production of heat was not far from the normal, rather below in the second, but during the third period it rose to double the normal; during the next three periods it was not far from the normal. A larger dose of alcohol (120 minims, in a smaller rabbit) had a striking effect. During the first quarter of an hour the heat produced was almost *nil;* during the second and third it was greatly increased, more than double the normal; and during the remaining three periods it was still higher. An observation with 180 minims of alcohol gave similar and more marked results. The production of heat was steadily augmented, until on the fifth interval it rose to about four times the normal. Not only is the effect on heat production greater, but it is more persistent after the large doses of alcohol. Thus the maximum production with 40 minims was reached in half an hour, with 90 minims in three-quarters of an hour, with 120 minims in one hour, and with 180 minims in an hour and a quarter. The earliest indication obtained of the action of small doses of the drug always pointed to a primary check to heat formation, which was, however, scarcely recognisable when larger doses were given, being apparently too brief and quick to be measured.

Observations on the temperature of the body showed, it is needless to say, a fall in temperature in all cases. This was greatest during the first quarter of an hour, but proportioned in degree and also in duration to the dose of alcohol which had been given. Not only is the fall of temperature greatest in the first quarter of an hour, when the production of heat undergoes a sensible diminution, but the fall lessens during subsequent periods, and a marked attempt at the restitution of the normal temperature coincides with the period of maximum heat production. In an earlier series of experiments Dr. Lewis studied the effect of chloral in a similar manner, and found almost the same effect upon the production of heat. The combination of the two leads to an extreme vaso-motor paralysis, which is seen very strikingly when alcoholic stimulants have been administered to patients who have taken twenty or thirty grains of chloral. The conclusion, as regards alcohol, is in direct antagonism to the view that in very large doses it lowers temperature by directly checking tissue metamorphosis. The characteristic action of alcohol is to greatly increase the production of heat, whilst dispersion of the freshly-formed heat is facilitated by peripheral vaso-motor paresis. It is only in very small doses that we get a temporary lowering of heat formation.

LONDON MORTALITY.

THE sanitary condition of the metropolis, judged by its recent mortality statistics, can scarcely be considered satisfactory. During the past six months the rate of mortality among the London population has considerably exceeded that recorded among the slightly larger aggregate population of nineteen of the largest provincial English towns. In the last quarter of 1879 the annual death-rate, which averaged 24·2 in the provincial towns, was equal to 24·9 in London; and in the first quarter of this year the metropolitan death-rate rose to 27·3 per 1000, while in the provincial towns it did not average more than 23·8. This signifies that, in equal numbers living, 115 persons have died in London during the past three months to each hundred dying in the provincial towns. This excessive mortality in London is exceptional; but it is a fact, of which the dwellers in London would do well to weigh the importance, that sanitary progress in London in recent years has not kept pace with that in our large provincial towns. That there was greater need and scope for improvement in other large English towns than in London does not afford an entirely satisfactory explanation of this fact. If we examine the mortality statistics of the past ten years, we find that mortality in the twenty largest towns showed a decline of 4·7 per cent. in the more recent quinquenniad, compared with that in the preceding five years; in London, however, the proportional decline of mortality did not exceed 0·7 per cent. In recent years the excess of mortality due to cold has been proportionately greater in London than in other large towns; it is difficult to ignore this fact as affording evidence of low sanitary condition. The recent marked increase of whooping-cough fatality in London is also noteworthy in connexion with the excessive mortality from all causes. During the past thirteen weeks the weekly deaths from whooping-cough in London ranged between 248 and 112, and amounted to no less than 1956 So great a fatality of whooping-cough has not occurred in London since civil registration was established in 1837; the nearest approach to it occurred in 1878, when an epidemic of this

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disease was unprecedentedly fatal. These facts call for the earnest attention of the metropolitan sanitary authorities and medical officers of health. It is necessary to guard against a dangerous tendency to fatalism in sanitation, which inclines to the belief that excessive mortality due to cold, and to such epidemic diseases as whooping-cough and measles, is beyond the control of sanitary authorities.

ARMY MEDICAL SCHOOL AT NETLEY.

THE Army Medical School commenced its summer session on the 1st instant. Inspector-General Dr. Maclean, C.B., delivered an eloquent address on the occasion, in which he reviewed the past history of the institution, and showed the essential importance of the studies pursued at it in extending the usefulness of the medical officers and promoting the interests of the public service. The classes have opened with sixty-one candidates for commissions in the different branches of medico-military employment—viz., thirty-five surgeon-probationers for the British Army, twenty-three candidates for her Majesty's Indian Army, and three for the Royal Navy. Two surgeons-major of the Indian Medical Service, and one staff-surgeon R.N., are also named in the lists as going through the courses of instruction. Dr. Maclean in his address acknowledged his regret at seeing the small number of representatives of the naval medical service on the benches before him, but expressed a confident hope that, in spite of certain difficulties there might be on the part of the governing authorities in meeting the expectations of those who were advocating various changes in the terms of naval medical service, a satisfactory solution of them would be found before long. The opening of the session was attended not only by the newly-arrived probationers, but also by the military and medical staffs of all the establishments at Netley.

COLONEL CHAPLIN, M.P., AND MR. SEELY, M.P., ON COMPULSORY VACCINATION.

DEPUTATIONS from the Lincoln branch of the Anti-Compulsory Vaccination League have waited upon Colonel Chaplin, M.P., and Mr. Seely, M.P., to ascertain their views with regard to the law of compulsory vaccination. Both gentlemen expressed themselves very decidedly in favour of retaining the law of compulsion as it stands, but both were willing to promote further inquiry on the subject. Colonel Chaplin attributed much of the ill-feeling existing among many people in the country as to vaccination to carelessness of vaccinators in performing the operation; and Mr. Seely appeared to imply a similar conclusion. Both gentlemen held that the benefits derived from vaccination in the restraint of small-pox outweighed the arguments which had been urged in favour of giving up compulsion; and, in like manner, both gentlemen held that the evils asserted to arise from vaccination were overcome by the benefits accruing from the operation. At any rate, they said they would require other evidence than that tendered by the gentlemen of the deputation to alter their feelings as to the necessity for maintaining compulsory vaccination, but they were prepared to consider additional evidence on the subject, and to further inquiry by Parliament which would be likely to throw additional light on disputed points.

OPHTHALMIC SURGERY AND THE MEDICAL CURRICULUM.

FOR some time past the necessity of ranking ophthalmic surgery among the compulsory subjects in the medical curriculum has been strongly urged; and the various licensing bodies may before long require an almost special knowledge of this branch of surgery from all candidates seeking their diplomas or degrees. About this time last year a memorial, emanating from ophthalmic surgeons in London, was presented to the General Medical Council, drawing attention to the neglect shown to the study of ophthalmology in the ordinary course of medical education; and urging the necessity of making it compulsory upon all medical students to attend a three months' course of practical ophthalmology, as well as a course of not less than twenty lectures on the same subject. A memorial from ophthalmic surgeons was also in last November forwarded to the Council of the Royal College of Surgeons in Ireland, and a reply was received concurring in the views expressed in it as to the great importance of remedying the defect in professional education in the matter of ophthalmic surgery, the chief objection which the Council saw to its introduction being the already overcrowded condition of the curriculum. Owing, however, to the presence in the Council of a gentleman who entered that body principally for the purpose of advocating the proposed measure, the College has lately adopted a resolution requiring all candidates for the diploma in surgery after this year to produce a certificate of attendance upon a three-months' course of clinical instruction in ophthalmic surgery.

THE EFFICIENCY OF THE WATER-TRAP.

A CONTEMPORARY publishes an important experimental investigation by Dr. Neil Carmichael concerning the trap and water-closet system, and their relation to sewage products, gaseous and others. As the result of this investigation Dr. Carmichael came to the conclusion that an efficient water-trap excludes soil-pipe atmosphere to such an extent that what escapes through the water is so little in amount, and so purified by filtration, as to be perfectly harmless. The water-trap, he further concludes, stops entirely the passage of all germs and particles from the air of the soil-pipe, including the specific germs or contagia of disease, which, so far as is known, are particulate. He thus traverses entirely the belief so largely entertained that the water of a trap, however perfect in arrangement, will absorb the air of the soil-pipe until saturated, and then give it off harmfully on the house side. He would rehabilitate the old faith in the sufficiency of the water to insure safety, and he would refer the harm from traps to their imperfect sealing, or to various deteriorations in the structure of the water-closet or soil-pipe which permit direct communication between the air of a house and the air of the soil-pipe. The series of experiments on which Dr. Carmichael has founded these conclusions are exceedingly ingenious, and would certainly appear to justify them, but we doubt whether he has been sufficiently careful in indicating the conditions under which the safety of the water-trap can be secured.

CHILDREN ON THE STAGE.

WE have repeatedly characterised the practice of employing children of tender years on the stage as unwise and unhealthy. The death of a child engaged in the performance of a prominent part in a popular little drama at one of the London theatres, has again attracted attention to the subject. It must not for a moment be forgotten that many of the little creatures who sustain parts in pantomimes and other stage spectacles, are more sufficiently fed and happier by reason of the money they earn; and it is an open question whether they would be better off sitting on the doorsteps of miserable houses, or perhaps lying crouched in corners during some violent family brawls than at the play house.

It is idle to suppose that because a death has occurred it must needs be due to the exposure to which the child was subjected. Nevertheless, it will be well if, in consequence of this painful incident, more care is be-

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stowed on the health of these children. Again, we say, children are not in their proper place on the stage, and it is to be regretted that public taste sanctions their appearance. The career which this early introduction to theatrical life opens to a child is not one which can be considered desirable in itself, or favourable to happiness or morality. The stage may sometimes be a "great teacher;" and we are not prepared to regard players as a class, as less "respectable" than the rest of the community; but no observant person would desire to see children of either sex enticed into the ranks of what is called "the theatrical profession." However, it is with the health aspect of the question we are principally concerned; and on the score of health we would warmly urge the necessity for some public regulation to control an industry which is in the main perilous, although it may, and doubtless does, embody a grain of economic good.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

ON the 1st instant an election for an examiner in the vacancy caused by the decease of Mr. O'Leary, M.P., took place. The candidates at first numbered eight, but on the day of election five only contested the appointment—viz., Benjamin G. McDowel, H. Gogarty, M. Kilgarriff, G. Foy, and K. Franks. Mr. McDowel, late Professor of Anatomy and Surgery in the University of Dublin, was selected, and as he was obliged to resign his seat on the Council in order to compete for the examinership, a vacancy for a councillor has taken place. For this there are two candidates: Dr. Corley, of the Richmond Hospital, and Mr. Nixon, of the Ledwich School of Medicine. The election has been fixed for the 15th inst., so that the successful candidate will have but a short tenure of office, as the general elections will take place early in June.

UNDUE DISINFECTION.

AN action was heard in the Scarborough County Court on the 23rd ult. against a former surveyor of the Filey Local Board in which damages to the amount of £5 were claimed for wrongful action in disinfecting the plaintiff's house. It appeared that while the defendant held the appointment of surveyor to the Filey Local Board he had entered the plaintiff's house without proper notice and proceeded to disinfect it, by chlorine gas it was said, on account of scarlet fever in the plaintiff's family. One of the family, a child, was ill at the time. The family, including the sick child, had to remove from the house during the disinfection, and several days passed before they were able to occupy it again. Various articles were damaged in the house by the mode of disinfection employed. A verdict was given for the plaintiff for the damages claimed, with costs, and immediate execution was granted.

A NATIVE HOSPITAL CORPS FOR INDIA.

WE are told that the want of a trained and disciplined corps of orderlies for service in our army hospitals in India is much felt, especially in the hospitals now in the field. A scheme for such a native hospital corps was drawn up by a committee, which sat in 1876, and of which the new Surgeon-General in India, Dr. Crawford, was a member. Its report has, however, been pigeon-holed, and the result is that every day during the existing campaign the medical officers find the very greatest difficulty in getting servants to fill up the vacancies caused by deaths or sickness. The pay now offered is very bad, far lower than that given even to the dhoolie-bearers, and as a consequence the servants are very often the refuse of the bazaars. They need uniform, good pay, fair pensions, a certain amount of drill, and it has also been proved over and over again that they should be armed for self-defence while serving in the midst of murderous tribes on the frontier. We hear with surprise that hospital servants in India are not eligible for medals for field service. This certainly seems unfair.

DEATH OF BRIGADE-SURGEON CORBETT, A.M.D.

OUR obituary column last week announced the death, at the Royal Naval Hospital, Haslar, on the 25th ult., of Brigade-Surgeon A. P. M. Corbett, M.D., Army Medical Department. Dr. Corbett entered the army as an assistant-surgeon on the 27th October, 1854, was shortly after gazetted to the 68th Light Infantry, with which regiment he served in the Crimea, and was present at the fall of Sebastopol—medal and clasp and Turkish medal. Dr. Corbett was promoted Surgeon-Major on the 14th May, 1867, and was selected for the appointment of Brigade-Surgeon, under the terms of the new Medical Warrant, being gazetted to this rank only a few weeks ago. His death, which was due to Bright's disease, was very sudden, he having been but a few days on the sick list.

IN his report on the Dispensaries and Charitable Institutions of the North-Western Provinces and Oudh (quoted in the *Indian Medical Gazette*), Dr. Walker shows that the surgical work done in these hospitals is yearly increasing in amount and importance. The number of large operations performed amounted to 6857, against 4711 in 1877. The list includes 29 amputations of the thigh, 46 of the leg, 32 of the arm, 30 of the forearm, 434 large tumours and cancers removed, 835 operations for the removal of stone from the bladder and 3097 for cataract. There were only four cases of lithotrity, all successful. The death-rate in lithotomy was 8·2 per cent., against 7·8 in 1877. The higher rate of mortality is attributed to the lowered health and physique of the population due to fever and privation. The rates for subjects under twenty were below the average, and those for persons above twenty considerably higher.

THE inquiry into the Lower Thames Valley main sewerage scheme drags its slow length along. The sewage farm at Molesey has been officially inspected, and the plan of Colonel Haywood has received favourable testimony from chemical experts, as well as from Mr. Baldwin Latham. Cross influences, however, seem to be at work. The latest phase in the matter appears to be an application for a provisional order not only to establish a sewage farm at Molesey, but to give the joint Board two years' grace to carry out proper drainage works, and so save penalties threatened by the Conservators for not complying with their order to prevent the sewage going into the Thames. "The latter half of the application," says the *Surrey Advertiser*, "is unopposed, so that in case Colonel Haywood's scheme is rejected, the Board will have to begin *de novo*."

AT a meeting of the lecturers of the Minto House Medical School, held recently, Mr. Geddes was unanimously elected to the vacant Lectureship on Natural History. Mr. Geddes was formerly demonstrator of physiology in University College, London, and more recently of zoology in the University of Aberdeen. We understand that he has just returned from a zoological and palæontological expedition in Mexico, and that he has had considerable experience at the French, German, and Scottish zoological stations.

THE Indian Government have given orders for the construction of a hundred dhoolies, of the pattern designed by Surgeon-Major Hamilton, for service with the army in Afghanistan. This conveyance for the sick and wounded was described at length in our columns on the 23rd of last June, and reports from medical officers serving with the army in the field fully bear out the anticipations expressed as to its simplicity and usefulness.

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SURG.-GEN. J. FULLARTON BEATSON, C.I.E., the head of the Bengal Medical Department in Calcutta, retires from the service from the 1st April, his term of duty having expired. Under the new orders of the Government of India regarding the medical administration of the Indian Army, the military Surgeon-Generalship will cease to exist, Dr. Crawford, the principal medical officer of the Royal Army, advising Government on all questions concerning the native troops. Dr. Cunningham, of the Bengal Medical Service, remains as Sanitary Commissioner, and will, it is believed, become Civil Surgeon-General, in addition to his other duties, when the new organisation has been finally sanctioned.

WE would call the attention of young surgeons wishing to increase or complete their stock of surgical appliances, to the sale of the cases of instruments belonging to the Stafford House Committee. The instruments, which include several sets of resection apparatus, are in good condition, most of them being quite new.

THE Secretary to the Government of Bengal has addressed a highly complimentary letter to Surgeon-Major S. B. Partridge, on his resignation of the professorship of Surgery in the Calcutta Medical College and the first surgeoncy of the College Hospital.

THE Vice-President, Council, and Secretary of the Royal College of Surgeons in Ireland, on the 1st inst., presented Dr. Mapother, the president, with six silver saltcellars, in the form of cradles, to commemorate the birth of his child during his year of office.

A MEDICAL SOCIETY has been established at Dacca. The members consist of the teachers of the Medical School, the Civil Hospital assistants attached to the Mitford Medical School, the local practitioners and students.

THE Hospital Saturday and Sunday movement appears to have firmly established itself in New York. On Dec. 28th and 29th the amount collected on behalf of the fund was 25,811 dollars.

DR. BANKS has been elected the Representative of the Queen's University in Ireland in the General Medical Council.

DR. LYONS has been returned to represent Dublin in the Imperial Parliament.

HEALTH OF LARGE ENGLISH TOWNS.

THIRTEENTH WEEK OF 1880.

UNDER the influence of recent cold east winds English urban mortality shows a further increase. In twenty of the largest towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5077 births and 3578 deaths were registered last week. The births were 108 below, whereas the deaths exceeded by 303, the average weekly numbers during 1879. The deaths showed a further increase of 420 upon the low numbers returned in recent weeks. The annual death-rate in the twenty towns, which had been equal to 21·4 and 21·9 in the two preceding weeks, further rose to 24·9 last week. During thirteen weeks ending last Saturday the death-rate in these towns averaged 25·5 per thousand, against 24·2, 25·2, and 27·5 in the corresponding periods of the three years 1877–8–9. The lowest death-rates in the twenty towns last week were 14·4 in Portsmouth, 18·5 in Wolverhampton, 19·6 in Bradford, and 20·2 in Sheffield. The rates in the other towns ranged upwards to 29·3 in Hull, 29·5 in Salford, 29·8 in Oldham, 31·3 in Manchester, 34·1 in Plymouth, and 35·5 in Nottingham.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 476 and 424 in the two previous weeks, rose to 531 last week; these included 215 from whooping-cough, 119 from scarlet fever, and 107 from measles. Only 28 deaths were referred to fever, principally enteric, of which 5 occurred in Sheffield, and 3 in Salford. The annual death-rate from these seven diseases averaged 3·7 per 1000 in the twenty towns; it was but 0·7 and 0·8 in Wolverhampton and Leeds, but ranged upwards to 7·3 and 11·8 in Salford and Plymouth. Whooping-cough showed the largest proportional fatality in Salford and Manchester; scarlet fever in Sunderland and Nottingham; and measles in Plymouth, Nottingham, Hull, and Oldham. The 21 deaths from diphtheria in the twenty towns included 11 in London, 3 in Liverpool, 2 in Leicester, and 2 in Bradford. Small-pox caused 10 more deaths in London and its suburban districts, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which in the three preceding weeks had declined from 188 to 167, were 172 on Saturday last; 47 new cases of small-pox were admitted to these hospitals during last week, against 25 and 31 in the two previous weeks. The Highgate Small-pox Hospital contained 19 patients on Saturday last.

A considerable proportion of the increase of deaths last week was due to the greater fatality of lung diseases. The deaths referred to diseases of the respiratory organs in London, which had been 315 and 334 in the two preceding weeks, rose to 396 last week, but were 94 below the corrected weekly average; 256 resulted from bronchitis and 92 from pneumonia. The annual death-rate from diseases of this class was equal to 5·6 per 1000 in London last week; in Liverpool the rate from the same diseases was 7·0 per 1000.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Hastings.—Mr. Charles Ashenden presents a highly satisfactory account of the sanitary state of health of Hastings during the past year. The death-rate (16·84) was that of a rural rather than an urban district. We note with gratification the good use to which the infectious diseases hospital (sanatorium as it is euphemistically called) of the town is put, and the readiness with which mechanics and small tradesmen availed themselves of it in cases of infectious sickness, also of the sanitary authorities' disinfecting apparatus. Few things will more certainly redound to the popularity of a health-resort among visitors than the knowledge that it is prepared to diminish risks from infection to the lowest point.

Hereford, City and County.—Dr. Vavasour Sandford's annual report for the combined rural and urban sanitary districts under his sanitary supervision shows a heightened mortality from diseases other than infectious and contagious, and "almost a total immunity from this latter class of maladies." This immunity he assigns to the efficient sanitary administration of the districts in regard to current infections; and the greater prevalence of other sorts of sickness, which is to be inferred from the greater mortality from them, he attributes to the sunlessness and unusual humidity of the seasons. Man, in fact, suffered in common with the crops and herds from the exceptionally bad weather which prevailed last year. He draws especial attention to the operation of the Public Health (Water) Act of 1878 in his district, and states that with respect to the "reasonable distance" of a water-supply from a dwelling, his sanitary authorities have laid down the rule that in regard to houses now in occupation, 500 yards shall be regarded as a "reasonable distance," but that in respect to houses built hereafter, 200 yards shall be so regarded. He has some remarks deserving of special attention upon the failure (too common, it would appear, in his district) to provide good water, in connexion with schools, for the use of the children.

Maidstone.—Mr. Matthew A. Adams reports for the past year a birth-rate of 32·9, and a death-rate of 19·5. Maidstone has much to do before she will have relieved herself from the filthy backslums she possesses, and not a few dilapidated and damp dwellings, as well as her offensive privies. But she seems to be moving in the right direc-

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tion, and her medical officer of health seems hopeful for the future.

Peterborough (Urban).—Dr. Thompson reports a death-rate of 22·4 in 1879, as against 24·1 in 1878. Scarlet fever appears to have been prevalent in the city during a great part of the year. But Peterborough has neither a hospital for infectious diseases nor a disinfecting apparatus!

Thingoe.—Mr. Charles Scott Kilner reports a death-rate of 16·5 per 1000 population in this rural district for the past year, as against 12·5 in 1878, the greater mortality occurring among infants and persons above sixty years of age.

Tottenham.—Dr. Watson refers to the extraordinary growth of this place. From February, 1875, to February, 1880, the Local Board, it appears, have approved of no less than 15,500 (or thereabouts) plans for houses. Nevertheless the death-rate from all causes in 1879 did not exceed 17·6, and there are other indications that the sanitary administration of Tottenham is now being carried out by its Local Board with much efficiency.

THE ROYAL COLLEGE OF SURGEONS.

AT a special meeting of the Council, held on Wednesday last, Mr. John Cooper Forster was unanimously re-elected a member of the Court of Examiners in Surgery. At a quarterly meeting, held on Thursday, the minutes of the preceding ordinary meeting, held March 11th, were confirmed, after a long criticism, by Mr. Simon; the report of the Committee on bye-laws relating to fees being adopted, with some modifications, the most important of which is the retention of the payment of fees by examiners on election. The Collegiate Triennial Prize was awarded to Mr. G. A. Woods, of Southport, for his essay on "The Anatomy and Physiology of the Third, Fourth, and Sixth Nerves."

Correspondence.

"Audi alteram partem."

MR. BADCOCK'S EXPERIMENTS ON THE VARIOLISATION OF KINE.

To the Editor of THE LANCET.

SIR,—Mr. Badcock, of St. James's-street, Brighton, having suffered in his infancy severely, and being much marked with the small-pox, determined upon performing some experiments upon some cows, which he kept, by inoculating them with the matter of the small-pox taken from the human subject. About forty years ago, the late Sir Cordy Burrows gave Mr. Badcock some small-pox ichor, which he had taken from one of his patients; Mr. Badcock inserted this ichor into one of his cows. After the lapse of a week, when it had produced a vesicle upon the cow, a human subject was vaccinated with the lymph thus produced, and the result was the facsimile of the vesicle which Jenner discovered fifty years before. Mr. Badcock employed a photographer, who took from the cow the likeness of the vesicle which he had produced, and then exhibited the photographs to the Brighton Medical Society, thus triumphantly confirming the value of Jenner's discovery, and placing the protective power of the vaccine upon an indisputable basis. The vaccine discovered and the vaccine produced being identical, it is a proof that the vaccine is unalterable, for after passing through the constitutions of 2500 persons during fifty years, it remains precisely the same thing. The fact is, vaccinia is a disease *sui generis*, and, like the small-pox, measles, and scarlet fever, incapable of admixture with any other disease. If you sow a radish seed you cannot produce a cucumber. If you sow a bean you will not produce a carrot. As well might it be said, that you can produce vaccinia by syphilis, as that you can produce syphilis by vaccine. This is not my opinion only, but also of all those public vaccinators (and their name is legion) whose opinions I have elicited upon the subject. I accompanied Mr. Badcock to his stall, and saw him take some vaccine from a cow which he had variolated the week before. Being at the time public vaccinator to the Western district of Brighton, I inserted the matter so taken, which Mr. Badcock kindly gave me at the time, into one of the children. I kept up that supply for about twenty years, until I resigned the office, as I preferred the matter so converted to all others. A great objection, and much of the prejudice against vaccination, would, I think, be removed by the most gentle method of vaccinating. I make a few horizontal scratches on the arm, just penetrating the cuticle; then, removing the blood and stretching open the incision, I insert the matter. By this means I have produced excellent vesicles without awakening a child who was asleep. By this method a peculiar mark is left on the arm, which is easily recognisable. Since my retiring from practice in 1870, Dr. Ross informs me two epidemics of small-pox have occurred in Brighton, but that *not one person so marked by me has ever been attacked by the small-pox.* One peculiarity with me is that I always vacciuate both arms, and taking the matter from one arm leave the other untouched, to be absorbed into the constitution, for the better protection of the person vaccinated. All honour, then, to Messrs. Ceely and Badcock, who have thus so satisfactorily solved the problem, till that time inexplicable—namely, Why does vaccination prevent the small-pox? and thus, by placing it as it were into a living alembic, have transmuted the small-pox from a repulsive, disfiguring, blinding, deadly disease into one perfectly harmless, as we have seen in Brighton, even to an infant just born.

I am, Sir, yours respectfully,

D. RICHARDSON, M.R.C.S., L.S.A.

Newhaven, Sussex, March, 1880.

SIR W. JENNER, BART., ON ENTERIC FEVER.

To the Editor of THE LANCET.

SIR,—By the last San Francisco mail arrived the numbers of THE LANCET for November containing Sir William Jenner's address on the treatment of enteric fever and Sir Joseph Fayrer's address on assuming office as president of the Epidemiological Society.

I should not presume to question Sir W. Jenner's authority on any point as far as concerns enteric fever, as seen in London, or even in England—although enteric fever in rural districts among paupers differs widely from that seen in London—but a reference to Sir Joseph Fayrer's address shows that on one important point the Indian authorities are at variance with Sir W. Jenner. The latter speaks of it repeatedly as a specific disease, produced, "in the majority of cases at least, by the action of a small portion of the excreta from the bowel of a person suffering from typhoid fever." (THE LANCET, Nov. 15th, 1879, p. 715.) Sir Joseph Fayrer maintains that "a form of fever exactly like European typhoid, except in its etiology, exists in India, and other hot and malarious countries, and that it is due to *climatic causes, not to filth or specific causes.*" (THE LANCET, Nov. 8th, 1879, p. 678.) The italics are mine. Sir William Jenner maintains that he has "never known a case of typhoid fever cut short by any remedial agent that is cured," and that the "natural duration of a well-developed case of typhoid fever is from twenty-eight to thirty days." Sir Joseph quotes from a report of Surgeon-Major A. Clarke a statement that numerous cases entered as enteric were discharged, and at their duty five or six days afterwards, though "rose-spots are invariably present, and in fatal cases the lesions of Peyer's patches are well marked." In other words, the disease is either cut short by treatment, or there are numerous cases of such a mild character that they get well in a few days.

Now, everyone who has seen enteric fever in tropical countries and amongst other than European races, must agree with Sir Joseph Fayrer. The disease is most protean in its character, and unless one is prepared to maintain that in the same house, in the same climate, amongst people living under exactly the same conditions, two or more forms of fever can spring up at the same time, one must admit that the same poison will vary in its effects on different individuals according to their constitutional peculiarities.

I have seen an epidemic of enteric fever breaking out on board an emigrant ship in lat. 41° N., continuing with us after we had rounded the Cape of Good Hope, lat. 34° S., and thence on until after we reached Dunedin, New

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Zealand, lat. 46° S., with gradually increasing severity. I took careful notes of all the cases, sixty in number, and some of them were cases that would be called febricula at home, lasting only a week; others, commencing in exactly the same way, were cut short by producing profuse diaphoresis, and terminated in a couple of days; while twelve were fatal on board ship, and four more died in quarantine. All the fatal cases presented the characteristic lesions of Peyer's patches. Fever broke out after we had been at sea a month. Surely no one could doubt that all the cases were caused by the same poison, although they differed greatly in the symptoms, duration, and severity of the disease.

As regards treatment, I am rather surprised that Sir W. Jenner says nothing about the unmistakable action of aconite in lessening the frequency of the pulse and lowering temperature in the early stages of the fever. For the last twenty-five years I have been in the habit of giving aconite in the form of Fleming's tincture, three to five minims, every four hours, with this object, and have rarely seen it fail to do good, not only in enteric fever, but in all febrile diseases or acute inflammations. The wet pack is also a most powerful agent, and affords immense relief. I use it with the view of assisting the elimination of the poison by the skin, on the ground that the poison, by producing the rose-spots, shows a tendency to eliminate itself in that way, and if we can encourage this tendency we shall lessen the danger of internal lesions.

Sir W. Jenner does not mention a valuable practical rule for the administration of alcoholic stimulants, which I was taught as a student—namely, to listen daily to the heart, and give stimulants as soon as the first sound begins to flag. I have found in the tropics that good sound Bordeaux wine answers in most cases even better than spirits. Preparations of bark, particularly the liquid extract, are also very useful in the latter stages of the disease.

It may seem presumptuous in an unknown practitioner to venture on criticising a man of Sir W. Jenner's justly-earned reputation; but, after all, a man who has treated enteric fever in London and the rural districts of England, in the wards of the Scutari Hospitals, in the Crimea, in the West Indies, in South America, in Australia, in New Zealand, and in all the climates ranging from 52° N. lat. to 37° S. lat. —among Europeans of almost every nation, negroes, Chinese, East Indians, both Hindoos and Mahometans, and in white and coloured natives of tropical regions—may perhaps be pardoned if, after being engaged in the study and practice of the profession for thirty-two years, he has an opinion of his own—*pace* even Sir William Jenner.

I am, Sir, yours, &c.,

R. H. BAKEWELL, M.D.,

Surgeon Superintendent of the Totara District Hospital, Ross, New Zealand.

Ross, New Zealand, Jan. 24th, 1880.

THE CROTON-OIL TREATMENT OF RINGWORM.

To the Editor of THE LANCET.

SIR,—Having just read Mr. Cottle's instructive paper on the croton-oil treatment of ringworm in THE LANCET of March 27th, in which he refers to my paper on the same subject published in the January numbers, I at once frankly admit that he *published* a treatment by croton oil previous to the appearance of my paper; yet in justice to myself I ought to state that I had neither seen nor heard of Mr. Cottle's paper read before the Dermatological Section of the British Medical Association in August last, that my paper was written at least eighteen months ago, and that I have specially worked out the croton-oil treatment of ringworm for over six years. I did not publish my results till January last, as I wished to thoroughly try the treatment before bringing it under the notice of the profession; and during the last few years I have frequently spoken to many dermatologists about it.

But I fail to see from the report I have now read of Mr. Cottle's former paper, or from his recent one in THE LANCET, that his treatment is quite the same as mine. It appears to me to differ in a most essential point.

Mr. Cottle says that I appear to him to carry my treatment "to an unnecessarily severe extent;" and he advises an application of the oil "to produce a deep pustular rash;" he also thinks it sufficient to set up a pustular rash involving the tissues to the depth of the hair-follicles, and "*that the formation of a subcutaneous abscess is unnecessary;*" and again, "that it is not necessary to produce *a real subcutaneous abscess or kerion*,"—"a copious pustular rash being all that is required."

Now in the first place, as it would appear from the above that I am in the habit of producing an abscess, I must call attention to the fact that *kerion* is not a subcutaneous abscess, and that I have never advised the formation of abscesses or any other such severe treatment. "Kerion," according to Dr. Tilbury Fox, "has the *appearance* of a threatening abscess; the patches are swollen, puffy, raised, red, tender, feeling semi-fluctuant and soft. They are studded over with little openings which are the mouths of the hair-follicles, and from which a muciform or purulent discharge exudes. Some of the hairs fall out, others lie loose in the follicles." This is true kerion—a variety of the disease that may occur under any treatment—the artificial production of which I specially advised in my paper, and not the simple formation of a pustular rash, which, though it is certainly very effectual in curing ordinary chronic ringworm, yet will most certainly fail in the inveterate forms of the disease. The pustular rash is not therefore the essential part of my treatment, but the actual infiltration of the true skin with inflammatory products, causing the hair to become loosened. If this state can be produced the case is practically cured, and the further use of parasiticides is not necessary, as the inflammatory effusion destroys the fungus.

Secondly, I must mention the fact that I only advised this "severe treatment" in those chronic cases that have resisted all ordinary applications, and can most positively affirm, from six years' experience, that the croton-oil rash alone will not cure many of the inveterate forms of the disease. If the case be left alone after one or two applications of the oil, followed by a pustular rash and yellow incrustation, but without the puffy swelling of the part, all may seem well, and the disease may appear to be cured, yet the stumps will crop up again and again. I speak very strongly on this point, as medical men so often make a mistake in thinking a patch well because it *appears* free from stumps. In ordinary private and hospital practice cases are often not seen again because they are considered well, and yet if they were examined after two or four weeks (as boys are, after having had ringworm, in a large school) the diseased stumps would constantly be found to have reappeared.

Mr. Cottle seems to prefer the croton-oil liniment to the pure oil. I always used the former preparation at first, but gave it up four years ago for the oil, as the alcoholic solution is more apt to run beyond the limits of the spot painted with it, and thus to cause pustulation where it is not wanted. This is especially seen when applying the oil to isolated stumps, as described in my paper.

The essential difference, therefore, between Mr. Cottle's treatment and my own is, that while Mr. Cottle seems satisfied with a deep pustular rash, I try by repeated poulticing to produce an *imitation* of true kerion, which is nature's certain cure of the disease. The process I advise I have already fully described in my paper, published in the January numbers of THE LANCET.

In conclusion, I may add that I am only too pleased to find Mr. Cottle has been employing croton oil as a remedy for ringworm, and that my object now is not so much to seek priority as to get the profession to recognise the efficiency of the croton-oil production of kerion as a certain and speedy cure in the most inveterate forms of the disease.

I remain, Sir, yours, &c.,

ALDER SMITH, M.B. Lond., F.R.C.S.,

April 6th, 1880. Resident Medical Officer, Christ's Hospital.

TREATMENT OF RHEUMATISM BY IODIDE OF POTASSIUM AND OPIUM.

To the Editor of THE LANCET.

SIR,—If there is one science which is and ought to be progressive it is the science of medicine, whereas if we agree with Dr. Barton in THE LANCET of Feb. 14th we must remain satisfied with a conservatism which contents itself with that which is unreliable and often inefficient. For I think he will hardly venture to state that the treatment of acute rheumatism by iodide of potassium is so satisfactory in its results as to leave nothing more speedy or effica-

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cious to be desired. He says, "Why resort to doubtful and dangerous remedies merely because they are new?" But surely if we are not to try new remedies, but to continue those which are old and often utterly inefficient, we shall make no progress at all. From what I have seen in hospital practice of the use of iodide of potassium in the treatment of acute rheumatism, it is of little avail in meeting any of the urgent symptoms, such as pain, effusion into the joints, or high temperature, and Dr. Barton is compelled to supplement it by blisters, Dover's powder, &c.

Anyone who has seen two cases treated, the one with carefully-regulated doses of salicylic acid, where the patient is free from pain and swelling, with an abated temperature, in from twenty-four to thirty-six hours, and the other treated in the old-fashioned and somewhat barbarous plan of blisters, first on one joint, then on another, &c., until the patient suffers almost as much agony from the blisters as from the disease, and where, finally, the disease itself remains almost unabated, only shifting its quarters, and lasting "generally a week or ten days"—anyone who has seen such cases could not fail to say at all events in which case there is the least pain.

I think Dr. Barton is in error in stating that salicylic acid has in any one case been proved to have caused a fatal result, and I demur to his calling it "a doubtful and dangerous remedy." There is no evidence whatever to show that deaths or cardiac complications are more frequent under its use, if not the reverse. I have treated some fifty cases with salicylic acid, combined with the minimum of bicarbonate of soda and ammonia, to effect its solution, and published a letter with a report of a few in THE LANCET, 1877, whilst I made a series of experiments upon guinea-pigs,[1] &c., giving one twenty grains every day for a fortnight, without any ill results, the said animal being alive a year after, and I also gave it doses of ten grains, which, considering the size of the animal, is a very large dose.

Whatever may be the relative merits of the salicylic-acid treatment, and that by other methods, such as the alkaline or iodide of potassium, as regards the frequency of relapses, the chances of cardiac complications—these are only to be determined by an accumulated amount of experience, and revealed by statistics; but I am of opinion, from my own experience, and that of many others, that the former method of treatment is far superior to the other methods in the rapidity with which it lowers the temperature, and relieves the pain, if it does not also shorten the duration of the disease.

Timidity in dosing (which is but natural to those who believe in the dangerous nature of the remedy) is one cause, and the principal one, of the failures which occur in the salicylic treatment. I found that I could detect it in the urine within ten minutes after its administration, and in the blood in less than that time. Considering then its rapid elimination from the system it is useless to give doses of ten or fifteen grains every four or six hours.

In the report of the Boston City Hospital, 1877, as regards the duration of the disease under this treatment, the average time to relief of pain was 1·46 days, complete cessation of pain 2·85 days, the average time the acid was given was 6·22 days, and the stay in the hospital 18 days. The total number of cases, 106. These figures certainly show better results than any yet obtained under any other treatment; at the same time they are much more favourable than Dr. Southey's recently-reported account of fifty cases under the same treatment.

I believe that by the use of a combination of iron and salicylic acid the anæmic condition and debility frequent after the use of the acid alone, or combined with soda, may be avoided, and thus the stay in hospital, apparently so prolonged after the actual cessation of the disease, may be shortened. I have always given it in this form after the first few days, and the result has been most satisfactory.

The form in which I use the acid is as follows:—Salicylic acid, 20 gr.; carbonate of ammonia, 5 gr.; bicarbonate of soda, 5 gr.; water to one ounce; and I afterwards add 5 or 10 minims of tincture of perchloride of iron. I have found this more effectual than the simple salicylate of soda, and less depressing. It is also much more active than salicine.

As far as regards relapsing and subacute rheumatism (and Dr. Barton's remarks would appear to apply to that form rather than to the acute disease), I have found that the salicylate treatment is not so successful, and I prefer to use iodide of potassium or some other drug.

I remain, Sir, yours truly,

ENGLEDUE PRIDEAUX, L.R.C.P. Lond., &c.

Wellington, Somerset, Feb. 17th, 1880.

*** The publication of this letter has been unavoidably delayed.—ED. L.

[1] The Practitioner, September, 1878.

SALICYLATE OF QUININE.

To the Editor of THE LANCET.

SIR,—Perhaps you will allow me, by way of supplementing my remarks on salicylate of quinine, to state that during the last two or three weeks I have had several favourable opportunities of further testing the value of this medicine.

I have had no case of acute rheumatic fever wherein to administer it. My cases have rather been mild, subacute gouty, or rheumatic-gouty, with erratic pains, muscular and articular. In one case of chronic gout, in a lady beyond the middle term of life, I had to discontinue the medicine in consequence of headache, which it was supposed to occasion. In all the others the effect has been satisfactory, and in four remarkably striking, the patients themselves commenting on its success, and asking to be allowed to have recourse to it again should necessity arise.

I would more particularly briefly narrate one case. It is that of a young gentleman, the descendant of an eminently gouty family. Both grandfather and father have been so afflicted for a large portion of their lives. The father, still living, and between seventy and eighty, has had gout for at least forty years. The son, my patient, aged thirty-three, had his first attack of gout two years ago. It was an acute attack. One foot and great toe, especially, were the seat of the affection. Since that time he has only had slight threatenings. Recently, however, he observed that he was becoming rapidly and uncomfortably stout. His hands and fingers, his feet and his toes, were swollen and puffy, and he was unable to write with comfort. Being private secretary in a department of H.M.'s service, at a very busy time, it was important that he should be able to discharge the pressing duties of his secretaryship. Medicines which used to benefit him seemed of comparatively little avail now. I had just come to know the benefit of salicylate of quinine, and I brought it into requisition. I administered it in three-grain doses every six hours. The result was as rapid and satisfactory as anyone could desire, for in the course of thirty-six hours the swellings had nearly quite disappeared. He soon became quite well.

I may state that in all the cases where I have employed this salt no other medicine whatever was used.

I am, Sir, your obedient servant,

Chester-square, April 5th, 1880. ARCHIBALD HEWAN.

*** In reference to the difficulty of obtaining salicylate of quinine, mentioned in Dr. Hewan's former letter (THE LANCET, April 3rd), we have received communications from Messrs. Young and Postans, and Messrs. Gale and Co.—ED. L.

CHIAN TURPENTINE FOR CANCER.

To the Editor of THE LANCET.

SIR,—As Mr. Clay does not make it quite clear whether he regards his experiments with Chian turpentine in the treatment of cancer as absolutely new or merely as revivals, you will perhaps permit me to state that turpentine is not a novel remedy for this disease. During some recent consultations, for a purely literary purpose, of Paracelsus' writings, I encountered in the "Chirurgia Magna," and elsewhere, many references to the treatment of the various forms of cancer, ulcer, fistula, &c., by means of balsams, resins, and turpentine, both as local applications and as internal medicines. I do not remember to have met with the precise mention of Chian turpentine, but the list of "turpentines" given in the second book "De Præparationibus" makes it almost certain that Chian turpentine was included. In the works of Riverius, into a translation of which I casually looked on reading Mr. Clay's paper, turpentine,

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bdellium, myrrh, &c., are recommended for the cure of cancer of liver, spleen, womb, and other organs.

I am, Sir, yours truly,

Harley-street, W., April 6th. JOHN TWEEDY.

A CASE OF EARLY PREGNANCY.

To the Editor of THE LANCET.

SIR,—As the following case appears to me to possess some interest, I am induced to call attention to it. Although there are cases of pregnancy on record as occurring in England at an earlier age than the following, yet the girl in this instance was so extremely young, and parturition proved so unexpectedly easy, that the matter seems worthy of being recorded :—

L. E—— (born February 7th, 1867, daughter of a farmer) was brought to me in November last to be treated for amenorrhœa. I learned from her mother that the menstrual flow, which had made its first appearance during the preceding April, had not occurred since. Struck by the peculiar figure of the girl, I inquired of the mother whether she had any suspicion of the nature of her daughter's condition, and I then elicited that it had recently come to the knowledge of the parents that there had been an improper intimacy between her and a lad of twenty, employed as farm servant. In consequence of this I made an examination, which verified my suspicion that she was pregnant. I may here mention that the affair became subsequently the subject of criminal proceedings against the lad, who in January last was sentenced to a term of twelve months' imprisonment under the provisions of the recent Act of Parliament.

Although L. E—— was more developed than are most girls of the same age, I naturally anticipated, from her extreme youth, a very tedious if not perilous labour. The sequel will show how agreeably I was disappointed.

On the morning of Feb. 26th I was sent for to visit her, and on reaching the house learned that labour had commenced the previous morning at about half-past ten o'clock. At the time of my arrival (8.30 A.M.) I found the os uteri fully dilated and the head presenting in the first position. From that point labour progressed rapidly, and in one hour and a half terminated in the birth of a healthy, well-developed male child. The mother never had a bad symptom, and both she and the child have been doing well since.

It will be seen from the above dates that L. E—— was, on the birth of the infant, thirteen years and nineteen days old.

I remain, Sir, your obedient servant,

ALBERT E. MAY, L.R.C.P. Ed., &c.

Moreton-Hampstead, March 16th, 1880.

THE BEARER CORPS IN SOUTH AFRICA.

To the Editor of THE LANCET.

SIR,—Although it is a matter of very secondary importance to anyone as to which was the first Bearer Company in action in the late war in South Africa, yet as it appears to have been made a matter of moment by Surgeon-Major Scott in his recent letter to THE LANCET (p. 266), I may remark that a regularly-organised company of Kroomen belonging to the Naval Brigade, previously trained by Fleet Surgeon Norbury, R.N., C.B., was in action with that officer at the battle of Inyezane in January, 1879, and besides this, there was also a large number of trained Native Bearers.

I am, Sir, yours faithfully,

JOHN BOWDEN TRIGGS, M.B., Surgeon R.N.,
In Medical Charge of H.M. Flag-ship *Active* during the late war.

Royal Naval Hospital, Cape of Good Hope, March 15th, 1880.

HONORARY QUEEN'S CADETSHIPS.

To the Editor of THE LANCET.

SIR,—There are a certain number of cadetships given every year at Sandhurst, called "honorary Queen's cadetships." These are not to be confounded with "Queen's cadetships." The first-mentioned are boons conferred on officers' sons whose fathers have done good service in the army, and the holders have only to "qualify," and not to "compete," for their commissions. By the warrant these boons are limited to the sons of the so-called "combatant" officers. The sons of medical officers are excluded from them, no matter what good service their fathers may have done. This is most unjust.—Yours, &c.,

March, 1880. I.V.R.C.

PARIS.

(From our own Correspondent.)

THE proposal to create a new chair of Pathological Anatomy has met with the greatest opposition on the part of the Faculty of Medicine. The professors have all signed a report, which has been sent into the Minister; and they have concluded that the proposed innovation is unnecessary, and that it may be dangerous. It is of course true that it is not absolutely necessary to appoint a new *professor* for this purpose; a post of less importance, such as that of *chef des travaux anatomo-pathologiques*, might be sufficient, and in this manner the wounded susceptibility of the faculty would be soothed. It is also true that such a precedent might prove dangerous to the interests of the present professors, who have every reason to keep their number as restricted as possible. But as far as teaching is concerned, this report is simply a quibble; some change is greatly needed. At the present time practical morbid anatomy is not taught at all in Paris. Post-mortem examinations are only held at the caprice of the house-surgeons and physicians, and that so irregularly, that a student might pass weeks on the look-out for an autopsy. Paris is not only behind Europe in this respect, but also far behind some of the French provincial schools. At Nancy, autopsies are performed in all cases by a competent pathologist, M. Feltz, the professor of anatomy. In Lyons, similar functions are performed by M. Pierret; and at Lille, by M. Kelsch. There is one reason against the new creation in Paris which, although freely whispered, has not yet been stated. The professor who was designed for the chair by the Minister of Public Instruction, M. Cornil, whose work in connexion with morbid histology is well known, happens to be a member of the Chamber of Deputies. The Faculty of Medicine affects the belief that the whole affair looks very like a job, and is afraid that it would afford a precedent for the future creation of new chairs, to suit the convenience of Ministerial favourites. It will be a great pity if the opposition of the Faculty be allowed to prevail. However the wire-pulling may have been conducted, there can be no doubt that some radical improvement is urgently required.

The Société de Médecine Publique et d'Hygiène Professionelle are going to discuss the proposition of one of their members, Dr. Bourgeois, that the State should take measures to prevent the marriage of individuals suffering from certain hereditary diseases which are most generally transmitted to the offspring. According to Dr. Bourgeois, by the prohibition of such ill-advised alliances, phthisis, epilepsy, and mental disease would soon be exterminated. The commission appointed to examine and report upon the proposition, has, as might be anticipated, concluded against it. In the French law there is only one case in which an individual is incapable of contracting marriage, and that is in the case of an *interdit*—that is, a person interdicted on account of mental incapacity from the exercise of civil rights, and this is on legal, rather than on hygienic grounds. For a marriage to be legal consent must be given, and as an *interdit* cannot legally give a valid consent, he cannot contract marriage. Dr. Bourgeois would have every candidate for wedlock submit to medical examination, and would allow marriage to those only who had obtained a medical licence. He also thinks that a difference of twenty-five years between the ages of the two parties should constitute an absolute bar to their union when one of them is over sixty, so that a man of that age would be forbidden to marry a woman of four-and-thirty.

The *République Française* of this day relates a remarkable freak of nature which has occurred at Cherbourg, and which it copies out of the *Vigie de Cherbourg*. If the *République Française* were not always of the most respectable prosiness, one might suppose that it was trying to get off what Artemus Ward would call a "goak." The "infant phenomenon" in question is a child, six months old, and the *Vigie* seems proud that Cherbourg should be privileged to show a marvel

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which "is without doubt unique since the creation of the world." This child has a spot upon its head out of which grows a feather every six days. The editor of the *Vigie* states that he has seen all the preceding feathers, and that he has assisted at the growth and fall of one of them. A pimple forms on the nape of the child's neck which soon opens and gives exit to the feather, which attains its full length of 10—12 centimetres in six days, and then falls. It has golden edges, and is of the most beautiful and varied hues. The father of this child is coming to Paris to show his interesting babe to the members of the Academy of Medicine. I leave the entire responsibility of this statement with the *République Française*, which must either have copied innocently from the *Vigie* of April 1st, or have maliciously conspired with its provincial contemporary to poke fun at a scientific body of inoffensive old gentlemen.

Paris, April 7th, 1880.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the primary examination in Anatomy and Physiology at Meetings of the Board of Examiners on Monday, Tuesday, and Wednesday last:—

Harry Swift, W. C. Bull, Arthur D. Roe, J. B. Hurry, Henry W. Pigeon, Edward Harrison, and John C. Aldred, Cambridge and Liverpool Schools; John H. Baker, David H. Barley, Anthony Dodd, Robert H. Rowell, Henry M. Fenwick, Newcastle-on-Tyne College of Medicine; John S. Moreton, George Preston, John S. Withers, James Richmond, Thomas L. Jordan, Charles S. Chadwick, Richard Holton, John J. Berry, John M. Beverley, Alexander Wilson, Joseph Collier, Cedric Challinor, and Alfred Hall, Owens College, Manchester; Walter G. Garman, Thomas P. Lowe, G. G. Jones, and Arthur H. Wilson, Liverpool; Charles F. Coombe and Edward France, Sheffield; Arthur Bowe, George Millhouse, John Dacre, Walter Scatchard, Henry Pope, and Eustace G. Carter, Leeds; Henry Shillito, Septimus Sunderland, John H. North, James R. Polson, and William Joberns, Birmingham; Lawrence E. A. Salmon, William H. Francis, Bristol; William J. Haddock, Charing-cross Hospital; John Hosford, Cork; Francis H. Furnival and Sandford S. Lessey, St. Thomas's Hospital; F. F. Schacht, St. George's Hospital; Samuel Aspinall, St. Mary's Hospital; John T. Tibbles, Charing-cross Hospital; Wheelton Hind, Guy's Hospital; Charles E France, Middlesex Hospital; Sidney H. C. Martin, University College; and Edwin J. Wenyon, Guy's Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on April 1st:—

Adams, Joseph, Royal Infirmary, Edinburgh.
Davies, Jenkin, Sidney-road, Stockwell.
Fraser, Donald Alexander, Weston-super-Mare.
Walters, Fredk. Rutenacht, The Waldrons, Croydon.
Wheeler, Fredk. John, Grafton-road, Holloway.

The following gentlemen on the same day passed the Primary Professional Examination:—

Charles Rowland Ordish Garrard, Guy's Hospital; Robert Henry Rowell, Newcastle-on-Tyne.

THE annual Report of the Leeds General Infirmary unfortunately shows a balance due to the treasurer of £3911; with a gradual decrease of income, and an increase in the number of patients.

A SPECIAL appeal for funds has been put forth by the Finance Committee of Addenbrooke's Hospital, Cambridge. The 30th of May has been fixed as the Sunday on which collections are to be made on behalf of the institution in the different churches and chapels of the town.

ZYMOTIC DISEASES IN DUBLIN.—During the March quarter small-pox caused 61 deaths; measles 95; scarlatina 186; diphtheria 13; whooping-cough 106; fever 76; and diarrhœa 34.

VACCINATION GRANTS.—The following gentlemen have received Government grants for successful vaccination in their respective districts:—Dr. Cuolahan, of Bermondsey, £127 12*s.* (fourth award); Mr. W. Powell, of the Bromyard Union (second award); Mr. J. H. Hynes, of the No. 2 District, Nottingham Union, £55 14*s.* (second award).

ADMIRALTY APPOINTMENTS.—Staff-Surgeons T. C. Hickey to the *Resistance*, Septimus Evans to the *Impregnable* for service in the *Neptune*, and Joseph Wood to the *Himalaya*; Surgeons William Tait to the *Impregnable* for service in the *Rifleman*, J. Dunlop to the *Orwell*, and R. W. Williams to the Plymouth Division of the Royal Marines.

ABERDEEN DISPENSARY.—At the annual meeting of the friends of this charity it was announced that there had been, during the past year, an increase of 470 in the number of patients. The important part played by wholesome and nutritious food in the treatment of the sick poor was shown to be especially recognised by the medical officers in that they had recommended to the Society for the Improvement of the Condition of the Poor, eighty-two persons, of whom sixty had received food and clothing. Complaint was made—and justly—by the chairman of the meeting of the smallness of the amount of subscriptions in the past year—viz., £96—a sum certainly not creditable to the citizens of Aberdeen.

PHYSICAL BASIS OF LIFE.—On Monday evening, at a Meeting of the Victoria Institute, held at 7, Adelphi-terrace, a paper by Professor H. Alleyne Nicholson, M.D., D.Sc., F.R.S.E., who fills the chair of Natural History in the University of St. Andrews, was read, the subject being "Life and its Physical Basis." It discussed the physical and chemical properties of the substance known as protoplasm, which forms the common basis of all organic bodies; the phenomena exhibited by simple masses of protoplasm in a living condition (such as the monera, the amœba, and the yeast plant); the distinctions between dead protoplasm and living protoplasm; the nature of vitality; and the essential character of the temporary connexion which subsists between protoplasm and life. A communication bearing on the latest researches in this recondite branch of natural history, from Professor G. G. Stokes, F.R.S., of Cambridge, was also read, and a discussion followed.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mr. Thomas Wrigley, of Timberhurst, Bury, bequeathed £10,000 each to Owens College, the General Hospital for Sick Children at Pendlebury, the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties at Lancaster, and the Bury Dispensary. Mr. Duncan MacDermid, and Miss Margaret MacDermid, his sister, bequeathed £500 to the Royal Infirmary, £500 to the Western Infirmary, and £200 to the Convalescent Home, all at Glasgow, and £200 to the Institution for Imbeciles at Lanbert. Sir Thomas Bernard Birch, Bart., of the Hazels, Prescot, bequeathed £300 to the Liverpool Infirmary, £200 to the Liverpool Dispensaries, £100 to the Liverpool Northern, and £100 to the Liverpool Royal Southern Hospital. Miss Mary Wasey, who recently died at Prior's Court, Chieveley, near Newbury, has bequeathed £3000 to the Royal Berkshire Hospital at Reading, £2000 to the Bath Hospital, £2000 to the Cancer Hospital at Brompton, and £2000 to the Consumption Hospital, Brompton.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

BOOTH, J. M., M.B., C.M., has been appointed Medical Officer to the Aberdeen Dispensary, vice Simpson, resigned.

BRANDER, J., M.B., C.M., has been reappointed Medical Officer to the Aberdeen Dispensary.

CLARK, J. G., M.R.C.S.E., L.S.A.L., has been appointed Clinical Assistant to the Medical Out-patient Department of the London Hospital.

ELLIOT, J., L.R.C.P.Ed., has been appointed Medical Officer to the First District and Workhouse of the Bellingham Union, vice Hill, resigned.

FOWLER, J. K., M.B., has been appointed Assistant-Physician to the Middlesex Hospital.

GANGE, F. A., M.D., has been appointed Medical Officer of Health to the Faversham Rural Sanitary Authority.

GARDEN, R. J., M.D., C.M., has been reappointed Medical Officer to the Aberdeen Dispensary.

GRAHAM, A., L.R.C.P. &c., has been appointed Medical Officer to the Western Division of the Bingham Union, Notts, and District Surgeon to the Midland Railway Company's Friendly Society, Nottingham and Melton Line.

HALL, J. G., M.B., C.M., has been reappointed Medical Officer to the Aberdeen Dispensary.

HOLDEN, J. C., M.D., L.R.C.P.Ed., has been appointed Physician to St. Leonard's Hospital, Sudbury.

HOLDERNESS, W. B., has been appointed Surgeon to the Royal Infirmary, Windsor, vice Fairbank, deceased.

JONES, R. T., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer to the Llanfihangely-Traethau District of the Festiniog Union.

KNIGHT, J. T., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Carlton District of the Basford Union.

LILLEY, G. H., M.D., has been appointed Assistant-Surgeon to Her Majesty's Convict Prison, Parkhurst, Isle of Wight.

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LYNCH, J. C., M.R.C.S.E., L.S.A.L., has been reappointed Surgeon to St. Leonard's Hospital, Sudbury.

MACLEAN, H., M.D., has been appointed Medical Officer to the First District of the Romford Union, vice Wright, resigned.

MURRAY, J., M.A., M.B., has been appointed a Surgeon to the Northern Infirmary, Inverness.

OGSTON, F., M.D., L.R.C.S.Ed., has been reappointed Medical Officer to the Aberdeen Dispensary.

PICKFORD, J. K., M.R.C.S.E., L.R.C.P.L., has been appointed Medical Officer to the Workhouse of the Leeds Union, vice Rhodes, resigned.

PURNELL, T., M.D., L.R.C.P.Ed., M.R.C.S.E., has been reappointed Medical Officer of Health for Wells Urban Sanitary District.

ROBERTSON, R., M.D., has been appointed Physician to the Liverpool Workhouse and Fever Hospital, vice R. Gee, M.D., appointed Consulting Physician.

ROWLANDS, J. F., M.R.C.S.E., has been appointed Medical Officer of Health for Richmond, Surrey.

SHAW, W., M.B., C.M., M.R.C.S.E., has been appointed House-Physician to the North Staffordshire Infirmary, vice McAldowie, resigned.

SHIELD, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Fourth District of the Romford Union.

SMITH, P. B., M.D., C.M., has been reappointed Medical Officer to the Aberdeen Dispensary.

TAYLOR, H. C., M.B., M.R.C.S.E., &c., has been appointed Assistant Medical Officer to the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, vice D. T. Playfair, M.B., resigned.

TERRY, C., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer to the Third District and the Workhouse of the Newport-Pagnell Union.

THAW, E. P., M.B., C.M., has been appointed Medical Officer of the Lesbury District of the Alnwick Union.

THOMSON, W. A., F.R.G.S., has been appointed Surgeon to the Midland Railway Company, for the Ampthill, Flitwick, and Harlington Districts.

WILLIAMSON, W. H., M.B., C.M., D.D.S., has been appointed Dental Surgeon to the Aberdeen Dispensary.

Births, Marriages, and Deaths.

BIRTHS.

DUNLOP.—On the 26th ult., at 50, David-place, St. Helier's, Jersey, the wife of Andrew Dunlop, M.D., of a son.

GOULD.—On the 4th inst., at 10, Queen Anne-street, Cavendish-square, the wife of Alfred Pearce Gould, M.Ch., of a daughter.

KAVANAGH.—On the 3rd inst., the wife of P. Kavanagh, M.D., of Wickham-road, of a daughter.

LESSON.—On the 6th inst., at Cotehall, Twickenham, Margaret, wife of J. Rudd Lesson, M.B., of a daughter.

SYMES.—On the 1st inst., at Ward's End, Halifax, the wife of Edmond West Symes, M.D., of a son.

MARRIAGES.

BRASH—GREGORY.—On the 6th inst., at St. Mary's, Tedburn, by the Rev. Charles Tothill, Rector, Edward A. Brash, M.R.C.S.E., L.R.C.P.L., only surviving son of the late James Brash, Esq., late 82nd Regiment, to Blanche, second daughter of J. B. Gregory, Esq., of Colley House, Tedburn St. Mary.

CHAWNER—CLOWES.—On the 31st ult., at St. Barnabas, Kensington, by the Rev. Albert Clowes (uncle of the bride), Alfred Chawner, L.R.C.P.L., &c., of Ashover, Derbyshire (son of the late Rev. W. Chawner, Vicar of Crich, Derbyshire), to Emily S. L., eldest daughter of William Clowes, Esq., Chancery Registrar, 80, Holland-road, W.

CROCKER—FUSSELL.—On the 3rd inst., at St. Nicholas Church, Brighton, by the Rev. T. Lee, Vicar of St. John the Baptist, Islington (uncle of the bride), assisted by the Rev. F. Brealey, late Vicar of Easingwold, Henry Radcliffe Crocker, M.D. Lond., M.R.C.P., of 28, Welbeck-street, W., to Constance Mary, only child of Dr. Fussell, of Brighton, and granddaughter of the late Henry Austin Fussell, of Sanford House, South Wilts.

ELLIOT—BAINBRIDGE.—On the 6th inst., at St. Paul's Church, Whitley, by the Rev. John S. Nye, assisted by the Rev. F. Rales, Henry Elliot, M.R.C.S.E., of Marden, Kent, to Annie, third daughter of the late William Bainbridge, Esq., Barrister-at-law, of Cliff House, Cullercoats, Northumberland.

HARRIS—ASHTON.—On February 26th, at Barkly Diamond Fields, Griqualand West, South Africa, William Lester Harris, L.R.C.P., M.R.C.S.E., L.M., J.P., District Surgeon, to Sarah, youngest daughter of the Rev. William Ashton, Missionary of the London Missionary Society.

SWAIN—ARCHIBELL.—On the 3rd inst., at St. Saviour's Church, Euston, by the Rev. J. D. Hawksley, Edward Swain, L.R.C.P.Ed. &c., Medical Superintendent of the Three Counties Asylum, Arlesey, Beds, to Florence Annie, eldest daughter of the late James Archibell, of Regent's-park.

DEATHS.

ADAMS.—On the 30th ult., at Evesham-street, Bangay, Edward B. Adams, M.R.C.S.E., L.S.A.L.

ROBATHAN.—On the 8th ult., after a lingering illness, at his residence, Main-street, Hyde-park, Pennsylvania, U.S., Dr. John W. Robathan, eldest son of Edward Robathan, L.R.C.P.Ed., M.R.C.S.E., of The Grove, Risca, Monmouthshire, aged 36.

WINSLOW.—On the 1st inst., after a few hours' illness, at Sussex House, Hammersmith, William St. John Forbes, fifth son of Dr. L. S. Forbes Winslow, aged 9 months.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, April 8th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp in Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
April 2	29·58	S.W.	46	45	..	54	40	0·08	Raining
,, 3	29·58	W.	54	51	91	64	44	..	Cloudy
,, 4	29·35	S.W.	54	52	91	63	51	..	Cloudy
,, 5	29·49	S.W.	50	47	92	58	41	0·08	Cloudy
,, 6	29·28	N.W.	44	42	78	55	40	0·15	Overcast
,, 7	29·56	W.	41	40	84	58	37	0·06	Overcast
,, 8	29·48	N.	43	42	79	56	39	0·15	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

POISONING BY INDIAN HEMP; AUTOPSY.

THE *Indian Medical Gazette* reports a case of death resulting from Indian hemp, some preparation of which the deceased had been accustomed to smoke for many years. After so indulging he generally became insensible or stupid. He was delirious for a fortnight before his death. On the day on which he died he tried to hammer a nail into his temple, and then expired suddenly. The post-mortem examination revealed the following condition:—Body of a well-nourished male, aged about forty years, exhibiting no marks of violence excepting a small lacerated wound, measuring a quarter of an inch across, over right temple. This did not penetrate the muscular aponeurosis. Beneath the occipito-frontalis, and at a point below the wound, there was a large clot of extravasated blood. Skull not fractured. On removing the vault, vessels of diploe and dura mater were seen to be greatly congested. Beneath the dura mater blood was found effused over the whole upper surface of right brain and over the frontal lobe of left brain. A large clot was found in the right middle fossa of skull; this extended across the crus and pons. There was a large clot in the left lateral ventricle; a smaller one in the right. The posterior borders of lower lobe of lungs on both sides were hypostatically congested, otherwise healthy. Cavities of the heart empty; valves competent, healthy. Liver, spleen, intestines, and kidneys healthy. Stomach full of half-digested food; mucous membrane blackened in places from decomposition of blood in distended vessels. Bladder full of healthy urine, but not distended.

Mr. T. Brenton.—The medical and surgical papers in "Cassell's Household Guide" would answer our correspondent's purpose. But all such publications are poor substitutes for good medical advice.

NEEDLES FOR ELECTRO-PUNCTURE.

To the Editor of THE LANCET.

SIR,—In your report of Dr. Ord's paper on a case of "Aneurism treated by Galvano-Puncture," read before the Medical Society of London, a difficulty appears to have arisen with regard to the insulation of the anodal needles. I send herewith a needle, insulated with shellac after a method I have adopted for some years past. As you will observe, the needle has been used for an aneurism of the arch of the aorta), the point being eaten away, and the uninsulated portion much oxydised, yet the insulation remains perfect. The shellac is applied by heat, care being necessary to avoid a too high temperature, as, if the heat be excessive, the lac is covered with microscopic fissures which destroy its cohesion, and render the insulation imperfect. Needles thus insulated may be obtained from Messrs. Mottershead and Co.

Yours, &c.,

Manchester, March 22nd, 1880. J. DIXON MANN.

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BROWN INSTITUTION.

IT appears from a Report to the Committee of the Brown Institution for the year 1879, by the Professor-Superintendent, that during the first part of the year the amount of material for clinical and pathological investigation afforded directly by the practice of the Institution was necessarily small, and even since that time comparatively few cases have presented themselves having any special interest. "Of these," Dr. Greenfield observes, "I may especially mention several cases of nervous diseases in domestic animals to which my own attention has been directed. Together with these, many carcases of animals have been sent from all parts of the country for pathological investigation, and have afforded material for study. I have reason to believe that great good is done by this part of the work of the Institution. In many cases the nature of an outbreak of epidemic disease is thus determined with certainty at the outset, and the proper measures can be taken to arrest its progress; and in other cases opportunities are afforded for the pathological investigation of diseases which are rare in towns, or which are obscure in their nature. On these grounds I believe that an extension of this branch of the work would be highly beneficial to the public in general. Apart from these subjects, which more particularly belong to the business of the Institution, I have, with the sanction of the Committee, been much engaged in an inquiry, on behalf of the Royal Agricultural Society, into the nature, causes, and prevention of anthrax and anthracoid diseases. This inquiry is in continuation of those which were so happily initiated by Dr. Burdon Sanderson in 1876, some of which have already yielded such valuable results with regard to pleuro-pneumonia and foot-and-mouth disease. The present inquiry relates to the great class of diseases known as anthracoid, which are not only widely prevalent amongst bovine animals, and more rarely horses, in this country, but affect also sheep, deer, and sometimes man, in many parts of the globe. The forms most common in this country are known as splenic apoplexy and quarter evil respectively; and one very important question is whether these are diverse manifestations of one and the same disease, or in what way they are related. This problem I have endeavoured to solve by the microscopic examination of specimens from a number of cases of these diseases, and of other anthracoid diseases occurring in India and South Africa, by the artificial cultivation of the virus of the disease, and by the inoculation of lower animals (rodents) with the virus. So far as these observations have gone, they appear to show that these various diseases, though allied in the conditions of their occurrence, and in the organism which forms their specific virus, are yet not identical in either of those respects. Moreover, with regard to the forms which differ from splenic apoplexy, I have been able to show that these diseases are communicable by inoculation to rodents, and preserve in them the usual features of the special form of disease from which they were derived; thus rendering it highly probable that these forms are communicable by contagion, and are not merely due to local or climatic causes, as has been supposed. Beyond this, nothing special has been elicited as to the causes of anthrax. The other branch of the inquiry is even more important—viz., the possibility of prevention of the disease (splenic apoplexy) by inoculation of the virus transmitted through rodents. These experiments were suggested by the results of certain preliminary experiments made by Mr. Duguid at the request of my predecessor, which appeared to show, first, that when anthrax is communicated by inoculation to bovine animals through rodents, the animals so infected, although exhibiting severe symptoms, recover; and, secondly, that such animals are less liable than others to future infection by the same process. I have continued experiments in the same direction, varying the method employed, with results which are in the main in striking confirmation of those which preceded. Hitherto I have been unable to perform the crucial experiment of exposure to direct contagion from a bovine animal suffering from the disease arising in the usual manner; but I have inoculated an animal thus protected with a large quantity of blood of a sheep which had died of anthrax, without producing any serious symptoms. Should this method of inoculation be found to succeed, even in a majority of cases, it would afford a most valuable prophylactic measure in those districts where from time to time whole herds of cattle die of the disease. It may, however, furnish another illustration of the pathological law exemplified in the relations of small-pox and vaccinia, and may serve as a basis for future more extended researches in relation to the prevention of fatal epidemic diseases."

HYPODERMIC INJECTION OF QUININE.

DR. MACREDDIE, civil surgeon of Pertabgurh, in Oudh, states the hypodermic administration of quinine to be both efficacious and economical. He employs citric acid, however, as a solvent, in the proportion of five grains to one grain of sulphate of quinia, in a drachm of water. Dr. MacReddie has never met with abscess or ulcer as resulting from the solution. The irritation sometimes arising disappears without treatment.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

AS the mode of conducting the Primary or Anatomical and Physiological Examinations for the diploma of Membership of this institution has been much altered, perhaps the following may be interesting to teachers and students. Commencing with the written portion of the examination, there were two distinct papers submitted to the candidates on the same day (viz., the 2nd instant), from one to three o'clock, when they were required to answer four, and not more than that number, out of the following six questions on Anatomy:—

1. Describe the calcaneum.
2. Describe the arrangement and attachments of the perineal fasciæ.
3. Give the attachments of the trapezius muscle; state what structures are exposed upon its removal.
4. Give the dissection required to expose the first portion of the subclavian artery on the right side.
5. Describe the course and relations of the portal vein; name its tributaries, and mention their anastomoses with the systemic veins.
6. The brain being removed from the skull, how would you proceed to expose the corpora quadrigemina?

These having been answered or attempted, they met again after an hour's respite—viz., from four to six, when the following questions on Physiology were submitted to them, with the same conditions as the Anatomical:—

1. Give the physical characters and chemical composition of the blood; describe its corpuscles. What purposes do they fulfil?
2. Mention the average period of eruption of the temporary and permanent teeth. Describe the minute structure of a tooth.
3. Give a description of the microscopical appearances presented by a transverse section of the spinal cord in the cervical region. What are the functions of the cord?
4. Describe the course and minute structure of a renal tubule. What functions have been ascribed to its several parts?
5. How is the circulation of the blood maintained? What is the average velocity of the blood in the larger arteries and veins, and in the capillaries? By what means has this been ascertained?
6. What is the structure of adipose tissue? What are its uses in the economy? and what are the circumstances that lead to variations in its amount?

Of the 173 candidates, 24 were examined daily at the *vivâ voce* for fifteen minutes at *two* tables, instead of ten minutes at *three*, as heretofore. At these tables there were two examiners in Anatomy and two in Physiology. At the former tables were to be seen carefully-prepared dissections, made by gentlemen who had passed the examination, and the *élite* of the metropolitan schools, as also some beautiful preparations from the museum of the College. At the expiration of the time the candidate proceeded to the Physiological tables, where he was met by two examiners, who submitted to him microscopic objects, such as blood, urine, milk, muscular fibre, bone, enamel, sections of kidney, brain, &c. The examiners in Anatomy were Messrs. Durham and Bellamy at table A, and Messrs. Pick and Rivington at table B; Physiology was represented at table C by Messrs. Power and Lowne; and at D by Messrs. Baker and M'Carthy. The new plan appears to work very well, and to give great satisfaction to the students. Mr. Heath, who is the Chairman of the Board, readily admits Fellows of the College and teachers generally to witness the examinations, which in consequence may be considered public.

A FEW REMARKS ON AN EPIDEMIC OF RUBEOLA.

To the Editor of THE LANCET.

SIR,—I have read with interest Dr. Dyce Duckworth's account of a case of rubeola in your issue of March 13th, as we are passing through an epidemic of this disorder, which first made its appearance amongst us some four months ago. I have had under my care many cases, male and female, their ages varying from sixteen to forty-five years. The case of A. M——, described by Dr. Duckworth, is typical of the generality of my cases. The most striking features of this disorder that I have noticed are—(1) the uncertain manner in which it seems to affect those exposed to the infection, one or two of a large household suffering from it, the others escaping, notwithstanding the absence of all precautionary measures; (2) the incubative period is about fourteen days, the prodromic from one to three; (3) there is little or no discomfort during the existence of the rash, but that intense pruritus often ensues upon its dying away; (4) there is little or no desquamation; (5) the enlargement of the cervical and suboccipital glands, with their excessive tenderness, is often the first condition that indicates that a person is out of sorts; (6) this lymphatic irritation is out of all proportion to the amount of pharyngeal congestion or other local causes. I might remark that we have had concurrently with this outbreak of rubeola an epidemic of true measles. From this and the fact that nearly all my patients suffering from the former can give a definite account of having had measles, however heretical it may seem, one is led to wonder whether this so-called rötheln is not morbilli, modified by a previous attack. My treatment has been warm baths with saline aperients. All my cases have terminated satisfactorily.

I remain, Sir, yours &c.,

Kingsbridge, April 2nd, 1880. W. H. WEBB, M.R.C.S.

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Mr. J. Robertson.—The matriculation examination at the Royal Veterinary College, London, is as follows:—A pupil, previously to his admission, is required to produce a recognised certificate of educational requirements, bearing date within the past four years. This certificate must include all the pass subjects of the matriculation examination, or otherwise he must pass an examination in writing, reading aloud, dictation, English Grammar, English History, Arithmetic, and French or Latin. A pupil may elect to be examined in any of the following subjects:—Euclid, Algebra to Quadratic Equations, Geography, Natural History, Physiology, Chemistry, Physics, and the Greek, German, or Italian Languages. The usual age for entering a veterinary school is eighteen years. There are two schools in Edinburgh, one in Glasgow, and one in London. All are affiliated to the Royal College of Veterinary Surgeons, the licensing body.

Mr. E. Winterborne.—In such a case the disease must, without doubt, be regarded as inherited. Epilepsy, which is in part the result of inherited taint, may commence at any period of life, as Dr. Gowers has shown in the lectures now publishing in our columns.

Dr. W. R. Smith, (Cheltenham.)—The paper will appear in an early number.

IS JAGGARY AN ANTISCORBUTIC?

To the Editor of THE LANCET.

SIR,—Surgeon Cullimore, in your impression of March 27th, exhibits surprise at the inferences I drew from his letter of January 31st, "On the Remedial and Preventive Effects of Molasses in Scurvy," &c. Here is the sentence which led me to believe that he had adopted the theory that sea influences and salt provisions are *per se* causative of scurvy: "Thus impressed by memory, and being surrounded by disease of a scorbutic character, though brought about by causes far removed from sea influences and salt provisions (these latter cannot be set down as causes of scurvy in the Indian famine, as the very bullocks often died from *want of it* ["sea influences and salt provisions," or "disease of a scorbutic character"?] owing to the heavy salt tax; it was due more to starvation, and to the effects of roots, nuts, wild aloe, prickly pear, and such inedible matters)." From the foregoing I concluded Surgeon Cullimore implied that (1) sea influences and salt provisions are the usual causes of scurvy; (2) that at sea the excessive use of salt is the prime cause; but that (3) in the Madras famine scurvy was due more to starvation, and to the effects of roots, nuts, wild aloe, and prickly pear. These conclusions may seem "illogical and incomprehensible," but they seem at least natural.

As to the bullocks exhibiting strong political feelings, and dying as a result of the "heavy salt tax," the question is hardly one to engage your space with; but I must say that Surgeon Cullimore's experience must have been cast in happy places to have discovered that, even in the most prosperous times, the average ryot gives to his bullocks one atom of salt from one year's end to another.

I am sorry I was not sufficiently logical to comprehend that your correspondent's experiments were intended to prove the "assimilation-assisting" power of jaggary, and confess I somewhat lost myself in following his statements as to the "powerful calorifacient, antiscorbutic, and assimilation-assisting properties of jaggary"—*multum in parvo!* But now that I do know that his experiments were advanced in proof of the latter quality only, I must still be allowed to point out that even on this count they cannot be considered to carry conviction. A gaol surgeon of the most slender experience usually knows that for a short time after admission prisoners fall off in weight; hence the comparison between twelve men received into a famine camp and twelve lately arrived inmates of a gaol is fallacious, and hence also Surgeon Cullimore's observations may be regarded as "practically worthless."

To bring into greater relief the alleged assimilation-assisting properties of jaggary, your correspondent states "it was the general experience that the chronically starved lost weight for at least a week after admission" into famine camps, "*no matter how well fed*, unless sugar was given." Well, Sir, this may be that gentleman's experience stated again in a "general way," but, after a careful series of weighings undertaken with reference to gain of weight on certain diets in periods of time, this certainly was not mine; that is to say, provided that patients were selected and placed upon diet considered suitable for their individual requirements, so as to obviate as far as possible the risk of intestinal complications. In the case of prisoners, there exist well-recognised reasons why they may be expected to fall off in weight for a short time; but with the famine-stricken, the change from a wandering life of beggary, bereft of food and shelter, to one of comparative ease and luxurious feeding, should surely be followed by progressive increase of weight. Can your correspondent state why his patients were so "illogical and incomprehensible" as to obstinately refuse not only to be benefited by food under favourable circumstances, but actually to *fall off in weight* for a whole week? In the meantime, it is not, I think, "beyond the bounds of imagination" that "a sane person" should believe that these experiments, as formerly suggested by me, simply demonstrate a fact known to the cattle-breeder in this and in other countries, that when saccharine bodies are added to an otherwise full diet increase of weight will be obtained.

As to the alleged antiscorbutic properties of molasses, Surg. Cullimore would fain regard the evidence of the New England sea-captains and that of Dr. Buzzard as conclusive. That of the latter would certainly be entitled to the greatest respect, if capable of the interpretation your correspondent would desire; but I question if Dr. Buzzard would care to have his testimony coupled with that of even "practical men," who declare that molasses is *more efficacious* than lime-juice. As a useful addition to the diet of imperfectly-fed soldiers, no doubt it was employed with "decided benefit"; but I see nothing in Dr. Buzzard's communication that could be regarded as incompatible with the belief that its action was otherwise than due to an increase in the total nutritive power of the diet produced by such an addition, and thus effected a modifying influence in cases of scurvy. Indeed, Dr. Buzzard's testimony would go strongly against employing it in the case of the famine-stricken (the position assumed by Surgeon Cullimore), as he distinctly points out that intestinal affections were apt to arise as a result of its use; so that it is evident, even if he believed in molasses as an antiscorbutic, he would not agree with your correspondent as to its "assimilation-assisting property," or that either result would be effected by a "partial acetous fermentation."

Surgeon Cullimore evidently considers that in asking me if I have used jaggary he puts a crucial question, which, if not answered in the affirmative, I should be bound for ever to hold my peace on the ground that my criticisms are "practically worthless." Well, Sir, if this notion is tenable, the sooner you desert your desk the better, for I am much afraid that you have driven THE LANCET before now through many a pretty theory without having seen the practice advocated in its support carried out. Might not your correspondent have concluded that in my experience as a famine-wallah, I must have seen something of a remedy that by his recommendation was introduced "generally among the famine-stricken people of the Madras Presidency?" But, Sir, I did not use it, nor did I see it used. I was, however, aware of Surgeon Cullimore's advocacy of jaggary, and, now I am making a confession, let me add, nothing came to my knowledge to lead me to consider it necessary to abandon established antiscorbutics in favour of what I considered, and consider, would in a famine-stricken subject give rise to intestinal affections. Surgeon Cullimore may, perhaps, be able to show statistics on this latter point. A remarkable absence of diarrhœa and dysentery in camps where jaggary was used as contrasted with others, would be of decidedly more value in proving its assimilation-assisting properties than the two bald and fallacious experiments he has advanced.

Your obedient servant,

April, 1889. A MADRAS FAMINE-WALLAH.

HICCOUGH.

DR. J. S. WARREN, of Danville, Ky., offers, as an explanation of the relief afforded to hiccough by holding the breath as long as possible, the following theory: "By holding the breath the trisplanchnic nerve is held in abeyance until the pneumogastric, which is off guard, can get back to its post."

Mr. G. S. Davies.—Messrs. Williams and Norgate would probably be able to supply the published monographs on the subject; but, as much of the "literature of septicæmia" is to be found only in journals and in Transactions of Societies, some library—e.g., that of the Royal College of Surgeons—should be consulted.

E. C. G.—Small books of Questions have been published by Gant, Lush, Husband, &c.

J. H. B.—Safranine, one of the red aniline dyes, has been recommended for the detection of amyloid matter.

Dr. John Anderson.—Henle's Anatomy is the best. We know nothing of the Surgery or Medical Dictionary.

Inquirer.—The Habitual Drunkards Act.

CASE OF OBSTINATE SCIATICA RELIEVED BY STRETCHING OF NERVES.

To the Editor of THE LANCET.

SIR,—The following case, which was under the care of Dr. Robertson may be of interest:—

D. F——, a blacksmith, aged forty-five, had for eight months suffered from sciatica of such severity as to entirely unfit him for work during that period. The paroxysms of pain were very frequent and intense, and his general health had been much impaired. No improvement following the exhibition of ordinary remedies, he became an inmate of the Glasgow Western Infirmary, where he remained for ten weeks. During his stay in the hospital he had blisters applied repeatedly over the course of the nerve without benefit; and the paroxysmal pains being still undiminished as to their frequency and violence, the actual cautery was resorted to, but failed to lessen his suffering. The daily use of galvanism for three weeks afforded not even temporary immunity from pain, and he quitted the hospital in no sense relieved, having refused to undergo the operation of stretching. Two weeks after his return home he consented to the operation being performed. Accordingly, having been brought under the influence of chloroform, an incision, two and a half inches in length, was made midway between the major trochanter and ischial tuberosity; the nerve was easily exposed and hooked out by the fingers. It was then firmly stretched until a degree of relaxation was obtained, extension of the limb being at the same time maintained. The wound was brought together with wire sutures, and antiseptic dressing applied. A good deal of suppuration followed, due, doubtless, to the comparatively low vitality of the tissues involved. Since the operation, twenty-two days ago, he has had no return of the paroxysms, and complains of no pain other than that referable to the wound.

Yours &c.,

Dumbarton, March 22nd, 1880. MAULE RICHARD, L.F.P.S.G.

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SPECIALISM.

THE New York *Medical Gazette* takes note of the increase of specialism in the States, and while acknowledging that there is some good purpose served in medical practice by a limited exercise of the principle of division of labour, objects, as we have often done, to its excessive development, as calculated to narrow the range of perception in diagnosis, and consequently to injure medicine as a healing art.

Mr. T. Beaufoy Green.—There is no rule to guide in such a question. The time occupied is an important element to be considered, of which our correspondent says nothing. He is himself the best judge. But he must not underrate the importance of such duties.

VOTING PAPERS FOR UNIVERSITIES.

To the Editor of THE LANCET.

SIR,—If your correspondent Mr. R. V. Ash, or any other gentleman qualified to vote, will communicate with the Secretary of either of the Committees in London, he will, no doubt, be enabled to get his voting-paper duly signed by a J.P. Mr. Hedderwick, 2, Fairfield-court, Temple, has, I know, made such arrangements in behalf of the Liberal interest. The voter can have his paper signed by taking with him some one known to the magistrate.

Respectfully yours,

April, 1880. J. C.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Vinen, London; Dr. G. Johnson, London; Dr. Greenfield, London; Mr. Dewar, London; Mr. Morrant Baker, London; Dr. J. Cavafy, London; Mr. Robertson, Southport; Dr. W. Roberts, Manchester; Mr. Hoadley, Hartshill; Dr. Tiffany, Kansas City; Mr. Robson, Leeds; Mr. Lowther, Hull; Mr. Wright, Manchester; Mr. Reeves; Mr. Green, Sedberg; Dr. Haddon, Eccles; Mr. F. M. Brown, Wansford; Mr. Webb, Kingsbridge; Mr. Grellett, Bancroft; Mr. Shaw; Dr. Chalmers, London; Mr. Winton, Abersychan; Mr. C. Stewart, London; Dr. Weaver; Dr. Aikman, Guernsey; M. Félix Dubal; Mrs. Gamgee; Dr. S. Gale, Manchester; Dr. J. Anderson; Dr. Hewan, London; Mr. Naumann, Turbenthäl; Dr. Boileau, Southampton; Mr. Diggens, Lancaster; Mr. Trigge, Cape of Good Hope; Mr. Winterborne; Dr. Thomson, Algiers; Mr. Cody, Bombay; Dr. Mapother, Dublin; Dr. H. V. Carter; Dr. G. Buchanan, Glasgow; Messrs. Young and Postans; Mr. Marsh, London; Dr. Murphy, Sunderland; Mr. Battye, London; Mr. Scott, Manchester; M. Leichterschofen, Homburg; Mr. Jesse, Macclesfield; Miss Manley, Prestelgne; Mr. Brenton, Richmond; Mr. M'Donald, Manchester; Dr. Pernisch, Engadine, Switzerland; Dr. Williams, Mr. Coutts; Mr. Hoggan, Bayswater; Messrs. Faraday and Sons, London; Messrs. Lea and Nightingale, Liverpool; Mr. S. Jones, Kensington; Mr. Henderson, Walton; Mr. Spencer, Chartham; Mr. Bate, Huddersfield; Mr. Greenwood, Liverpool; Messrs. Hunter and Co., Aberdeen; Mr. Bainbridge, Collercoates; Dr. Crowther, Luddenden; Mr. Mitcheson, Heckmondwike; Mr. Elwin, Dover; Dr. Ritchie, Otley; Mr. Grace, St. Andrews; Mr. Townsend, Exeter; Mr. Grant, Birmingham; Dr. Dalgado, Sawant Waree; Messrs. Gale and Co., London; Inquirer, London; The Editor of the *Bazaar*; Anti-quack; The Secretary of the Society of Arts; A Madras Famine-Wallah; E. C. G.; F. W. D.; An Old Surgeon-Major; I. V. R. C., Bala Bissar; R. V.; Medicus; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Hemm, Corsham; Mr. Hogden, Haywoath; Dr. Fraser, Elliyth; Mr. Hawby, South Africa; Mr. Dick, Heckmondwike; Messrs. Milner, Lancaster; Mr. Mosse, London; Mr. Riccard, South Molton; Mr. Wall, Wigan; Mr. Young, Chilton Polden; Mrs. Cottrell, Cliftonville; Mr. Scott, Manchester; Mr. Barnascone, Plymouth; Dr. Bateman, Norwich; Mr. Torris, Derby; Mr. Gotelee, Odiham; Dr. Page, Kendal; Mr. Ross, Alderney; Professor Gairdner, Glasgow; Mr. Smith, Bridgend; Mr. MacEwen, Hammersmith; Mr. Gornley, Afghanistan; Mr. Birks, Sheffield; Mr. Brush, Weymouth; Mr. Collett; Mr. Sayre, Clifton; Dr. Smith, Glenbrook; Transfer, Hulme; A. G. T.; R., Manchester; T. H., Leicester; Alpha, Cardiff; H. B. S.; Medicus, Norwich; D. E., Birmingham; X., Leicester; Vicar, Sudbury; R., Barrow-in-Furness; L. M.; Dr. F.; Medicus, Wallsend; M.D., Whitechapel; M. F., Radnor; H. F. E., Bryton Eleven Towns; Novo; D. G. H.; Surgeon, Regent's-park; D. M.; E. H., High Wycombe; R., Manchester; X. Y. Z.; M.R.C.S., York; Medicus, Manchester; &c.

Insurance Record, Medical Temperance Journal, Church of England Temperance Journal, Music, Pharmaceutical Journal, Shield, Analyst, Dumfriesshire and Galloway Herald, New York Medical Gazette, Manchester Guardian, Bristol Mercury, Liverpool Daily Post, Freemason, Hertfordshire Mercury, Western Morning News, Bury and Norwich Post, L'Union Médicale, &c. &c., have been received.

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Medical Diary for the ensuing Week.

Monday, April 12.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 2½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. Clement Godson will exhibit a specimen of Placenta Succenturia.—Dr. T. Harrington Tuke, "On the Lunacy Laws."

Tuesday, April 13.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Huxley, "On Dogs, and the Problems connected with them."
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Rev. Lorimer Fison: "Notes on Fijian Burial Customs."—Mr. C. Staniland Wake: "Notes on the Polynesian Race."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8 P.M. Ballot.—8½ P.M. Dr. Gilbart Smith and Mr. Walsham, "On a Case of extreme Pharyngeal Stenosis, the result of Syphilis."—Dr. E. C. Anderson, "On the partial Metabolism by the Liver of Leucin and Tyrosin into Urea."

Wednesday, April 14.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Dr. M. C. Cooke, "On the Genus Ravenelia."—Mr. G. Hoggan and Dr. F. E. Hoggan, "On the Development and Retrogression of Bloodvessels."—Mr. A. Grunow, "On some New Species of Nitzschia."—Mr. W. Webb, "On a New Finder."

Thursday, April 15.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Tyndall, "On Light as a Mode of Motion: Theories of Light and Colours."
HARVEIAN SOCIETY.—8½ P.M. Mr. Teevan: "Points in the Surgery of the Urinary Organs which every Practitioner ought to know."—Mr. Henry Power, "On the Affections of the Eye in connexion with Pregnancy."

Friday, April 16.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Evening Meeting.—9 P.M. M. Ernest Renan, "On Marcus Aurelius."
SOCIETY OF MEDICAL OFFICERS OF HEALTH.—7½ P.M. Mr. A. Wynter Blyth, "On the Prevention and Propagation of Diphtheria."—Dr. Alfred Hill, "On Diphtheria and Typhoid, and their Concomitant Conditions in Birmingham."

Saturday, April 17.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. James Sully, "On Art and Vision."

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THE

Lumleian Lectures

ON

THE DIGESTIVE FERMENTS, AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians,

BY WM. ROBERTS, M.D., F.R.C.P., F.R.S.,

PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY; PROFESSOR OF CLINICAL MEDICINE TO THE OWENS COLLEGE.

LECTURE II.—PART I.

PEPSIN AND TRYPSIN—DIGESTION OF PROTEIDS.

VARIOUS kinds of albuminous or proteid substances are used by mankind as food. The most important of these are muscular flesh, the casein of milk, and egg-albumen from the animal kingdom; and gluten, albumen, and legumin from the vegetable kingdom.

Proteids are attacked by the digestive ferments at two points in the alimentary canal, by pepsin in the stomach, and by trypsin in the small intestine. Between these two acts of digestion there is a complete break in the duodenum, owing to the abrupt change of reaction from acid to alkaline which occurs at that point.

Gastric digestion is, in all creatures, an essentially acid digestion; but the most varied opinions have been entertained as to the nature of the acid. It has been supposed in turn to be hydrochloric acid, lactic acid, acid phosphate of lime, butyric, and even acetic acid. Much of this confusion has arisen from not distinguishing between the acid of pure gastric juice as secreted into an empty stomach, and the acid of the gastric contents during the digestion of a meal. A good deal of light has been thrown on this subject by the recent researches of C. Richet.[1] This observer found himself in exceptionally advantageous circumstances for the study of the gastric juice. He had under observation a young man on whom Verneuil had successfully performed the operation of gastrotomy for the relief of impermeable stricture of the œsophagus, the result of swallowing inadvertently a quantity of caustic potash. The complete occlusion of the œsophagus enabled Richet to obtain and examine the gastric juice in a pure state, uncontaminated with saliva. All food had to be administered through the fistulous opening left after recovery, and the observer could at any moment—as in the famous case of Alexis St. Martin—withdraw portions of the gastric contents for examination. Richet also took advantage of the new method of separating the various organic and mineral acids from one another made public by Berthelot in 1872.[2]

Berthelot had found that if you shook up an aqueous solution of any acid with ether, and then allowed the two fluids to separate, that a part of the acid passed into the ether, and that the remainder clung to the water, and that the ratio between these two parts was a constant quantity. He called this ratio the *coefficient of partage*, and found that its value was a fixed characteristic for each particular acid. Solutions of the mineral acids were found to yield nothing, or almost nothing, to ether when agitated with it; but organic acids were found to pass into the ether in considerable, though very variable, quantities—the proportion varying in a constant ratio according to the nature of the acid.

Testing pure gastric juice, uncontaminated with food or saliva, by this method, Richet found that almost all the acid was retained by the water, and that only a small proportion—about one in twenty-two—passed into the ether. This showed that the acid of pure gastric juice was almost entirely a mineral acid, with only a minute admixture of organic acid. The organic acid (tested by the same method) exhibited a coefficient of partage closely corresponding with that of sarco-lactic acid. The nature of the mineral acid was determined by a method similar to that employed by C. Schmidt, and yielded the same result—namely, undoubted evidence that the mineral acid of pure gastric juice was hydrochloric acid. But Richet found that this mineral acid did not behave in the presence of salts of the organic acids quite in the same way as free hydrochloric acid does. The observations of Berthelot had shown that when free hydrochloric acid is added to a solution of acetate of soda, or other similar organic salt, the mineral acid attaches the base entirely to itself, and throws the whole of the organic acid free into solution—so that the mixture when tested by the method of coefficient of partage behaves exactly like an unmixed solution of the organic acid. When pure gastric juice was put to this test it was found that, although it liberated the organic acid largely, it did not do so to the same extent, by a good deal, as if the mineral acid contained in it had been entirely free. It behaved, rather, as hydrochloric acid does when united with a feeble organic base, such as leucin or peptone—and, on the ground of what appear to be very careful experiments, Richet came to the conclusion that this feeble base was probably leucin, derived from the gastric mucus, and that the acid of pure uncontaminated gastric juice was hydrochloric acid in loose combination with leucin.

Richet next proceeded to examine the free acid actually existing in the stomach during the digestion of a meal in his patient with gastric fistula. He found, as might have been expected, that this differed from the acid of pure unmixed gastric juice—in this respect, namely, that it contained a very much larger proportion of organic acids, in comparison with the mineral acid, than pure gastric juice. It was evident that the mineral acid had to a large extent seized upon the bases of the acetates, malates, lactates, butyrates, and other organic salts always present in the food, and had set free their organic acids. The real work of digestion then, so far as the acid constituent is concerned therein, is largely performed by various organic acids thus set free from the articles of food which are undergoing digestion.

Richet found that the acidity of the contents of the stomach during digestion, although it varied through considerable limits, had a marked tendency to maintain the normal average. If acid or alkali was added to the digesting mass the mean was presently restored automatically—the stomach in the former case ceasing to secrete acid, and in the latter case secreting an increasing quantity of acid.

The Effect of Gastric Juice on the Salivary and Pancreatic Ferments.

The observations of Berthelot on the power of a mineral acid to set free the acids of organic salts and to take their place with the bases—and the further observations of Richet, showing that the acids actually free in the gastric contents during digestion were organic acids, have led to the re-examination of a point of some importance—namely, as to whether the salivary, and more especially the pancreatic ferments, were or were not destroyed by the acid contents of the stomach. The matter has a practical interest in this way. If the gastric acid destroys these ferments it is evidently useless to administer pancreatic preparations by the mouth during digestion, because they would be rendered inert by the acid contents of the stomach. On the other hand, if they are not destroyed in passing through the stomach, but merely lie dormant and recover their activity in the alkaline medium of the small intestine, then we can administer pancreatic preparations during digestion with every prospect of their passing uninjured through the pylorus and proving useful in assisting digestion in the small intestine.

A series of experiments bearing on this question were submitted by T. Defresne to the Académie de Médecine and the Académie des Sciences towards the close of last year, and have attracted some attention. On the ground of these experiments Defresne arrived at the following conclusions—namely, that saliva continued its action on starch in the stomach without interruption—that the pancreatic ferments in like manner preserved their activity in the presence of the gastric acid—that the acids of the chyme, being organic acids, did not really destroy these ferments, but merely reduced them to a state of temporary inertness; so that when the acidity of the chyme was neutralised in the duodenum, they recovered their powers and exhibited undiminished activity both on starch and proteids.

As the question had a direct bearing on the medicinal administration of pancreatic preparations, and indirectly on the administration of malt-diastase and malt-extract, I thought it desirable to repeat some of Defresne's experiments and to

[1] Du Suc Gastrique, by Ch. Richet. Paris, 1878.

[2] Ann. de Chimie et de Physique, 4e Série, t. xxvi., p. 396.

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put the question raised by these experiments to the test in other ways.

One of Defresne's (apparently) most convincing experiments was the following, which I give nearly in the words of the abstract of the paper published in the Proceedings of the Académie de Médecine for November 4th, 1879. When twenty grammes of dilute hydrochloric acid, having twice the acidity of the normal chyme, are mixed with twenty grammes of egg-albumen—what follows? The acidity of the medium is no longer due to free hydrochloric acid, but to the lactic and phosphoric acids of the white of egg which have been set free. In presence of these acids pancreatine may be digested for two hours in the warm chamber with impunity. And if, at the end of this period, the acidity of the mixture be neutralised, digestion is accelerated, and the pancreatine peptonises thirty-eight times its weight of albumen.

I repeated this experiment in the following manner: forty grammes of chopped boiled white of egg were mixed with forty cubic centimetres of dilute hydrochloric acid of the strength of four per thousand. This mixture was subjected to a preliminary digestion of two hours in the warm chamber at 40° C. The object of this preliminary digestion was to allow the hydrochloric acid a sufficient time to seize on the bases, and to set free the organic acids of the white of egg. At the end of this time five cubic centimetres of an active extract of pancreas were added to the mixture. A second experiment was arranged in exactly the same way, except that filtered saliva was substituted for extract of pancreas. The mixtures were kept in the warm chamber for a further period of one hour, and were then filtered and carefully neutralised. On testing the neutralised filtrates, I obtained approximately the same results as Defresne. The diastatic and proteolytic ferments of the pancreatic extract were found active, but not so active by a good deal as if the extract had been diluted to the same extent with simple water. In the second experiment with the filtered saliva the ptyalin had preserved its activity quite unimpaired.

These experiments, however, involve a fallacy which vitiates the deductions intended to be drawn from them. White of egg has a highly alkaline reaction, and although the acid used in the experiment possessed double the strength of the normal gastric juice, it was found that the mixtures, at the end of the two hours' preliminary digestion, had only a comparatively feeble acidity—in fact, only one-seventh of the normal acidity of the gastric contents. It has long been known that the salivary and pancreatic ferments are able to resist a feeble acidity, but the question really at issue is, Can these ferments resist the average acidity of the contents of the stomach, when, moreover, this acidity is rendered still more destructive to them by the presence of pepsin?

I tested the question in this way. A distinction is drawn, and rightly, between the acidity due to free hydrochloric acid, and a similar degree of acidity due to an organic acid. Now, lactic acid is a typical organic acid, and it is also an acid which is often, if not always, present in the contents of the stomach during digestion. I prepared a solution of lactic acid corresponding in saturating power to the normal gastric acid (2 per 1000 HCl.). To fifty cubic centimetres of this dilute lactic acid I added five cubic centimetres of a solution of pepsin and five cubic centimetres of an active extract of pancreas. I prepared a second similar experiment, but substituted filtered saliva for pancreatic extract. The mixtures were then placed in the warm chamber for one hour. At the end of this period the solutions were exactly neutralised and tested. They were both found to be absolutely inert. Not a vestige of amylolytic nor proteolytic power had escaped destruction.

I had an opportunity of trying the same question in a still more satisfactory way. While I was examining the throat of a patient suffering from an ailment which did not affect his general health, a portion of the contents of the stomach was ejected, and fortunately caught in a clean vessel. This was immediately filtered, and about ten cubic centimetres of clear acid solution were obtained. The period of digestion was three hours after breakfast. One-half of this was devoted to testing its saturating power. It was found to possess an acidity very nearly corresponding with that of normal chyme. To the remaining portion five drops of extract of pancreas and five drops of filtered saliva were added, and the mixture was placed in the warm chamber for one hour. At the end of this time it was exactly neutralised, and divided into two equal portions. One portion was tested with a drop of starch-mucilage, and found to be absolutely devoid of amylolytic power. The other portion was added to an equal volume of milk rendered slightly alkaline with bicarbonate of soda, and was then placed in the warm chamber. Not the slightest digestive action was produced on the milk in twelve hours.

I may mention that in the above experiments I used milk as the test of proteolytic activity. I had become thoroughly familiar with the behaviour of milk with pancreatic preparations during a long course of observations, and was therefore able to detect the slightest signs of pancreatic action.

With this evidence before me, I am unable to accept the conclusions of Defresne and others in Paris who allege that saliva and pancreatic preparations can resist the normal acidity of the stomach in full digestion; and who recommend the administration by the mouth of pancreatic preparations during the period of chymification. I will in my next lecture point out the time and the method in which these preparations may, I believe, be administered by the mouth with sure prospect of success.

Digestive Proteolysis.

The changes undergone by albuminoid substances in digestion are still very imperfectly understood. It is, however, known that the chief end-product of the transformation is peptone. It is also known that between any native proteid—egg-albumen, muscle-fibrine, casein, or legumin—and the end-product peptone there are intermediate grades and bye-products, which have hitherto proved difficult to define and isolate. The constitution of the proteid molecule is still unknown to chemists. That it is a highly-complex aggregation is certain; and it can scarcely be doubted that the way to a better knowledge of its constitution lies in a persevering study of the action on it of the digestive ferments. It has been already seen that in the case of starch the action of diastase furnished the key to the constitution of the starch molecule; and, similarly, it is not unreasonable to expect that the mystery of the proteid molecule will be finally solved by a study of the action on it of pepsin and trypsin. Attention has hitherto been too exclusively directed to peptic digestion, which is complicated by the interaction of an acid. Pancreatic digestion is, in this respect, a simpler process, inasmuch as it requires the interference neither of an acid nor an alkali, but is a reaction, pure and simple, between the ferment and the proteid. This, however, is a question of the future.

Characters of Peptones.

The end-product peptone has been fairly isolated and its characteristics defined. If the filtered product of a pancreatic digestion of egg-albumen be evaporated to dryness in a watch-glass at a temperature of 104° Fahr. (40° C.), there remains a glassy straw-coloured residue resembling dried gum. With the point of a penknife this can be chipped off in shining scales, which may be easily reduced to a fine whitish powder—this is nearly pure peptone. This substance is extremely soluble in water: and its solutions even when highly concentrated by evaporation betray no jellying, and no viscosity, but continue diffluent almost to the moment of desiccation—only just before drying up do they assume a slightly syrupy consistence. When the latter point is approached the solution deposits beautiful white crystalline sheaves of tyrosin and spheres of leucin. From the constancy with which these crystalline bodies make their appearance in pancreatic digestion it may be inferred that they constitute an essential portion of the final products of the transformation.

The reactions of peptone are mostly of a negative character. Its solutions give no precipitation with nitric acid, nor with boiling, nor with ferrocyanide of potassium and acetic acid. The behaviour of peptone with alcohol is peculiar. When a strong peptone solution is dropped into absolute alcohol, the peptone is precipitated as a white sediment, but it is not truly coagulated into an insoluble modification, as all the other proteids are, for when the alcohol is removed the deposit is found to have preserved its solubility in water—even after prolonged contact with the alcohol. Solutions of peptone are precipitated by those metallic salts which throw down other proteids, also by tannin when the solutions are neutral. When the solutions are rendered alkaline, the cupro-potassic test (Fehling's solution) added in very small quantity produces a rose-red colouration, whereas other proteids produce a violet tint. Physiologically, by far the most important reactions of peptone are its extreme

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solubility in water and its diffusibility through organic membranes. With regard to the latter point, contradictory statements have been made by different investigators. Otto Funke rated the diffusibility of peptone through the membrane of the small intestine higher than that of common salt. On the other hand, V. Wittich concluded that peptones did not pass through parchment paper more rapidly than unaltered albumen. My own observations support the view that peptone is incomparably more diffusible through parchment paper than the native proteids. In the case of milk, the effect of digestion is very marked in regard to its behaviour in the dialyser. When milk was dialysed for forty-eight hours into twice its volume of water, not a trace of proteid matter could be detected in the diffusate; but when milk had been previously digested for a couple of hours with pancreatic extract, an abundant reaction with tannin and Fehling's solution was obtained after dialysing it for eight hours.

My results with egg-albumen were equally striking. I prepared a solution by agitating white of egg with nine times its bulk of water, and straining the product through muslin. When this solution was dialysed into twice its volume of water for thirty-two hours it yielded absolutely no reaction with tannin nor with the cupro-potassic test. But when the same solution was previously digested, either with pepsin and acid, or with pancreatic extract, and then dialysed, it gave in five hours a slight but distinct reaction, both with tannin and with Fehling's solution, and in sixteen hours a most abundant reaction.

The theoretical views held by physiologists in regard to the intimate nature of the transformation undergone by proteids in the presence of pepsin and trypsin are still unsettled, but recent opinions converge towards the idea that the process is, in the main, one of progressive deduplication with hydration, similar in type to the transformation of starch by diastase. This view receives a positive support from the recent analyses of Henninger. By operating on highly purified albumen, fibrin, and casein, Henninger[3] succeeded in obtaining peptones in a state of great purity. An analysis of peptones so obtained indicated that they contained less carbon and nitrogen, and proportionally more hydrogen, than their original proteids. The differences were, it is true, small, but they pointed distinctly in the direction of the conclusion that there was a fixation of the elements of water by the proteid in the course of its transformation into peptone.

Henninger also believes that he has succeeded in reversing the process, and in reproducing an albuminous substance from peptone by operating on it with dehydrating agencies. He found that when fibrin-peptone was heated with anhydrous acetic acid at 80° C., or was maintained for an hour at the temperature of 160° to 180° C., it yielded a body which agreed closely in its reactions with syntonin.

The intermediate products which are generated in the course of proteid digestion, and stand between the original proteid and the end-product peptone, are very imperfectly understood. The laborious researches of Meissner and Kühne have shown that several such intermediate bodies are produced, but these have not yet been adequately isolated and defined.

[3] A. Henninger, De la Nature et du Rôle Physiologique des Peptones. Paris, 1878.

CORONERSHIP FOR WEST KENT.—A petition has been presented to the Court at the West Kent Quarter Sessions from the Dartford Local Board of Health, the document also being signed by the vicar and churchwardens of Dartford, praying that the West Kent Commissioner's district should be divided into two districts, to be called the Greenwich and the Dartford district, and that a coroner should be appointed for each district. They suggest that the Greenwich district should consist of the following parishes:—Beckenham, Bromley, Cudham, Charlton, Chislehurst, Chelsfield, Downe, Farnborough, Greenwich, Hayes, Halstead, Keston, Kidbrooke, Lee, Lewisham, Mottingham, St. Nicholas (Deptford), St. Paul, Deptford (that portion in Kent), Plumstead, Woolwich, and West Wickham. The Dartford district, they recommend, should include the parishes of Bexley, Crayford, Darenth, Dartford, Eltham, Erith, Eynsford, Farningham, Fawkham, Footscray, Hartley, Horton Kirby, Knockholt, Longfield, St. Mary Cray, St. Paul's Cray, Southfleet, Stone, Sutton-at-Hone, Swanscombe, East Wickham, and Wilmington.

Lettsomian Lectures

ON

THE TREATMENT OF STRICTURE OF THE URETHRA, ENLARGED PROSTATE, AND STONE IN THE BLADDER,

WITH SPECIAL REFERENCE TO RECENT PROGRESS.

Delivered at the Medical Society of London, February, 1880.

BY W. F. TEEVAN, B.A., F.R.C.S.,

SURGEON TO THE WEST LONDON AND ST. PETER'S HOSPITALS.

LECTURE III.—PART I.

MR. PRESIDENT AND GENTLEMEN,—I now proceed to the consideration of the enlarged prostate. The treatment of this local nuisance continues to be much as heretofore, palliative only. Heine has attempted to cure the affection by injections of iodine; but they do not seem to have been very successful, for in several instances suppuration took place, attended once or twice by a fatal result. Atlee has recorded cases in which he obtained marked diminution in the size of the enlarged organ by the administration of ergot of rye. I have myself given the drug in large doses for months together, but I did not observe any appreciable reduction in the bulk of the gland. In France, compression, dilatation, electricity, incision and excision, have all been tried; but the only effectual measure would seem to be the excision of the obnoxious portion, as invented and practised by Mercier, whose name will for ever be associated with this subject, for his investigations into the pathology and treatment of the complaint were so exhaustive, that he left but little to be done by those who followed him. Although Guthrie had recognised "the bar at the neck of the bladder," Mercier established the very great pathological differences between the "valvule musculaire" and the "valvule prostatique." His coudée and bicoudée instruments have obtained a world-wide reputation, and his elbowed catheter is known all over his own country as "the old man's catheter." To Velpeau belongs the merit of having established the analogy which exists between fibrous tumours of the uterus and those of which prostatic outgrowths are made up. Professor Ellis showed that the prostate was not a gland, but a body composed of unstriped muscular tissue. The pathology and treatment of the enlarged prostate, as usually understood in this country, might be expressed by a knob jutting up at the entrance to the bladder, requiring a catheter shaped like a Saracen's scimitar to pass over it. A little reflection will show how imperfect and rudimentary such a conception must be. Although it is perfectly true that the median portion lying behind the verumontanum (sus-montale) is the part usually enlarged, yet it is by no means uncommon to meet with cases where either one or other of the lateral lobes is hypertrophied, thereby causing great deviation in the course of the urethra, so that the passage of a metal catheter is an impossibility.

The following diagrams[1] illustrate the four separate and distinct conditions which may be found interfering with micturition. The first one (A, Fig. 9) represents "the bar at the neck of the bladder" of Guthrie, or "valvule musculaire" of Mercier, which consists of a transverse fold of mucous membrane, enclosing hypertrophied muscular fibres at the rectal aspect of the meatus internus, and differs greatly from "the valvule prostatique," B, or enlarged third lobe of the prostate, as it is commonly called, although in reality there are but two lobes. Either lateral lobe may alone be enlarged, as seen at C, where the right one may be observed greatly increased in size, pressing the urethra into a crescentic-shaped canal, and at D the left one is seen to be similarly affected, deflecting the urethra to the opposite side, rendering it impossible to introduce the ordinary metal prostatic catheter. Anyone who has had much experience in introducing silver instruments in cases of enlarged prostate

[1] Figures A and B are taken from Mercier and Phillips.

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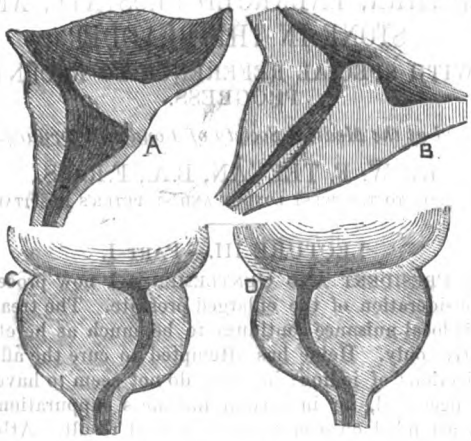
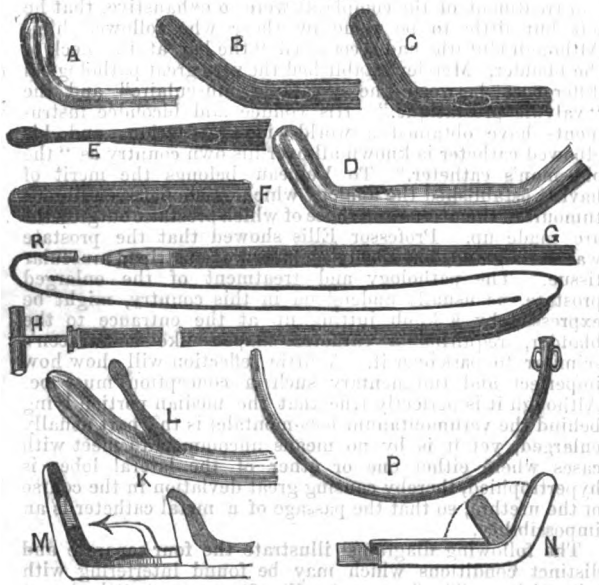
must have occasionally noticed, that in endeavouring to pass a catheter it was arrested at a certain spot, and deflected to the right or the left, so that the handle of the instrument made a quarter turn to the right or the left in the surgeon's

FIG. 9.



hand. The only instrument which can effect a diagnosis between a muscular and prostatic valve is the short-beaked sound of Mercier (see A, Fig. 10.) Its beak is the shortest ever made, and is set almost at right angles to the shaft. It might at first sight be supposed that it was difficult to introduce, but this is not so. There is no instrument so easy to pass as a short-beaked lithotrite. I have never seen a case where one or other failed to slip in, the difference of an eighth of an inch in the beak determining success or failure. Rectal examination may elucidate whether there

FIG. 10.



be general or partial enlargement of the prostate, but it will fail to discover any alteration in the central median portion behind the verumontanum. The most important object in connexion with the enlarged prostate is to choose for a patient that catheter which he can introduce with the greatest ease and the least annoyance. Till within the last few years the English gum-elastic catheter was that which was usually placed in the patient's hands. Its end had, however, to be very curved, and then set; and as it was only good for one introduction, without requiring to be again reset, gentlemen obliged to use catheters usually kept a mahogany case containing seven of them, one for each day in the week, set in grooves, and ready for use. Now, all this cumbersome appliance is done away with, and patients carry in their walking sticks, or umbrella sticks, but one catheter.

Mercier was led by his investigations to invent the coudée catheter (C, Fig. 10), which goes by the name of "the old man's catheter" in France. Such a success was it, that six weeks after its introduction Leroy d'Etiolles brought out his coudée catheter (B, Fig. 10), which was a bad imitation of Mercier's, from whose it differed only in having its beak set at a more obtuse angle to the shaft, so that it was very liable to impinge against the prostatic obstruction instead of riding over it. Mercier's catheters are made with beaks of varying lengths; the illustraton represents a long one. As a rule the shorter the beak the less will it annoy the patient. Of all catheters for prostatic use the coudée is, perhaps, the one most generally applicable. I myself prefer the olivary catheter (E, Fig. 10), but in order that it may pass easily it must have a long slender neck and well developed olive, otherwise it will impinge against the prostate, cause bleeding, and prove worse than useless. If, however, it be made as I have pointed out, its olive will usually mount the prostate, and glide into the bladder. If the catheter will not pass it can usually be made to do so by bending the last half inch at right angles to the shaft, so as to make a condée beak to it. Provided an olivary catheter suits the patient, it is by far the best one for him to use, I think, as it can be introduced very quickly and without annoyance. The india-rubber cylindrical catheter (F, Fig. 10) is that preferred by Hutchinson, Socin, and Van Buren. There is no doubt that it is the one which can be introduced with the least annoyance to the patient, but this great advantage is counterbalanced by the fact that it cannot be passed quickly, which is a great objection; for if a patient cannot introduce his instrument rapidly he becomes nervous, fidgety, and fails. In a considerable number of cases the india-rubber instrument cannot be passed; it can often be made more manageable by inserting a close-fitting bougie-stylet for about two-thirds of its length, leaving the last three inches empty, so that the very limpness of its extremity may enable it to be passed over the obstruction. If a surgeon be called in to a case of retention from enlarged prostate, he usually tries to pass the silver "prostatic catheter," but I consider it ought only be taken as a last resource; in inexperienced hands it is, to use Keyes' expression, "a murderous weapon." For the relief of prostatic retention, by whatever pathological alteration it may be caused, I know of no instrument equal to the "sonde à vis portant un conducteur" of Dr. Charles Phillips, the author of the well-known work "Maladies des Voies Urinaires." The filiform bougie (R, Fig. 10) can be wriggled over an enlarged third lobe, or round a lateral one into the bladder; the catheter, G, is then screwed on to it, and made to follow it into the bladder. The eye of the catheter is placed near the ferrule, which is objectionable, for as the instrument may be bent at right angles when traversing the subpubic region, it is liable to crack at its weaker part, which is at the eye. I have therefore had the eye made in the brass ferrule, as seen in the illustration. By this little change there is no longer any weak spot at which it may crack. There are other catheters for relieving retention from enlarged prostate. H, Fig. 10, represents an over-sliding catheter introduced by Maisonneuve. It consists of a fine olivary bougie, to which is attached a cord twelve inches long fixed to a crossbar; a catheter, open at both ends, is passed over the bougie and string till it meets the crossbar. The surgeon introduces the bougie into the bladder, and, holding the crossbar in the left hand, slides the catheter over the bougie, which is then withdrawn. Another catheter is that of Récamier (P, Fig. 10), comprising half a circle. It hugs the roof of the urethra during the entire time it is being introduced, so that it avoids the prostatic third lobe and false passage, which latter is nearly always in these cases found in the floor of the urethra in front of the obstruction. In certain cases, where there is not only a third enlarged lobe, but the general body of the prostate is considerably augmented as well, thereby causing great elongation of the prostatic urethra, Mercier's bicoudée catheter (D, Fig. 10), will be found most useful. There are also the American vertebrated catheters of Gross and Squire.

One of the most troublesome complications is the presence of a false passage, which is always, I may say, situated in the floor of the urethra. There are two different methods of overcoming the difficulty. One is to pass a medium-sized metal catheter, as suggested by Mercier, and leave it in the false passage; a small elastic catheter is then to be introduced by the side of the metal one, and as the false channel is occupied by it the elastic instrument will glide into the bladder. For effectually meeting the difficulty caused by a

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false passage, Mercier invented what he called his "invaginated catheter." It consists of a full-sized metal catheter very slightly curved (see K, Fig. 10), containing an elastic catheter, L, which is turned out by means of an inclined plane, so that when the silver one has gone into the false route, the surgeon can shoot out the elastic catheter.

If no instrument can be introduced, what operation should be performed? I consider tapping the bladder through the rectum to be an objectionable procedure, for it necessitates the patient's confinement to bed with a tube up his bowel, which becomes covered with fæcal matter, and is very likely to slip out: the opening is liable to remain as a fistula, and cannot be utilised. The relief afforded by the operation is only temporary, and after the removal of the tube the patient is left in much the same condition as he was before the operation. Aspiration of the bladder above the pubes affords but transient relief. Far better is it to tap the bladder above the pubes with a full-sized trocar and cannula, through which an elastic catheter can be passed into the bladder and retained there.

In connexion with the enlarged prostate cysto-prostatitis naturally obtrudes itself. It is very common to observe a certain amount of chronic inflammation in men who are obliged to use a catheter, which might often, I think, have been avoided if the urethra had been very gradually accustomed to the introduction of the instrument. If a man begins to pass a catheter twice a day from the first, he is very likely to irritate and inflame the urethra; but if, on the other hand, he merely introduce the instrument every other day for the first fortnight, once a day for the second, and twice daily afterwards, the urethra will have time to become accustomed to the frequent intrusion. When there is much deposit of muco-pus the bladder ought to be washed out daily with warm water, for which purpose I know of no apparatus so good as the American one of Keyes. Some cases of chronic cysto-prostatitis resist every means of cure, and are in this country usually left to be broken up by pain and want of rest. In America cystotomy has been established as an operation for such patients, by Willard Parker, Emmett, Gouley, Mastin, &c., the object being to treat the bladder as a suppurating sac, and give it physiological rest by allowing the urine to dribble away as fast as it trickles in. I think that future experience will prove that the incisions of lateral lithotomy are unnecessarily severe for the purpose, which can be equally attained by external urethrotomy, with which operation I have contented myself, and allowed all the urine to run away through a soft tube. It is wonderful to see the immediate relief which such an operation affords; a patient who has perhaps been tormented for years, and has not known a good night's rest, sleeps soundly the night of the operation, having lost all his pain.

I will now for a moment glance at those patients who pass their catheters comfortably twice a day, and have nothing to complain of. Under favourable circumstances they may go on for years, and all is well; but there comes a time in the history of every such patient, if he only live long enough, when the hand loses its cunning or the sight becomes dim, and the catheter is no longer passed with the same skill and ease as of old, some hitch occurs, and the man is beaten. The aid of the nearest doctor is sought, but he very likely fails in so complicated a case. The hospital surgeon is then called in, who probably after some difficulty succeeds. The result of all the combined manœuvres too often is that cystitis or hæmorrhage carries off the patient. Then, again, there is another set of cases. A man goes on well for some time, but a period arrives when he finds that he has not long emptied his bladder with the catheter before he is again troubled by an urgent call to micturate, and has to use his instrument; the intervals of respite become less and less distant, and the unfortunate man at last finds that half an hour after he has emptied his bladder he is tormented with an urgent desire to urinate, which destroys his night's rest and makes life a burden to him. Now is the time for surgery to interfere and to try and save the unhappy patient from the doom which so surely awaits him. I consider that whenever auto-catheterism is becoming increasingly difficult or frequent, the time for action has arrived, and must not be delayed. Far better would it be if the operation were not postponed till the patient's strength be undermined, but that action were taken on the earliest indication of coming trouble. There are three different operations open for selection. 1. There is the supra-pubic puncture for the purpose of establishing a new route, allowing the urethra to fall into disuse. 2. Puncturing the urethra at the apex of the prostate, thereby giving the patient a second meatus externus. 3. The excision of the obstruction as invented and practised by Mercier. Of all these operations the last is the only one that removes the cause of the trouble; hence it is theoretically perfect in its conception. Hundreds of men now alive to whom Mercier has restored the faculty of free and natural micturition, prove that the operation is as good in execution as it is in theory. The alleged danger of hæmorrhage has not been sustained by experience, and sinks into insignificance when compared with the great results achieved. There are other French surgeons besides Mercier who have tried the operation, and reported most favourably of it; curiously enough, I believe, it has never been performed in this country. The instruments for incising the muscular valve and excising the prostatic one are respectively represented at N and M, Fig. 10. Supra-pubic puncture has its advantages and disadvantages; it is the only one of the three operations eligible in the event of the surgeon not being able to pass any instrument along the urethra into the bladder; its special risk is urinary infiltration causing peritonitis. The operation which I have been in the habit of performing is that of opening the membranous urethra just in front of the prostate, in order that the patient may have direct and easy access to his bladder. It might at first sight appear that in these cases catheterism from the perineum would offer no advantage over that manipulation s performed in the ordinary way down the penis, but this is not so. What is it that sometimes renders catheterism difficult, and at times impossible? The trouble is not directly caused by the third lobe, but the general enlargement of the prostate converting the sub-pubic curve into an angle which, if it be very "accentuated," as the French call it, may render catheterism impossible. In the normal urethra the course of its deeper portion is a gentle curve; but when the prostate is much enlarged it is greatly elongated and carried upwards and forwards, forming a sharp angle with the membranous part, which is fixed between the layers of the triangular ligament. In such cases, if an opening be made into the membranous urethra and a catheter introduced, it will glide into the bladder with the greatest ease, *as it has only to mount an inclined plane.* So easy is catheterism from the perineum that a child or nurse may perform it, and it is a painless and bloodless procedure. I have seen remarkable instances in which catheterism before the operation was painful, difficult, and bloody, but after the perineal puncture had been established it was free from all the above annoyances. A point not to be lost sight of is the more effectual drainage afforded by the perineal opening as compared with the supra-pubic. This is important, for every man who is obliged to use a catheter may be looked upon as having a reversionary interest to stone in his bladder.

ABSENCE OF PATELLAR TENDON-REFLEX IN A CASE OF PARALYSIS FOLLOWING DIPHTHERIA.

BY THOMAS BUZZARD, M.D., F.R.C.P.,
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A GENTLEMAN, aged thirty-seven, applied to me on July 4th, 1879, on account of numbness in his fingers and feet. He had been in England only a fortnight, and the numbness had commenced shortly before landing in this country.

It appeared that he had left India on May 4th. Two or three weeks before his departure he complained of a soreness in his throat, which was cauterised by his medical attendant, who told him at the same time that there was a diphtheroid throat prevalent among the natives, several of whom had been in hospital under his care. The patient's throat got worse and became ulcerated, yet for about a week or ten days he continued to do duty. But he became gradually much weaker, and when put on board ship on May 4th he was not expected to live. On the voyage, however, he recovered completely, and landed in England feeling quite well, except for a feeling of numbness in his fingers, which had commenced about three weeks after the

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throat had recovered. It was only since his arrival in England that the numbness had extended to his feet.

On examination I found no objective signs of disease. The patient looked well, and had no complaint to make of his general health. There was simply, he said, a little feeling of numbness in the ends of the fingers, which made it difficult to pick up small objects and button his clothes, and in the feet a similar sensation. His urine contained no albumen. The ophthalmoscope showed no change in the fundus oculi. His sight was perfectly good, and he had no difficulty in accommodation. There was no history of syphilis. The patellar tendon-reflex was normal in each leg.

On July 7th he complained of some want of power of grasp. The muscles of the forearms showed a normal reaction to induced currents.

A fortnight later (July 23rd) I saw him again. The feet and hands, he said, now felt perfectly dead. In walking he would catch his left foot. The symptoms did not affect any part of the head or trunk, but were entirely confined to the four extremities, in which there was considerable loss of cutaneous sensibility and a certain loss of power. As an illustration of the loss of sensibility in his hands, he told me that he had taken his cheroot-box out of his pocket with the full conviction that it was his purse. He had the greatest difficulty in dressing himself.

The sensibility for temperature was to a great extent retained, and he could tell the difference between a linen and a woollen material, not by the texture, but by its power of conducting heat. There was, however, some delay in the appreciation of heat impressions. He told me, for example, that he had to leave his hand in water a few seconds before he could be sure that it was of a proper temperature to use to his face.

He was weak on his legs, so that walking made him feel tired and sick, and he could not go downstairs without keeping hold of the balustrade. I noticed now that he staggered a little in his walk, and when he stood with his feet together, and the eyes were closed, he swayed about. The numbness was described as having now extended up the back of both legs.

I could find no very notable defect of electrical excitability in the muscles of the forearms, but the response in each was alike, and it is not easy therefore to be sure on this point. Examination of the urine, as well as by the ophthalmoscope, continued to give negative results. There was no difficulty in swallowing, the sight was still unimpaired, and the functions of the bladder and rectum remained normal. The patient looked well, and said that he felt perfectly well, except in respect of the symptoms described. The patellar tendon-reflex was now found to be absent from both legs.

After this I lost sight of the patient, who was living at some distance from town, until a few days since. He tells me that he quite recovered about the end of August—i.e., in about a month after his last visit. Examination now showed the patellar tendon-reflex present and normal in each leg.

The treatment consisted in the use of faradaism, and the administration of iron and arsenic.

There was a complete absence in this case of many symptoms which are so commonly present as to be almost pathognomonic of diphtherial paralysis. The voice had never acquired any nasal tone, nor was there any difficulty in swallowing, and fluids never regurgitated. The sight remained throughout perfectly good, the smallest type being able to be read at a normal distance, so that the accommodation of the eyes, which rarely escapes in the paralysis following diphtheria, was never in this instance affected. The numbness described was confined to the extremities, no part of the head or trunk being the seat of it at any time.

The disappearance of the patellar tendon-reflex whilst the patient was under observation, is interesting. It furnishes proof, if such were wanting, that this peculiar paralysis is dependent, when it affects the extremities, upon a lesion either of the spinal nerves or in the substance of the cord. A cerebral lesion would not account for this symptom. A lesion of the posterior roots of spinal nerves alone would be sufficient to interrupt the reflex; but the fact that there was loss of power as well as anæsthesia, shows that, if the lesion were not one of the substance of the cord, it must have involved either the trunks of the mixed nerves or the anterior as well as the posterior roots.

Grosvenor-street.

ON

POLYPUS AND OTHER MORBID GROWTHS IN THE NOSE:

THEIR RADICAL TREATMENT BY THE ELECTRO-CAUSTIC METHOD, AND THEIR CONNEXION WITH ASTHMA.[1]

BY J. L. W. THUDICHUM, M.D., F.R.C.P.L.

IT is my intention to bring under the notice of the medical profession, in as brief a form as possible, some general results concerning the treatment of polypus and other morbid growths in the nose, derived from practical experience extending over more than 300 cases. While in the early days of my practice I operated with the forceps like everybody else, and even had some permanent successes with it, I became convinced about sixteen years ago that this instrument had to be abandoned, and I substituted the electro-caustic platinum-wire noose for it. My first publication on this subject was made in THE LANCET fourteen years ago. My further experience was published in an essay, of which the third edition was published in 1877 by Messrs. Longmans.

The immediate objections to the use of the forceps are that it causes great pain on mere introduction, and the view into the nostril is immediately closed. It is then next to impossible to open the blades sufficiently to grasp more than a thin end; in the best case the stalk of an anterior polypus. Consequently the rest of the polypi are pushed backwards or upwards in the nose, and jammed into the narrow recesses of the upper nose. At the same time there is bruising of the mucous membrane over the ascending ramus of the upper maxillary bone, and bruising and tearing of the Schneiderian membrane of the turbinated bone and septum. Then there follows much bleeding, secondarily ulceration, and, in some cases, gangrenous destruction of ill-treated parts. But worst of all is the inefficiency of the result. If a passage is produced it frequently only lasts for a few days, and soon the nose is closed again. Only few cases of simple form—e.g., in young women—are freed and permanently cured.

Worse than these immediate evils are *the permanent evil results of forceps operations*. In some cases I have observed amongst such results, closure, partial or entire, of the nostril (atresia). In two cases, one male, the other female, the closure was complete; in another case there remained only a small opening through the membranous formation sufficient to admit a probe. In a greater number of cases the injury to the surface of the nasal cavity causes membranous adhesions between the turbinated bones and the septum. When the forceps is used by strong hands, a good deal of tearing and breaking of the turbinated bones is effected, ending in their dislocation. This disorder then heals up, and causes great discomfort. In such a case the lower turbinated bone lay against the septum and caused constant pain. I removed it entirely, and the patient was quite restored, the pain ceasing immediately. In quite a number of cases the forceps produces fracture of either the cartilaginous or bony septum. In two such cases, one from the antipodes, another from a northern county, there was a history of hæmorrhage, in consequence of which the operation was left uncompleted and the nose plugged; then followed gangrene of part of the septum, with perforation and loss of substance. These illustrations suffice to explain the preference for my new method expressed by all patients who have experienced the forceps.

The electro-caustic method of operating on nasal polypus I was the first to use. Even Middledorpf, the inventor of the electro-caustic method of operating, did not operate for nasal polypus; an illustrious member of our profession, being himself afflicted with polypus, visited Middledorpf for the purpose, as he hoped, of being operated upon by electro-cautery; but he was disappointed, and operated upon with the forceps.

The advantages of my new method over all former methods are that it is greatly superior in results; that there is no, or

[1] A paper read before the Medical Society of London on March 16th, 1880.

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next to no pain on introduction of tools; that the tools are so thin that even when two or three are simultaneously used, there is yet room by their side for completely illuminating at least that part of the cavity of the nose in which it is desired to operate, and thus avoiding doing anything in the dark. The method allows freedom to the operator to shift his and the patient's position. Pain and bleeding are limited to a minimum, and the results as to the restoration of freedom of respiration through the nose are simply perfect. This method further removes all necessity to operate, for polypi, through mouth and pharynx. I have had a number of cases, from which some polypi had been elsewhere removed through the mouth from the choanæ, after numerous sittings and great torture to the patients; and yet the patients had the posterior nares filled with polypi. These cases were completely freed by my method, applied exclusively through the anterior nares. I bring the posterior polypi forward by easy traction, effected by suitable tools—blunt hooks, sharp hooks, either of steel or flexible metal, sliding hooks, fine forceps appropriately bent, and all so thin as to pass the narrowest nostril. The description which some authors have given of my method, in saying, e.g., that I used no traction, is therefore quite contrary to fact.

The mode of rhinoscopy which I have described has also been confirmed as simply perfect. The use of *choanoscopy* (erroneously called posterior rhinoscopy), is useful for diagnosis, but not for operating except in very few cases. My method of rhinoscopy (by some unnecessarily termed anterior rhinoscopy), by means of the blade specula, with spring lever attached and without any screws, has met all wants of practice. All screw specula are slow and inefficient, and I have not the slightest doubt that Voltolini's screw specula and Zaufal's internal tube specula must be rejected, as well as their methods. Indeed, Zaufal's nasal tubes or specula for seeing through the nose into the pharynx or posterior nares are quite unnecessary; moreover, they are mischievous by causing pain, and frequently hæmorrhage, sufficient at all events to entirely destroy the objects of the introduction. Compression of the spongy layer of the turbinated bone with a probe or blade is very useful; the spongy tissue yields, and a canal is produced where there was none, or the existing canal is made wider. For this purpose the laminaria is also useful, but its application requires much skill and patience.

The broad hook for drawing the soft palate forward in choanoscopy, lately recommended by Voltolini as a novelty, I have used since 1864; it is perfectly correct that a strong traction upon the soft palate is preferable to a slight one, because much better borne by the patient.

Operations by electro-cautery for the ablation of excrescences in the nose other than polypi—namely, fibrous, adenoid, osseous, or osteo-cartilaginous growths—are very successful. *Atresia*, or *closed nostril*, is opened by proceeding with the electro-caustic wire from without inward. After the cavity has been opened the projecting parts are further excised until sufficient space is produced to effect contraction in healing.

Ablation of the turbinated bone, an important operation, is effected in two stages; one act is the cutting away of the cavernous tissue with the white-hot wire; the other, the cutting away of the bone with nippers, or chisel and hammer. In most cases the removal of a short piece, of an inch, at most an inch and a half in length, suffices to establish a good canal. Polypi frequently have *bony excrescences* in their substance, which have to be similarly removed, and to be carefully manipulated to prevent wounding the nose by their sharp edges.

Adenoid tumours of the pharyngeal cavity, which alter voice, expression of face, hearing, and cause the patients to snore greatly during sleep, can mostly be detached by seizing them at the base with the sliding hook, and twisting away as for stopping a bleeding artery by twisting, until the hook comes out. By repeating this process the tumour is at last detached clean. Care must be taken to fix it through the mouth by some means, when it becomes visible, to prevent its falling into the pharynx and larynx. I have had cases in which danger was averted only by rapid action. If the tumour were swallowed the operation would lack its *corpus delicti*, which is unsatisfactory. I have cut off one such adenoid tumour by passing the loop through the one nostril until it touched the posterior wall of the pharynx; the tumour was manipulated through the other nostril; when cut off, it was drawn through the nose, and required great force to get it to pass. The case was perfectly successful, and the result important, as the subject was a clergyman.

Epithelioma of the nasal cavity is a peculiar form, and must be treated cautiously. It is always very soft, and in later stages gives rise to great hæmorrhage when touched. In this way it also terminates fatally by spontaneous bleeding. I have seen a case of such epithelioma complicated with common polypus.

Concealed abscesses in the nasal cavity give rise to much trouble. In the anterior part of the septum they exist as results of injury, such as occurs from boxing, falling, from blows by cricket-balls or swung-gates. The size which the septum can acquire in such cases is enormous. In such cases I fix a drainage-tube at the lowest point; the tube is kept in position by platinum-wire fixed on the outside of the nose by adhesive plaster. Dead bone is carefully searched for and removed, with nippers in pieces if large. Such dead bone is sometimes buried deep in thickened tissue, and is discovered only after the diseased tissue is cut away by the electro-cautery.

Abscess complicated with a small aneurism, I met with once on the septum of a medical colleague. In opening the abscess the aneurism also was opened, and I had much to do to stop the bleeding by the electro-cautery. This is the only case in which I have seen blood welling out of any part of the septum. In most cases of injury or disease the septum only oozes out blood.

Fibro-cartilaginous tumours occur on the septum in children and young persons. They are to be treated like bone if the passage is obstructed. If they are small I advise not to touch them.

The pernicious *fibrous*, *osteo-fibrous*, or *osteo-cartilaginous tumours*, which arise from the roof of the pharynx, and occur only in persons below the age of twenty-five years, are very rare, and their operation demands the greatest circumspection on account of the appalling hæmorrhage which is liable to arise in the course of it. If in such a case the tumour has advanced to the anterior nose, I should recommend the removal of the septum, and digging out of the tumour through the nose by means of the electro-caustic spoon.

Foreign bodies in the nose cause chronic diseases of the ozæna type. I operated upon a boy, supposed to have dead bone in his nose, who had a shoe-button firmly imbedded in a cavity of the cartilaginous septum.

Operation for polypus in cases where both nostrils are completely obstructed, disfigured, narrow, and distorted, has to be carried on by instruments guided by the feeling, without the aid of the eye. A lady, who had been, so to say, quite demoralised with long-standing disease, was so cured. She took the mucus from the nostrils with an ivory spoon, being quite unable to blow either nostril; was emaciated and much distressed. She insisted on the use of chloroform, under which, however, the operation could not be made. With much trouble she was persuaded to sit quiet and be operated upon without the anæsthetic. She gained confidence by little successes, and became so far restored by the removal of many polypi, none of which was ever seen previous to extraction, that she could blow her nose and inspire as well as expire through it. She would not consent to have an operation for widening the nasal canal performed upon her.

The *hearing* is affected in many cases, particularly of polypus, but also of chronic affection of the Schneiderian membrane, either on one side only, or on both sides; the patients are hard of hearing or deaf. They frequently recover immediately on removal of the choanal polypi; great is sometimes the astonishment, always the joy, of these poor people. It is, in the first instance, pressure on the choanal end of the Eustachian tube which disarranges, ultimately disorganises, the inner ear. The outer ear must be carefully examined in such cases.

According to my experience a considerable number of persons are thrown out of career, employment, or situation by diseases of the nose. Clergymen, barristers, military and naval officers, merchants, medical men, and farmers are most severely afflicted when polypi interfere with their speaking power. *The causes of polypi* frequently cannot be traced; they occur in well-made and otherwise healthy young women, and in these do not relapse when once removed. They sometimes develop during pregnancy. In one such case I have known the cystic polypus to burst, then to atrophy and require no removal. In the greatest number of cases, however, some dyscrasia or other, acquired or inherited, is the cause of the evil. Scrofula produces more frequently thickening and ulceration, and the bad forms of ozæna, than polypus.

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Among the *complications of nose diseases*, particularly polypus, none is more common than *asthma*. About every fifth case of chronic nose disease has or has had asthma, continuously or at periods. Frequently this asthma disappears after removal of the polypi, even when they are very small. Some patients were so sensitive to irritation in the nose that they were seized with an attack of asthma when the cavity of the nose was touched by instruments. I have seen the most curious varieties of nose disease complicate asthma, even a red thickening of the outer nose, in very abstemious, regularly-living persons in good society. In strong men of active habits the presence of polypi in the nose leads to chronic congestion of the posterior parts of the lungs, for which there is frequently no relief except the complete removal of the nasal polypi.

The asthma is sometimes relieved by the careful use of ammonic chloride and potassic iodide. But the iodide must not be used when there is bronchitic complication. Here the most useful remedy is the inhalation of the pyrolytic vapours of extract of opium, of belladonna, of Indian hemp, of hemlock, of hyoscyamus, of stramonium. All these remedies have been used for a long time in one form or another, though not in the form here alluded to. Most patients of both sexes who came under my observation had smoked stramonium leaves, or some little rolls of blotting-paper in which a vestige of the solid contents of the tincture of these substance was contained. Some used preparations of vegetals impregnated with nitre and ammonic chloride. These powders are burnt on a tray, and the smoke is inhaled. It contains ammonic carbonate arising from the double decomposition of the potassic carbonate formed from the nitre with the ammonic chloride. These mixtures are called "cures," but seem to me to be destitute of any real alterative or symptom-relieving power.

The asthma accompanying nasal polypus may be inherited by the offspring without the polypus, just as polypus alone is sometimes inherited. Of the former I observed a remarkable case some years ago. A strong man following an open-air trade, had been suffering from gout and polypus, and intermittently from asthma for twenty years. I removed the polypus, and by medical treatment much improved the patient's general condition. I was thereupon called to see his two daughters, who both suffered from periodical asthma. In the case of the elder one the attack came on every fortnight or every twenty-eight days, and lasted from one to three days. It was bronchial spasm, causing noisy, heavy inspiration; the face was livid, and the pulse vacillating between fulness and collapse; the patient could hardly speak a word; lips and tongue were dry, cracked, and fissured. Strong doses of morphia alone relieved the disorder, and reduced its dimensions and duration, if taken as soon as the premonitions appeared. The asthma was subdued by a long course of quinine and potassic iodide. The younger sister had a spasmodic panting, resembling certain hysterical forms of that neurosis. Its attacks were less regular and shorter than those in the former case, and yielded to the same remedies. I have known polypus affecting three successive generations; in one instance, seven members of one family, of whom I treated three, were said to be affected by it.

Pembroke-gardens.

THE DIAGNOSIS OF TUMOURS OF THE CEREBELLUM.

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(Concluded from p. 559.)

ENLARGEMENT of the head takes place only in children whose cranial bones are not ossified. Their yielding sutures allow the collection of a great deal of fluid, and the attainment of large dimensions by the tumour. Similar enlargement may be produced by voluminous tumours—as hydatid—of the cerebrum. The enlargement is then not always so symmetrical, and is more frequently associated with hemiplegia.

When the various symptoms I have described are present we may diagnose with confidence—as was done in the three cases above—tumour of the cerebellum, but it must not be understood that with tumour of the cerebellum these symptoms are always present. I have seen cases of cerebellar tumour without these localising symptoms, and in their absence exact diagnosis is impossible.

In the present state of our knowledge it is impossible to fix the exact position in the cerebellum occupied by a tumour. A few years ago the same might be said regarding the cerebrum. Detailed reports of post-mortem examinations, and careful clinical records of cases of cerebellar tumour are required, in order that the cerebellum may be mapped out as is being done with the cerebrum. It is as a contribution in this direction that I offer these cases.

As regards the *nature* of tumours of the cerebellum the means at our disposal for its determination are very limited. The cerebellum is a rather favourite seat of tubercular or scrofulous cheesy tumours. Children are most liable to this form of growth, and there is always a strong probability of the tumour being of this character in the young. This probability amounts almost to a certainty when we have, either in the child or the adult, signs of scrofula present. In Case 3 the diagnosis as to the position and nature was complete, and in several other cases it has been equally correct. Almost any kind of tumour may occur—glioma, psammoma from the membranes, &c.,—but syphilomata in this position I believe to be rare.

Though my subject is the diagnosis of tumours of the cerebellum, I may be allowed to add a few remarks on the physiological importance and significance of cerebellar lesions. "The functions of the cerebellum form one of the most obscure and disputed questions in cerebral physiology," says one who has done much to clear up the obscurity.[1] Dr. Ferrier, in his valuable work, has given details regarding his own, Flourens', Hitzig's, and other experimenters' investigations into the functions of the cerebellum. Drawing attention to the importance of, and at the same time pointing out the difficulties in, distinguishing between the effects of irritative and destructive lesions, he says, "When the cerebellum is divided exactly in the median line in an antero-posterior direction, it is found that the disturbances of equilibrium, if any, are of no marked importance, and there is none of the tendency to reeling or rotation which characterises undefined lesion of the organ. It is also found that when lesions which are as nearly as possible symmetrical on both sides are made, that the disorders of equilibrium are also comparatively slight." In the *Medical Mirror*, Sept. 1st, 1869, Dr. Hughlings Jackson records a case in which there were, fourteen days before death at any rate, no symptoms referable to the cerebellum, although there was a tumour in each lateral lobe. There was paralysis of one arm owing to tumour of the hinder part of the uppermost frontal convolution. Dr. Ferrier goes on to say: "When the lesions, however, are established unsymmetrically, or unilaterally, disorders of equilibrium are more manifest, and the equilibrium is overthrown in different directions, according to the position of the lesion. When the anterior part of the middle lobe of the cerebellum is injured, the animal tends to fall forward, and in its attempts at locomotion usually stumbles or falls on its face (Flourens, Renzi). When the posterior part of the median lobe of the cerebellum is injured, the head is drawn backwards, and there is a continual tendency to fall backwards on attempts at locomotion. This fact I have determined by careful experiment on a monkey."

In connexion with these disturbances of equilibrium consequent on lesions of the cerebellum, it has been noted that temporary or permanent deviation of the optic axes occurs, or some degree of nystagmus or oscillation of the eyeballs. Thus Ferrier has shown that irritation of the middle lobe produces simultaneously movements of the eyeballs and head, and sometimes of the extremities also—just what is observed in the tonic convulsions associated with cerebellar disease.

Ferrier regards the cerebellum as a complex arrangement of individually-differentiated centres, which in associated action regulate the various muscular adjustments necessary to maintain the equilibrium of the body; each tendency to the displacement of the equilibrium round a horizontal, vertical, or intermediate axis acting as a stimulus to the special centre which calls into play the antagonistic or compensatory action. Thus *irritation* of the anterior part of the middle lobe produces backward movement of the head and

[1] Ferrier: Functions of the Brain. 1876.

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extension of the trunk and limbs, together with upward movements of the eyes—actions which are to be regarded as natural compensatory efforts to counteract a seeming rotation forward on a horizontal axis; whilst *destruction* of the same part causes a tendency to fall backward. "In this latter we see," says Ferrier, "both the negative effect caused by the removal of the one centre, and the positive effect exerted by the unopposed and antagonistic centres."

The conditions may be compared to a driven horse. The horse is kept straight by the rein of each side held equally tight; when one rein is let go the horse turns to the opposite side by the negative effect of the slackened rein of one side, and the positive and unantagonised effect of the unloosened rein of the other side. Imagine a rein in front and behind, one for each side, and various other pairs in intermediate positions, the horse will be kept straight by a balance of antagonism of the several reins. Any slackening of one or more reins will be met by the combined action of the remaining unslackened reins. It will also be observed that the effects of discharging and destructive lesions may be the same; thus pulling hard on the right rein and slackening of the left rein will equally turn the horse to the right. The lesions of disease are less exact than the electrode of experimenters. So far as my observations go, we only have backward movements (retraction of head and extension of spine), with extension of legs and rigidity of arms, accompanied by movements of the eyeballs, whether the lesion of the cerebellum is irritative or destructive, or whatever part of the middle lobe is affected. Ferrier believes that cerebellar co-ordination is independent of consciousness or volition, yet in the normal state cerebellar activity is associated with that of the hemispheres, so that lesions of the cerebellum, whilst interfering with the mechanical adjustments against disturbance of the bodily equilibrium, do not cause paralysis of voluntary movements of muscles which are concerned in these actions. The facts stated by Ferrier on this point are in accordance with clinical observation—at least as regards movements of the extremities. Any directly paralytic affection of the extremities is due to pressure on the parts adjacent to the cerebellum[2]—pons and medulla—as pointed out by Vulpian, and as well illustrated by my second case. Otherwise destructive lesions of the cerebellum do not cause hemiplegia or paraplegia. Ferrier believes that the loss of reflex adjustment may be in time compensated for by an acquired power of voluntary adaptation, and thus he reconciles the facts of persistence of equilibration in an animal whose cerebellum has been removed, or in a human being when the cerebellum has undergone degeneration from a slowly progressive lesion. It will be seen Ferrier attributes the tonic convulsions and permanent rigidity noted in cerebellar lesions solely to *cerebellar* influence; the negative condition to paralysis of the parts governing the movements in one direction, the positive condition to the unantagonised parts governing movements in the reverse direction.

Dr. Hughlings Jackson has treated of the physiological bearings of cerebellar disease in various places. He believes that "in health the whole of the muscles of the body are doubly innervated—innervated both by the cerebrum and cerebellum; there being a co-operation of antagonism betwixt the two great centres. Whilst the cerebrum innervates the muscles in the order of their action from the most voluntary movements (limbs) to the most automatic (trunk), the cerebellum innervates them in the opposite order. This is also supposed to be the order of their degree of influence on parts; and is equivalent to saying that the cerebellum is the centre for continuous movements, and the cerebrum for changing movements."[3] In disease this co-operation of antagonism is interfered with, and the influence of one centre being removed, the unantagonised influence of the other centre is permitted. Thus in hemiplegia of some standing there often follows rigidity of the paralysed muscles. The paralysis Dr. Hughlings Jackson would ascribe to a lesion of the cerebrum, the rigidity to unopposed cerebellar influx; for, as he lucidly points out, whilst the primary cerebral lesion can account for the paralytic element—the negative condition, it cannot (nor can the sclerosis in the lateral column) account for the tonic contraction of the muscles—the positive condition. In destructive lesions of the cerebellum he would ascribe the weakness of the locomotory organs to loss of cerebellar innervation over the trunk muscles, and the rigidity to unopposed cerebral influx. Hemiplegia is analogous to paresis of the spinal muscles; hemiplegic rigidity to cerebellar rigidity. It may be mentioned that he adopts a similar explanation for the motor symptoms of Parkinson's disease (paralysis agitans). In this case a partial removal of cerebral influence permits that approach to tonic contractions which is seen in rhythmical tremor of the hands; on complete removal there is tonic contraction: in the spinal, and some other muscles there is rigidity without prior tremor, these being the parts the cerebellum in health influences most. In advanced cases there is universal rigidity and an attitude, he says, somewhat like that of a weak person going upstairs; the attitude in the rigidity of cerebellar disease is a great exaggeration of that of a person going downstairs. Much has, he thinks, yet to be done in comparing and contrasting the rigidity which certainly occurs with cerebral disease, and that which, quite as certainly, sometimes occurs with cerebellar disease. Tetanus, which is so closely simulated by cerebellar disease, Dr. Hughlings Jackson would ascribe to discharge of some part of the cerebellum. There is, he thinks, a cerebellar rigidity analogous to hemiplegic rigidity, and a cerebellar convulsion analogous to cerebral convulsion. This view as to the two kinds of convulsive seizures was first stated in his report of a case of tumour of the middle lobe of the cerebellum, in the *British Medical Journal*, Nov. 4th, 1871, where a rough comparison and contrast is made betwixt tetanus and cerebral convulsion. In the *Medical Times*, Oct. 26th, 1878, he institutes a more elaborate comparison and contrast betwixt tetanus and cerebral convulsion beginning unilaterally. In recording a case of choreal movements and of "cerebellar rigidity" in the *British Medical Journal*, May 15th, 1875, he writes: "In some cases of disease of the middle lobe of the cerebellum, the patient lies on his back with his legs and feet extended, the latter a little turned in; the arm is acutely flexed at the elbow, the wrist is flexed, and the palm is turned towards the front of the upper arm. The head may be thrown back." The case was one of tubercular meningitis. The hypothesis of Dr. Hughlings Jackson is of the highest importance, including as it does a physiological principle of wide application. There are, I feel bound to point out, a few practical difficulties to accepting this hypothesis *in toto*, but I am quite prepared to have them met by Dr. Hughlings Jackson when stated. In the first place he has pointed out as the difference between cerebral and cerebellar innervation, that from the former we have changing movements, or, borrowing, with him, medical terms to describe physiological conditions, clonic movements; whilst from the latter we have continuous, confluent, or tonic movements. Now, on removal of cerebral influx (as in hemiplegia with rigidity) there follows, according to him, tonic contraction from unopposed cerebellar innervation, and in destructive lesions of the cerebellum (as extensive tumours) we have tonic contraction from unopposed cerebral innervation. It seems to me, admitting his differences in character between cerebral and cerebellar innervation, that the effects of removal of the control of either is too much alike in kind. Again, the effect of discharging and destroying lesions of the cerebellum is too much alike, for in tetanus (discharging lesion) and in large cerebellar tumours (destructive lesion) we have alike tonic contraction of wide range; in the one from increased cerebellar discharge, in the other from removal of cerebellar influence. Nowhere else do we see such like effects from irritation and destruction of nervous centres. Irritate the cerebral cortex and movements are produced; destroy it, and paralysis follows. Next, if in hemiplegia the rigidity which sometimes supervenes is due to unantagonised cerebellar influence, how is it that it takes so long to come into play? why does it not appear as soon as the cerebral influx is removed? Dr. Hughlings Jackson tells me that he cannot explain this, and admits that his hypothesis is not, as yet, defensible all round. To what does Dr. Hughlings Jackson attribute the rigidity of the hemiplegic limbs coming on rapidly when a hæmorrhage of the corpus striatum breaks through into the lateral ventricle? Whilst I point out these difficulties I must state that my clinical experience is quite in accordance with that of Dr. Hughlings Jackson. I have seen some tonic contraction from subtentorial meningitis and small superficial cerebellar

[2] In the Medical Times and Gazette, Jan. 17th, 1865, Dr. Hughlings Jackson records a case of tumour of the cerebellum which had compressed the pons and crus cerebelli. He attributed the patient's irregular gait to pressure on these parts; he did not then believe that lesions of the cerebellum alone produced inco-ordination of movements. He believes that tumour pressing on the crus cerebelli produces some paralysis on the same side of the body, as Brown-Séquard long ago asserted.

[3] Medical Examiner, April 5th, 1877, p. 271.

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tumours, and from destructive lesions, such as large cerebellar tumours and hæmorrhage into the cerebellum.

Finsbury-square.

CASE OF ECTROPION TREATED BY A NASO-BUCCAL FLAP; AND OTHER CASES.[1]

BY SIMEON SNELL,

OPHTHALMIC SURGEON TO THE SHEFFIELD GENERAL INFIRMARY.

THE usual places from which flaps are taken in plastic operations on the eyelids are the forehead and temple or the upper part of the face, but the case I am about to relate was an exceptional one, and required that the portion transplanted should be derived from a different locality.

J. W. O——, sixteen years of age, is a subject of epilepsy, and on October 2nd, 1877, during a fit, he fell into the fire and severely burnt the left side of his face and head. The same day he was admitted into the Sheffield General Infirmary under the care of my colleague Mr. Barber. He made a good recovery, except that the left upper eyelid remained completely everted; and in March, 1878, Mr. Barber kindly transferred the case to me for further treatment.

His condition at the time mentioned was as follows. The left upper eyelid was altogether turned inside out, and the ciliary margin of it was drawn close up to the eyebrow and firmly cicatrised; the conjunctiva thus displayed on the inner surface of the lid was red, granular, and much thickened; the cornea was exposed, and there was no power of closing the eye. As a result of this want of protection there was some general conjunctival irritation. To obviate this and to shield the unsightliness of the eye he was compelled to cover it with a "shade." The skin also over the forehead and towards the left temple was extensively cicatrised, and on the brow near the orbital margin was a firm cicatricial band.

The boy's appearance was certainly revolting, and naturally he was desirous for something to be done to render it less evidently so. The eye was, moreover, suffering somewhat from exposure, and seemed almost to necessitate interference. The scarred condition of the tissues in the localities generally selected for taking a flap from in such cases presented a difficulty, as it appeared more than doubtful whether skin in such a state, when transplanted, would maintain its vitality. It was evident, also, that when the lid was replaced in its normal position, the gap resulting would be considerable, and the flap necessary to fill it be large.

Whilst bearing these facts in mind, and considering what would under the circumstances be the best procedure to adopt, the published Transactions of the last International Ophthalmological Congress were forwarded to me. Here I found a description of the use in two cases of a naso-buccal flap by Noyes of New York. In neither of these cases "could the usual proceedings be employed, because there was no tissue in the usual localities which could be utilised." He further pointed out that it was possible to obtain a flap fully three inches in length from the side of the nose and cheek, which would be capable of maintaining its vitality by a rich blood-supply derived from the vessels coming out of the orbit, and more on the face from the free inosculations between the terminal branches of the facial with the nasal artery. It was thus evident that a flap large enough for my purpose, and able to preserve its vitality, could be procured from the naso-buccal region. I decided, therefore, to adopt this plan, and accordingly, on March 25th, 1878, the operation was performed.

Chloroform having been administered, an incision was made through the cicatrix binding the everted lid to the eyebrow, and the tissues carefully divided until the eyelid was able to be replaced in its normal position. Next, with the object of shortening the palpebral fissure, the opposed surfaces of the lids, at the external commissure, were pared and the incisions continued outwards, so as to remove a > piece of integument from the commissure itself. The edges were then drawn together by sutures, which had the effect also of keeping the lid *in situ*, but, to still further insure this latter object, the margins of the lids were vivified at two points, and were here united by fine sutures to cause their temporary adherence. With the eyelid thus placed again in its normal position, a large raw surface was the consequence, measuring fully two inches in length and one inch in width. To obtain integument sufficient to fill this big gap, it was necessary to mark out a flap considerably larger, to allow for shrinking after dissection. An incision was now carried obliquely downwards, from the inner and lower margin of the raw surface on the upper eyelid, over the face to just below the level of the mouth, and rather more than two inches from the margin of that orifice. It was then rounded and carried back again over the nose at some little distance from its root. The pedicle was thus a little narrower than the flap was in the rest of its extent. The flap thus marked out was dissected up, care being taken to leave all the vessels as far as possible uninjured, especially at the inner orbital angle. As at first mapped out, the flap had measured three inches in length by about one and a half in width. It was now found to readily fill the rawed surface, and this without twisting. It was secured with sutures with no apparent sign of tension. The thickness of the skin, with its subcutaneous fat, occasioned a prominent and somewhat ugly appearance. It may be mentioned that the facial vein disclosed whilst raising the flap had been carefully dissected from it. Attention was now directed to the large and gaping wound left on the face by the removal of the transplanted flap. The edges were drawn together by three hare-lip pins, sutures being also placed where necessary. In this manner the wound was tolerably readily closed, and it was found to be quite unnecessary to follow Noyes in his practice of rendering the closure of the gap more easy by carrying an incision from the original wound below the lower eyelid and along the zygoma, and dissecting up the cheek thus included in these incisions. The operation was thus completed and water-dressings were applied. The time occupied was one hour and a quarter, and though this may seem considerable, the operation is necessarily a tedious one, and there is a great deal to be done. Noyes was engaged two hours in each of his cases.

The next day a little duskiness showed itself at the extreme edge of the flap at its outer side. On March 27th the sloughing had in no way extended, and appeared only superficial. The pins were removed on the third day from the facial wound, which was doing well. The sutures joining the opposed surfaces of the lids to each other gave way without producing the temporary adhesion that was desired. Granulation set in at the margins of the flap. The patient rapidly recovered, and in a few weeks left the infirmary. The flap had, however, dropped somewhat at the pedicle end, and had not become attached, as one wished, to the ciliary margin, but had fallen over and become fastened to the upper part of

[1] Read before the Sheffield Medico-Chirurgical Society.

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the wound on the cheek. An attempt was made to rectify this as soon almost as it was detected, but not very successfully. The parts were given time to quietly settle down, and on Aug. 5th, 1878—the boy being again an in-patient—the inner part of the lower edge of the flap was dissected up and accurately joined to the margin of the upper lid; the edges of this part of the wound on the face being also closed by sutures. At the same time, the new eyelid seeming too bulky, the opportunity was taken of removing a small portion at the pedicle end where it was dissected up. In this way the flap transplanted on the lid was intentionally surrounded by cicatrix, with the idea, founded on a theory suggested by Mr. Teale some years since, that atrophy is induced by cicatrix, and that thus the new eyelid, which was still too prominent, would become less so. Suffice it to say this hope has been realised. I need not mention further particulars. The boy now possesses a good lid, his eye is covered, his appearance is changed, for he is now well looking. The scar on the cheek is not very noticeable, and becomes less marked. I should add, the palpebral fissure was on December 30th, 1878, brought back to its usual length by separating the lids at the external commissure.

The engravings are from photographs taken before and after the operation—the latter in October last; and in this the artist has drawn the scar on the cheek more distinct than it should be.

The operation which I have thus described does not appear to have obtained a recognised place. Noyes says he found no mention of it in the regular text-books, but supposes cases have occurred in which surgeons have employed it without having called special attention to it. Of its service, however, in certain cases there can, I think, be little doubt. In the one just related the condition of integument on the forehead and temple prevented me taking a flap from either of those regions; had it indeed been taken from the latter the cicatricial band at the inner side of the brow was where its pedicle would have been situated. In such cases, where the simpler procedures are rendered impracticable, it may be used with advantage.

I refer now to other cases, merely because they illustrate the older and simpler methods of treating ectropion. I will do so briefly.

John T. J——, about twenty years of age, suffered in childhood from an abscess beneath the right eye, evidently connected with bone. As a consequence the lower lid at its outer part had become much everted, the conjunctiva being exposed and thickened. The deformity was great, and in April, 1877, he placed himself under my care at the Sheffield General Infirmary for its relief. On April 27th he was placed under chloroform. A short space below the everted margin of lid was a depressed cicatrix, firmly adherent to a bony nodule. A little distance on either side of this two converging incisions were carried, commencing immediately beneath the ciliary margin, and uniting just below the cicatrix. The V-shaped piece of skin thus marked out was dissected up, and then pushed upwards as far as possible, and attached to the margins of the wound by sutures, whilst the gap left below the flap thus raised was closed by a hare-lip pin. The lid was by this means brought back to its proper place, but to keep it *in situ* and to shorten the elongated palpebral fissure, incisions were commenced in the lids at their outer extremities, and carried on beyond the commissure, where they were united. The triangular portion produced by these incisions was removed, and the edges of the wound closed by sutures. The case did well, leaving little or nothing to be desired.

The third case, that of E. J——, five years of age, came under my care in January, 1879, and is similar in character to the last. After measles, at the age of two years and a half, the bones of the face at various points became diseased, and now several depressed cicatrices were noticeable, the consequences of old sinuses. As a result also of one of these scars over the malar bone, the left lower eyelid at its outer part had become considerably everted, causing an ugly appearance. On Jan. 27th the case was treated in a manner almost identical with the one last referred to, and with an equally satisfactory result.

In conclusion I would refer shortly to another case in a man aged sixty-five (J. H——). From relaxation of tissues, as a result of senility, both lower eyelids had become pouted, permitting the tears to collect, and causing a chronically inflamed condition of conjunctivæ. The case was treated, the right eye on July 28th, and the left on August 4th, 1879, by removing a wedge-shaped piece of the lower lid at the centre, and uniting the edges by sutures. This produced shortening and relieved the eversion of the lid.

A MEDICO-TOPOGRAPHICAL REMINISCENCE OF THE WEST INDIES;

BEING CHIEFLY AN ACCOUNT OF THE HILL STATION OF NEWCASTLE, JAMAICA, WITH SPECIAL REFERENCE TO ITS CLIMATE AND ITS FLORA; IN CONNEXION WITH THE EXCEPTIONAL IMMUNITY FROM MORTALITY ENJOYED BY THE 29TH REGIMENT DURING THE YEARS IT WAS STATIONED IN THE COMMAND.

BY SURGEON-MAJOR BOILEAU, B.A., M.D.,

DIPLOMATE IN STATE MEDICINE, UNIV. DUBLIN, ETC.; ASSISTANT-PROFESSOR OF PATHOLOGY, NETLEY; AND FORMERLY MEDICAL OFFICER OF THE 29TH FOOT.

(Concluded from p. 562.)

IT is thought by many, and maintained by not a few, that the climate of Newcastle, Jamaica, is not tropical. This, however, is a mistake—a conclusion resulting, it appears to me, from a contemplation of but one factor only—elevation. A closer investigation dispels such a notion, and proves that the elevation of the station above the sea by no means insures that security against disease which it is credited with by those who look upon its climate as sub-tropical, or even warm-temperate, in comparison with that of the plains. It is quite true that persons coming up from the plains sometimes feel even cold as they approach Newcastle; yet its climate is tropical, as I shall now endeavour to prove.

I cannot more appropriately commence this part of my subject than by referring to the "Romance of Natural History," by Gosse, in which, alluding to the mountains of Jamaica, he quotes the words of Darwin—"the land is a great, wild, untidy luxuriant hothouse."[1] The biologist recognises the tropical character of the climate, for he sees that it is favourable to the production and propagation of numbers of tropical forms of life, and it is from one of his aspects of the case that I now propose to consider it. It is especially from a botanical point of view that I will dicuss the question. The botanist, then, perceives that the inhabitants of the cantonment are exposed to the influences which favour the growth of the banana and plantain forms of vegetation and of the suffrutescent *Malvaceæ*, such as *Sidas*, *Abutilons*, and *Hibisceæ*. Within the limit of his

[1] Vide p. 177, loc. cit.

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afternoon walk he meets with the great Cotton-tree (*Eriodendron*), towering high as a landmark above all other growths; and the liana forms of the tropical forest twining in company with the curious *Marcravia umbellata*, the various *Ipomeas*, the *Melastomas*, and the *Piperaceæ*. He finds, amongst the succulent *Crassulaceæ* bounding his walks, the "life-plant," or "wonder of the world" (*Bryophyllum calycinum*), throwing up its panicle to the height of four or five feet. He finds arborescent ferns, growing to the height of thirty feet, in great abundance and in high development; whilst, on the other hand, he finds not a solitary example of the common or characteristic dicotyledonous trees of temperate regions. In place of the pine, plane, elm, oak, walnut, hazel, birch, beech, chestnut, or alder, he meets with cecropias, fig-trees, anonas, avocados, coffee; arborescent atropas and solanums, mangos, and other *Anacardiaceæ;* hog-plums (*Spondias lutea*), artanthes, and East Indian jambosas. In place of the familiar ivy, he finds arborescent forms of the same family—e.g., *Hedera capitata* and *Sciadophyllum Brownei*. In place of the common nettle, he finds a shrub (*Boekmeria caudata*); wild lantanas and durantas greet the citriodoras and flowering verbenas, imported from temperate climes. The only representatives of the heath form he can find are three trees, an *Andromeda*, a *Clethra*, and the polypetalous *Cyrilla antillana*. Of the poppy tribe he finds but a single example—the "John Crow bush" (*Bocconia frutescens*). He seeks almost in vain for the plants of cold climates, but finds the *Ranunculus repens* wandering from a garden, or, perhaps to his surprise, the *Leonurus sibiricus*, or the *Leontodon* of Britain. The familiar daisy he cannot find, whilst its tropical brothers and sisters he sees in countless numbers—e.g., *Vernonia arborescens*, *Ageratum*, *Eupatorium odoratum* and *glandulosum*, *Baccharis scoparia*, *Bidens leucanthus*, *Verbesina galinsoga*, *Emilia*, *Calea*, and shrubby *Senecios*, &c.; in fact, within half an hour's walk of the station he will find amongst many others the following plants—*Coccocypsilum repens*, *Dodonæa angustifolia*, *Phytolacca decandra*, *Crotolaria striata*, numerous forms of *Cassias*, *Mimosæ* and *Acacias*, and amongst them *Acacia vespertina*, the large white heads of which become so conspicuous at sunset, and the high climbing *Cassia viminea*, with its very black pods. He will find *Clusias*, *Rytidophyllums*, *Centrosolemias*, *Stachytarphas*, *Scutellarias*, *Rhipsalis cassytha*, *Tournefortia hirsutissima*, *Leianthus longifolius*, and among the orchids, *Bletia*, *Epidendrum*, and *Isochilus*, &c. To the above I might add numerous other plants, the locality and identity of which I determined in my walks about Newcastle; but I have given enough to prove from a botanical point of view that there can be little question about the climate being tropical. I would, however, appeal to the ornithologist with his humming birds, mocking birds, buzzards, Jamaica parrots (*Crotophagia ani*), and todies (*Todus viridus*), &c.; the entomologist, who would delight us with an account of the *Lampyridæ*, which in myriads gleam at night; of the magnificent *Urania sloanus* that flies in scores by day; of the "walking leaves" and "spectre insects" which baffle attempts to find them, and of the "trap-door" spiders whose nests excite such admiration. Lastly, I would summon the meteorologist himself as a witness in my case, who should admit that a temperature below 50° F. is scarcely known at Newcastle at any time of the year; that tropical sunsets, rains, and storms prevail, and that the average temperature is only 10° F. below that of the plains.

The water-supply at the station was excellent; there was a sufficiency of the purest water fresh from the clouds and from the mountain springs and streams, from sources far above the possibility of ochlitic or zymotic contamination. It was conducted by metal pipes, and as a rule was abundant in quantity, a rule to which there need not be any exception if the pipes and tanks were always kept in proper order. The latrines were on the dry-earth system, and it worked admirably, admitting at the same time of some improvements. The system had not been extended to the officers' quarters, and the latrines attached to these were still of the old style, constructed on principles ancient, primitive, and condemned—very great nuisances, and sooner or later certain to be, as they were before, causes of disease and death. The drainage proper, both natural and artificial, was all that could be desired. The lavatories and baths were in fair condition, but a large plunge and swimming bath was very much needed. It would have been a most valuable addition to the station, and the majority of the men would gladly have availed themselves of it. The rations were good, but as the men could very rarely obtain either fish or mutton, the never-ending beef became a very monotonous diet. Vegetables and fruit could be had in great variety and abundance, and the free use of them—instinctively indulged in—no doubt contributed much to the preservation of health.

The duties, drills, and parades were of a light and ordinary character. Knapsacks were not worn, and marching out parades were unknown. The means and opportunities of recreation were very limited; there was, it need scarcely be said, no place of public amusement within reach. All ordinary out-door games were excluded by the configuration of the place, and even walking was a matter of labour, if of inclination, in consequence of the surrounding hills. The artificial lighting of the barrack-rooms was decidedly bad, and thus the men had no inducement to remain in them after the short twilight following sunset. They were tempted by the allurements of the canteen, and intemperance, either in the form of drunkenness or in the less tangible form of physical and mental degeneration, was becoming latterly too common. I would here remark that three years is quite long enough for any regiment to be stationed at Newcastle. Life there becomes monotonous, and the consequences cannot be good.

In conclusion I will briefly mention a few of the circumstances which contributed to the extraordinary good fortune of the 29th Regiment in its not having lost a single life from endemic or epidemic disease during the three years and three months that it, or a portion of it, was stationed at Newcastle, Jamaica.

First, in point of time, and perhaps of importance, the regiment arrived in the West Indies from a very healthy command—Canada—where it had been for two years, and I would suggest for consideration the fact that the 84th Regiment, which suffered so severely at Newcastle, went to the West Indies from Malta. Two years in Canada must impart to the human economy a resisting power against morbific forces very different from that to be gained by a residence of the same length of time in Malta.

Secondly. The regiment passed inside Port Royal and the dreaded "palisades" at probably the very best season of the year. It disembarked at Kingston, *en route* for Newcastle, in the last week of December.

Thirdly. There was absolutely no sickness in the regiment when it landed.

Fourthly. Whilst the regiment was at the station, the nature of the duties imposed was such as gave the men sufficient employment to neutralise or prevent as much as possible the ill effects of *ennui*, and their strength was not taxed.

Fifthly. The men had an unusually large number of "nights in bed." Their turn for night duty came round very seldom. Constantly recurring night duty is most detrimental to health.

Sixthly. The hospital and everything connected with the sick was kept most scrupulously clean. I may say punctiliously so; to such an extent, indeed, that certain officials in the command thought proper to draw attention to our extravagance. We pointed to the results, and made no change.

Seventhly. The clinical thermometer was in constant requisition. By its use the admission of a man for inflammatory or febrile diseases—unless he really had such—was guarded against. On the other hand, it prevented the occurrence of any man reporting himself sick being sent to his duty when he should be admitted to hospital. Conclusions drawn from subjective phenomena were by its aid considerably modified, and the stage of a patient's convalescence to a great extent measured. There is, however, no need to dwell here on the advantages of clinical thermometry. My remarks on the subject are of course merely a text of the enlargement they admit of.

Lastly. The health of the regiment was greatly contributed to by the unceasing supervision exercised by all the officials concerned over every matter connected with the well-being of the men.

I have only to add to the above the reasons why every regiment nowadays should look forward with little or no apprehension to spending a few years at Newcastle, Jamaica, although it is a tropical station less than 4000 feet above the sea-level. The station is isolated, and at a distance from the haunts of men; thus, to a great extent, the introduction of contagious or infectious diseases is prevented. There are no low public-houses in the vicinity: a walk to the nearest would involve an amount of physical exertion which would

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be considered by most men much too dear a price to purchase their pleasure at. There is a plentiful supply of water, drawn from the purest sources; and there is an abundant supply of a great variety of wholesome fruits and vegetables. The system of conservancy is that known as the "dry-earth," and the necessary work for its proper accomplishment is all done by a corps of natives known as the black pioneers. The white soldier has no work of this nature to do. The advantages of the dry-earth system, when it can be carried out properly, are admitted. In fine, the favourable influences of the locality are such that, in the presence of due vigilance and attention to the laws of hygiene, and the absence of epidemics, it ought always to prove as healthy as it did to the 29th Regiment.

HYDRONEPHROSIS; NEPHROTOMY; RECOVERY.

BY THOMAS SAVAGE, M.D., M.R.C.P. LOND.,
SENIOR SURGEON TO THE HOSPITAL FOR WOMEN, BIRMINGHAM.

MARY N——, aged forty-six, married twenty-one years, with five children, came as an out-patient Oct. 28th, 1879. She had noticed a lump in her abdomen for a year and a half; is quite regular, the last period being a fortnight ago. Has suffered from prolapsus uteri, for which she has worn various pessaries. She is thin, and looks careworn.

On examination there was a tumour about the size of a fœtal head, occupying the right lumbar and umbilical regions. It was elastic, very movable and painless, clearly a cyst, and appearing to spring from the right kidney. The urine was examined several times, and found to be normal. There was no history of pus or blood in the urine, nor of injury in any way, and there was no appearance of malignancy, but there was an indistinct history of renal colic, to which the patient referred as having occurred about three or four years ago, and which was marked by intense pain on the right loin, frequent micturition, and the necessity for constant application of hot fomentations. On repeated examinations, seeing that it sprang from above and had clearly no reference to the pelvis, that pressure on the right kidney pressed it forwards, and that there was resonance on percussion over one portion (the lower) of it, the tumour was diagnosed as a hydronephrosis, with a fairly long mesonephron. Very curiously, it was said to become smaller at the menstrual periods. As time went on the patient was sure the abdomen was enlarging, and this, together with the fact that she was getting thinner, and was now (January, 1880) quite unable to do her household work, induced a recommendation to come into hospital and submit to an attempt at removal, or, at all events, to allow us to make an exploratory incision.

On Jan. 16th the operation was performed, which consisted of a median incision, extending from about two inches above to two inches below the umbilicus. The tumour now exposed was seen to be cystic, and was covered by the upper layer of the meso-colon. It was tapped, giving exit to a clear, watery fluid; unfortunately this got mixed with blood, and was thrown away, and so neither the quantity nor the quality could be ascertained. When the hand was passed down to the base it was found that the attachment was very broad—i.e., thicker than one's wrist,—and it appeared impossible to tie the artery and the vein, as also to tie the mass in bulk, at so great a distance, deep in the abdomen, and close to the spine. The wall of the cyst on the outer and front part was made up of true renal structure—i.e., the dilated pelvis of the kidney, in which were seen the enlarged calyces and papillæ. The other part of the cyst-wall was evidently made up of two portions: an outer, being a continuation of the capsule of the kidney; and an inner, apparently derived from the lining of the enlarged pelvis. The hand was passed into the cyst in search of a calculus in the ureter, but none was found, and it was then sponged out with carbolic solution. A wire clamp was applied about the middle of the collapsed cyst, and about one-half of the distal portion—i.e., about one-fourth of the whole mass of the cyst—was cut away, leaving one-fourth still attached to the distal side of the clamp. This large mass was left for the sake of security against slipping. Perchloride of iron was applied to it, and carbolised lint applied as dressing. About the fourth day afterwards there was noticed a slight welling up of clear fluid in the centre of the stump, which appeared likely to eventuate in the presence of a persistent urinary fistula. The clamp was cut away on the twenty-third day, and the sloughing stump gradually cleaned, so that the patient left the hospital on March 1st.

When seen again on March 15th, at my house, the wound had cicatrised with the exception of an area about the size of a threepenny-piece, at the bottom of which was a sinus, into which a probe passed for two inches directly backwards and without pain or bleeding. The patient stated that there was a daily discharge of clear fluid of from a tea- to a table-spoonful in quantity. She appeared to be quite well in herself, and there was no tumour to be felt. She expressed herself as being better, and much more comfortable than before the operation.

Remarks.—The surgery of the kidney has of late attracted a considerable amount of attention, more especially with regard to the subject of nephrotomy; and several cases have recently occurred which tend in the direction of making it a justifiable and recognised operation. This has no doubt been brought about by the greater safety of abdominal section now compared with what formerly obtained. It may be deemed suitable in some few cases, in the early stages, of encephaloid and sarcoma; in hydronephrosis, as in the case related; and in pyonephrosis, where the patient is in a state of hectic, or, rather, before that stage, if possible, has come on; and for the removal of calculus in the ureter or in the pelvis.

There appear to be certain difficulties connected with the operation which have occurred to my mind since I operated on the above case. First, there is the thickness of the so-called pedicle or base, which at so great a depth may prove a considerable hindrance to successful ligature and subsequent cutting away. Of course the clamp is out of the question for the entire removal of the kidney, as the mesonephron would seldom, I imagine, be long enough to be brought up to the abdominal wall: and kidney tumours are often very deceptive in this respect, appearing to be freely movable in all directions nearly all over the abdomen, but found to be in reality rather firmly bound down. The clamp could be applied only to the tumour itself, as in my case, and then it is a question how far the part of the cyst left attached may not continue to be a secreting surface, and so the patient, perhaps, be no better for the operation, or leave a fistulous tract, which, though relieving a hydronephrosis, is, to say the least, not a pleasant accompaniment to one's ordinary life troubles. Secondly, there is the difficulty, I imagine, in many cases of having to pass a ligature round so short a vessel as the renal artery and vein are; and, thirdly, there is the question whether, when a ligature has been passed, the shortness of the vessel, and therefore the close proximity of the ligature to the great vascular trunks, will not prevent thrombosis occurring in the proximal side of the ligature, and hence permanent occlusion. I am not prepared to answer these points, but they are such as have occurred to me in thinking on the subject.

The cases reported by Simon, Czerny, Martin, Zweifel, and more recently by Knowsley Thornton and A. E. Barker, will do much to bring nephrotomy and nephrectomy before the profession; and the foregoing case is recorded with the same view.

MEMORANDA ON SKIN DISEASES.

BY H. STANLEY GALE, M.B. LOND.,
PHYSICIAN TO THE MANCHESTER SKIN HOSPITAL.

HERPES GESTATIONIS.

TWO cases of this rare disease having been treated—successfully, I believe—by me during the last four years, and a third case being still under notice, it may be worth while to describe the treatment adopted.

When I saw the first of these cases I was struck with its similitude to "recurring pemphigus" (not Hutchinson's "cheiro-pompholix") both as to appearance and course. Of this latter disease I have seen several examples during the last few years, two or three of which cases had lasted three or four years, while one had lasted nine. These were treated upon general principles, the application of which in

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most of these cases consisted in the internal administration of quinine in doses of three grains, when the patient could stand it, and iron when required. Cod-liver oil was added in scrofulous cases. The local treatment consisted in pricking the blebs, turning back the skin, and rubbing the spot freely with lunar caustic. The pain was severe, but all the cases were cured. (I give no details, as I am not writing of pemphigus). Struck with the resemblance, I adopted similar treatment in my cases of herpes.

Mrs. H——, housewife, aged thirty-nine, had suffered from herpes on six occasions. The eruption had usually appeared about four days prior to her confinement, and gradually increased in severity up to three weeks after that event. The blebs appeared the day after confinement, the rash before that resembling erythema papulatum. When I saw the patient first, a few days before her confinement, she was in such an irritable state that she could with difficulty hold a cup in her hand. All ordinary local sedative applications were of no avail. It was not, therefore, till the blebs appeared, and lunar caustic freely applied, that relief was given. A slight amount of irritability which remained was removed by the local application of vaseline and a hypodermic injection of morphia. After two or three applications of caustic the patient said she felt "as if in heaven." I may add that the morphia by itself does no permanent good. This woman has been confined once since without the slightest symptom of the disease, although she had suffered from it at every preceding pregnancy.

Mrs. B——, a baker's wife, aged thirty-four, suffered much from gastralgia, probably due to eating new bread. (She said she married a baker so that she could indulge this taste.) Her symptoms were, in the main, similar to those of the last case, but she did not suffer at every confinement. "On and off" she had the disease for eleven years—i.e., eight confinements. The patient, an intelligent woman, states that it was milder than usual when it reappeared after its absence during one pregnancy, and still milder after its absence during two. Previous to her last confinement but one this patient suffered for eight months from chronic eczema, and took during that time small doses of arsenic. The eruption broke out as usual, apparently unaffected by the drug. Lunar caustic was applied as in the last case, and immediately afforded relief. This patient has been confined since without any reappearance of the disease.

There can hardly be a doubt that these cases (herpes gestationis, pemphigus, and hydroa) depend upon some affection of the nervous system. They are all benefited, more or less, by nervine tonics, and accompanied by pain or nervous irritation amounting at times to almost complete prostation. I may add that my cases differed from those recorded by Milton in the following particulars, viz.:—1. No stain was left after involution. 2. In one case the eruption was chiefly on chest, abdomen, and back, and hardly at all on the limbs. 3. No solid papules, merely the condition seen in mild erythema papulatum. 4. Neither blebs nor vesicles till after delivery. 5. Neither grouping of vesicles nor crusting (when left to themselves). Lastly, there was no inflamed base to the vesicles. This confirms Dr. R. Liveing's opinion that the disease should be called "hydroa."

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tam aliorum, tam proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prooemium.

ST. BARTHOLOMEW'S HOSPITAL.

[OUT-PATIENT DEPARTMENT FOR DISEASES OF THE SKIN.]

FIVE CASES OF LOCALISED SCLERODERMA; REMARKS.

(Under the care of Mr. MORRANT BAKER.)

FOR more than two years Dr. J. Herbert Stowers has registered for Mr. Baker the cases of special interest in the department for diseases of the skin, and among them are the following cases of localised scleroderma or morphœa, or Addison's keloid, as it was formerly called:—

CASE 1.—Anne H——, aged twenty-one, a well-developed girl, with dark-brown hair, and somewhat florid complexion, attended on May 17th, 1878. The disease was first noticed six months before. Upon the right cheek, situated over the malar bone, there existed a circumscribed induration, circular, and measuring 1½ in. by 1 in. The skin was closely adherent to it, although the indurated mass itself moved freely over the subjacent bone. There was scarcely any visible superficial change in the skin. Some itching was complained of. Upon the left side of the face, situated also over the zygomatic process of the malar bone, an indurated and slightly prominent mass of integument was felt, measuring about 2 in. by ½ in. The colour of the skin was red, with a tinge of purple, but not sufficiently distinct to enable one to trace the outline with the unaided eye, the colouring not being coextensive with the margin. The skin was thick and "brawny," and could be taken up between the finger and thumb by its edges, feeling like a plate of semi-cartilaginous tissue. Sensation upon both sides of the face was unimpaired. The patient's general health was good, and the catamenia regular. The rest of the skin of the body was unaffected. No other member of the family had suffered from any cutaneous disease.

The patient was ordered to take three grains of iodide of potassium, with aromatic spirits of ammonia, thrice daily, and to apply a lotion of the subacetate of lead frequently. She was advised to shield the affected parts from exposure and all forms of local irritation as much as possible. After a week the prominence over the left malar bone appeared slightly less marked, but as on June 14th no further visible change having occurred, a draught containing five minims of arsenical solution with a little carbonate of soda and infusion of calumba was prescribed to be taken three times daily, and zinc ointment replaced the lotion.

On July 26th there was slight apparent decrease in size on both sides of face. Redness was less apparent.

On Sept. 13th on both sides the diseased integument appeared to be sinking in at the centre, and possibly from this cause was slightly more raised and tuberculated at the margin. The diameters remained the same. The itching originally complained of was less.

On June 24th, 1879, there was hardly any change in the condition of affected parts. The patient has not since attended.

CASE 2.—Harriet S——, aged eleven, attended on July 8th, 1878. She had never been a strong child, and had complained much of headache, giddiness, &c. Her skin had been quite clear until the end of March. The rash first appeared in irregular patches, which were red, scaly, and dry. It was stated that after the lapse of a few weeks the redness and scaliness disappeared, and a white, shining, somewhat indurated cicatrix or mass was left, but the scaly spots upon the left side of the face at the visit looked merely like spots of pityriasis simplex. The rash was confined to the face; the child had never complained of pain or itching. There were two other children living in the same house, but they were quite well, as was also the mother. The patches of morphœa were confined to the right side of the face. The largest, which was 1¾ in. by ½ in., extended from near the angle of the jaw, and passing forwards parallel to the margin of the lower jaw, terminated one inch from the angle of the mouth. Its edges were clearly defined. At the lower margin there was distinct redness from capillary injection. Below the right angle of the mouth there was a white patch, nearly circular, about the size of a fourpenny piece, and having a somewhat bluish outline. On the prolabium of the upper lip there was another white patch, about the size of a split pea. This was confined to the right side. There were three very irregularly-defined patches below the margin of the jaw in the submaxillary triangle. All the places were indurated.

On Nov. 28th, 1879, the following notes were made:—The patient has enjoyed continuous good health since last seen (more than a year ago). The right cheek presents no evidence of fresh disease, or extension of old patches. A slight dry eczema is present over the chin and upper lip. The two original patches of localised scleroderma present no changes, excepting that of almost complete absence of induration. The parts, however, when taken up between the finger and thumb, feel a little thicker than natural. Sensa-

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tion is still below normal. Some slight degree of shiny whiteness, about the size of a shilling, is observed in the centre of the left cheek, also in the form of a straight line running down the forehead just to the left of the centre, about a quarter of an inch in width; also upon the right side of the nose, commencing immediately under the right eyebrow, and ceasing about half an inch from the apex. This is best seen when looked at obliquely. No structural change manifest; integument quite natural to the touch; sensation unimpaired.

CASE 3.—Catherine C——, aged twenty-nine, married, four children, first attended on April 25th, 1879. The disease began nine months before. There was no pain, but some itching was complained of. There were several patches of morphœa scattered over the lower part of the abdomen and back, extending to the upper and outer parts of both thighs. There was also a patch on the inner side of the left thigh. The affected integument presented all the usual characters, but with less thickening than usual. The colour was a faint yellowish-brown. There was also a patch commencing over left clavicle. Ordered zinc ointment to be applied locally, and syrup of the phosphate of iron and cod-liver oil internally.

No later opportunity occurred of taking a note of this case, as the patient did not attend, and a letter written to her address was returned on account of her having left the neighbourhood.

CASE 4.—Annie D——, aged twenty-four, married, one child, attended on Nov. 7th, 1879. The disease was first recognised five months before. Some itching was complained of. There was only one patch, and it had these typical characters. The sensibility slightly impaired. It was situated beneath the right mamma. Diameters 2 in. by 1½ in. The patch was raised and well-defined, whitish-yellow in colour, with reddish margin of capillary congestion. The general health was good. Zinc ointment was ordered for the relief of the itching.

On Nov. 28th there was no noticeable change. General health continued unimpaired.

On Jan. 30th, 1880, the patient expressed herself as much relieved of the irritation from which she previously suffered, but there was no apparent change in the condition of the patch of morphœa.

CASE 5.—Charles L——, aged thirty-six, a pattern-maker, married, four children. This patient was first seen by Mr. Baker three years ago, the disease having been then in existence for seven years. The patches of scleroderma, of which there were several on each side of the abdomen, and also upon the upper part of Scarpa's triangle, were nearly symmetrically placed. They were firm, smooth, and yellowish, with unimpaired sensibility; mostly of oval outline, the long axis running in all alike, parallel with Poupart's ligament. Most of the patches measured from one and a half to two inches in their long diameter. Itching was at first a prominent symptom.

The patient ceased to attend, and was not seen again until Nov. 28th, 1879, when the following note was taken:—The special change noticeable about the patches is that the former whiteness, with reddened margin, has given place to a dark-brown pigmentation, corresponding in extent and site with the patches formerly noticed. The integument is quite smooth and soft, the induration having completely disappeared. Upon the right side of the abdomen four or five patches of dark pigmentation are also to be seen. A larger mass of darkened skin, with here and there a white spot, corresponds with the inguinal fold, similar in extent and position to that on the left side. No alteration in sensibility at this time; general health good. Mr. Godart, the librarian, has made two water-colour drawings which show well the alteration that has occurred.

Remarks by Mr. BAKER.—Cases of localised scleroderma or morphœa are so rare that it seems well to place on record an accurate note of those which are observed; and it is with this object, and not because the foregoing cases show any very exceptional characters, that they are here recorded. The disease, moreover, is spread over so long a period in each individual case that the patients are apt to present themselves at various intervals before different observers, and it is hoped that these brief notes may be of service to others under whose care the patients may happen to be in the future, by enabling them to estimate the changes which the disease has undergone, and to contribute, thus, valuable facts with regard to the natural history of this puzzling affection.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

WHOOPING-COUGH IN A MAN OF SIXTY-SIX TREATED WITH DROSERA ROTUNDIFOLIA.

(Under the care of Dr. MUSKELL.)

William H——, aged sixty-six, the beadle at one of the City churches, attended the hospital in January, 1879, suffering from whooping-cough. He stated that he had had it for about three months. The attacks of coughing ended up with a distinct whoop and a violent struggle for breath. He had usually six or seven bad attacks in the day. They were not accompanied by vomiting, but terminated in the expectoration of thick sticky phlegm. The cough was most violent, and exhausted him very much, and he was glad to lie down after each paroxysm. There had been no hæmoptysis, no shortness of breath, and no night-sweating. He had lost flesh a little, but this he attributed to his loss of appetite. He was hoarse, and could not lead the singing as usual. His chest was carefully examined, but nothing wrong was detected. There was no doubt about the nature of the complaint, and one Sunday morning he whooped in church, to the consternation of the congregation. He had been exposed to whooping-cough, more or less, all his life, and thought he had caught it from some of the school children. This was his second attack, for he had had it as a child. He mentioned incidentally that his wife had it when she was sixty.

He was ordered fifteen grains of bromide of potassium in an ounce of water three times a day, and this he took for a fortnight with only slight benefit. He was then ordered a one-in-ten tincture of drosera rotundifolia (THE LANCET, August 3rd, 1878), in five-drop doses, every four hours, in a little water. He took this for a week, and then returned, saying that it had made him much worse. It increased the spasm and cough, and made him whoop more; he whooped as many as a dozen times in a single paroxysm of cough. It increased the expectoration too, and he begged that he might be allowed to discontinue the medicine. He was then ordered half-drop doses of the same tincture in half an ounce of water every three hours. At the expiration of a week he reported that there had been a very great improvement; the cough was less, and he rarely had more than one attack in the twenty-four hours. He slept better, and his appetite had improved. He took the medicine for a fortnight longer, when the cough had completely left him. He was quite well, and was able to sing bass and lead the choir once more.

The points of interest in the case are—the age of the patient and the fact of the drosera having succeeded in small doses after having failed in large.

FOLKESTONE INFIRMARY.

DOUBLE SIMULTANEOUS AMPUTATION OF LEGS JUST BELOW THE KNEE-JOINT; FRACTURE OF LEFT HUMERUS; LARGE SCALP WOUND; RECOVERY.

(Under the care of Mr. TYSON.)

A CASE very similar to the following was recorded in THE LANCET for Dec. 27th, 1879, by Mr. Hewetson of York.

J. H——, aged nineteen, a fireman, in the employment of the South-Eastern Railway Company, whilst changing the lamp in the front part of the engine, missed his footing and fell, and the wheels of the engine passed over his legs. The train was at the time of the accident slowly approaching Shorncliff station. The accident happened at 10 P.M. on Oct. 10th, 1879. About one hour later he was conveyed in a fly to the infirmary, a distance of a mile and a half.

On admission the general condition was unexpectedly good, the pulse being 80 and strong in character. The man was perfectly sensible, and appeared to have suffered little from the shock of the injury. There was no bleeding going on, nor had he, as far as could be ascertained, lost more than a trifling amount of blood. Both legs were crushed from the centre of the tibia downwards, and one was only just hanging to the body by a thin piece of tissue.

It was decided to amputate as near the seat of injury as possible, on both sides. At midnight chloroform was ad-

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ministered, and the left leg was amputated in the upper third by Mr. Bateman (senior surgeon) by circular flaps, and the right leg by Mr. Tyson in a corresponding position, by antero-posterior flaps, the posterior one being transfixed, and including the muscles. A strong elastic cord was applied just above the knee-joint during the operations; only about two ounces of blood were lost; the vessels were ligatured with silken sutures. The left humerus, which was fractured in the middle, was set in the usual way. A scalp wound extended from the root of the nose, across the forehead in a semicircular course, as far as the external angular process. The wound was washed, and the edges brought together by interrupted wire sutures. The scalp wound rapidly healed by primary union, and the fracture was firmly united at the end of a month.

The stumps of both legs from the time of the operation progressed favourably; they were dressed (after the first dressing, which was of dry lint) with carbolic acid lotion and oil, then wrapped in cotton-wool. The spray was not used. Daily notes of the case were not taken, but the constitutional symptoms were comparatively mild; for beyond a slight increase of temperature and a pulse of 120° for two or three days after the operation, he appeared to ail little. The pulse was always under 100 (generally between 80 and 90), except during an attack of inflammation in the left stump about a month later, which gave rise for a few days to some feverish symptoms. He left the infirmary March 17th, 1879, walking on pin stumps, and in good health.

It may be added that the patient was a healthy young man, and had always lived an extremely steady life. The main cause of the success of the case may perhaps be attributed to the trifling loss of hæmorrhage before the operation.

NEWARK HOSPITAL.

TORTICOLLIS; INJURY TO RIGHT STERNO-MASTOIDEUS; ASCARIS VERMICULARIS.

FOR the following notes we are indebted to Mr. J. D. T. Reckitt, L.R.C.P., house-surgeon.

Fanny M——, aged three years, attended as an out-patient on February 18th. Her grandmother stated that a fortnight ago the child, whilst apparently in perfect health, was playing under an upright ladder, which fell across her chest and right clavicle, bruising the latter considerably. The next day a swelling was noticed at the sternal end of clavicle, and the head was pulled down towards the right shoulder. The child complained of pain over the swelling, which, together with the altered position of the head, continued till admission, the latter getting worse. When first seen, the child presented a healthy appearance, the head was considerably flexed towards the right shoulder, and the chin pointed over the left. There was a small swelling over the sternal end of clavicle about the size of a pigeon's egg, but no displacement of that bone, the swelling being evidently due to effusion into the sheath of the muscle (sterno-mastoid) at this point. On attempting to straighten the head much pain was caused. There was no history of worms.

Pressure was applied over the swelling at sternal end of clavicle by means of a pad of lint. A pad was placed in the axilla to keep the bone at rest, and the arm securely bandaged to the side, a suspicion arising that there might possibly be some reflex irritation from worms. Four ounces of concentrated infusion of quassia were injected, and directions were given that the motions should be inspected, and the child brought in three days.

The child was freely purged by injection, and many thread-worms were expelled. On the 21st, the neck was much straighter. Repeated injection. On Feb. 25th, more worms had been passed; the neck was quite straight; and swelling over sterno-mastoid was gone.

Remarks.—The interesting point appears to be that though the ascaris vermicularis was perhaps the main cause in producing the wryneck, yet that condition did not appear until another exciting cause in the injury by the ladder was brought to bear upon the case. Then, again, the disappearance of the effused fluid in the sheath of the sterno-mastoid simultaneously with the worms by aid of injections of quassia, makes it almost difficult to decide whether to ascribe the cause to the idiopathic or traumatic nature.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Syphilitic Stenosis of Pharynx.—Partial Metabolism by the Liver of Leucin and Tyrosin into Urea.

THE ordinary meeting of this Society was held on the 13th inst., J. E. Erichsen, Esq., F.R.S., President, in the chair. A remarkable case of extreme pharyngeal stenosis, due to syphilis, and relieved by operative measures, was communicated by Dr. Gilbart Smith and Mr. Walsham.

The following is an abstract of the paper, entitled "A Case of Extreme Pharyngeal Stenosis the result of Syphilis; with Remarks." By T. GILBART SMITH, M.D., and W. J. Walsham, F.R.C.S. The subject of this case was a woman, forty-seven years old, who was admitted on Oct. 29th, 1878, into the Royal Hospital for Diseases of the Chest, under the care of Dr. Gilbart Smith, suffering from prostration and dysphagia, accompanied by severe and recurrent attacks of dyspnœa. She gave a clear history of syphilis, which she had evidently contracted soon after her marriage twenty-six years before. She suffered for the first time ten years ago, from ulceration of the throat. This was relieved by treatment, but recurred at intervals up to the time of her admission. Eight months ago her voice became affected, and the movements of the tongue impeded. For six months she had been unable to swallow food, and for two months had suffered from severe and alarming attacks of dyspnœa. The tongue could not be protruded beyond the teeth; the right posterior pillar of the fauces was drawn backwards, and was adherent to the posterior wall of the pharynx. The uvula and a considerable portion of the soft palate had disappeared, leaving a clean semicircular border to the portion that remained. On laryngoscopic examination the epiglottis and vocal cords could not be seen, but an aperture was visible one-eighth of an inch in diameter at the bottom of a funnel-shaped depression to the left of the middle line on a level with the epiglottis. This was separated by a thick cicatricial band from another and deeper depression to the right, which terminated in a cul-de-sac, containing pus. This small aperture, after considerable difficulty, was made out to be the only entrance to the larynx and œsophagus. Tracheotomy was performed by Mr. Walsham on November 1st. On November 24th attempts at dilatation were made, and on succeeding days repeated, but they failed to produce any material benefit. Stretchings by means of laminaria and sponge tents could not be borne. On Dec. 5th Mr. Walsham partially divided the cicatricial band bounding one side of the aperture with M. Ricord's urethrotome. On the 8th it was further divided with a pair of curved scissors. One blade being placed in the aperture, the other in the ulcerated depression, incision was made little by little from above downwards so that a full view was obtained of the cut surface of the tissues, and any vessel, if divided, could be seen and secured. Care was taken to enlarge the aperture as much as possible in such a direction as would allow the food in passing downwards to avoid the entrance into the larynx. The parts were then forcibly dilated by the finger and œsophagus bougie. On Dec. 12th another incision was made at a different spot, and the epiglottis, vocal cords, and arytenoid cartilages came into view. When the patient left the hospital, Dec. 18th, the aperture measured three-quarters of an inch in diameter, and admitted a full-sized œsophagus bougie. On Sept. 23rd, 1879, she was again seen by Dr. Gilbart Smith. The aperture had not contracted in the least. Stenosis of the pharynx appears to be very rare. The authors describe three distinct forms. The first, the most common, is situated between the naso- and mid-pharynx, and is caused by ulceration and contraction of the posterior pillars of the fauces, and the drawing backwards and subsequent adhesion of the soft palate to the pharyngeal wall. Cases of this kind are reported by Messrs. Bradley, Cheevers, Reid, Coulson, and Schech. The second form is more rare; it occurs between the mouth and the pharynx, and is produced by the ulceration and contraction of the anterior fauces and the drawing downwards and

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subsequent adhesion of the soft palate to the dorsum of the tongue. A case is reported by Mr. West. The third variety involves the lower part of the pharynx, as in the case now before the Society; the stenosis being produced by bands of adhesions or soft or tough membranes, which stretch across the pharynx, and glue the parts together. Other similar cases are reported by Schech, Gerhardt, Trendelenburg, Schroetter, West, and Cheevers. The authors draw the following conclusions:—1. That tracheotomy is called for both as a temporary expedient to obviate sudden death from asphyxia, and as an essential factor for safe and satisfactory treatment. 2. That division, with a guarded knife, presents advantages over other methods of treatment. 3. That several small notches are preferable to a deep incision, and that, when possible, the parts should be divided from above downwards, so as to allow a full view of the surface of the tissues divided. 4. That the aperture should be enlarged in a direction so as to permit the passage of liquid food clear of the entrance to the larynx.—Dr. HABERSHON said that the case was of great interest from its rarity and from the relief afforded by the operation. Syphilitic contraction of the upper part of the pharynx was not uncommon, but stenosis in the situation in this case was rare. He asked whether the contraction was wholly attributable to antecedent ulceration, or whether there was any evidence of new growth—as occurs in advanced syphilis. He also asked whether internal treatment—e. g., mercury and iodide of potassium—was followed after the operation.—Dr. SÉMON congratulated the authors upon their success in dealing with so intractable a disease as syphilitic contraction. As a rule, simple dilatation alone was insufficient, the contraction recurring after the dilatation was left off. The preliminary tracheotomy was a wise measure, especially in the case of so narrow a stenosis as existed here. He commended the employment of gradual dilatation aided by small incisions, and said that the latter might also be made by the galvano-cautery loop, which diminished the risk of hæmorrhage. The observations of Gerhardt as to the greater liability to syphilitic ulceration of the upper over the lower respiratory passages were confirmed by a recent analysis of 10,000 cases (shortly to be published) of throat disease, 1100 syphilitic, 800 of these involving the pharynx and 300 the larynx.—Dr. FAGGE inquired whether the stenosis was wholly attributed to cicatrisation of ulcers; for he had remarked the occurrence in some cases of tracheal and bronchial stenosis without any evidence of ulceration. He had seen a case of syphilitic stenosis low down in the pharynx. The patient was under Mr. Durham's care, for stenosis of the larynx. A year later the pharyngeal stenosis became declared, and dysphagia was very extreme. Mr. Durham succeeded in relieving the patient by the passage of bougies. Mercurial fumigations were also practised in that case.—Mr. GANT asked whether the dilatation was continued after the cutting operation. He had failed in overcoming such obstructions by dilatation alone; but judging from the analogy afforded by rectal strictures, he would think that dilatation practised after incision would obviate the return of the stenosis.—Dr. R. THOMPSON thought it would have been well to have administered nutritive enemata during the treatment of the case. It would have given the affected parts rest, and supported the patient during the dysphagia.—The PRESIDENT said that many years ago he had observed by experiments on animals that the sensibility of the glottis was always much diminished after tracheotomy; so that food passing into the larynx no longer created spasm. He had noticed this also in cases of cut-throat and after tracheotomy in man. This appeared to have been so in the case related; and the point was one of importance as favouring the performance of a preliminary tracheotomy, which does not complicate subsequent operative measures, and relieves the patient from the risks attending on them.—Dr. GILBART SMITH, in reply, said that iodide of potassium was administered freely during the whole course of the case. There was active ulceration going on by the side of the cicatricial tissue; and there could be no doubt that the new tissue and thickening were due to previous ulceration. The relief afforded to the dysphagia by the operation obviated recourse to nutrient enemata, although perhaps they might have been resorted to with advantage. The effect of tracheotomy in arresting spasm of the glottis was an important fact. Allied to it was the occurrence in some cases of paralysis of the laryngeal muscles from the use of tracheotomy tubes; which has led to the suggestion that the tube should have an aperture made in it to allow of passage of air into the larynx from below, whilst the tube is worn.

A paper was then read "On the Partial Metabolism by the Liver of Leucin and Tyrosin into Urea," by EDWARD CHARLES ANDERSON, M.D., of which the following is an abstract:—"The presence of leucin and tyrosin in the urine of man, in the course of numerous diseases, shows that it is a function of the healthy liver to decompose them partly into urea, and to thereby prevent their undue accumulation within the system." It has been, and still is, universally taught and accepted that leucin and tyrosin are present, most especially in acute yellow atrophy of the liver—an exceedingly rare disease,—that, in addition, one or both have been discovered by Beale in chronic wasting of the liver, and in leucocythæmia; by Frerichs and Städeler in typhus, small-pox, and some of the other exanthemata; and Balfour infers, if he does not state positively, that they, or at least certain abnormal constituents, were present in the urine in a case of obstruction to the hepatic circulation, due to valvular disease. Murchison, however, attributed their presence in typhus, &c., as due to concurrent acute atrophy. Having met with, on Nov. 11th, 1877, a case of jaundice arising from obstruction, Dr. Anderson, more through curiosity than from anything else, examined the urine for leucin and tyrosin, and discovered them; moreover, finding that during convalescence first tyrosin disappeared and finally leucin, and that during each return of the symptoms, on future slight recurrences, leucin reappeared, he determined upon prosecuting strict and extended research for these constituents in as many pathological manifestations as came under his notice. As a result, out of thirty-three individuals (about ten of whom came under his care frequently, and therefore, counted as cases, their numbers would exceed sixty) in whose urine either leucin alone or tyrosin and leucin existed, there were of jaundice, two; mitral and aortic incompetency, one; cirrhosis, one; acute rheumatism with pneumonia, two; nephritis with dyspepsia, one; anæmia, one; phthisis with intestinal obstruction, one; phthisis, one; colic, one; pleuro-pneumonia, two; chronic bronchitis, one; hepatic derangement, five; emphysema, two; Bright's disease with presystolic and mitral systolic bruits, one; bronchitis with asthma, one; acute rheumatism, one; chronic and spasmodic asthma, three; puerperal eclampsia, one; delirium tremens, one; hemiplegia, one; pertussis, one; cancer of liver, one; puerperal septicæmia and embolism into base of right lung, one. That is to say, there were over eighteen or nineteen different diseases in which either leucin alone, or tyrosin and leucin were present; and differing in two senses; for, firstly, they differ among themselves, and, secondly, because they do not include either acute yellow atrophy, chronic yellow atrophy, typhus, small-pox, or the other exanthemata. Tyrosin is said to generally accompany leucin, but it was absent in nineteen out of the thirty-three individuals; moreover, it most usually occurs in only the severer manifestations of disease. Some physiologists assert, but by others it is disputed, that, in certain cases, urea is almost completely replaced in the urine by leucin and tyrosin. Beale found tyrosin in considerable quantity in urine which contained much uric acid. In the case of puerperal eclampsia, out of a total of five fluid ounces of urine passed in three days, albumen was copious; uric acid in enormous quantity; urea in only minute amount; much leucin and tyrosin. In the hemiplegia cases at the commencement, albumen was very appreciable; leucin abundant; urea deficient. Within a week of taking euonymin nightly albumen was reduced to a mere trace; leucin greatly lessened; more urea and water in urine. Under similar treatment a like increase of urea and diminution of leucin, or of tyrosin and leucin, occurred in Nos. 12, 23, 24, 25, 26, 29, 30, 31, of the individuals whose diseases are recorded. Dr. Anderson is, therefore, of opinion that the presence of leucin and tyrosin in the urine is due to a corresponding deficiency of urea; that this is not invalidated by the circumstance of the simultaneous existence of much leucin and tyrosin and increased quantity of urea, for during great destructive metabolism, such, for instance, as occurs in the course of many diseases, the liver is so overtaxed as to cast into the blood, not only urea in large amount, but the overplus of waste—viz., leucin and tyrosin; moreover, as convalescence advances, although the absolute quantity of urea daily eliminated may have become less, the most marked and progressive diminution takes

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place in leucin and tyrosin; and, as the author has shown, occasionally in albumen and uric acid. As a strong presumption in favour of the theory that among the many functions of the liver the formation of urea from leucin, if not from tyrosin, may be ranked as one, it has been instanced that in cases of acute atrophy of the liver, where the hepatic gland cells lose their functional activity, the urea of the urine is replaced by leucin and tyrosin. If such be the case, the inference seems irresistible that the numerous diseases in which leucin and tyrosin (one or both) are shown to have been present; their diminution during convalescence; reappearance and increase during each return and exacerbation of the symptoms; their final disappearance and the order of it—viz., firstly tyrosin and then leucin; the circumstance that tyrosin appears only in and during the severer manifestations; their increase and diminution in inverse proportion to the amount of urea; and, lastly, the influence exerted by the preparations of salicin and euonymin (well known hepatic stimulants) in increasing the quantity of urea and in diminishing that of leucin and tyrosin, strengthen and support this theory in the fullest possible manner. Frerichs asserts that leucin and tyrosin are found only in the *hepatic* and *not in the portal vein*. This would seem irreconcilable, in the face of so much to the contrary, but for one possible explanation—viz., that afforded by the early stages of so-called nutmeg liver. Here, owing to "remora," there is congestion and partial stasis of the contents of the intra-lobular veins, and consequently pressure upon and interruption to the functional activity of the gland-cells immediately surrounding them.

CLINICAL SOCIETY OF LONDON.

Sympathetic Ophthalmitis after Excision of Eyeball.—"Bone-setting."

THE ordinary meeting of this Society was held on the 9th inst., Dr. E. H. Greenhow, F.R.S., President, in the chair. After Mr. Nettleship had read some interesting cases of sympathetic ophthalmitis following excision of the eyeball, a debate took place upon "bone-setting." It arose out of a communication by Mr. Howard Marsh, who, after giving details of certain cases which had come under his own notice, enumerated the various kinds of disease which were sometimes successfully treated by bone-setters. The debate occupied the greater part of the evening, and was shared in by Messrs. Hulke, J. Wood, T. Smith, C. Heath, Barwell, Brown, H. Morris, and Prescott Hewett.

Dr. STEPHEN MACKENZIE exhibited a case of Elephantiasis treated by Elastic Bandage, and Mr. CLUTTON one of Acquired Hypertrophy of one Lower Limb.

Mr. NETTLESHIP read notes of Three Cases of Sympathetic Ophthalmitis setting in three weeks after Excision of the other Eye. The first case was one in which excision was practised for the removal of a shrunken eye, with fluid cataract and corneal nebulæ following purulent ophthalmia. Twenty-two days after there was some dimness of vision in the left eye; this increased. Neuro-retinitis, followed by irido-cyclitis and chronic glaucoma, ensued. Iridectomy did not much reduce the tension of the eyeball, and permanent blindness ensued. The second was a case of rupture of the left eyeball from a blow with a screw-driver. The wound was of moderate extent, was united by single suture, and iced compresses applied. But inflammation followed, and excision was had recourse to nineteen days after the accident. Twenty-nine days after the excision acute iritis set in in the right eye, and then detachment of retina; the vision became impaired, but subsequently recovery took place. The third case was one of excision for injury to the eyeball twenty-four days before. Twenty-five days after the operation the remaining eye began to inflame, and vision was permanently impaired, but not wholly lost. Mr. Nettleship remarked that he had found notes of six published cases, in one of which the ophthalmitis set in the remaining eye five days after the excision, and in the others three days, two weeks, eight days, and forty-one days respectively. He did not think the ophthalmitis was due to the operation, but to the original disease. It was notable that out of eight cases there had been six recoveries. These cases strengthened the insistance upon early removal of eye spoiled for useful sight, and likely to set up sympathetic disease.—Mr. SPENCER WATSON questioned whether the eyes which became inflamed were not primarily diseased eyes. This seemed probable in the first case. He thought that the cases showed the importance of care in the after-treatment of excision of the eye, but he had never met with a case of ophthalmitis attributable to the operation.—Mr. NETTLESHIP did not think the other eye was diseased in his first case, where the cataract depended on perforation of the cornea.

Mr. MARSH read some cases of "Bone-setting."—No. 1. A countryman, aged fifty, dislocated his shoulder. The dislocation was at once reduced, and the arm bandaged to the side. Nine weeks afterwards he came to London for advice. It was found that the limb was so stiff that he could not move the elbow more than two or three inches in any direction; and any movement, whether on his part or during examination, produced great suffering; and he complained of constant severe aching from the shoulder to the elbow. It was noticed, however, that the joint was quite free both from heat and swelling. When he had taken gas the scapula was fixed, and the humerus was fully rotated on its long axis in the glenoid cavity, and then carried, in a series of short jerks, through all its natural range of movement. Numerous adhesions around the joint were felt to give way. He now lost much of his pain, and could move his arm freely except in an upward direction. A fortnight later the arm was carried, while he was under gas, freely above his head; after this all his pain ceased and he recovered the full use of his limb.—No. 2. A man, aged twenty-four, in jumping from a cart twisted his foot under him. Great pain and swelling followed, and the limb from the instep to the middle of the calf came out, he said, "all black and blue." He was laid up for a fortnight, and then took to walking with a stick. Eight months afterwards he came to St. Bartholomew's Hospital. The joint was still swollen, and the seat of severe pain if weight was thrown upon it. He had gone from hospital to hospital and been liberally supplied with bandages, elastic stockings, liniments, and the inevitable tincture of iodine; but he got no better. The ankle was found free from unnatural heat, indeed it was unnaturally cold; the skin was bluish and shiny, and the outlines of the joint were obscured by brawny swelling. The heel was a little drawn up, and flexion and extension were almost entirely lost. He took gas, and the joint was carried by short jerks through all its natural range. Numerous adhesions in the sheaths of the surrounding tendons were felt to give way. Within an hour he walked freely about the ward, and the next morning walked from Hackney to the hospital and reported himself ready to go to work on the limb. Six months later he came with the ankle again out of order. He said he had been quite well till three months before, when the joint had become painful and weak. On inspection, nothing could be found amiss, and he was advised to have the part strapped, and to rest it. He however said he was sure if it were "bound" it would be all right. Gas was given, and the joint was carried into full extension and full flexion. During flexion some slight adhesions were felt to give way. He wrote next morning to say that he had been walking on the limb, and found that he could now do so without either pain or limping.—No. 3 was a case of a similar character. A man, aged forty-five, could bear no weight on his ankle nine months after a severe sprain. The joint was quite free from heat. All his symptoms disappeared when the ankle was flexed and extended under gas; and in less than a week he was quite well.—No. 4. A lad, aged seventeen, of strumous family, was reported to have hip-disease. He could bear no weight on his limb, and the thigh was flexed, abducted, and rotated outwards. There was deep-seated pain at the back of the joint on any movement, and tenderness on pressure in this situation. There was no swelling. On examination, it was found that the hip-joint was sound, but it was believed there was strumous periostitis of the innominate bone beneath the external rotator muscles. He was told to rest, to have a course of blisters, and to take cod-liver oil. Three months later, as he was no better, he was taken to a bone-setter, who moved his limb. After this he lost all his pain, and in a week was "all right." Just twelve months later, having in the interval been quite well, he was, on rising quickly from his chair, seized with his old trouble. He had great pain, and felt sick, and the limb became instantly locked and intensely painful, if any weight

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was thrown upon it. On examination, the thigh was found flexed, abducted, and rotated outwards; movement at once produced painful spasmodic contractions of the muscles, and there was excessive pain on pressure over the sciatic notch. He was put under gas, and the limb was gently carried through its complete range of flexion, extension, abduction, adduction, and rotation. Directly afterwards, though nothing seemed to give way, or to slip, he lost his pain, and he could freely move his limb. He has had no relapse. Mr. Marsh remarked that he had brought the subject of bone-setting forward because, undoubtedly, there were a numerous set of cases which forcible movement could speedily cure, but which had not hitherto been treated as commonly as was desirable by this means. These cases, as they made but little progress under the routine treatment of rest, liniments, and elastic stockings, frequently fell into the hands of bone-setters, by whose manipulations many of them were cured. He alluded principally to cases in which adhesions had formed in or around joints, otherwise sound, as the result of injury or inflammation. Sir James Paget was the first to draw attention to this subject in a clinical lecture given as long ago as 1867, and since published in the first and second editions of his Clinical Essays and Lectures. In this essay the principles of forcible movement as a means of treatment were very clearly and most fully laid down, and were rendered all the more distinct by being brought into contrast with those which regulate the use of perfect rest so essential for joints which were the seat of inflammation, especially of strumous disease. Displacements of cartilages and slipped tendons might be, and doubtless sometimes were, put right by bone-setters; but he believed the cases of adhesions — especially such as occurred after an injury outside a joint, which itself was healthy,—afforded by far the most numerous instances of improvement after forcible movement, and he expressed his conviction that they were much more frequent in practice than many had supposed. After referring to the classes mentioned by Dr. Hood in his lectures, the author stated that all he had observed led him fully to accord with the teaching of Sir James Paget, that when joints after injury have remained stiff, "weak," and painful, and yet free from abnormal heat, beyond the usual period of convalescence, and when they had no history of previous disease, and when a careful examination could detect no evidence of any of the diatheses, such as struma, or severe gout or rheumatism, the patient should be put under gas, and the limb should be carried in all directions through its full range of movement. As to the movement of particular joints, the author had seen good results in the shoulder, the finger joints, the knee, and the ankle. He had not used the method in either the elbow or the hip, having met with no cases which seemed suitable for it. In conclusion, he stated that if synovitis had been present movement must be very cautiously employed. In two knee cases lately under observation, in which synovitis had subsided for eight or nine weeks, and the joints had become perfectly free from swelling and abnormal heat, a renewed attack of inflammation, with heat, pain, and considerable effusion, had followed the manipulative treatment.—Mr. HULKE said they were much indebted to Mr. Marsh for bringing this very interesting subject before the Society. It was an opprobrium to surgery that so many people sought advice from bone-setters, not that patients could be prevented from sliding away, but because it was notorious that these empirics were or are in the habit of extracting written guarantees from their patients before proceeding to interfere with them; and thus the bone-setter, having shielded himself from the possible event of malpraxis, promises everything. To show how even intelligent people are blinded by the statements of these men, Mr. Hulke mentioned that he was consulted by a lady who had an enlarged bursa over the ischial tuberosity—a stiff hip-joint compelling her always to sit sideways on her chair. He explained the nature of the case, but the patient was persuaded to go to a bone-setter, who, after giving her oils for inunction, proceeded to put the "bone" in, which he did so effectually that the patient's husband declares that he "saw it go in!" He had no doubt some of the cases treated in this way were instances of adhesions, as Mr. Marsh had said, and the occurrence of such adhesions was long ago pointed out by Bonnet of Lyons. He (Mr. Hulke) had been personally the subject of such a condition. When in the Levant he fell over some rocks and injured his knee, which became acutely inflamed. The acute attack passed away, and left him with a stiff joint, so that he could not walk without support. Falling one day, his knee was bent under him, and, as he supposed, the adhesions must have given way, for on rising he found that he had regained free use of the joint, and could walk well without his supports; so that he thought there were such cases, which admitted of rapid cure when there was no actual disease of the joint. But, he added, we hear only of the benefit done by "bone-setting"; its disasters are carefully concealed. He had seen such disasters—often very grave mischief indeed; and more than once he had to excise a joint damaged from the rough usage it had suffered. One case he knew of, where there was disease of the shoulder and sinuses around the joint; the bone-setter broke down the adhesions, rekindling the inflammation, and the result was the death of the patient. If such cases could be published in their bare truth, the law would hardly shield the author from libel.—Mr. JOHN WOOD said there were cases in which the adhesions were outside the joint, especially the shoulder. A blow or injury on the deltoid was apt to be followed by great pain, lasting for months or even years. In such cases forcible movement was most successful, and the interpretation was that the subdeltoid bursa was inflamed and adherent to the muscle—a condition he had often found on dissection. Such cases were cured by manipulating the limb in different directions, or by acupuncture. But occasionally, after temporary relief, the pain returns. Where the articular cartilages are the seat of adhesions, such manipulative treatment was less likely to be permanently successful. Some of the cases of so-called misplacement of tendons were, he thought, really instances of inflammations of the sheaths of the tendons. The case which Mr. Marsh thought was one of displacement of the obturator tendon, was more likely an instance of effusion into the bursa in this situation; for it was difficult to see how the tendon could slip out of its groove; and the procedure adopted probably caused the rupture of the enlarged bursa. He had seen great mischief due to bone-setters, and this mainly in cases of hip disease; and he would warn surgeons in such cases of the impropriety of attempting too early movement, lest inflammation of the bone be again set up. He had thus seen very serious symptoms started by movement attempted twelve months after the primary inflammation had subsided. In old subjects, with tough and extensive adhesions, he had repeatedly seen fracture take place from the attempt to break down adhesions. "Sudden jerks," then, were to be deprecated; but gentle and slow movements, gradually increased in range, should be the plan followed. Not long ago he saw a lady who had anchylosis of both knees from rheumatism. Gentle manipulations succeeded in breaking down the adhesions in one knee; but in the other (which was more firmly anchylosed) the ligamentum patellæ gave way. The smooth porcellanous character of the ends of the bones, denuded of cartilage, could be felt; and in so advanced a case he was sure breaking down the adhesions did but little good. The ruptured ligamentum patellæ healed, but the stiffness returned to the joint. There was another class of cases out of which bone-setters made much capital—viz., cases of "hysterical spine"—of which he related an instance where a bone-setter, pretending that the patient had twisted her spine, proceeded to manipulate, and cured the patient at least for some months of the pain from which she had long suffered. It was just possible, of course, that in that case one of the little interspinal muscles had been displaced, and that it had been reduced by manipulation; but he was inclined to think that in the majority of cases hysteria was the real cause of the pain, and that the cure was attended by the deception of the patient on the one hand, and the bone-setter on the other.—Mr. T. SMITH asked whether Mr. Marsh advocated these measures for the relief of stiffness in a limb following union of fractures. He was inclined to believe, with Mr. Wood, that adhesions were often outside a joint, and he had followed the procedure in desirable cases of the class pointed out by Sir James Paget, Mr. Wharton Hood, and Mr. Marsh. In six cases of Colles' fracture at periods varying from six weeks to three months, where the fracture seemed to have united badly, he had broken down adhesions of tendons by free and forcible movement. In no case had any serious disturbance followed; in two or three the manipulation was repeated more than once, and was followed up with shampooing and friction. In one case, where the whole hand was stiff, he began by liberating two fingers, and then passed to the others, taking each in turn. The same methods were applicable to the after-treatment of other fractures—e.g., of thigh and leg; in the former case the knee, and in the

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latter the ankle, could be set free by forcible movement from the stiffness (and in the case of the ankle the malposition) so often following fractures. He agreed with Mr. Wood as to the improbability of one of the rotator tendons of the hip slipping out of place, for its anatomical disposition hardly showed where it could slip to. But no more could he see how an interspinal muscle could be displaced.—Mr. HEATH endorsed Mr. Smith's remarks as to the after-treatment of fractures. No fracture should be considered cured until the movement of the joint was completely restored; and were this thoroughly appreciated, many a case would be taken out of the hands of the bone-setters. The same thing applies especially to cases of injury about the shoulder. The pain, &c., were generally left to time, but in his opinion time never does cure them, and it was to be regretted that some of the most eminent surgeons should take the former view. Many such cases were set right by manipulation under anæsthetics. Whether there were adhesions inside or outside the joint was an open question. In some cases—e.g., the knee—they were certainly within the joint. In breaking them down often decided loud "cracking" sound was produced, but this must not deter the surgeon. He had once fractured a humerus in this manipulation, but after union had taken place the patient was better than before. Of course, care must be exercised in the case of old people.—Mr. BARWELL thought cases of slight subluxation, such as occurred in the shoulder and ankle, should not be overlooked. He had seen cases of injury where there were no ordinary signs of dislocation or inflammation, yet there was inability to raise the arm; and a slight manipulation under nitrous oxide would often put them right, so that in many cases the use of the arm was immediately regained. The same held good with the ankle and tarsus, where a condition of slight downward luxation of the scaphoid produced lameness and inability to bear the weight of the body on the foot. He thought there was also a condition of subluxation of the os calcis on the astragalus. He had met with displaced tendons about the malleoli, especially the peroneus longus tendon; although the tendon could be replaced, it was almost impossible to keep it in position. He mentioned an instance where a lameness was cured by manipulation, which reduced a tendon so misplaced; but in another case no device succeeded in keeping the tendon in its groove. He asked what was meant by adhesions within a joint. He had never seen on dissection any adhesions comparable to those of other serous membranes; but hypertrophied synovial fringes might become united, and he had seen union between two cartilages on the knee. He concluded by relating how a lady who was thrown down by a cab, and seen by a bone-setter, who declared a "bone was out," and after manipulation said she was cured. But the reverse was the case, for in addition to a dislocation of the hip, she had also a fracture of the neck of the thigh, probably produced by the manipulation referred to.—Mr. G. BROWN, referring to cases of anchylosis after acute rheumatism, said that owing to wasting of the muscles from impossibility of having early recourse to movement, the patient was unable to move the joint, although this may have been set free by passive motion. What procedure should be adopted in such cases, of which he had recently had an example under his care?—Mr. MORRIS said the debate suggested that it was not well to draw too much distinction between adhesions formed outside or inside a joint; but there were cases—e.g., in shoulder and knee—where the contraction was due to changes in the capsule of the joint itself. He had dissected a contracted knee-joint, which could not be straightened until after division of the posterior ligament. So, again, in the shoulder there might be contractions and adhesions in the capsular ligament itself. If such structures be ruptured in attempt at restoring the limb the relief could only be temporary. He asked whether it was justifiable within six or seven weeks of the injury to resort to passive movement for the relief of stiffness due to fracture of the olecranon or patella. A recent case had brought this to his mind. A gentleman broke his olecranon by a fall on the ice, and a second injury delayed union. At the end of six weeks he became impatient to use the arm. Mr. Morris was averse to moving the limb too early. A further opinion was sought, which was favourable to forcible flexion under chloroform. This broke down the fracture again, and set up inflammation of the joint.—Mr. PRESCOTT HEWETT, who spoke on the invitation of the President, said that no doubt the cases in which the bone-setter succeeds were of the class alluded to by Messrs. Heath and Smith—viz., a slight injury followed by some contraction about a joint. The knee was often the seat of this, where, as in Mr. Hulke's case, an acute synovitis was followed by lameness due to adhesions, which could be readily broken down by forcible movement. He had broken down adhesions in knee and ankle with great benefit; he had been less successful with the shoulder, and least of all with the elbow. He found that Sir James Paget and Mr. W. Hood were of the same opinion as to the slight results following such treatment of the elbow—which is often the seat of adhesion—especially after fractures of one or other condyles. He had practised forcible movement under chloroform to break down the adhesions found in connexion with contracted toes, due to wearing short and narrow shoes, such contractions occurring often after the foot had been cramped for a very short time. Some of the cases consulting bone-setters were no doubt instances of slipped tendon; he had seen this occur in the case of the biceps tendon, and in those of the peronei muscles—these being difficult to maintain in proper position. No doubt great injury is at times done by too forcible measures employed at too early a period. He was once present when manipulation employed to break down adhesion about the hip resulted in fracture of the thigh, and that in a powerful young officer. He had seen severe inflammation follow attempts to break down adhesions of the knee-joint; and in one case pyæmia followed such an attempt made on the shoulder. The worst example he knew of the injury done by bone-setters was in the case of a young gamekeeper, whose leg became inflamed and gangrenous, following the manipulations of the bone-setter. The thigh had to be amputated, and the patient died.—The PRESIDENT expressed the hope that the discussion would bear fruit; not that it would prevent people going to bone-setters, but that it would enable surgeons to lay down the lines of the scientific treatment of such cases, and show their country friends that such cases were understood and could be rationally dealt with. Quite lately a friend of his, the subject of hysteria only, fell into the hands of a bone-setter. Of course, it could scarcely be expected that surgeons would do all that the bone-setter proposes to do—they are more cautious than the latter, to whom the adage, "Fools rush in," &c., would well apply.—Mr. MARSH, in reply, said that in relieving the stiffness of a shoulder it was essential to fix the scapula, which otherwise accompanied the humerus in its movements. The sudden event of the pain and lameness, and the rapidity of its cure in his fourth case, made him attribute it to slipping of the obturator internus tendon over a ridge of cartilage. He agreed with Mr. Wood that the jerks should be slight, and he had seen cases where too much force had been used and the thigh fractured. To Mr. Barwell he said that he had seen actual adhesions in joints; and he agreed with Mr. Morris that contraction of the ligaments was likely enough to occur in severe cases.

Reviews and Notices of Books.

A Treatise on Hygiene and Public Health. Edited by ALBERT H. BUCK, M.D., American Editor of "Ziemssen's Cyclopædia of the Practice of Medicine," Instructor in Otology in the College of Physicians and Surgeons of New York. Two vols. large 8vo; pp. 792 and 657. New York: Wm. Wood and Co. London: Sampson Low, Marston, and Co. [SECOND NOTICE.]

THE second volume is divided into two parts, one relating to Occupation, the other to Public Health.

The first part is subdivided into five sections, dealing respectively with the hygiene of occupation, the hygiene of camps, the hygiene of the naval and merchant marine, the hygiene of coal-mines, and the hygiene of metal-mines.

"The Hygiene of Occupation" is from the pen of Dr. Roger S. Tracy, sanitary inspector of the Board of Health, New York. It is a very complete statement of the health-conditions involved in various kinds of occupation. Dr. Tracy divides occupation into three principal classes—namely, occupations involving the introduction of deleterious matters into the body; occupations involving exposure to conditions that interfere with nutrition; and occupations

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involving exposure to mechanical violence. He distributes the various occupations in these several classes, and presents an admirable summary account of existing knowledge of their hygiene enriched by his personal experience on the subject.

"The Hygiene of Camps" is written by Dr. Charles Smart, C.M., Assistant-Surgeon U.S. Army. This article should be particularly welcome to the medical staff of our volunteer forces, and, indeed, to military medical men in general. The illustrations of Dr. Smart's subject, taken from the experience of the war of secession, are peculiarly instructive. We would especially note his observations on overcrowding in tents, on tent-hygiene, on hut-construction, and generally on the hygiene of camps and the camp kitchen. The article is a real acquisition, and it gives special consideration to the camps of civil life as well as of military life.

Dr. Thomas J. Turner, M.A., Ph.D., Medical Director of the United States Navy, has written the section on the "Hygiene of the Naval and Merchant Service." It is almost superfluous to say that it contains the result of much and extended experience effectively put together. It is remarkable how barren English literature is of works on the hygiene of a service which has been made so peculiarly a service of English-speaking people. This section forms a very welcome addition to our scanty literature on the subject.

"The Hygiene of Coal-mines" is from the pen of Mr. Henry C. Sheafer, the coal editor of the *Miners' Journal*, Pottsville, Pa., and the "Hygiene of Metal-mines" from the pen of Mr. Rossiter W. Raymond, Ph.D., editor of the *Engineering and Mining Journal*, New York City. Both are excellent articles, full of valuable information.

The second part of the volume, relating to Public Health, is divided into eleven sections, which we shall briefly note in the order of their occurrence. "Infant Mortality and Vital Statistics," by Dr. Thomas B. Curtis of Boston, Mass., is an elaborate article, of which the part relating to infant mortality has much to interest the English reader. "Adulteration of Food" is dealt with by Mr. Stephen P. Sharples, S.B., of Boston, Mass. It is a capital summary article on the subject. "Public Nuisances" are treated by Dr. Roger S. Tracy in the widest sanitary sense. He regards as a public nuisance "anything that injuriously affects the health or comfort of the occupants of two or more premises other than the premises on which it exists," and upon this text he has written an exhaustive treatise. "Quarantine" (with reference solely to seaport towns) forms the subject of an article by Dr. S. Oakley Vanderpoel, LL.D., health officer of the port of New York; and "Inland Quarantine" the subject of an article by Dr. J. J. Hawick, secretary of the Louisiana State Board of Health. Both articles will be read with much interest in view of the opinions as to quarantine entertained, and action taken, by the National Board of Health. "Small-pox and other Contagious Diseases" are considered in their hygienic relations by Dr. Allan McLane Hamilton of New York, in conjunction with Dr. Bache McE. Emmett. "Disinfectants" are treated by Mr. Elwyn Waller, Ph.D., chemist to the Metropolitan Board of Health, New York. "Village Sanitary Association" (an article of great interest), by Dr. Roger S. Tracy; and an article on "School Hygiene," by Dr. D. F. Lincoln of Boston, Mass., closes the volume.

We have thus cursorily glanced at the contents of these two volumes. It will be obvious, even from this imperfect account of their general character, that the work must take a very important place among standard treatises on hygiene and public health. There is a surprising uniformity of excellence throughout the numerous articles of which the book consists, and we apprehend that it will become a favourite one for reference. It is clearly a work which will be more highly valued the more closely it is studied. To say it is worthy of the country of its origin is to say a great deal, but not more than is deserved. Dr. Buck has achieved the heavy task he undertook, of organising the arrangements for and editing the work, with singular success.

The Atlas of Histology. By E. KLEIN and E. NOBLE SMITH. Part X. Plates xxxiv—xxxvii. London: Smith, Elder, and Co. 1879.

THIS part embraces accounts of—1. The small and large Intestine. 2. The Pancreas. 3. The Liver. 4. The Larynx and Trachea, and the Bronchi and Lung,—all subjects of much interest. Dr. Klein supports Dr. Watney's view that the absorption of chyle, or perhaps, more correctly speaking, of chyme, takes place through the interstitial tissue between the cells covering the villi, and not through the cells themselves, so far at least as the mammalia are concerned. The question of the origin of the bile-ducts seems to be still a little doubtful. After describing the bile-ducts down to the margin of the lobule where they are much branched, communicate with each other, and are lined with a single layer of more or less flattened epithelial cells, and constitute the intermediary portion of the duct, the authors give the following account of the further course of the ducts: "The intermediary portion of the bile-ducts joins the substance of the lobule in this manner: the lumen of the former passes directly into the network of bile capillaries, while the flattened epithelium, changing of course suddenly its appearance and nature, forms a direct continuity with the mass of the liver cells. The membrana propria is not continued into the lobule on to the surface of the liver cells, as is maintained by Beale, Pflüger, and others." This view is not altogether in accordance with the statements of recent writers, some still holding that the minutest ducts have a membrana propria.

We notice a few clerical errors:—"Latchenberger" should be Latschenberger, "Chrzonszewski" Chronszczewski, and "Fry" Frey. In the following sentence "take up" is an incorrect expression:—"The interlobar connective tissue contains nerve branches and large lymphatics with valves. These latter take up lymphatic clefts and sinuses," &c. The meaning probably is "receive the contents of." The drawings are, as usual, extremely carefully and accurately drawn, and in delicacy of execution the plates of this part surpass those of the preceding.

Diseases of the Ear. By GEORGE P. FIELD, M.R.C.S., Aural Surgeon of St. Mary's Hospital, and Lecturer on Aural Surgery in the Medical School. Second Edition. London: Henry Renshaw. 1879.

THIS book is worthy to have reached a second edition in a very short time, as it has done. It is not pretentious or exhaustive, but it will be found to be very practical and helpful to the student and to the general practitioner. The three opening chapters are taken up with, respectively, the anatomy of the ear, the physiology of hearing, and the examination of the patient. Chapter 4 contains some very practical observations on affections of the external auditory meatus, and especially on the proper way of removing foreign bodies, which may be read with much advantage. Mr. Field very properly recommends the use of the syringe in preference to that of forceps and other instruments. Thereafter follow eleven other chapters dealing with all affections of the ear, and, at most length, with the commoner ones, all of which are enriched by good, though short, clinical reports of illustrative cases. A noticeable feature of the book is a number of coloured illustrations, the work of Mr. E. Noble Smith.

Mr. Field mentions the frequency with which acute catarrhal inflammation of the ear is overlooked until a discharge from the ear is noticed. It is well, when we cannot find other reasons to explain fever and restlessness and crying in a child, to suspect otitis; and we shall be

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helped in forming a judgment by seeing whether the little patient refuses steadily to lie on one side, which Mr. Field says he invariably does in this affection. This is a good hint, like many others, obtained from a doctor's close observation of his own child. We can commend this book to practitioners and students.

Du Traitement Mécanique des Maladies de la Colonne Vertébrale par l'application des Corsets Plâtrés. Par OSCAR JENNINGS, M.D., M.R.C.S.E. Paris: O. Berthier. 1880.

THE treatment of curvature of the spine by "plaster-of-Paris jackets" applied during extension has not been received with so much favour, or so widely adopted, in Paris as in England and on the Continent generally. Dr. Jennings is a warm advocate of this treatment, and is anxious that Sayre's method should have a fairer trial at the hands of the profession in Paris than has yet been accorded to it. He accounts for the prejudice existing against it in France, by stating that in attempting to carry it out the French surgeons have wilfully neglected the details upon which Sayre justly lays so much stress; and he avers that the proper muslin for the bandages cannot be obtained in Paris. If this be the case, we are glad that there is at least one surgeon in Paris who is engaged in carrying out Sayre's treatment in accordance with his directions, and who, happily, is meeting with Sayre's success. The paper now published in a pamphlet form originally appeared in *La Tribune Médicale*, and we confidently expect that its wide circulation will lead many to reconsider their present convictions, with a very happy result for their patients.

THE INDIAN MEDICAL DEPARTMENT.

THE following General Order has been issued for the regulation of the administrative branch of the Indian Civil Medical Service:—

1. In continuation of General Order No. 13, dated Jan. 2nd, 1880, issued in the Military Department, and subject to such modifications as may hereafter be deemed necessary, the Governor General in Council is pleased, with the sanction of Her Majesty's Secretary of State, to issue the following orders regarding the administrative staff of the Indian Medical Department in the several provinces of India.

2. From the 31st March, 1880, the following administrative appointments will be made:—

	Monthly Salary. Rs.
One surgeon-general with the Government of India...	2700
One deputy surgeon-general, with local rank of surgeon-general, for civil medical administration in Bengal	2250
One deputy surgeon-general, with local rank of surgeon-general, in the North-Western Provinces and Oudh	2250
One deputy surgeon-general, with local rank of surgeon-general, in the Punjaub	1800
One deputy surgeon-general for civil medical administration in the Central Provinces	1800
One surgeon-general for civil medical administration in Madras	2500
One secretary to the surgeon-general, Madras... ...	800*
One surgeon-general for civil medical administration in Bombay	2500
One secretary to surgeon-general, Bombay	800*

* Consolidated.

3. The surgeons-general with the Government of India and with the Governments of Madras and Bombay will, in addition to performing civil administrative duties, be heads of the Indian Medical Departments in their respective Presidencies. It will be their duty, among other matters, to propose transfers between the Military and Civil Departments; to recommend for promotion to the administrative grades; and to advise the Government on all questions relating to the admission of officers and subordinates to the Indian Service, to the conduct and services of Indian medical officers of all grades, and to the supply of medicines and hospital stores. The surgeon-general with the Government of India will be entitled to receive any information he desires from the surgeons-general and deputy surgeons-general attached to the Local Governments and Administrations; but he will exercise no direct authority over them. These officers will be solely under the orders of the Local Government or Administration to which each belongs.

4. Officers will be selected for the above-named administrative offices by the Government of India for the Bengal Presidency and by the Governments of Madras and Bombay for those Presidencies respectively. Selections will be made in each Presidency from the whole Indian Medical Service of that Presidency; and the principles of selection, hitherto followed in making such appointments, will be observed. Surgeons-general and all deputy surgeons-general, including those who may have the local rank of surgeon-general, will count their five years term of office from the date of their first entering on the duties of their rank, whether in the military or civil branch of the service.

5. The deputy surgeon-general for the Central Provinces will also be sanitary commissioner for those provinces. As already notified in the Military Department Order above quoted, "the deputy surgeons-general of the Eastern Frontier District and of the British Burmah Division will, in addition to their military duties, exercise the civil medical administration of their respective provinces, and will also perform the duties of sanitary commissioners in them." The deputy surgeons-general of the Punjaub Field Force, and of the Scinde District, will also exercise the civil medical administration of those circles. In respect of these civil duties they will be subject to the orders of the provincial surgeon-general.

6. In all provinces for which a separate sanitary commissioner is sanctioned the sanitary department will remain distinct from, and not subordinate to, the medical department. The Sanitary Commissioner of Madras and of Bombay will, in future, have the rank and privileges of a deputy surgeon-general, as soon as he attains twenty-six years' service, or as soon as any officer below him on the list is promoted to the administrative grade; and, subject to the same conditions and limitations, the Sanitary Commissioner of Bengal, the North-Western Provinces, and the Punjaub, will have the rank, pay, and privileges of a deputy surgeon-general. This rule will apply to officers now holding the appointment of sanitary commissioner in these provinces. The five years' tenure of office by a sanitary commissioner in each province will reckon from the date of his attaining the rank and privileges of a deputy surgeon-general. In the appointment of officers to be sanitary commissioners the same principles and procedure will be adopted as in the promotion to deputy surgeon-general in the military and civil administration; but in the selection for such posts knowledge and experience as a sanitary officer will be specially considered.

7. The supervision of the Vaccination Department will form an important part of the duties of the sanitary commissioner in each province. The separate appointment of superintendent-general of vaccination, where it still exists, will be abolished, and this officer as well as the superintendent of vaccination will become a deputy sanitary commissioner under the orders of the sanitary commissioner, who will utilise not only them, but also the whole vaccination staff and the civil surgeons as far as possible in sanitary work.

8. Although the administration of the Indian Medical Department is divided into two branches—civil and military—Indian medical officers will remain as now, military officers, those in civil employ being only lent to the Civil Department, and liable to be called on for military duty in the event of their services being required.

9. Officers holding appointments which are abolished under these orders—viz., the superintendent-general of vaccination, Punjaub, and the sanitary commissioners for the Central Provinces and British Burmah—will receive a personal allowance, making the emoluments of their future offices equal to the pay they now draw.

AN application has been made by the local sanitary authorities of Bournemouth for a provisional order to enable them to purchase compulsorily five acres of land, whereon to erect a fever hospital. The building is estimated to cost from £6000 to £8000.

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THE LANCET.

LONDON: SATURDAY, APRIL 17, 1880.

A NEW Parliament raises new hopes; and this irrespective of political bias, from which we are of course quite free. It would be a sad thing to believe that great political conflicts, and even great political reverses, had no good in them. Tired men get at least a period of repose. They see wherein they have disappointed public expectation and failed to realise their own promises; and another set of men, who have had the advantage of studying all their errors and the enjoyment of a period of rest, come into power. It would almost seem as if legislation nowadays was too arduous and many-sided a business to be conducted by one set of men. Lord BEACONSFIELD is too great a man not to indulge in reflections on the lessons of the election which is now wellnigh over; and though, like other moralists, he may put much down to popular fickleness, he is too wise not to perceive that in the judgment of the country there are some elements of justice. He would probably admit that the domestic legislation of this country since 1874 has been very unsatisfactory: first, that there has been very little of it; and, secondly, that this little has been weak and ineffective. There has been some excuse for this state of matters in the urgent foreign questions which have arisen since the last general election; but the urgency of foreign affairs has not been such as to afford an excuse for a Ministry so powerful as this has been doing so little to promote the domestic welfare of the nation. Both political parties need the lesson which the election teaches. It is amazing how little the keen politician of either side cares for quiet questions of domestic policy—for measures that will make health more secure, and so make life brighter and happier. Take, for example, the question of the water-supply, which has been disastrous to the present Government. It is to the lasting disgrace of both parties in the State that four millions of people have been allowed up to this time to remain at the mercy of grasping companies in the matter of a commodity as needful as light and air, and have had to put up with a short and intermittent supply of comparatively dirty water, for which they have had to pay very dearly. Though the Government cannot be congratulated on its actual proposals for dealing with this question, it is at least entitled to credit for being the first Government to perceive that the water-supply of four millions of people is a question of State magnitude, and as worthy of the attention of a strong Cabinet as the stipulations of a European treaty. Mr. CROSS may comfort himself with reflecting that he has at least raised the question out of its parochial and commercial relations into the category of those subjects which need a statesman's care.

It will be the fault of the next Government if they do not show a very considerable enlargement of view as to the duties of the State. It is to be hoped, too, that we shall see the end of that curious phenomenon "permissive legislation." Let us have either law or freedom. We can understand one or the other, but not the hybrid weakling which is neither one thing nor the other. Where there is no urgent need for restriction of personal action let us have no legislation. Where personal action is used to the disadvantage of dozens or scores of others, by all means let us have law that will powerfully and directly control personal freedom used so selfishly and injuriously. To give a habitual drunkard who is drinking himself and his family into the workhouse and into the grave, "permission" to go into a retreat for curative purposes, is to bring law itself into disrespect, and it is not very much otherwise to give rival examining boards "permission" to combine to form one board, or rate-sparing vestries in their capacity as sanitary authorities, "permission" to make—or not to make—provision for an outbreak of deadly disease. We want the *minimum* of law; the less of it the better, but that little should be strong and effective.

We venture to hope that the new Parliament, and the Government that is to be, will not be behindhand in dealing thoroughly with those great questions of public health which have so much to do with public virtue and happiness. As regards the composition of the new Parliament we shall greatly miss some whom we have ever found helpful and sympathetic. Amongst the members of our own profession whose services in past Parliaments have been most useful, but who are to be allowed to rest, we cannot forget Dr. BRADY and Dr. LUSH. We owe to Dr. BRADY the Act which secured retiring allowances to Poor-law medical officers who spend the best part of their life in the service. And we owe much to Dr. LUSH for his interest during the last twelve years in every question affecting the efficiency and honour of the profession, and, very particularly, the prevention of premature medical legislation, and the thorough representation in successive medical Bills of the questions involved in medical reform. It cannot be doubted that the new Parliament will revive the Select Committee for inquiry into this subject, but we regret to think that it cannot have the presence of Dr. LUSH, and that both Mr. ARTHUR MILLS and Mr. WHEELHOUSE, good medical reformers, will be conspicuous by their absence. The other members of the Committee are either returned or likely to be returned. Mr. MITCHELL HENRY, Dr. CAMERON, and Sir J. T. LAWRENCE have already secured their seats.

There is no reason to think that a Liberal Government will be indifferent to the settlement of this subject. Mr. FORSTER has taken great personal pains to master its details, and the Marquis of RIPON is known to feel very strongly as to the importance of non-permissive legislation for the consolidation of the Examining Boards. He used to be of opinion that this part of the question could be dealt with separately from the constitution of the Council; but the course of events has ruled otherwise, and we may now hope for the help of a new Ministry in passing a great and lasting measure of medical reform.

We are pleased to notice the return of several members of the profession for the first time to Parliament, amongst them Dr. ROBERT FARQUHARSON, of Brook-street, for West Aberdeenshire, and Dr. ROBERT DYCE LYONS, of Dublin. Both these gentlemen are hospital physicians. They are graduates, respectively, of Edinburgh and Dublin, and we

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are sure they can be relied on faithfully and intelligently to represent the views of medical citizens in Parliament.

THE suggestion that the office of President of the Local Government Board should be given to a prominent member of the in-coming Ministry, and that he should be provided with a seat in the Cabinet, is so important, that we make no apology for reverting to it. There has long been a growing sense of the need which undoubtedly exists for an ample and practical recognition of the interests and principles of Public Health as an integral part of State policy. Not only do questions of a specifically sanitary character demand broader and clearer views from the supreme government stand-point; Health, as a factor in progress and as an element of prosperity, requires to be constantly represented in the innermost council of the State, where policy is shaped and the balance between those diverse and often conflicting interests which are likely to be disturbed by any new measure is adjusted. It is too much to hope that Health will ever be represented directly in a Cabinet, but nothing short of representation of some kind in that conclave will satisfy the necessities of the case. It, then, only remains to ask that the particular member of the Government who is officially charged with the control of the public health officers of the country, may be admitted to the position his office claims.

Even if the Health question were not involved in this proposal, there would seem to be cogent and strong reasons for making the claim we urge. The President of the Local Government Board is, in a *political* sense, one of the most important members of the Government. He is, in a very special way, the connecting link between the country as a whole and the Ministry. The Secretary of State for Home Affairs may guess the state of local feeling, but the President of the Local Government Board *knows*, or ought to know, how the population is affected in its localised opinion and enterprise. The fundamental principle of constitutional rule in England is self-government. The President of the Local Government Board is, so to say, the Moderator placed at the head of the multitude of local incorporations of this constitutional idea. The Government, properly so called, is the aggregate and concentration of the self-governments of the nation. These are localised, each district being a state or commune for domestic purposes, and yet the President of the Local Government Board—or the Central Board of the local governments, as it might well be called—is not in the Cabinet! He ranks as a subordinate official, although he, and *he alone*, is the embodiment of the great constitutional principle.

The Secretary for Foreign Affairs is a Minister told off to keep the outside enemies of the country in check, and to assert the international interests of the State. The Secretary for War and the First Lord of the Admiralty are the champion knights of the kingdom acting under the Secretary for Foreign Affairs. The Treasury, the Exchequer, the Home Office, are departments designed for the administration of general business. Not one of these ministries is so directly and peculiarly *representative* as that of the Local Government Board. Probably it is on this very account the President of this department stands so low in the ranks of administrators as to be universally excluded from the council of supreme government. The theory of the Cabinet doubtless is that it should be composed exclusively of representatives of the Sovereign, not of the people! The time has arrived when this senseless tradition should be broken through, and we venture to hope the party which is about to grasp the reins of government will not hesitate to take a step urgently necessary in itself, and sure to be approved by the people. There is nothing unconstitutional in the proposal we now make, though for party purposes, or as a plea for delay, it may be so represented. There could be nothing derogatory to the dignity, still less even approximating an infraction, of the Royal prerogative, in the admission of a representative of self-government to the rank of a Minister. We contend that it would strengthen the stability of the Throne to introduce a Minister into the Cabinet who should be able to give prominence to the wishes of the population as expressed in the local corporations, and whose bearing and actions towards these local corporations should be in a practical sense ministerial and representative of the Crown by something approaching a direct delegacy.

Either the suggestion we have thrown out will be unheeded by those for whose consideration it is intended, or objections will be raised. It has scarcely ever happened that a recommendation made as this has been made produced an immediate effect. That the time will come when it must be adopted we cannot doubt. It would be a graceful concession to the desires of a profession which has been much neglected of late, and a timely recognition of public expediency, if the arrangement proposed were at once carried out. Without a seat in the Cabinet no President of the Local Government Board can hope to grapple effectually with the daily increasing difficulties of the office, and no really strong and able statesman will accept the position unless he is allowed to rank as a Minister. Some step must be taken in this matter before any considerable time elapses, and probably a remedy would have been devised before this but that a most absurd arrangement stops the way. The Lord President of the Council, apparently to make business for that august but not very useful Minister, has been entrusted with certain duties which do not belong to his office traditionally, or, so far as we can see, arise out of its historic functions. If, for example, a plague to man or beast afflicts the country, the Lord President is the dignitary to put it down, although as a matter of fact, if the infliction be human the President of the Local Government Board is the only official who *can* deal with the question practically, simply because the local authorities are under his direct control, and he has his officers of health everywhere; or, if the plague be one affecting cattle, it falls to the Veterinary Department to deal with it! In no case has the Lord President of the Council either the practical knowledge, the machinery, or the local authority indispensable for a powerful effort to stamp out an epidemic disease, or carry into effect a measure of local sanitary reform. Already there have been signal instances of seeming clumsiness and complete failure on the part of this Minister, not the effects of personal inefficiency, but arising out of his official impotence. At best he can only meddle and muddle in sanitary affairs. And in any emergency his interference, or the necessity of appealing to the Lord President for authority, might be productive of the gravest consequences. Prudence requires

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that an end should be finally put to this state of matters. The whole difficulty would be speedily removed if the President of the Local Government Board were admitted to the Cabinet, so that the two Ministers might rearrange their several duties and responsibilities. As it is, we greatly fear the petty jealousy of any duke who may be appointed to the office of Lord President of the Council will militate against the introduction of the nominally subordinate but practically more important administrator into the Cabinet. We point to these difficulties simply to stir the energy of some spirited and patriotic statesmen to grapple with and overcome them. That task should not be impracticable, and the moment is peculiarly well fitted for its accomplishment, while the need was never more urgent than now, or public opinion so fully prepared to endorse the change when once it has been effected.

THE General Order regulating the administrative staff of the civil branch of the Indian Medical Service has at last been published, and we think it is to be regretted that it was not brought out simultaneously with that for the military branch. Such a course would have obviated that feeling of alarm, and those expressions of discontent and anger, which were unfortunately, and, as it now seems, unnecessarily, called forth by the provisions of the first General Order. It appears that the civil medical service is to be administered by three surgeons-general, one in each of the presidencies, and four deputy surgeons-general, with local rank of surgeon-general, so that the Indian Medical Service will only lose two deputy surgeons-general by the reorganisation, and the British service has lost the same number. This loss to the Indian Service will be more than compensated by the grant of the rank, pay, and privileges of a deputy surgeon-general to each of the five Sanitary Commissioners "as soon as he attains twenty-six years' service, or as soon as any officer below him on the list is promoted to the administrative grade." The difference introduced into the system of administration by these measures appears to be that, instead of having a double staff to administer the military medical department, there will be a staff of British officers for that service, and a corresponding staff of officers of the Indian service for the administration of the civil duties. This division of duty will have the good effect of preventing any collision between the two services at times when the necessity for unanimity in action is most required, when the troops take the field. The rules hitherto in force with regard to the promotion and retirement of administrative officers in the military branch will continue in force in the civil; in fact, the medical officers are to be, as at present, military, and when on civil employment are to be considered merely as lent to the civil department, and liable to be called on for military duty when required. Three civil appointments are abolished—the Superintendent-General of Vaccination, Punjab, and the Sanitary Commissioners for the Central Provinces and British Burmah—their duties being transferred to the newly-created deputy surgeons-general; but the present holders of these appointments are to receive a personal allowance equal to the difference between the pay of the present and future officers. It will be seen that the reorganisation affects the prospects of the officers of the Indian Medical Service to a very slight extent, and there can be little doubt that with the numerous lucrative civil appointments open to them it will still continue to be the favourite service, and to command the greatest number of candidates. We speak of the service as it now exists under the rules laid down in these two General Orders. It remains to be seen whether the British Government will adopt the recommendations of the Simla Military Commission, and what effect these, if adopted, may have on the medical department; but we have not much fear of any change being introduced which will injuriously affect this very important branch of the Indian service.

WE have now before us the report[1] of Dr. AUGUST HIRSCH and Dr. M. SOMMERBRODT, who, in conjunction with Dr. B. KUSSNER of Halle, formed the medical commission sent by the German Government into the province of Astrakhan to make inquiry concerning the outbreak of plague there in the later months of 1878 and the beginning of 1879. They reached the seat of prevalence of the disease at an earlier period than the British medical commissioners (Mr. W. H. COLVILL and Dr. J. F. PAYNE), and although, like them, too late to make personal acquaintance with the disease, they were more fortunate in obtaining details as to its history, character, and progress. They had, it would appear, larger opportunity of access to documents, and of communicating with individuals who had more or less intimate acquaintance with the facts of the outbreak. This is manifest in the more elaborate description in which they are enabled to indulge, and the more precise information they afford as to the symptoms and progress of the malady. Substantially, however, they add little to what Mr. COLVILL, Dr. PAYNE, and others have made known to us of the general history and characters of the outbreak. They agree with the British medical commissioners in accepting the facts that the disease broke out in October, 1878; that it continued until the end of January, 1879; and that it appeared in six places, but in one only—namely, Vetlianka—assumed an epidemic form. But when they enter upon the discussion of the origin of the malady, they diverge in opinion from Messrs. COLVILL and PAYNE. These gentlemen were unable to accept the theory of transmission of the infection of plague from Resht or elsewhere to the banks of the Volga. Mr. COLVILL saw in the local conditions of the Volga, at the locality affected (these closely corresponding with the conditions under which plague had been observed in Mesopotamia), a source of origin; and Dr. PAYNE, while not altogether disagreeing with this view of the subject, expressed a much more guarded opinion upon it. Messrs. HIRSCH and SOMMERBRODT, rejecting the theory of local origin, are inclined to believe that the disease was brought to the Volga by infected articles of clothing carried into the district by Cossacks returning from the seat of war in Asia Minor. The difficulties in the way of accepting this theory appear to us well-nigh insuperable. The fact is, in regard to this question of origin of the outbreak, that evidence which would help to a definite conclusion is not as yet forthcoming. And this is in truth

[1] Mittheilungen über die Pest-Epidemie im Winter 1878-1879 im russischen Gouvernment, Astrachan. Berlin: Carl Heymann's Verlag. 1880.

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what both the British and German Commissioners say when their words are reduced to their simplest expression. The foreign medical commissioners were on the ground too late for a successful elucidation of a question of so much difficulty, and which had to be worked out among a population whose language was unfamiliar to them, and under considerable restrictions of movement. Whether the Russian medical authorities, when their report on the outbreak is published, will be able to throw light on this subject, seems very doubtful indeed. We are thankful, however, to have in this report of Drs. HIRSCH and SOMMERBRODT, the most complete statement of the facts of the outbreak which has yet appeared. A high compliment is paid by the Commissioners to Count LORIS MELIKOFF for his energy in stamping out the relics of the plague on the Volga, but as the disease was rapidly dying away when the Russian Government first interfered for the arrest of the outbreak, it does not clearly appear that either measures of quarantine or measures of hygiene exercised any real effect in limiting the malady to the district thus infected, or in favouring its extinction.

Annotations.

"Ne quid nimis."

THE DISPUTE AT GUY'S.

IN the current number of the *Nineteenth Century*, Miss Margaret Lonsdale, the authoress of "Sister Dora," a work which has attracted a good deal of attention of late, gives to the public her version of the dispute now existing between the treasurer and the staff of Guy's Hospital concerning the nursing arrangements. In doing this, Miss Lonsdale has succeeded in widening the breach existing between the lay and medical authorities, and has given additional strength to the position taken up by the latter. Miss Lonsdale states that the medical staff are resisting the introduction of "the new system of nursing" which replaced the old system in November last. In the course of her article, contrasting the two systems of nursing, she makes the following accusations against Guy's Hospital, either directly or by implication:—

1. That Guy's has hitherto been nursed to a great extent by women of the charwoman class, into whose moral character no adequate inquiry was made, who were wholly without training in the matter of nursing, who spent their leisure time "too often, alas! in the nearest public-house," whence they returned "at the regulation hour more or less the worse for drink." "I am far from saying," says the writer, "that every nurse under the old system was drunken or dissolute, but I do say that, as a rule, their moral character was unsatisfactory, and that the long hours of work, with no regular interval allowed during the daytime for proper air and exercise, together with the practice of eating their food in the impure air of the wards, render the supporters of the old system largely responsible for the low moral, as well as physical, condition of the nurses who work under it."

2. That the night nurses slept whenever they could, "regardless of the wants and dangers of their patients, of whose pillows and blankets they often made free use for their own convenience and comfort, and helped themselves from the patients' private store of food, and, whenever it was practicable, from the patients' allowance of wine and spirits as well." (What, it will be asked, is the advantage of the free press of these enlightened times if such scandals could go on uncontrolled!). Further, that they did their own "washing," during the hours of the night, and converted the ward into a drying ground; and that for the duty of night nursing "very aged and feeble, to say nothing of hopelessly drunken, women were considered fit."

3. That both day and night nurses were under the control of a "woman called the 'sister,'" who was little more than an experienced housekeeper, who, among other duties, "kept and gave out the wine and spirits ordered by the doctor, and either partook of them or not herself as she felt disposed." "It was unusual for a 'sister' to be moved from one ward to another, and therefore, in course of time, if she were at all an intelligent woman, in spite of a want of general education and a total absence of any special training in the work of her calling, she would become expert in various ways, especially in attendance upon the medical staff, and in prompt and skilful obedience to their orders. *She would learn to watch critical cases in the doctor's absence, and to act with ability under his orders.* [The italics are our own.] After some years at her work it would be strange indeed had she not accumulated a certain amount of experience in the treatment of various diseases of the particular kind she may have had to deal with in her own ward. But all this time she must have remained in absolute ignorance of the first principles of nursing the sick, for she had never seen nursing practised, much less had she been taught to nurse herself."

4. That the doctors go so far as to say that "if the nurses were drunken and dissolute it was of no consequence," &c.; that doctors are not necessarily able to tell good nursing from bad, and that because they want the sisters in the wards when they make their visit they object to their getting air and exercise.

5. That doctors object to the new system, because they fear that public attention may be drawn "to practices and experiments which are better not mentioned beyond the walls of a hospital." That they dislike the moral restraint which the presence of the modern "sister" imposes upon them, and they object to be obliged to "consider either their own manners or the feelings of the nurses." "The presence of refined intelligent women in the wards imposes a kind of moral restraint upon the words and ways of both doctors and students, which some of them desire to get rid of, and I have no hesitation in saying that it is against this, as much as anything else, that they are now at Guy's Hospital resisting with all the might they possess. Yet this unconscious restraint might in time prove powerful to smooth down the roughnesses of medical students, who are, as a class, universally acknowledged to be uncouth."

6. That the presence of the medical staff in the wards is often "a hindrance of a serious kind to the nurse's work;" that students dare to go behind screens without asking the permission of the officiating nurse, and regard nurses as machines for answering questions and clearing up "any mess they may choose to make." That "familiarity" existed between house doctors and nurses, and that this "contributed largely to the low tone of morality for which the wards were remarkable."

This is the indictment which Miss Margaret Lonsdale brings against the physicians, surgeons, students, sisters, and nurses of Guy's Hospital. In every class of persons there will be a certain number who are ignorant and vicious, but we cannot think that the public will regard Miss Lonsdale's article as anything more than an angry tirade, which is not meant to be taken literally. It is easy to gather up hearsay and bits of scandal and to write as if faults were the rule and not the exception; but such a course is not wise, is not charitable, and it will be repudiated by many of the followers of Florence Nightingale.

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Miss Lonsdale is a clever writer, but she is impetuous and lacks judicial spirit. The article demands no serious answer from us. We only hope that the treasurer and governors of Guy's Hospital will, one and all, read it carefully, and that they will then appreciate the dangers of the sentimental course upon which they have entered.

THE ANNUAL "CHANGE."

THE season, so far as it is governed by the Session of Parliament, will probably be late this year; if, indeed, it be possible to enter upon serious business after the commotion and delay which have occurred. It may not be a regretful consequence of this state of things if the effect should be to postpone the annual "change," to which most persons are already looking forward, to a little later in the year than custom determines. Of course, the time of movement for the multitude of sportsmen and their families will be governed by the festival of St. Grouse, which occupies a fixed place in the calendar; and as this particular saint is much worshipped by those who owe their first allegiance to St. Stephen, the session of Parliament—however important or urgent its responsibilities may be—must be arranged to suit the grouse. The postponement is not, therefore, likely to be for long. If it has the effect of enabling the ordinary class of Londoners to enjoy their "outing" some six or eight weeks later than usual, the experience is not unlikely to be both pleasing and satisfactory. We manage our holidays badly in England; some go too early, before the long dragging trail of the winter has been obliterated by summer suns; others contrive, or are compelled, to go away in September and October, when London is most enjoyable. A considerable proportion of the ordinary population of the metropolitan district have no notion how bright and cheery the parks, and even the streets of the great city, are during the months in which fashion has ordained that the upper and the upper middle classes shall desert the capital. Later on, in November, when the wandering great return to their homes, they find ample cause for complaint as to the climate of London, and regret their inability to remain out of it. Could the holiday season be so arranged that we left London in October or November for, say, six weeks, and took a second holiday of the same length in the spring, we should succeed in making the best of life by living in the best places at the best times. The effect on both health and spirits would be beneficial, because it would sometimes happen that we saw other great cities—for example, Paris and the Continental capitals—when their ordinary inhabitants were at home! As it is, we are wont to find the normal elements of social life absent in our travels abroad. The conditions of climate are not so equable over these isles and the adjacent Continent, that it is impossible to arrange the interchange of visits, so that the multitude of "change" and health seekers may be advantaged in respect both to society and sun.

ENTERIC FEVER IN SHEFFIELD.

THE prevalence of enteric fever in Sheffield has during the past few months assumed epidemic proportions. During last year it appears from the returns of the Registrar-General that 91 deaths were referred to fever, principally enteric, within the borough, of which 36 were registered in the fourth quarter. In the first thirteen weeks of this year, ending 3rd inst., no less than 64 deaths from fever were recorded, and six other fatal cases were returned last week; these figures imply, on the assumption that the proportional mortality of the disease has not exceeded the average, that since the beginning of the year there have been more than 700 cases of enteric fever within the borough. The fatality of fever in England continues to decline both steadily and rapidly, and during the last quarter its annual death-rate in twenty of the largest English towns averaged only 0·25 per 1000; in the several towns it ranged from 0·04 and 0·05 in Brighton and Wolverhampton, to 0·40 and 0·84 in Liverpool and Sheffield. Thus the death-rate from fever in Sheffield last quarter was more than twice as great as that which prevailed in Liverpool, the town with the next highest rate. The annual rate of mortality from all causes in Sheffield has for some time been remarkably low, and averaged but 21·6 in the first quarter of this year, against 25·5, the average rate in the twenty towns. It may be presumed, therefore, that the recent excessive number of fever deaths in Sheffield is due to a specific outbreak, the causes of which we trust will be carefully investigated. We may take this opportunity to note that so far as we know no annual report on the sanitary condition of Sheffield has been published since the late Dr. Griffith's report for 1877. This is subject for regret, since the Sheffield reports published by the late medical officer were valuable contributions to urban vital statistics. Sheffield is the only large English town from which we have been unable to obtain a health report for 1878. We trust that Dr. Hime intends to publish a bi-annual report for 1878 and 1879, in order that there may be no break in the series of statistical reports for the borough.

SALE OF POISONS.

ONCE more the attention of the public has been directed to the notorious abuse of the Sale of Poisons Act; this time by Mr. Henry Hubbard, vice-president of St. Mary's Hospital. Having recently been called to a case of death from an "overdose of chloral taken through misadventure," he practically tested the facility with which this and allied drugs are obtained, by sending round one of his youngest children to various chemists and grocers, and found no difficulty in thus obtaining from them, without any restriction or question whatever, those poisonous drugs. The reason for the facility lies in the fact, repeatedly pointed out in these columns, that certain special preparations of chloral, &c., are protected by the Government stamp as patent medicines. Mr. Hubbard has done good service in again drawing attention to the anomalies of our law—which allows the protection of a patent to materials which are poisonous in any guise,—to the advantage it may be of the public purse, but to the great danger of individual members of the community.

DIPHTHERIA AND TYPHUS IN RUSSIA.

FROM the 27th January to the 13th March, 269 villages were reported infected with diphtheria in the Government of Poltava. The population of these villages amounted to 451,937, and during the period referred to there were 908 new cases of diphtheria, of which 520 were fatal. Diphtheria is still seriously prevalent in Voronege and its suburbs. The hospitals are said to be encumbered with patients. The disease has broken out in the government of Yénisseisk. The larger number of the villages are infected, and there is great want of medical aid and of hospitals. From the 6th to the 13th March there were 730 deaths recorded in St. Petersburg (475 males and 255 females). Typhus caused 22 per cent. of the mortality. The deaths reported from maculated typhus were 64 in number.

In a sitting of the Medical Society on the 26th March, Professor Andreïeosky read a report on hygiene, and particularly on the hygiene of schools. He spoke highly of the hygienic regulation of English schools, described this as "une véritable perfection," and as the envy of other nations of Europe!

At Kharkov a special course of training, of three weeks'

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duration, has been organised for sisters of charity. Three detachments of sisters have undergone this course already, and a first detachment, ten in number, after an examination, has been despatched to give assistance in localities where diphtheria is prevalent. A second detachment, consisting of twenty-eight sisters, will presently follow. A third is being prepared for examination. The course of instruction is for the most part practical, and given in the hospitals. During the progress the sisters receive four lessons in anatomy and physiology, three in pharmacy, three specially relating to diphtheria, and eighteen in hygiene and disinfection. If the sister passes a successful examination she receives a certificate stating her fitness to join a sanitary detachment.

BROWN-SEQUARD ON THE TRANSFER OF SENSIBILITY.

AN interesting communication was made to the Académie des Sciences at its last meeting by Dr. Brown-Séquard, on the substitution of hyperæsthesia by a lesion of the nerve centre, for anæsthesia produced by a previous lesion. In animals of three species—dogs, guinea-pigs, and rabbits—especially in the latter, he first divided one-half of the pons Varolii immediately behind the middle cerebellar peduncle. The effect of this lesion varied, even as regards sensibility. Frequently, however, especially in rabbits, the same effect was produced as by a hemisection of the spinal cord—more or less considerable hyperæsthesia on the side of the lesion, and more or less marked diminution (sometimes complete loss) of sensibility on the opposite side. Each change was most marked in the hind limbs. He then divided the opposite half of the spinal cord at the level of the sixth dorsal vertebra, and quickly found that after this second lesion the corresponding hind limb, which had lost sensibility after the cerebral lesion, was not only sensitive but hyperæsthetic, while the other limb, hyperæsthetic after the lesion of the pons, became anæsthetic after the second lesion. The hyperæsthesia in the limb on the side of the spinal lesion was as marked as in an animal in which the same section had been made without any previous lesion of the pons.

In another series of experiments, after having divided the right lateral half of the brain at the level of the anterior extremity of the cerebral peduncle, and having found a more or less considerable diminution (and sometimes complete loss) of sensibility in the limbs of the opposite (left) side, he divided the left half of the medulla in two rabbits, and of the spinal cord in six others. He then found hyperæsthesia in the left hind leg, which had previously been anæsthetic, and anæsthesia in the right hind leg, which had been hyperæsthetic. Here, as in the first set of experiments, the second lesion not only removed the effect of the first, but substituted the opposite condition.

If the results of these experiments are compared with the remarkable effects, in which anæsthesia in man, even due to organic disease of the brain, has been cured by the application of galvanic currents, and the interesting observation of the transfer of anæsthesia and hyperæsthesia, published by Charcot, Dumontpallier, Debove, and others, Dr. Brown-Séquard believes that we must reject the notion that the anæsthesia produced by an encephalic lesion necessarily depends on the alteration or destruction either of perceptive centres or of conductors transmitting the sensory impression to these centres. The results of these experiments can, he adds, be readily explained by the views he has previously advanced. Certain parts of the cerebro-spinal centre possess a remarkable power to abolish the functions of other parts of the centre by an "inhibitory" influence. The same parts, or others, possess also another power, hitherto unstudied, by which an irritative lesion may augment the function of other parts more or less distant, by an influence which he terms "dynamogenic." The experimental facts, for instance, may be explained by regarding the anæsthesia as the result of an inhibitory influence exerted upon the sensory elements of the spinal cord, and the hyperæsthesia as the effect of a dynamogenic influence upon the same elements. Other conclusions which he believes follow are—(1) That we have no right to infer from the appearance of anæsthesia, after an encephalic lesion, that the conducting tracts or sensory centres are injured. (2) That in spite of his early observations, which seemed to prove a decussation of the sensory part in the spinal cord, this theory must be discarded. (3) That one-half of the pons suffices to conduct the sensation from both sides of the body.

HEALTH IN SCHOOLS.

WE are anxious that it should be understood by those managers of schools who have already favoured us, or are now sending communications with particulars of the structural and domestic arrangements of their establishments, the dietary supplied to their pupils, the hours allotted to study, recreation, and sleep, together with other matters of interest—that the information supplied will be deemed confidential in so far as the writers may desire that it should be so treated. Our object will be to draw general inferences and cull suggestions from the data supplied; and if it appears expedient, we may ask for such further statements as seem necessary to make our summary of the facts complete. It will greatly help the undertaking if school-keepers and teachers will send their replies at their early convenience. We are prepared to receive communications from schools where boarders are taken from the number of six upwards; and shall be especially glad to be informed on all points relating to the mental and physical discipline of the pupils.

MEASLES FATALITY IN PLYMOUTH.

THE epidemic of measles which has prevailed in Plymouth since the beginning of November last shows no sign of abatement. During the last seven weeks of 1879, 44 fatal cases were recorded within the borough, and in the thirteen weeks ending the 3rd inst., 136 additional cases were registered. Plymouth suffered from severe epidemics of measles in 1871, 1874, 1876, and in 1878, but the epidemic now prevailing is considerably more fatal than any in recent years. During the ten years 1870–9 the annual death-rate from measles in Plymouth averaged 0·71 per 1000 of the estimated population, whereas the average rate in the twenty towns did not exceed 0·51. With reference to this exceptional fatality of measles in Plymouth, it cannot be without interest to consider the evidence which the general mortality statistics of the borough afford of its sanitary condition. During the ten years under notice the average annual death-rate in the borough was equal to 22·2 per 1000, and rose from 22·0 in the first, to 22·4 in the second half of that period. Thus the Plymouth mortality in the last quinquenniad exceeded by 2 per cent. that which prevailed in the preceding five years. This fact becomes the more unsatisfactory when we consider the steady decline which has recently taken place in the mortality of our largest towns. In the twenty large English towns dealt with in the Registrar-General's weekly return, the average mortality during the past five years was lower by 4·7 per cent. than that which prevailed in the preceding quinquenniad. Indeed, if we exclude London, where the decline of mortality has been very slight, the decrease in the nineteen provincial towns was equal to 9·5 per cent. The increased mortality in Plymouth side by side with the large decline in most other towns, deserves the serious consideration of the urban

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sanitary authority and of the ratepayers of Plymouth. It may be well to notice another fact which affords evidence of retrogression in the health of Plymouth. Infant mortality, which in the nineteen provincial towns was more than 12 per cent. lower in the last than in the previous five years, showed a decline of but one per cent. in Plymouth. The proportion of deaths under one year, to births registered in Plymouth was equal to 161 per 1000 during the five years 1870—4, while it was 160 in the following five years ending 1879. The extent to which it is possible to control zymotic fatality in urban populations is one of the most important and interesting of sanitary questions, and the unsatisfactory character of recent mortality statistics in Plymouth suggests an intimate connexion between the constantly-recurring measles epidemics in that town and acknowledged defects in its sanitary condition.

THE LATE DR. HEATON.

THE following minute of the Council of the Leeds School of Medicine has been forwarded to us for publication:—"The Council desires to record its deep sense of the great loss it has sustained in the death of Dr. J. D. Heaton, whose valuable services were devoted to the Leeds School of Medicine with untiring zeal for a period of thirty-six years. Dr. Heaton lectured successively upon Botany, Materia Medica, and the Practice of Medicine; and three times occupied the presidential chair. For the last fifteen years he fulfilled the onerous duties of treasurer to the school, in which capacity his mature judgment and watchful supervision conduced very materially to the success of the school. The Council further beg to tender to Mrs. Heaton and her family their deepest sympathy with them in their recent bereavement."

SCHOOLS AND INFECTIOUS DISEASE.

A DIFFICULTY in the way of enforcing the absence from school of children attacked with infectious disease has arisen from the fact that such absence deprives the little sufferers of the prospect of rewards for regular attendance. This difficulty has been met, so far as regards Liverpool, by the energy of Dr. Taylor, the medical officer of health, through whom the question has been brought under the notice of the Liverpool Council of Education. Dr. Taylor has received a letter from Mr. Hance, clerk of the School Board, giving extracts from a communication from the Council, to the effect that such enforced absences would not in future be counted against the children in computing their claim for premiums.

DIABETIC HYPERMETROPIA.

THE ocular complications of diabetes are well-known, and diabetic cataract, retinal hæmorrhages, optic neuritis, and paralysis both of the intrinsic and external muscles of the eye are often met with. Dr. Landolt contributes an article to *El Siglo Medico*, of Madrid, and calls attention to a symptom which has hitherto attracted but little attention. A woman, aged sixty-one, consulted him with reference to her sight. Long vision had always been good, and she had also seen well at a short distance with the aid of glasses, which, however, had now become inefficient. Upon examination he found that she had a hypermetropia of 1·25 dioptrics (= old No. 30), visual acuity 0·5, presbyopia 5 dioptrics (old 8). With these glasses she saw well, so that the change of the sight depended upon a change in the refraction, rather than upon an alteration of the visual acuity. This change had occurred after a fall six months before, and in consequence of which she had suffered from pains in the back and hips, as well as from glycosuria. At the time of consultation there were 229·4 grammes of sugar in 2630 cubic centimetres of urine analysed. The specific gravity was 1040. Fifteeen days later the hypermetropia was only 0·75 dioptrics (old 50), and after four months 0·25 (old 156). At the end of five months it had entirely disappeared. The patient had become emmetropic, as before, and had returned to her old glasses. Coincidently with this increase of the refraction the quantity of sugar in the urine diminished, and when the hypermetropia had become 0·75 dioptrics it had disappeared altogether. The author attributes this diminution of refraction (hypermetropia) to the infiltration of sugar into the vitreous humour, in consequence of which the index of refraction is increased, whilst the general refraction of the eye is lessened.

RUSSIAN HOSPITALS.

AT a recent meeting of the Society of Public Hygiene, St. Petersburg, Dr. Andrievsky raised the question of the reorganisation of Russian hospitals, and the adoption of a new method of dealing with the patients sent to them. It appears that the hospitals too frequently contain incurable cases, which might equally well be treated at home, to the serious limitation of the accommodation for cases of acute sickness. He suggests the organisation of a system which would admit of the incurable securing medical care at their own houses. To the objection that many of these cases consist of very poor persons who have sought refuge in the hospitals from their misery, he replies to the effect that the function of the hospital is the relief of sickness and not of pauperism, and that the latter should be otherwise provided for.

A considerable amount of overcrowding is reported in the hospitals of St. Petersburg, owing to the increased demands upon them from the prevalence of infectious diseases in the capital, notably typhus. It is stated, moreover, that from the central hospital bureau, at which persons have to apply for admission, being situated in one of the hospitals, opportunities occur for the dissemination of infectious diseases which should be avoided, and the establishment of an office detached from any hospital is advocated.

HOME FOR FEMALE INEBRIATES.

LORD SHAFTESBURY appeals on behalf of the St. James's Home for Female Inebriates, and the appeal is made in the powerful form of which his lordship is a master when great sins or evils have to be dealt with. The reclamation of habitually drunken women is certainly a very difficult matter, and especially so when the initiatory steps can be taken only with their consent and concurrence. But Lord Shaftesbury tells us that the most apparently incorrigible inebriates have submitted of their own accord to the rigorous, though kind, discipline of this home, and, further, that they are fully aware of the benefits they receive. This is important testimony. But it will need to be made more specific, and much multiplied, to convince us that the law, in its present weak form, will be of much use. We shall be glad to be supplied with evidence on this subject.

FARR TESTIMONIAL FUND.

A MEETING of the executive committee, charged with the raising of a testimonial in honour of Dr. William Farr, C.B., F.R.S., took place on Thursday afternoon. Now that the general election is over, an appeal will be made to the profession, the learned societies, and the public in general, in furtherance of the object in view. A first subscription list will shortly be published.

THE SICK CHILDREN'S HOSPITAL.

THE twenty-eighth anniversary of the Hospital for Sick Children, Great Ormond-street, was held on the 8th inst., at Willis's Rooms, Sir James Paget in the chair. The number of in-patients last year was 1114, of out-patients

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12,300. The Convalescent Home in connexion with the institution has received 3302 children during the past ten years. Sir James Paget's appeal on behalf of this excellent charity was characterised by his usual eloquence, and, fortified by remarks from Lord Aberdare, Viscount Gort, Sir R. Wilbraham, the Bishop of Rangoon, Dr. Dickinson, and Dr. Ord, was responded to by the announcement of subscriptions amounting to nearly £2000.

HOWELL v. WEST AND JONES.

THE trial of the action brought by Dr. Howell nominally against the head master and the medical attendant of the Royal Medical Benevolent College at Epsom, for breach of contract in respect to the care and treatment of his son, who recently died of scarlet fever at the school of this institution, not having been concluded at the moment of our going to press, we are compelled to leave over a summary of the evidence, and to reserve comment until next week.

THE LATE DR. SHARPEY, F.R.S.

WE regret to announce the death of Dr. William Sharpey, F.R.S., the well-known Emeritus Professor of Physiology in University College, London. Dr. Sharpey had been residing at Hastings for some months on account of bronchitis, and returned to London about a fortnight ago. He took cold at the beginning of last week, and died, after a few days' illness, on Sunday last, the 11th inst., in his seventy-ninth year. On Thursday afternoon the corpse was taken to University College, where it was met by a large number of distinguished persons, and thence to Euston Station to be conveyed to Arbroath for interment. The *cortége* included about fifty private carriages. We hope to publish a sketch of his long and useful life in our next issue.

A REPORT prevailed in Dublin last week that some uncertainty existed in reference to the validity of Dr. Lyons' election for that city, on the ground that when elected he held an appointment under Government. Dr. Lyons is physician to the Richmond Hospital, for which he receives a salary from the Parliamentary Grant. There seems to be some misapprehension as to the law on this point. Servants of the Crown, with certain exceptions, may sit in Parliament; but the act of accepting an office after election voids the seat. When, therefore, a candidate holds his appointment *before* return to Parliament his election is not affected by it. When a member of Parliament accepts an office under the Crown he is disqualified, but may seek re-election and sit on a new return, as is the practice with members of the Government.

A TABLET in memory of Surgeon-Major Shepherd, who was killed at Isandula, has recently been placed in the Church of Leochel-Cushnie. The tablet, which was prepared by Messrs. Macdonald, Field and Co., Aberdeen, is of oblong shape, and is exceedingly tasteful in design. It bears in neat lettering the following inscription:—"In memory of Peter Shepherd, M.B., University of Aberdeen, Surgeon-Major, Her Majesty's Army, born at Craigmill, in this parish, on 25th August, 1841, who sacrificed his own life at the battle of Isandhlwane, Zululand, on the 22nd January, 1879, in the endeavour to save the life of a wounded comrade. Erected by his friends and brother officers."

AT a recent meeting of the board of guardians of St. George's, Hanover-square, a letter was read from the Commissioners in Lunacy in reference to the want of asylum accommodation for lunatics in the county of Middlesex. In the event of the county asylums and licensed houses being reported as full, the Commissioners fear that accommodation will scarcely be found nearer than the Northampton County Asylum. They agree with the guardians of St. George's Union in thinking that many cases exist in all three asylums for Middlesex of old demented people and others who would be properly taken care of in well-regulated workhouse infirmaries. The discharge of such patients is a matter which would probably be best secured by regular visits of a committee of guardians of every union to the asylums. They should take with them their own medical officer (16 and 17 Vic., cap. 97, sec. 65), and confer with the medical superintendent as to the suitability of particular cases for treatment out of an asylum.

THE Board of Trade inquiry into the formation of banks at Barking and Crossness, alleged to be caused by the outfalls of sewage, and to be obstructive to navigation, has now terminated, having occupied twenty-five days. Sir Charles Hartley sat as umpire, and Mr. F. J. Bramwell and Captain Galton as arbitrators, the latter for the Thames Conservancy Board, and the former on behalf of the Metropolitan Board of Works. After hearing the reply of Mr. Pope, Q.C., on behalf of the Thames Conservancy Board, the umpire said he and the arbitrators would, after having carefully weighed all the evidence, report, if possible jointly, to the Board of Trade.

AT a meeting of the Board of Guardians of St. Albans, attention was called to the excessive mortality among infants during the past year in the sanitary district, as shown by the report of Dr. Saunders, medical officer of health. At Tring the death-rate of infants under one year of age was reported to be 140 per 1000. The matter was referred to Dr. Saunders for further report.

DR. TIDY, analyst for Essex, whilst reporting favourably of the food sold in the county as regards its genuineness, echoes an objection made by other analysts as to the method of purchasing samples. He thinks more satisfactory results would be obtained if private individuals exhibited a greater interest in the efforts made to put a stop to food adulteration.

WE understand Mr. Lister, F.R.S., has consented to preside at the annual distribution of prizes at the Bristol Medical School, on Monday, May 3rd, at 4 P.M. On that day he will also give a demonstration at the Royal Infirmary; and on Tuesday, May 4th, another at the Bristol General Hospital, at twelve o'clock.

THE twenty-seventh report of the Charity Commissioners for England and Wales contains some very strong observations by the Commissioners, deprecating investments on mortgage by charity trustees, and advocating the placing of funds affected by a charitable trust in Government securities.

MR. JOHN BRIGHT, M.P., has been nominated as the next Liberal Lord Rector of Glasgow University, and the right hon. gentleman has intimated his acceptance of the nomination. The term of office of Mr. Gladstone, the present Lord Rector, will expire in November next.

WE learn from the Russian journals that H. E. Count Orlof-Davydow, who is a graduate of the University of Edinburgh, having appeared for the purpose before the British ambassador, acting as a justice of the peace, has recorded his vote in favour of Professor Lyon Playfair.

THE post of Honorary Surgeon to Her Majesty the Queen in India, vacant by the death of Surgeon-General Arnott, C.B., has been conferred upon Surgeon-General Hunter, M.D., Bombay Medical Department.

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SIR WILLIAM JENNER, Bart., will take the chair at the twentieth festival dinner of the Royal Medical Benevolent College, to be held at the Langham Hotel on the 28th inst.

DR. W. B. CARPENTER, the representative of the University of London in Firth College, Sheffield, has resigned his position owing to ill-health.

SURGEON-MAJOR J. M. CUNNINGHAM has been appointed Surgeon-General in medical command in India, in succession to Dr. Beatson.

THE district medical officer has reported an increase in the number of cases of whooping-cough at the Norwood parish schools.

MR. G. PIZEY, M.R.C.S., of Clevedon, has, says the *Bristol Mercury*, been stricken with paralysis.

A MEDICO-SANITARY PILGRIMAGE TO MECCA.

THE veil which has hitherto shrouded the sacred city of Mahommedanism from the familiar knowledge of the unfaithful is being withdrawn, and that in a manner and after a fashion which was unlooked for. The function of adventurous travellers, such as Burckhardt, Burton, and Maltzan, so far as it concerns the central spot of the Mahommedan world, will presently be at an end, and we have promise of becoming early acquainted with the innermost recesses of the sacred city, habits of life of its population, and proceedings of the pilgrimage, from the pens of Mahommedan writers themselves. It is no new thing that the faithful should commit to paper an account of their pilgrimage, as in the instances of the Nawab Sikander Begum of Bhopal, and Hafiz Ahmed Hassan, but their descriptions have been looked upon by the unfaithful rather as literary curiosities than as helpful to that knowledge of Mecca and its sister city in holiness, Medina, which the Christian of the "special correspondent" epoch craves for. But a different sort of author has now entered the field of letters, the English-speaking Mahommedan, cultivated in Western medicine, and capable of judging of the events of the pilgrimage, and of the place to which it is directed, in other than their religious aspects. How this has come to pass is not the least interesting part of the story.

When, in 1865, cholera, radiating from Mecca, spread for the first time in the history of that disease by way of the Red Sea into the basin of the Mediterranean and into Europe, the governing Powers of the Continent discovered that under the altered and altering relations of the traffic with the East by way of Egypt, and its increasing acceleration, the pilgrimage had become a great danger to the Continent, and the holy land of the Hejaz a sort of half-way house for cholera in its migrations by the sea route from India. An International Sanitary Conference held at Constantinople in 1866 formulated certain notions as to this newly-ascertained danger, and each subsequent pilgrimage to Mecca has been carefully watched by the Powers on the Mediterranean littoral in view of cholera or plague, and elaborate measures have been instituted by the Ottoman and Egyptian Governments, the governments most immediately concerned, for the sanitary regulation (much needed) of the pilgrimage, and the arrest (if practicable) of any threatened extension of disease by the returning pilgrims from the sacred cities and the Hejaz. Every year since 1865 a medical Commission has been despatched from Constantinople to the Hejaz to regulate and amend the sanitary conditions under which the rites of the pilgrimage have to be performed there, and generally to give such medical assistance as may be needed by the pilgrims. An Egyptian medical man is attached to this Commission, and its proceedings appear to be reported at the close of each pilgrimage to both the Ottoman and Egyptian Governments, but the report is not made public. The Mahommedan population of India under British rule contributes a large proportion of the pilgrims who each year make the pilgrimage, and we learn from Captain Burton, and more recently from his wife, Mrs. Isabel Burton,[1] that India is one of the chief contributors of impoverished pilgrims to the pilgrimage. India, moreover, as the "home of cholera," is looked to as the prime source of danger from that disease; and although she led the way in endeavouring to subject the pilgrims and the pilgrimage, so far as this fell within her power, to sanitary regulation, she is not regarded either by the Ottoman or the Egyptian Governments, nor generally it may be said by the Governments of the Continent, as represented at the Constantinople Conference of 1866, as having done all she might have done to diminish the chances of the spread of cholera from her shores in the track of pilgrims bound for Mecca. There would appear to have been a sort of simmering discontent with India in this matter since 1866, and at length the Government of India has taken the course of despatching a medical commissioner to Mecca, to report upon the sanitary relations of the pilgrimage, more especially as it concerns British Mahommedan subjects.

In the autumn of 1878 Assistant-Surgeon Abdur Ruzzack, a Mahommedan gentleman in the Indian Medical Service, was directed to visit Mecca, and to study the whole circumstances of the pilgrimage—at the starting-point from an Indian seaport, on the voyage out and home, during the journey in the Hejaz, the stay in Mecca and Medina, and during also the rites of the pilgrimage. This he did; and in the course of last year he reported fully on the subject, adding to his report a series of detailed recommendations for the better regulation of the pilgrimage as affecting British Indian Mahommedan subjects. The report, written in excellent English, is admirable from the acute and comprehensive observation it displays. It presents us for the first time with an adequate account of the sanitary circumstances under which the pilgrimage is performed and the sanitary condition of the sacred cities of the Hejaz; and, apart from this, it is of considerable value for its description of the rites of the pilgrimage. There would appear, from the report, to be no doubt that the Government of India is really not so careful as she might be of our Mahommedan fellow-subjects in pilgrimage, and that she has been less heedful of the fears of the Ottoman and Egyptian Governments and other Powers of the Mediterranean littoral than was to be desired. Abdur Ruzzack shows that she has left numerous things undone, for the better regulation of the pilgrimage, which she might be reasonably asked to do; and he effectually does away with the objection that further interference with it is undesirable, lest such interference should arouse religious prejudice.

Abdur Ruzzack arranges his recommendations, first, (*a*) with reference to the pilgrim previous to embarkation, and (*b*) after his embarkation, and during the voyage: and next, (*a*) with reference to the arrival at Jeddah and the journey to Mecca; (*b*) with reference to the stay at Mecca, and the journey during the rites to Arafat and Mina; and (*c*) with reference to the journey to Medina and back. On each of these subjects he has much to say, but we may not do more than touch upon a few salient points. He proposes that the pilgrim should not be permitted to embark until he has been examined as to his health by a health officer, and until he has given evidence of possessing sufficient means at command to meet the costs of the pilgrimage. It is difficult to over-rate the importance of these recommendations. The first would remove the objection strongly urged by the Conference of 1866 regarding the omission by the Indian authorities to give heed to the state of health of pilgrims before embarkation—an omission which was held to neglect the one safeguard needed to prevent the embarkation of persons in an early stage of cholera. The second recommendation would put a stop to persons entering upon the pilgrimage who were simply religious mendicants, and who form one of the great difficulties in regulating the sanitary conditions of the pilgrims in the Hejaz.

Abdur Ruzzack further recommends the establishment of a complete system of agencies and registration by which the course of the pilgrim could be regulated from the time of his embarkation in India to the time of his landing on his return home, and by which he could be protected from the frauds of self-constituted agents both before embarkation in India and during his stay in the Hejaz. A system of this kind

[1] Arabia, Egypt, India, 1879.

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appears to be in force among the Javanese pilgrims, and is said to work exceedingly well.

Notwithstanding what has been done for the regulation of the pilgrim-traffic from Indian seaports, much more, it appears, remains to be done in regard to the overcrowding of the pilgrim-ships; and Abdur Ruzzack shows fully what is further required in this respect.

Among the most important of his recommendations in this connexion, are those relating to the medical supervision of the pilgrimage. He would have a Mahommedan medical officer attached to each pilgrim-ship (forbidding pilgrim-traffic in ships of small tonnage); would establish a hospital at Jeddah during the pilgrimage, and attach to it a Mahommedan medical officer, who might also act as pilgrim-agent and assistant to the British Consul, and when the pilgrims move to Mecca would take medical charge of them there, leaving a substitute at Jeddah. The Mahommedan medical officers of the different ships, as they arrive, would be placed in charge of caravans bound for Mecca and Medina, and they would act as a medical staff under the agent during the rites of pilgrimage. There can be no question whatever of the necessity for this recommendation being acted upon, and of its feasibility; and we apprehend that in regard to the question of expense, the whole Mahommedan population of India would be glad to co-operate with the Government of India in promoting a scheme which is so completely in accord, as it would appear, with their religious teachings, and which is so obviously to be desired in the interest of their co-religionists.

That this remarkable report will exercise an important influence upon the action of the Government of India in this matter can scarcely be doubted; and we trust to learn that its author has or will shortly receive some special mark of honour for the mode in which he has performed a difficult and delicate duty.

HEALTH OF LARGE ENGLISH TOWNS.

FOURTEENTH WEEK OF 1880.

URBAN mortality showed a marked decline last week. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population in England and Wales, 6021 births and 3239 deaths were registered last week. The births exceeded by no less than 836, while the deaths were 36 below, the average weekly numbers during 1879. The deaths showed a decline of 339 from the number returned in the previous week, and were equal to an annual rate of 22·5 per 1000, against 21·9 and 24·9 in the two preceding weeks. During last quarter the death-rate in these towns averaged 25·5 per 1000, against 24·2, 25·2, and 27·5 in the corresponding periods of the three years 1877–8–9. The lowest death-rates in the twenty towns last week were 16·9 in Leicester, 17·2 in Leeds, 17·5 in Portsmouth, and 18·5 in Brighton. The rates in the other towns ranged upwards to 26·2 in Oldham, 28·6 in Manchester, 28·6 in Norwich, and again the highest rate, 31·3, in the borough of Plymouth. The excessive rate in Plymouth continues to be mainly due to the exceptional fatality of measles.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 424 and 531 in the two previous weeks, were 449 last week. They included 143 from whooping-cough, 112 from measles, 89 from scarlet fever, and 41 from fever, principally enteric. The annual death-rate from these seven diseases averaged 3·1 per 1000 in the twenty towns, and ranged from 0·7 and 1·0 in Wolverhampton and Brighton, to 6·3 in Oldham, 7·2 in Nottingham, and 13·2 in Plymouth. The largest proportional fatality of measles occurred in Plymouth, Nottingham, Hull, and Oldham; of scarlet fever in Salford; and of whooping-cough in Manchester. The 16 deaths from diphtheria in the twenty towns included 11 in London and 2 in Birmingham. Six more deaths were referred to fever in Sheffield, against 4 in each of the three previous weeks. Small-pox caused 15 more deaths in London and its suburban districts; but no death from this disease was recorded in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 167 and 172 in the two preceding weeks, further rose to 177 on Saturday last; 42 new cases of small-pox were admitted to these hospitals during last week, against 31 and 47 on the two previous weeks. The Highgate Small-pox Hospital contained 18 patients on Saturday last.

The fatality of lung diseases showed a considerable decline in our urban population last week. The deaths referred to diseases of the respiratory organs in London, which had been 315, 334, and 395 in the three preceding weeks, declined again to 365 last week, and were 91 below the corrected weekly average; 219 resulted from bronchitis, and 103 from pneumonia. The annual death-rate from diseases of this class was equal to 5·2 per 1000 in London last week; in Liverpool the rate from the same diseases was 6·0 per 1000.

FEES AT THE COLLEGE OF SURGEONS.

FOR some time past, as we have more than once announced, a Committee of the Council of the Royal College of Surgeons has been considering the best means of giving effect to the principle adopted by the Council about a year ago of requiring candidates who have been rejected at any examination of the College, to pay, on re-examination, such fees as will cover the expenses of the re-examination. The Committee presented its report at a meeting of the Council held on the 11th ultimo, and at a meeting held on the 8th inst. the adoption of the report was confirmed. It may, however, be well to state that the proposed changes cannot be put into force until the Secretary of State has sanctioned the necessary alterations in and additions to the bye-laws. The following are the regulations relating to the payments by candidates from the membership and fellowship.

"For the Primary Membership Examination the fee shall be five guineas, or, if it be the re-examination of a previously unsuccessful candidate, three guineas; and the fee shall not be returned to a candidate who fails to pass the examination or re-examination. For the Final Examination or re-examination the fee shall be fifteen guineas, over and above all charge for stamps; and ten guineas shall be returned to a candidate who fails to pass the examination or re-examination.

"The fees to be paid for admission to the Fellowship by examination, over and above all charge for stamps, shall be as follows:—(*a*) for members of the College, if succeeding on their first examinations, fifteen guineas; but with liability to higher payment (as hereinafter provided) in cases where re-examination is required; (*b*) for persons not members of the College, thirty guineas.

"Of the above respective amounts, one-third part shall be paid before admission to the Primary (or anatomical and physiological) Examination; and the remaining two-thirds, together with the charge for stamps, shall be paid before admission to the Final Examination.

"Of the fee of five guineas to be paid by members of the College before they are admitted to the Primary Examination, no portion will be returned to unsuccessful candidates; but of the fee of ten guineas to be paid by persons who are not members, half will, in case of rejection, be returned. Of the fee of ten guineas to be paid by members of the College before they are admitted to the Final Examination, no portion will be returned to unsuccessful candidates; but of the fee of twenty guineas to be paid by persons who are not members, half will, in case of rejection, be returned. And in all cases any money which has been prepaid as a charge for stamps will be returned to rejected candidates.

"Candidates who, having failed at an examination, subsequently desire re-examination, are, on each such occasion, subject to the same conditions regarding payment as those on which they were first examined: except that in all cases previous payments shall be taken into account, and that, if in any case a total payment of thirty guineas for the Fellowship has been made, no further payment shall be required."

ST. JOHN AMBULANCE ASSOCIATION.—On the 8th inst., at the Mission Hall, Princess-street, Wapping, Mr. John Furley, of the Order of St. John of Jerusalem in England, presented certificates to the pupils who had, out of the class recently closed in the district, satisfied the surgeon examiner (Dr. H. Crookshank) of their capability of rendering first aid to injured persons.

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Correspondence.

"Audi alteram partem."

ON A NEW METHOD OF EXCISING THE KNEE-JOINT.

To the Editor of THE LANCET.

SIR,—The somewhat unsatisfactory result which, in a considerable proportion of cases, follows excision of the knee, as regards the position of the limb and its firmness as a support, especially in those instances where the patient is not kept sufficiently long under observation, has suggested to me the desirability of some modification in the mode of operation now commonly employed.

In some cases there is, from the first, a tendency for the tibia to become displaced backwards upon the femur, whereby the area of apposition of the two bones is lessened, and consequent diminution in the strength of the union is produced, as well as unnecessary unsightliness of the limb. In other cases bending of the limb occurs after a certain amount of consolidation has taken place, and consequent weakness, deformity, and shortening are produced, as well as an inequality of strain—a portion only, instead of the whole, of the divided area bearing the pressure of the body-weight, and hence the part upon which the undue proportion of pressure comes is more likely to become the seat of a fresh outbreak of the disease.

To remedy these defects I would suggest trial of the following operation, which has not, so far as I am able to learn, been yet employed. I have not yet had an opportunity of seeing its results, but the operation itself I have found presents no particular difficulty upon the dead subject, and would, I believe, be still more easy upon the living, where the ligaments have been relaxed and more or less destroyed by pulpy infiltration.

A transverse incision, as in the ordinary operation, should be made across the knee just below the apex of the patella, but should be carried only through the skin and subcutaneous structures. The joint should then be opened at the sides, leaving the ligamentum patellæ intact. The capsule of the joint and the interarticular ligaments or their remains having been divided, the thigh should be flexed upon the abdomen to relax the rectus muscle, and the leg being either extended upon the thigh or flexed to such extent as to allow of easy manipulation, the saw should be introduced between the ligamentum patellæ and the tibia at such distance above the tubercle of the tibia as the disease may require, the section being made from before backwards. The slice of tibia having been removed, the necessary amount of the femur should next be sawn off in a similar manner; to facilitate this it is well to partially divide the aponeurosis attached to the sides of the patella, in a direction parallel to the long axis of the limb. The patella may then be readily turned round, so that its articular surface is exposed, and this should be removed by a horizontal section exactly in the same way as it is in Gritte's amputation. The next step consists in removing with chisel or saw a small portion of the anterior surfaces of the tibia and femur to which the refreshed surface of the patella should be adjusted, and the rest of the operation concluded in the ordinary way. In order to keep the bony surfaces in apposition, an apparatus made on the plan of a small Lister's or a Signoroni's tourniquet may be applied, the one pad resting on the splint at the back of the limb, and the other pressing lightly but firmly upon the patella; this, of course, would be put on after the dressings are in place.

By this means a continuous, as it were, anterior splint of bone and tendon is preserved on the front of the limb, and the patella by its union with both bones forms a bony arch across the fissure left between the tibia and femur; at the same time the tendency of the hamstring muscles to draw the tibia backwards is counteracted by the preservation of the extensor tendon.

Even supposing that no bony union were to take place between the patella and the other two bones, still, the presence of the bone and tendon would add greatly to the strength of the limb. Further, the quadriceps would still be enabled to act in bringing forward the limb in walking; also the appearance of the limb would be improved by the presence of the patella, by avoidance of the atrophy of the muscles on the front of the thigh resulting from their disuse as a consequence of the division of their tendon.

The most useful saw for the operation will, I think, be found to be a Butcher's saw, the blade of which should be passed beneath the ligamentum patellæ, or quadriceps tendon, as the case may be, and then adjusted in the bow; or in default of this a narrow Spence's saw with movable back may be employed.

No difficulty will, I think, be found in removing all diseased tissue that may be necessary, and although the operation takes somewhat longer time in its performance, it seems probable that it would give improved results.

I remain, Sir, yours, &c.,

G. A. WRIGHT, F.R.C.S.

Royal Infirmary, Manchester, March, 1880.

A MEANS OF DIAGNOSIS OF RENAL CALCULUS.

To the Editor of THE LANCET.

SIR,—At the conclusion of the recent debate upon my paper on "Nephrectomy," at the Royal Medical and Chirurgical Society, I had intended to draw attention to a method of diagnosing calculus in the kidney, which had rendered me the greatest service in a case treated since the writing of the paper. Having, however, omitted to do so then, I venture to think that recording the matter here may be of use to others in dealing with a class of cases beset with difficulties in their earlier stages as to diagnosis, and with dangers later on. The following brief notes of a case will illustrate the point sufficiently.

At the beginning of February my colleague, Dr. John Williams, very kindly transferred to my care at University College Hospital a woman whom he believed to be suffering from some renal tumour, a view which I also adopted on hearing the history, and on manual examination. But the question as to the nature of the tumour presented many difficulties. The symptoms had only developed comparatively recently—i.e., some three or four months before; the morbid mass was not very large, was movable and nodulated; it was painful on handling, and felt to be particularly hard. There was pus in the urine, but never any blood. To be brief, the diagnosis appeared to lie between: (1) a new growth of the kidney; (2) tubercular infiltration of the renal tissue; (3) a calculus in the organ. In the hope of distinguishing between these three conditions I adopted the following measures on Feb. 21st:—

The patient was put under chloroform to admit of more thorough examination of the tumour. This showed it more than ever to be renal. I then took a long, slender aspirator needle, carefully cleansed, and forced it into the loin at a point midway between the crest of the ilium and last rib, directing the point towards the abdominal aspect of the spinal column, and a little upwards. At the same time the tumour was pressed backwards towards the needle by the hand on the abdomen. The vacuum (previously made) having been turned on, the needle was thrust steadily on into the tumour, and, at about two inches from the skin surface, came upon a calculus. The point could be almost heard grating on the stone, and the grating could, it was believed, be felt by the hand on the tumour in front. Only about two drachms of thick, yellow, and odourless pus came away in the aspirator. The diagnosis was thus rendered certain. But had the tumour been a new growth or tuberculous, I had hopes that enough débris would have come away in the instrument to enable us to judge of its nature, as in the case of growths in other situations.

The withdrawal of even this small quantity of pus seemed to benefit the patient. The pain was relieved, the temperature fell, and she felt better for the next few days. No blood was noticed in the urine afterwards.

In view of the rapid wasting, loss of strength, and suffering, and the hopelessness of the case if left to itself, I proposed to cut down and remove the kidney. The patient, however, declined any operation, and returned home a few days later. That removal of the organ in this case, before abscesses had formed around it, and the patient was altogether exhausted by the disease, would have been the proper treatment I am still satisfied. It would, I believe, have been less dangerous than simple removal of the calculus by

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incision into the kidney through the loin, with all its later risks.

The point indicated for puncture will always find the lower end of the kidney as verified by dissection beforehand. It appears strange that this almost obvious method of diagnosing stone in the kidney early should not have been employed before this, though aspiration of hydro- and pyonephrosis and peri-renal abscess is common. But though so simple, there appear to be no records, so far as I have found in a rather extensive examination of the subject, that it has been made use of.

I am, Sir, yours obediently,

ARTHUR E. BARKER, F.R.C.S.I.,
Assist.-Surgeon and Assist.-Professor of Clinical Surgery, at University College Hospital.

Welbeck-street, W.

CHRONIC MENINGITIS WITH OSSEOUS DEVELOPMENT IN THE DURA MATER.

To the Editor of THE LANCET.

SIR,—The following case, from the length of its duration, and several other particulars, seems to me worthy of publication.

On Dec. 29th last, at about 2 P.M., I was sent for to see the body of a man (H. W——, aged forty-nine) who was last seen alive at about 10 A.M., and was found dead in his room two hours afterwards. As the consequence of this I subsequently made a post-mortem examination, and, never having seen him alive, I shall give the particulars of that examination first.

There was nothing to note externally, excepting the appearance of an old fracture of his nasal bones. The space between the brain and its membranes was occupied with a considerable amount of serum; the left lateral ventricle contained about one ounce and a half, and the right about half an ounce, of clear fluid; there was no effusion of blood in any part of the brain; the arachnoid was thickened and opaque, and inseparable from the pia mater in places, chiefly in the median line over the longitudinal fissure: lying deep in the latter, attached to, and embraced on either side by, the falx cerebri, was a small plate of bone, about one inch in length and a quarter of an inch in breadth, convex on its upper, straight and dentated on its lower margin; there was no irritation or lesion of any kind visible in its immediate neighbourhood. I could find no traces of disease in any of his thoracic or abdominal organs, the kidneys in particular being quite healthy. And now for his previous history, which I have subsequently learnt.

From ten years of age he had been subject to epilepsy. The attacks recurred for the first few years at intervals of from one to two months, until during the last six years he had them every fortnight or every week, and at last twice a week, the longest interval that he ever enjoyed being, for one period only, three years. He appears never to have done any work, and to have been quite well between the attacks until the last five or six years. During this latter period he had symptoms of cerebral irritation, especially for a day or two before the fit would come on, even threatening to kill those around him. He never had any form of paralysis other than a certain want of control over his bladder. He was always somewhat drowsy, sullen, and irritable. There is an entire absence of any history of epilepsy or cerebral disease in the family.

I am, Sir, yours truly,

Tunbridge Wells. W. M. SATCHELL.

ALGIERS AS A HEALTH RESORT.

To the Editor of THE LANCET.

SIR,—In THE LANCET of the 20th ult. I read a letter of my friend, Dr. Lockhart Robertson, in which he comments very severely upon the unwholesome sanitary conditions of the town of Algiers, and compares it very unfavourably in that respect with the towns upon the Riviera. I would be the last to pretend that the sanitary arrangements in Algiers were anything like perfect, for, more especially from the great drought which has existed for the last two years, also from the imperfect system of water-closets in general use by the French both here and in France, bad smells are only too common here as elsewhere on the Continent. Still, I cannot help thinking that Dr. Robertson has exaggerated his description. During this winter about 1000 English visitors have passed a longer or shorter time in the hotels here of which he complains so much, not one of whom has suffered from typhoid fever, a result at the present time, when that disease seems rife both at home and abroad, which can compare very favourably with the returns from other places of health resort; nor have I ever seen any cases of illness in these hotels the cause of which could be directly attributed to the effects of sewer gases. The few cases of typhoid fever which have occurred here this winter, to which Dr. Robertson refers, have almost without exception been confined to the suburbs of Mustapha Supérieur; of these five came under my care, and in two of them there was distinct evidence of the fact that the patients had been attacked by the disease before their arrival in Algiers.

I have had considerable experience in the unpleasant degrees of smells of nearly all the different marine health-resorts upon the shores of the Mediterranean, and I can most unhesitatingly award the palm for intensity to some of the most celebrated ones upon the opposite side, which it might be invidious to name. Trusting that you may find space in your journal for this,

I remain, Sir, yours, &c.,

Algiers, April 2nd, 1880. W. THOMSON, M.D.

THE CROTON-OIL TREATMENT OF RINGWORM.

To the Editor of THE LANCET.

SIR,—May I be allowed a word in reply to Mr. Smith's letter in reference to the croton-oil treatment of ringworm, in THE LANCET of last week, as he appears to have misunderstood a sentence in my paper on this subject in THE LANCET of March 27th.

I did not say that kerion is a subcutaneous abscess, but that the production of either kerion or subcutaneous abscesses is unnecessary.

A pustule will clear of ringworm only an area as large as comes under the influence of the inflammatory process. A rash of scattered pustules may fail to free of ringworm the affected part, if spaces beyond the sphere of their action exist between the pustules. I have often seen diseased hairs reappear in such interpustular spaces. It is necessary, therefore, that the pustules be in close propinquity and deeply seated.

In my experience a close-set pustular rash, involving the tissues to the depth of the hair-follicles, produces all the good effects of a more far-spreading and severe inflammation. Some inflammatory infiltration accompanies such a rash, and the hairs are loosened.

As regards the principle of treatment, the all-important point, Mr. Smith seems to agree with me. I did not for one moment suppose that Mr. Smith was aware that I had previously brought the matter before the profession.

I am, Sir, your obedient servant,

WYNDHAM COTTLE, M.B. Oxon., F.R.C.S.,
Assistant Surgeon to the Hospital for Diseases of the Skin, Blackfriars.

Savile-row, W., April 10th, 1880.

DISLOCATION OF THE ASTRAGALUS (SIMPLE).

To the Editor of THE LANCET.

SIR,—Cases of this nature are so rare and often so little amenable to treatment that it is worth while to record one that had a favourable termination.

A young man, aged nineteen, tall and active, when engaged in athletic sports, in taking a leap, got his foot fixed in the ground and fell forwards. Dr. Carter, who was near at hand, saw him immediately, and, finding that there was dislocation of the astragalus, attempted, with other assistance, to reduce it by direct extension, but without success. When I saw him about an hour afterwards I found the foot presenting an appearance of truly formidable distortion. The toes were turned outwards. The distal head of the astragalus formed a marked prominence on the inner aspect of the foot, with the integuments tightly stretched over it. Immediately beneath the inner malleolus was a deep depression corresponding to the normal situation of the displaced bone. The heel was drawn back, and the tendo

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Achillis tightly strained. On the outside the external malleolus projected in a very marked manner, the skin being here also tightly strained over it. The dislocated bone was quite immovable.

Chloroform having been administered, a round towel with a clove-hitch at one end was passed over the heel and across the instep. To the other end pulleys were attached, and counter-extension made over the pelvis. After a few minutes' extension the bone slipped into place with an audible click, and with the effect of at once removing all the distortion which had previously been so marked.

The after-treatment was of the simplest kind, and the patient rapidly recovered with a useful and undamaged limb.

In the process of reduction I had the benefit of the co-operation of Mr. Stockwell, Dr. Carter, and Mr. Scott, our house-surgeon.

I need scarcely say the result was highly satisfactory, as the distortion was extreme, and the prospect of replacing the bone apparently very problematical.

I am, Sir, your obedient servant,

Bath, March, 1880. R. T. GORE.

TRICHINOSIS v. ENTERIC FEVER.

To the Editor of THE LANCET.

SIR,—Having read your article, "Trichinosis *v.* Enteric Fever," I would suggest that the temperature charts of the best-marked cases of trichinosis should be published, as these might afford a valuable guide to the differential diagnosis of these diseases in the future.

I am, Sir, yours, &c.,

PYREXIA.

EDINBURGH.

(From our own Correspondent.)

IN hospital Dr. John Duncan has had two cases of lateral lithotomy. One of these, performed in the Glasgow method with the rectangular staff, presented some difficulty, for the extreme narrowness of the pelvic outlet and the large size of the stone hindered extraction. The patient is doing well.

Dr. Keith's series of successful consecutive ovariotomies—over eighty in number—has been interrupted by a death. This occurred in a case where operation had been performed as a last resort, at the earnest solicitation of the patient's relatives. In the wards in the Royal Infirmary there have been two interesting operations of late—one for removal of a large fibro-cystic tumour over forty pounds in weight, and another where a large single cyst with many adhesions burst during the operation. It is to be hoped the managers may attend to the further illumination of the great theatre, so that Dr. Keith may again give pleasure and instruction by operating publicly. It is also a matter of doubt whether there is any advantage derived from the use of the two clinical theatres as operating rooms. Formerly in the old Infirmary a student might see various surgeons at work after one another in the same arena; he might enter at the commencement and leave at the conclusion of any operation he felt a special interest in; now, however, in the new building he is perplexed sometimes by seeing three operations advertised. Each of these is carried on in a separate theatre, but all takes place at the same time. He cannot conveniently see them all, as he might have done had old customs been adhered to; he must take his choice of one, and one only. The system may be more convenient for the surgeon; it does not seem to be better for the student, and is apt to lead to the establishment, as it were, of three or more small schools, under one common roof, each following its own leader.

A third house physician will be appointed to the University clinical wards, and the junior house surgeon will become resident after the month of October.

Following the example of the University, the resident physicians attached to the extra-mural medical wards will, in future, be selected by competitive examination.

THE salaries of the district medical officers of St. Pancras have been increased as follows:—Dr. Thomas Sayer's, from £100 to £140 per annum; Dr. Walter Smith's, from £100 to £130; and that of Mr. Sydney L. Smith, from £130 to £140.

Obituary.

ALFRED LEGGATT, F.R.C.S. ENG.

BY the death of Mr. Leggatt the profession and society have alike lost a practitioner of no common order. The profession has lost a member who sustained its dignity, upheld its honour, and exemplified its best characteristics with singular fidelity and success; and society, in its highest walks, has lost a trusted, able, and conscientious medical adviser, whose death has left a void scarcely likely, in some instances, to be adequately filled.

For over thirty years Mr. Leggatt enjoyed a practice in the most aristocratic quarter of the metropolis such as seldom falls to the lot of any man; and he retained it as only a man of ability and high character could do. His practice was extensive and lucrative, being almost exclusively among the upper classes. He enjoyed the confidence of Cabinet Ministers of both parties, and was the trusted medical adviser of some of the most distinguished personages in the State.

Of singularly fine presence and gentle manners, he had also the charm of honest purpose; for the uprightness of his mind shone through all his acts. Of him may be said that which can be truthfully said of very few, that he lived what he professed—a Christian life. Such as his belief was, he faithfully strove to live up to it; and it can truly be said of him that his life was one of unobtrusive and gentle piety.

Mr. Leggatt's practice, like that of the majority of general practitioners, was chiefly medical and obstetrical, with very little surgery. For such work a medical qualification would have appeared the most appropriate leading licence, but, like so many others who are never called upon to practise surgery after acquiring their licence, he only held the M.R.C.S., and after that the L.S.A. A few years ago, however, the honorary F.R.C.S. Eng. was conferred upon him; and no one more truly merited a distinction than he whose blameless life had brought honour to his calling.

Mr. Leggatt was a good, but kindly, judge of men; and it may be mentioned in illustration that two of his old assistants who lived with him when quite young men, are now Fellows of the Royal College of Physicians of London and teachers in Metropolitan Schools of Medicine — viz., Dr. B. Yeo of King's College and Dr. Wiltshire of St. Mary's. Mr. Leggatt leaves a widow and large family to mourn his loss. He died at the age of sixty-five, after a laborious and successful life.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at Meetings of the Board of Examiners on the 8th, 9th, 12th, 13th, and 14th inst.:—

Edward D. Thring, William H. Horrocks, Charles R. Elgood, Ernest Hudson, William C. Wilkinson, William R. Buckell, Frederick J. Bollen, and Francis F. Culhane, University College; George Frost, John B. Sutton, Hugh R. Neblett, John F. McMillan, Edgar R. Dimsey, William E. Ransom, M. W. Russell, Walter E. Wynter, Alan E. Tate, J. H. Douty, William Hern, Charles G. Brodie, and Sidney R. Dyer, Middlesex Hospital; Frederick L. Nicholls, William C. Beatley, William Tibbles, James Donald, John L. Rodwell, David L. Jones, James K. Lewis, and Samuel Wyborn, Charing-cross Hospital; William A. W. Smith, Percy Pope, Arthur F. G. Codd, Percy Edgelow, and George Y. Eales, St. George's Hospital; Henry F. Illewiez, Robert F. Fox, Michael Angelo, Robert Black, Oliver W. Sharood, John H. Thomas, John Sinclair, George Adkins, John C. Davies, Frederick H. Kenny, William Coates, Walter F. Dale, Ralph Holyoake, R. Buksh, and John W. Davis, London Hospital; Thomas D. Pryce, James Berry, Edward J. Jenkins, R. J. Collyns, D'Arcy Power, and Alfred J. Anderson, St. Bartholomew's Hospital; Harry L. R. Dent, Robert G. Lynam, Hugh R. Beevor, James J. C. Dounet, John W. G. Kealy, Sidney Ellis, and Walter T. Brooks, King's College; John H. H. Williams, Louis A. Dunn, Charles H. L. Meyer, and John H. Booth, Guy's Hospital; Oliver F. N. Treadwell, Arthur Goulston, Walter Hull, and David W. H. Llewellyn, St. Thomas's Hospital; John R. Cater, St. Mary's Hospital; Joseph Pollard, Cambridge and King's College; Edward A. G. Doyle, Westminister Hospital; S. T. Pruen, Francis J. Walker, Harold Hendley, and H. E. Bateman, St. Bartholomew's Hospital; Frederick Knight, Edward Skipper, Edward W. Von Tunzelmann, and Frederick H. Lane, University College; G. D. Porter and Bertram H. L. Stivens, King's College; Henry Green and Alfred H. Willoughby, St. Mary's Hospital; Robert Sanderson and Gilbert E. Butler, Westminister Hospital;

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Llewellyn A. Morgan, St. Thomas's Hospital; William B. C. Treasure, Charing-cross Hospital; Charles Reuner, Würzburg and University College; and William J. Sheppard, St. Thomas Hospital and Newcastle-on-Tyne College of Medicine.

Of the 173 Candidates examined during the last and present week twenty-six failed to satisfy the Board of Examiners and were referred for three, and one Candidate for six months' further Anatomical and Physiological Study. The Primary and Pass Examination for the Fellowship of the College will take place on the 21st and 27th of May, respectively.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on April 8th:—

Kánga, Jamshedji Kharshedji, Bombay.
Pickering, Robert Whitworth, Park-road, Reyton.
Usher, John Edward, Melbourne, Australia.

The following gentlemen on the same day passed the Primary Professional Examination:—

Thomas Wm. Buckley, St. Thomas's Hospital; William Cecil Penwick, Guy's Hospital.

COLLEGE OF PHYSICIANS IN IRELAND.—At the April examinations the following obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—Matilda Charlotte Chaplin Ayrton, Charles James Barry, Joseph Bradley, John Joseph Daly, James Davison, John Knox Denham, Anthony Kidd, Chas. George Drummond Masse, Cornelius O'Brien, John Pollock, William James Swanson.

MIDWIFERY.—Matilda Charlotte Chaplin Ayrton, James Davison, Anthony Kidd, Edward Erskine Moore, Cornelius O'Brien, Oliver William Spromlle, William James Swanson.

On the 7th inst. the undermentioned were admitted to the Fellowship of the College:—

Isaac Ashe. | Christopher Joynt.

On the 12th March:—

Robert A. Hudson.

UNIVERSITY OF OXFORD, April 15th.—The degree of Doctor of Medicine was conferred on E. Jacobs, Corpus.

THE Hospital Saturday collections in Sheffield on the 10th inst. realised £747.

A BUST in bronze of J. Marion Sims, M.D., LL.D., has been presented to the Alumni Association by the surgical staff of the Jefferson College Hospital.

MR. G. ADAMS, the medical officer of the Nailsea district of the Bedminster Union, has been awarded a gratuity of £20, in recognition of extra services rendered by him during the fever epidemic in his district.

MERCER'S HOSPITAL, DUBLIN.—Some alterations, including a new operation theatre and accommodation for extern patients, are contemplated, and plans have been selected for those and other purposes, which it is estimated will cost over £4000. About £1500 has already been received or promised, and the governors trust that further aid will be obtained, so as to allow them to commence the work without delay. During the past year the receipts amounted to £2247, and the total expenditure to £3182, or a balance on the wrong side of £935.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Hospital for Sick Children, Great Ormond-street, received nearly £1900 in donations on its twenty-eighth anniversary last week. The Right Hon. Sir William Erle, P.C., formerly Chief Justice of the Court of Common Pleas, bequeathed £500 to the Royal Hants County Hospital at Winchester, £300 to the West Sussex, East Hants, and Chichester General Infirmary and Dispensary, and £300 to the London Fever Hospital. The Cumberland Infirmary, Carlisle, has received £100, less duty, under the will of Miss Thurnam. The North Eastern Hospital for Children, Hackney-road, has received £200, less duty, under the will of Mr. Samuel Yates, and £100 anonymously, per Mr. J. Lister Godlee. Mr. Johnston Jonas Foster, of Moor Park, Ludlow, bequeathed £250 each to the Bradford Infirmary and Dispensary, the Bradford Eye and Ear Hospital, the Bradford Fever Hospital, and the Halifax Infirmary. General Philip Spencer Stanhope, colonel of the 13th Regt., bequeathed £100 to the St. Marylebone General Dispensary. The Drapers' Company have given an additional fifty guineas to the Royal National Hospital for Consumption and Diseases of the Chest at Ventnor. The Rev. G. B. Paley bequeathed £50 to the Cottage Hospital, Millenhall. The Rev. J. Heyworth bequeathed £600 to the Bristol Royal Infirmary.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ADAMS, J. D., M.D., M.R.C.S.E., has been reappointed Medical Officer of Health for the Yeovil Rural Sanitary District.

ADOLPHUS, T. F. P., M.R.C.S.E., has been appointed Assistant Medical Officer at the Camberwell Infirmary and Workhouse, for three months, on probation.

BURMAN, C. C., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Western District of Belford Union; also Medical Officer to the Workhouse, vice *J. Millar*, M.D., resigned.

BUTTERS, J. G., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Whitchurch and South Lydford District of the Tavistock Union.

COYLE, Mr. D., has been appointed Analyst for the Southern Division of the County of Derby.

CROSSBY, J. P., L.R.C.P., L.F.P.S.G., has been appointed Medical Officer of the Sunderland Union Workhouse, at a salary of £200, with private practice.

FISHER, Mr., has been appointed Resident Accoucheur at the London Hospital, vice Davies, resigned.

FOTHERGILL, Mr. E., L.D.S., has been appointed Dental Surgeon to the Newcastle-upon-Tyne Infirmary.

HENDERSON, G., M.B., C.M., has been appointed one of the Medical Officer of the Coldstream and Eccles Dispensary, vice Brown, deceased.

MCCUAIG, D., M.D., L.R.C.S.Ed., has been appointed Consulting Physician to the North Riding Infirmary, Middlesbrough-on-Tees.

MCGACHEN, F. W. D., L.F.P.S.G., L.M., has been appointed Medical Officer of the Hanslope District of the Newport Pagnell Union.

NORTHEY, G. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Milton Abbot District of the Tavistock Union.

ORTON, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Foleshill District and the Workhouse of the Foleshill Union.

PATTERSON, T., M.D., C.M., has been appointed Medical Officer for the Fourth District of the Oldham Union.

SMYTH, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Senior House-Surgeon to the Belfast Royal Hospital.

VOLCKMAN, Mr., has been appointed House-Physician at the London Hospital.

WOLFENDEN, Mr., M.B., has been appointed House-Physician at the London Hospital.

WRIGHT, W. H., M.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer for the Normanton District of the Shardlow Union.

Births, Marriages, and Deaths.

BIRTHS.

BULL.—On the 7th inst., at St. Oswald's House, Stony Stratford, the wife of William H. Bull, L.R.C.P.L., M.R.C.S.E., of a son.

LUCEY.—On the 14th inst., at Southampton, Hants, the wife of William C. Lucey, M.D., of a son.

MOSS.—On the 9th inst., at Chardville, Elphinstone-road, Southsea, the wife of Edward L. Moss, M.D., Staff-Surgeon H.M.S. *Atalanta*, of a son.

REID.—On the 11th inst., at Belgrave Villas, Stratford, E., the wife of Walter Reid, Staff-Surgeon H.M.S. *Wivern*, of a son.

MARRIAGES.

FERNELL—PORTER.—On the 13th inst., at St. Mark's Church, Sheffield, by the Rev. T. Woollen Smith, M.A., Vicar of Calvertown, Notts, Henry George Tudor Fernell, M.A. Cantab., Solicitor, to Edith, elder daughter of the late John Taylor Porter, F.R.C.S., of Sheffield.

SANKEY—CARR.—On the 8th inst., at St. Oswald's Church, Shipton Oliffe, Gloucestershire, by the Rev. Douglas Powell Ware, B.A., Curate of St. Mary's Episcopal Church, Glasgow, assisted by the Rev. W. H. Stanton, M.A., R.D., J.P., Rector of Hasleton, Gloucestershire, W. Arthur C. O. Sankey, third son of W. H. O. Sankey, M.D., of Sandywell-park, Gloucestershire, to Annie B. Fox, eldest daughter of the Rev. John A. Carr, B.A., Rector of Shipton Oliffe, W. Shipton Sollars.

WILSON—STYRING.—On the 8th inst., at All Saints' Paddock, Huddersfield, by the Rev. Wm. Gordon, M.A., Vicar, assisted by the Rev. Canon Calvert, M.A., Vicar of Huddersfield, David Wilson, M.B., to Emma, eldest daughter of Thomas Styring, Esq.

DEATHS.

BIRCHENALL.—On the 22nd ult., at Park-street, Macclesfield, John Birchenall, M.R.C.S.E., L.S.A.L., aged 81.

BIRNIE.—On the 6th inst., at Don-street, Old Aberdeen, Sarah Augusta, widow of M. Birnie, Surgeon, of Aberdeen, aged 85.

JAGOE.—On the 5th inst., at the Royal Victoria Hospital, Netley, E. R. Jagoe, A.B., Surgeon, A.M.D.

MCCREA.—On the 2nd inst., at Templepatrick, co. Antrim (the result of an accident), Samuel McCrea, M.D.

MAITLAND.—On the 9th inst., at Devonshire-terrace, Elizabeth White, widow of John Maitland, M.D., Indian Medical Service, and second daughter of the late Lieutenant-Colonel Hobbs, Royal Engineers.

POTTLE.—On the 9th inst., at Bunhill-row, E.C., Edgar George Pottle, M.R.C.S.E., L.R.C.P., aged 40.

SHARPEY.—On the 13th inst., at Torrington-square, London, William Sharpey, M.D., LL.D., F.R.S., formerly Professor of Anatomy and Physiology in University College, aged 78.

N.B.—*A Fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.

A Movable Atlas, showing the Mechanism of Hearing and of Mastication. By Dr. G. J. Witkowski.

G. BELL & SONS.

Rest and Pain. By John Hilton, F.R.S. Edited by W. H. A. Jacobson, B.A., M.B. Oxon.

DAVID BOGUE, London.

Physiological and Pathological Relations of the Voice and Speech. By Dr. J. S. Bristowe.

J. & A. CHURCHILL, London.

Potable Water. By Charles Ekin, F.C.S.
An Introduction to the Study of Chemistry. By A. P. Luff, F.I.C., F.C.S., &c.
Healthy Life and Healthy Dwellings. By Dr. G. Wilson.
Surgical Emergencies. By W. P. Swain, F.R.C.S.
The Journal of Mental Science for April.

DELAHAYE ET CIE., Paris.

Mémoires de Chirurgie. Par Dr. G. Nepveu.

H. K. LEWIS, London.

Metric Record of Prescription and of Medical Observation.
On the Bile, Jaundice, and Bilious Diseases. By Dr. J. Wickham Legg.

LINDSAY & BLAKISTON.

Transactions of the College of Physicians of Philadelphia.

LONGMANS, GREEN, & Co., London.

Notes on Physiology. By Henry Ashby, M.D. Second Edition.

MACMILLAN & CO., London.

Introductory to Science Primers. By Professor Huxley.

S. W. PARTRIDGE & CO.

Neville Hatherley. With Introduction by S. Bartley, B.A.

H. RENSHAW, London.

Diseases and Injuries of the Eye. By G. Lawson, F.R.C.S.

SMITH, ELDER, & Co., London.

Poems. By W. Frank Smith, M.B. Second Edition.

Birmingham Medical Review. (Cornish, Brothers.)—Quarterly Journal of Microscopical Science; British Journal of Dental Science. (Churchills.)—Introduzione allo studio della Medicina Legale. Per Dott. C. D. Foscani.—Westminster Review.—Congenital Malformation of the Knee. By J. F. Hartigan.—Elijer Goff's Manifesto.—Archives of Otology.—Report of the Norfolk Lunatic Asylum.—Report of the Birmingham General Hospital.—Archives of Medicine.—The Population Question. By Dr. C. R. Drysdale. (Standring.)—Treatment of Empyema by Resection of one or more Ribs. By W. Thomas, M.B. (Hall & English, Birmingham.)—The Independent Practitioner. Baltimore.)—The Weather of 1879, as observed in London. By E. Mawley, F.M.S. (Bemrose.)—Structure and Function of the Kidney. By Dr. A. W. Smyth. (New Orleans.)—The Therapeutic Gazette. (Davis, Detroit.)—Cumberland and Westmoreland Lunatic Asylum Report.—Report of Joint Lunatic Asylum at Abergavenny.—Journal de Médecine.—Cenni Statistici sul pio instituto di S. Spirito in Sassia dal 1870 al 1876.—A Sketch of the Life and Mission of St. Benedict.—The Popular Science Review. (D. Bogue.)—Maryland Medical Journal.—The Fallacies of Popular Clinical Medicine. By Dr. J. S. Wight. (Putnam, New York.)—Time.—Du Traitement Mécanique des Maladies de la Colonne Vertébrale. Par Dr. Oscar Jennings. (Paris: O. Berthier.)—Therapeutic Gazette. (Michigan: G. S. Davis.)—The Family Physician. Part III. The Magazine of Art. Part XXIV. (Cassell & Co.)—Social Notes. Part XXV.—Fraser's Magazine for April. (Longmans.)—Monthly Review of Dental Surgery. (Smith, Elder, & Co.)—De la Lésion des Organes Urinaires. Par Dr. G. Eastache. (Baillière et Fils.)—Fourth Annual Report of the Managers and Officers of the State Asylum for the Insane at Morristown, N.J.—Bollettino del Comitato Medico di Genova.—National Board of Health Bulletin, Washington. No. XXXVI.—Sur la Menstruation après l'Ovariotomie et l'Hystérectomie. Par Dr. L. Ormières. (Paris: Doin.)—On the Nomenclature and Classification of Diseases of the Skin; New Method of Permanently Removing Superfluous Hairs; Use of Water in the Treatment of Diseases of the Skin. By Dr. L. D. Bulkley. (Putnam, New York.)—Therapeutic Action of Mercury. By Dr. Clevenger. (Knight & Leonard, Chicago.)—Annual Report of the Salop and Montgomery Lunatic Asylum.—On the Treatment of Endometritis. By Dr. J. Hickinbotham. (Hall & English, Birmingham.)—The Churchman. (Elliot Stock.)—Archives of Ophthalmology; C. Heymann's Verlag, Berlin; Annals of the Anatomical and Surgical Society, Brooklyn. (Putnam, New York.)—Notes on the Anatomical Relations of Uterine Structures. By Dr. Buckler.—Journal des Sciences Médicales de Lille.—Ueber einen fall von Paracentesis Pericardii. Von C. Hindenlaug.—Mittheilungen über die Pest-Epidemie im Winter 1878-1879 im russischen Gouvernement Astrachan.—Victoria Review.

METEOROLOGICAL READINGS.

(Taken daily at 9 a.m. by Steward's Instruments.)

THE LANCET OFFICE, April 15th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp in shade	Min. Temp	Rain fall.	Remarks at 9.30 A.M.
April 9	29·28	N.E.	46	42	62	50	40	0·09	Cloudy
,, 10	30·20	N.E.	43	40	56	46	38	..	Overcast
,, 11	30·09	N.E.	41	39	61	49	37	..	Cloudy
,, 12	29·89	E.	44	40	75	51	37	..	Cloudy
,, 13	29·89	E.	48	46	81	59	41	..	Overcast
,, 14	29·72	E.	47	46	..	50	45	0·12	Raining
,, 15	29·70	E.	45	44	..	47	41	0·85	Raining

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE USE OF THE FORCEPS.

DR. P. C. WILLIAMS, in a paper read before the Baltimore Academy of Medicine, and published in the *Maryland Medical Journal*, discusses in a full and able manner the subject of the use of the forceps in midwifery. In labours "tedious," not so much from the time occupied in the process as from the pain and exhaustion induced, he would use the forceps, taking care that the rigidity of the parts is first overcome. Also in cases of malposition or unusual size of the child, and in deformed pelvis, he would, as a rule, prefer the instrument to version, because resort to the latter expedient leads to the danger of prolapsed cord, with its accessory perils, and likewise exposes the mother to unnecessary risks. Dr. Williams concludes with a caution, which he thinks it wise to observe in every case where the forceps are applied at the "superior strait"—viz., "always insert the hand, or at least the extremities of the fingers, into the os uteri before you introduce the blades of the instrument. This affords an infallible guide, and is a great protection to the mother."

F.R.C.S.—There were four vacancies last July for election into the Council of the College of Surgeons. The unsuccessful candidates were Messrs. T. Bryant and R. Barwell; the former polled 97 votes, including 9 plumpers; and the latter 22, including 8 plumpers.

Dr. Buchanan, (Glasgow.)—The late arrival of the proof rendered it impossible to insert the addition. The request shall be complied with.

TREATMENT OF GONORRHŒAL OPHTHALMIA.

To the Editor of THE LANCET.

SIR,—I walked this day's LANCET in order to see whether Dr. Charles Bell Taylor or anyone besides would challenge Mr. Critchett's claim to be the first to divide the eyelid in cases of gonorrhœal ophthalmia. In a communication which you published in THE LANCET, April, 1876, p. 360, Dr. Taylor concludes thus: "While on the subject of gonorrhœal ophthalmia, I may mention that I have found the greatest benefit, in some of these cases, from the very free division of the external canthus; this enables the surgeon to expose the eyeball, turn the lids inside out, incise chemosed conjunctivæ, and freely apply such local remedies as may be indicated. Spasm is also relieved, and the free bleeding occasioned is most beneficial."

Had Mr. Critchett consulted the "Medical Digest," section 1834-6, he would not have written: "I determined to adopt a somewhat heroic and novel proceeding, and one that has not, I believe, been published," and then describes division of the eyelid in the middle line, instead of at the external canthus, the latter plan being, I should fancy, preferable.

Yours obediently,

RICHD. NEALE, M.D. Lond.

Boundary-road, South Hampstead, April 9th, 1880.

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BROMIDE OF ETHYL.

THIS drug, which seems to be obtaining some reputation, especially in America, where its use has been warmly advocated by Dr. Levis, forms the subject of an article in the New York *Medical Record* of the present month, by Dr. Marion Sims, who describes a case in which the hydrobromic ether was employed for the performance of Battey's operation. During the first twenty minutes about two ounces of the ether had been used; the patient then vomited, and again twenty minutes later, with severe straining. On three occasions during the operation there was considerable opisthotonos, with rigidity and twitchings of the extremities; her pulse, however, was strong and full. In all, four and a half or five ounces of the anæsthetic was used in the course of the operative proceedings, which lasted an hour and a half. The patient suffered from distressing retching and vomiting, with diarrhœa and headache, and died some twenty-one hours afterwards in severe convulsions. Dr. Sims inclines to the opinion that in this case death was caused, at least indirectly, by the ether, and utters a caution against its use in prolonged operations, and where there is kidney disease.

Inquirens.—Nothing can be done in the study without practice.

SMALL-POX HOSPITALS.

To the Editor of THE LANCET.

SIR,—Your issue of March 20th, containing an article on Dr. Bridges's Report to the Local Government Board on Small-pox Hospitals, has only just reached me. In that article you have clearly pointed out the possible fallacies of some of Dr. Bridges's conclusions and methods of reasoning, more especially in that part of his report which deals with their influence, for good or for evil, on the immediate neighbourhood surrounding them, as you say it has never been averred that these institutions produce evil results on the large districts or parishes in which they may be situate, but that they do, or that they may, produce evil results on the immediate locality surrounding has been maintained, and with some reason.

Until very recently, and for some years previously, I have resided in the vicinity of one of these institutions, the Fulham Hospital, and I speak with a considerable amount of personal knowledge of the locality surrounding it, and of the extent to which it has been affected by small-pox. Since the opening of the hospital the immediate neighbourhood surrounding it has never been free from the disease, except when the hospital itself has been empty or nearly so of patients. In the autumn of last year (1879) the medical officer of health for the Fulham district gave, in his Annual Report for 1878, a most ghastly description of the ravages of the disease up to that date. On analysing his report, it was found that the scenes there depicted occurred in the streets of his district contiguous to the hospital grounds. Since then the disease has continued, and I have now before me an extract from a local paper, dated March 20th, 1880, in which a report is made to the Fulham Board of Guardians with reference to the disease. It states that from three of the districts of the Fulham Union, during the previous month, 23 cases of small-pox had been removed, 22 of these cases having been sent from one district only, and from that part of the district next to the hospital—in fact, from one street in its immediate neighbourhood. This has been precisely the case with the Brompton district of the Kensington Union. A portion of it adjoins the hospital, and I am well acquainted with it, having been associated with its Poor-law medical officer during the late, or rather present, epidemic, as it still continues. Up to the autumn of 1879, 223 panper cases were removed from the Brompton district to the Fulham Hospital. Of this number, 203 were removed from ten or twelve streets in the immediate neighbourhood of the hospital; the remaining 20 occurred in the more distant parts of the district in a scattered and sporadic form. It may be mentioned that the infected area formed about one-tenth of the area of the whole district, and about one-fiftieth of the whole of the parish of Kensington, in one street. In that side of it exposed directly to the hospital scarcely a house escaped infection. It will not, therefore, appear very surprising that many of the general public, and also many competent professional men, should be unable to believe that the hospital is entirely innocent in the matter. Those whose duty, however, it is to report officially on the subject think otherwise. So far as I have seen of their reports, they appear to make the mistake you refer to, treating the matter as one affecting a whole parish or large district, losing sight of the immediate neighbourhood of the hospital—a manifest fallacy in so far as it has reference to the locality directly surrounding the hospital and its influence thereon.

The reasons generally given for the long continuance of the epidemic are: insufficient vaccination and revaccination, concealment of cases, carelessness of washerwomen, the visitings of servant maids to infected districts and epidemic influence. All these, no doubt, have their action; but they are also equally applicable to those districts where the disease has not existed, or only so in a mild or sporadic form. It would seem as though some other cause or causes should be looked for.

It appears to me that the term epidemic influence as applied to this long-continued outbreak of small-pox—a disease, of all others, spread by contagion and infection—should be received with some modification; at any rate, of all the large towns in the United Kingdom until very recently, London alone has been subjected to it, and that for a period of now over three years.

t the risk of encroaching too much on your space, I would wish to make one remark on the observation of Dr. Bridges with reference to the conveyance of microscopical spores. He says that it is absurd to suppose that they can be conveyed through the atmosphere for an indefinite distance. This is true enough. Distance, however, is a relative term. Manifestly, however, the spores or contagium in the instance of small-pox must be carried some distance. As the majority of cases are infected by some unseen, and therefore distant, source, direct contact is by no means necessary. The question arises, What is the probable distance at which infection ceases? Is it the same in an infected house containing one patient, in an ambulance under the same conditions, as it is in a large hospital containing 150 severe cases of the disease, saturating the surrounding atmosphere with spores, or whatever form the poison may take? Are conditions of atmosphere, locality, elevation, &c., the same in the one case as the other, as regards the power of infecting at a distance? This is a question well worth inquiring into; and, as you say, it is incumbent on some one of the governing authorities to make it, seeing that in spite of the establishment of these hospitals the disease is now entering on its fourth year of scarcely uninterrupted progress in London.

I am, Sir, your obedient servant,

March 29th, 1880. SURGEON-MAJOR.

"NEWSPAPER NOTICES OF MEDICAL WORK."

WE called attention in THE LANCET of November 29th to two newspaper paragraphs in reference to ordinary surgical operations. One of these paragraphs was from the *Sydney Echo*, and described a lithotomy and an amputation by, respectively, Dr. M'Laurin and Dr. Cox. These gentlemen forward us the following letter from the Editor of the *Echo*, which completely exonerates them. We gladly insert the letter, but Drs. M'Laurin and Cox will agree with us that it is no part of a newspaper reporter's duty to describe the ordinary operations of surgery in an infirmary or out of it, and the sooner the practice is discontinued the better.

Echo Office, Sydney, January, 1880.

"DEAR SIR,—I see that a paragraph which appeared in the *Echo* with reference to medical work at the Sydney Infirmary has been copied into THE LANCET, apparently for the purpose of condemning unprofessional efforts to obtain notice through the press. I mark particularly the following sentence: 'We cannot so much blame lay newspapers for inserting such paragraphs as we blame medical men who contribute them for publication.' I regret that an unjust imputation should thus be cast upon you and Dr. Cox. One of the duties of the city reporter of the *Echo* is to visit the infirmary every day, and in the ordinary course of business he obtained the information contained in the paragraph referred to. There is not the slightest colour of truth in the innuendo conveyed in the sentence I have above quoted from THE LANCET. In conclusion, I would say that, in my long experience of newspaper life, I have not known any instance in which a Sydney medical man of recognised standing has attempted to obtain recognition by the press in the unprofessional manner censured by THE LANCET.

Yours very truly,

"Dr. M'Laurin." "SAMUEL COOK.

PUERPERAL CONVULSIONS.

DR. T. A. POPE, of Wilderville, Texas, writing on this subject, says:—"I feel justified in saying that if bloodletting be eschewed, chloroform inhalation as a temporary expedient, chloral and the acetate of potash be given freely, followed by free purgation, and a diuretic mixture when no contra-indication exists, very few patients will be lost from puerperal convulsions."

ENGLISH AND FOREIGN WEIGHTS AND MEASURES.

To the Editor of THE LANCET.

SIR,—Will you allow me to call attention to another victim to the difference between English and foreign weights and measures?

The Italian Consul in Bombay was prescribed an injection of morphia by an Italian doctor; but the chemist mistook *grains* (written "grana" in the prescription) for the French word *grammes!* and, of course, the unfortunate patient died in a very short time. As well as I remember, there are about *fifteen grains* in one *gramme*, so that the extent of the danger of mistaking one for the other can be estimated.

I have recently returned from a long stay in Italy, France, &c., and always found the *greatest difficulty* in making foreign chemists understand the difference; and if I had not known the French language fairly, I should probably have been sacrificed to one of the many English prescriptions I got made up.

I leave the matter in the hands of the medical profession, respectfully suggesting an International Conference to assimilate the weights and measures of all civilised countries.

I remain, Sir, your obedient servant,

April 10th, 1880. NEMO.

P.S.—"Gr." expresses equally *grains* and *grammes*, which is really too *monstrous*, considering the difference between the two!

F.R.C.S., (Manchester.)—At the primary examination for the Membership of the College of Surgeons, which was brought to a close on Wednesday last, 173 candidates had been examined, against 213 in the corresponding period last year, when the rejections amounted to 45 for three months, and 7 for six months.

W. J. H. should at once secure the aid of a skilful general practitioner or surgeon. There are, happily, as yet no special institutions for such diseases.

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INFLUENCE OF THE ELECTRIC LIGHT ON VEGETATION.

MR. C.W. SIEMENS has made some further observations on the influence of the electric light on vegetation. In another communication to the Royal Society he detailed a few of the results obtained. He exhibited two pots of strawberries which had been grown in the usual way until the fruit buds appeared, when one of the pots was exposed to continuous light—that is, daylight through the day and electric light during the night, the other being left to the influence of ordinary daylight. The contrast between the two pots, as shown at the meeting, was remarkable: one bore a cluster of large, red, fragrant strawberries; the other a bunch still green, with the exception of one slightly red spot. The ripe fruit was the result of the combined light, from which the conclusion is drawn that electric light may be found useful in the ripening of fruit generally. The ripe strawberries were tasted by the President, and pronounced very good.

A Fellow, (Liverpool.)—There is plenty of time, as the election does not take place until the first Thursday in July, when at least three vacancies will be declared in the Council, caused by the death of Mr Hancock, and the retirement in the prescribed order of Mr. George Busk and Mr. T. B. Curling, both of whom are Fellows of the Royal Society. Sir James Paget, Bart., will take the Chair at the Fellows' festival.

THE PHYSIOLOGY OF THE LARYNX.

To the Editor of THE LANCET.

SIR,—Permit me to reply to Mr. Holmes's letter of December 6th last year. Had I been at home I would have done so earlier.

In my original paper, which appeared in your columns on June 21st, 1879, I not only began by stating it as my firm belief that there is no longitudinal stretching of the vocal cords by muscular action during vocalisation, but concluded that to admit a longitudinal tension by the action of the crico-thyroid muscles was to admit an anomaly in the phenomena of muscular action, in the shape of an increase of the length of a muscle during its contraction. Mr. Holmes in his first letter (June 28th) ventures to admit I am right in reference to this matter, but adds that "the experiments of Müller are sufficient to prove that alterations in the pitch of the voice, at least in the chest notes, are entirely dependent on varied tension of the vocal cords." Mr. Holmes is now "sorry" that I am "able to strain such an absolute agreement" with any of my "theories" out of anything he has written. After remarking that it is not with any theory of mine I have claimed his agreement with me in every letter I have written, but with an argument based upon anatomical and physiological facts, I would ask why Mr. Holmes did not accuse me of straining an agreement after my letter of July 12th, in which I express astonishment that, after agreeing with me so far, he should still have faith in the experiments of Müller. I now learn that the approval is a qualified one. The peculiarity of the particularly intricate and lengthy qualification, however, is that it more than negatives the approval. Mr. Holmes believes in a longitudinal tension of the vocal cords. I most emphatically do not. The process of reasoning by which I try to show why I do not, Mr. Holmes has not as yet ventured to attack. He contents himself with styling it an idea and a theory. I must, therefore, again point out that if I argue correctly that the crico-thyroid muscles do not stretch or make tense the vocal cords in a longitudinal direction, all experiments yet made upon the dead larynx have no value whatever, because they are not faithful imitations of nature; and also that Mr. Holmes is not at liberty to appeal to them for the purpose of qualifying a very positive approval of an argument which avowedly aims at demonstrating their absurdity.

My remarks about the falsetto voice in my last letter sprang from no misconception or want of care in reading Mr. Holmes's letter. I added that "a pure falsetto note has never been emitted by any method of experimentation yet devised," in order to show that if the vocal cords were the all-important structures they are made out to be, some method would have been discovered by this time to get a falsetto note out of them.

In conclusion, I have to invite Mr. Holmes to consider my argument on the action of the laryngeal muscles in THE LANCET of June 21st, 1879.

I am, Sir, yours faithfully,

Kendal, April 7th, 1880. C. R. ILLINGWORTH, M.B.

SUBCUTANEOUS INJECTIONS.

MR. W. J. MARSH, of St. Matthew's Infirmary, Cambridge Heath, offers the following remarks on the above subject:—

None of the preparations at present obtainable are free from objection. The permanent solutions are apt to leak or spill, and the gelatine discs are troublesome, whilst their advantage as regards exact dosage is more apparent than real. What is required are solutions that could be alternately and easily solidified and liquefied. Might not these be obtained by using a certain proportion of gelatine sufficient to enable the solutions to set firmly at ordinary temperatures, but not so much as to prevent them being easily liquefied by heat? A small quantity of salicylic acid or chloral might be added if necessary as a preservative.

An Old Surgeon-Major.—The publication of the General Order regulating the administrative branch of the Indian Civil Service obviates the necessity for the publication of our correspondent's very temperate remonstrance.

A CASE OF DIABETES MELLITUS TREATED WITH SALICYLATE OF SODA.

DR. CHARLES KAUFMANN, of Frankfort-on-the-Main, communicates the following interesting case:—

A lady, aged fifty-eight, consulted me for intense pain she suffered during micturition, and which increased, especially after having passed urine. She had been under the care of another medical man during one year and a half, who told her that her disease was a chronic catarrh of the bladder, and who applied, besides other medicines, injections of chamomile infusion into the bladder, without any amelioration. On examination, I found the mucous membrane of the vagina much excoriated in places, and extremely sensitive. It being evident that the passage of the urine over these excoriations was the cause of the pain, and that the bladder was free from disease, further examination eliciting the well-known symptoms of diabetes, except the hunger; the diagnosis was not difficult, even before the analysis of the urine, which was of a specific gravity of 1038, with five per cent. of sugar. First of all I regulated most carefully the diet, and ordered Carlsbad water to be taken at home, as the patient could not undertake a journey to the spa. The water having been regularly used during a fortnight, the analysis of the urine showed no change at all for the better. I then ordered salicylate of soda in doses of one gramme to be taken three times a day after each meal. After a fortnight the specific gravity had diminished to 1016, and the sugar to two per cent. The medication having been continued for ten days longer, the sugar had quite disappeared, and the specific gravity was 1012.

I. V. R. C.—The minute on the Indian Medical Service by Lord Dalhousie, written in 1856, was subsequently published in this country, and will be found in the Appendix to the Report of Lord Herbert's Commission. It is interesting and valuable; but we do not think it necessary to reprint a portion of it, as suggested by our correspondent.

ARSENIC IN SKIN DISEASES.

To the Editor of THE LANCET.

SIR,—In last week's LANCET you have generously reported an abstract of a paper I read on the above subject before the Medical Society of London. An error has arisen in the report, how I cannot understand, as the abstract as I wrote it is correctly entered on the minutes of the Society. Your report says, "It is sometimes useful to combine it with other drugs, even iron." It ought to read, "It should never be combined with any other drug, not even iron."

I am sorry to trouble you with an explanation on a point that at first sight seems trivial; but the whole object of my paper was to show that, in order to obtain the full therapeutical value of arsenic in diseases of the skin, it should be given alone.

I am, Sir, your obedient servant,

Montagu-square, April 12th, 1880. MALCOLM MORRIS.

A Collector.—The large collection of medical portraits made by Mr. W. Wadd was dispersed; the late Dr. Squibb, Dr. Merriman, the College of Surgeons, and Mr. Stone obtained by purchase most of them. Mr. Squibb's collection is now in the possession of the Royal Medical and Chirurgical Society.

Mr. Harry Dove should address his question to a practitioner; or, if thought desirable, to one of the Professors of Obstetrics, whose names may be easily found in the Medical Directory.

NICTITATION.

To the Editor of THE LANCET.

SIR,—I have three patients, one gentleman and two ladies, all suffering in the same way—viz., a shaking of one eyelid, like a frequent and rapidly repeated wink, and a little occasional twitching at the same side of the face, extending to the angle of the mouth. One lady has good private means, so, having proved my inability to benefit her, I recommended her to consult some physicians of highest repute in London, Dublin, and elsewhere. No advantage has resulted.

Perhaps some kind reader of your valuable journal could recommend, as the result of successful experience, some treatment. He would have my sincere thanks, and my patients shall be duly informed by me of their benefactor.

Yours faithfully,

April 7th, 1880. M.D.

R. V.—Our correspondent will probably have seen ere this the announcement that a mess has been established for the medical officers at Aldershot.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—Will you permit me to correct an error in your report of my remarks at the last meeting of the Pathological Society? I did not say that branched connective-tissue corpuscles occurred in "mucous membrane," but in mucous *tissue*, of which the vitreous humour, the fœtal umbilical cord, myxomata, &c., are examples. I should not have troubled you with this correction were it not that your report represents me to have said not only that which I did not say, but that which is almost certainly erroneous.

I am, Sir, your obedient servant,

Upper Berkeley-street, W., April 9th, 1880. JOHN CAVAFY.

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M.B. Edin. — Druitt's Surgeon's Vade-Mecum, Longmore on Gunshot Injuries, Parkes's Practical Hygiene, Aitken's Outlines of Practice of Medicine, and Lowne's Aids to Physiology, would probably answer the purpose of our correspondent.

A. E. B.—Write to the Secretary of the Local Government Board, Whitehall.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Fayrer; Mr. C. Mazzoni, London; Messrs. Boyle and Son, London; Dr. Neale, London; Mr. Hubbard, London; Mr. Illingworth, Kendal; Dr. Cavafy, London; Mr. Max Greger; Mr. Palmer, Coldstream; Dr. Wahltuch, Manchester; Dr. Thin, London; Messrs. Dunn and Hewett, London; Mr. H. Millington, Bromsgrove; Mr. Berry, Wigan; Mr. S. Gamgee, Birmingham; Dr. Warren, Boston, U.S.A.; Mr. M'Lamin, Islington; Dr. Ward, Cockermouth; Mr. Wright, Leeds; Surgeon-Major Gurran; Mr. Wyndham Cottle, London; Mr. Hagyes, Halstead; Mr. Little, Ben Rhydden; Dr. Skerritt, Bristol; Messrs. Macmillan and Co., Cambridge; Dr. Watt; Mr. Dearden, Church; Mr. Hynes, Nottingham; Mr. W. M. Allen, Boston, U.S.A.; Rev. T. J. Berwick, Buntingford; Dr. Buzzard, London; Dr. Barton, Fulbeck; Mr. Macpherson, Middlesborough; Mr. R. C. Lucas, London; Dr. Buchanan, Glasgow; Dr. Bowditch, Boston, U.S.A.; Mr. Malcolm Morris, London; Dr. S. Mackenzie, London; Mr. Bridger, Canning Town; Mr. S. Murphy, London; Mr. Gray, London; Messrs. Tulloch and Son; Dr. Boileau; Mr. Snell, Sheffield; Dr. Thudichum, London; Dr. Savage, Birmingham; Mr. Childs, London; Mr. Sumner, Boston, U.S.A.; Mr. Keene, Otterhead; Mr. Lockwood, Sheffield; Messrs. Smith and Son, Birmingham; Messrs. Richardson and Co., Leicester; Mr. Williams, Liverpool; Mr. Hemming, Cheltenham; Mr. Whiffen, Battersea; Messrs. Grabham and Co.; Mr. Elliott, Newcastle; Mr. Marshall, Cheetham; Dr. Stuart, Dowlais; Dr. Skrimshire, Holt; Messrs. Harrison and Sons, London; Mr. Scott, Manchester; Mr. Cowburn, Newbury; Mr. Frampton, Weston-super-Mare; Mr. T. Hunt; Mr. Pountney, Lytham; Mr. Allsop; Mr. H. Dove; Dr. L. Gogal, Murraysburg; Mr. J. C. Richardson; C. Holloway; R. S.; M.D., Derby; Dean, Golcar; Filmer; M.D., Woolwich; W. J. H.; Nemo, Newport, I.W.; M.D.; Medicus, Hackney; Unknown; The Editor of the *Gardeners' Magazine*; Rumination, India; Pyrexia; Inquirens; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from — Mr. Grace, St. Andrews; Mr. Keyworth, Lincoln; Mr. Bainbridge, Chiltercoates; Mr. Coates, Strhowey; Dr. Harding, Whittlesea; Dr. Foote, Rotherham; Dr. Farmer, Bridgwater; Mr. Edwards, Farneaux Pelham; Mr. Ball, Stony Stratford; Messrs. Deal and Co., Brighton; Mrs. Cookson, Cambridge; Mr. Day, Dorchester; Mr. Musgrott, Pontefract; Mr. Baron, Ulsby; Mr. Porter, Sheffield; Dr. Gill, Stratford-on-Avon; Mr. Hubbard, Downham Market; Mr. Davies, Ebbw Vale; Mr. Wilson, Ryde; Dr. Kennedy, Dublin; Mr. Bullivant, Derby; Mr. Andrews, Shrewsbury; Mr. Appleton, Beverley; Mr. MacGill, Littleborough; Dr. Sheehy, Ebbw Vale; Mr. Hall, Aberystwith; Dr. White, Bradford; Dr. Walker, Hackney; Mr. Moore, Moreton-in-Marsh; Dr. P. M. Chapman; Mr. Bolton, Carlow; Messrs. Macmillan and Co., Cambridge; Mr. Hemming, Cheltenham; Mr. Bartlett, Malfen; Dr. Lucey, Southampton; Mr. Evans, Bromsgrove; Mr. Bate, Huddersfield; Medicus, Carlton; D. C. S.; Alpha, Darlaston; Boyatt; M. E. K., Oakham; Y. Z., Forest-gate; A. B., Stoke Newington; Medicus, Newport; M. B.; C. W. H.; R., Barrow-in-Furness; Dr. X., Huddersfield; M.R.C.S., Grantham; W. S., Stockwell; R. G., Carnarvon; Medicus, Glasgow; M. N. O., Barnard Castle; C. B.; M.D., Bow; Alpha, Swansea; L. M. G.; Verax 50; A. B., Bethnal-green; E. Q.; W., Wigan; Alpha, Kennington; B. F.; &c.

La Médecine des Ferments, Manchester Guardian, Welshman, Liverpool Daily Post, Hastings and St. Leonards Times, East London Observer, Metropolitan, Pharmaceutical Journal, National Board of Health Bulletin, Bristol Mercury, Surrey Advertiser, El Observador Medico, Medical Record, Philadelphia Medical Times, Sunderland Daily Post, La Independencia Médica, Englishman, Australian Medical Journal, Leeds Mercury, Western Morning News, &c. &c., have been received.

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Medical Diary for the ensuing Week.

Monday, April 19.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 2½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. William Adams will show casts of Contracted Fingers. — Sir Joseph Fayrer, "On Hepatic Abscess."

Tuesday, April 20.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. H. H. Scott, "On Wind and Weather."
STATISTICAL SOCIETY.—7½ P.M. Dr. F. J. Mouat, "On the Education and Training of the Children of the Poor."
PATHOLOGICAL SOCIETY OF LONDON. — 8½ P.M. The following Specimens will be shown:—Multiple Ivory-pitch Morphœa in process of rapid recovery (living specimen); Skin Disease, probably Lichen Ruber (living specimen); Ramifying Cyst in the Brain; Aneurism by Anastomosis of the Ear; Laryngeal Perichondritis in Typhoid Fever and in Small-pox; Elongation of Limb in connexion with Knee-joint Disease (living specimen); Aortic, Mitral, and Tricuspid Constriction; Tumour of Spermatic Cord; Imperforate Anus; Volvulus in an Infant; Complete Necrosis of the Lower Jaw, with Cancrum Oris; Diffuse Sarcoma of Liver in an Infant aged three weeks; Ossifying Chondro-sarcoma of Left Femur, with Secondary Growths; Congenital Talipes Varus; Talipes Calcaneus; &c. &c.

Wednesday, April 21.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY. — 7½ P.M. Council Meeting. — 8½ P.M. Mr. Christopher Heath: "Thirty-five Years' History of a Maxillary Tumour."
HUNTERIAN SOCIETY.—8 P.M. Mr. Startin will show a Case of Acute Pemphigus.—Mr. J. E. Adams, "On a Case of Cancer of the Rectum, in which Excision and Colotomy were performed"; and a "Case of Osteotomy of the Femur for Genu Valgum."

Thursday, April 22.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. —Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Tyndall, "On Light as a Mode of Motion: Theories of Light and Colours."

Friday, April 23.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION. — 8 P.M. Evening Meeting. — 9 P.M. Mr. W. H. Pollock, "On Dumas Père."
QUEKETT MICROSCOPICAL CLUB. — 8 P.M. Mr. J. G. Waller, "On an undescribed British Sponge of the genus Raphiodesma."—Mr. A. Martinelli, "On the Mechanism of the Stomata of the Holly."
CLINICAL SOCIETY OF LONDON.—8½ P.M. Dr. Stokes, of Dublin, "On Amputating through the Hip-joint."—Dr. Southey, "On a Case of Acute Rheumatism with Multiple Embolisms."—Mr. Cripps, "On a Case of Secondary Hæmorrhage from the Stump of the Thigh, with Calcareous Degeneration of the Vessels."—Dr. Grailly Hewitt, "On a Case of Acute Hysterical Vomiting of ten months' duration, caused by Displacement of the Uterus."

Saturday, April 24.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. James Sully, "On Art and Vision."

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THE

Lumleian Lectures

ON

THE DIGESTIVE FERMENTS, AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians,

BY WM. ROBERTS, M.D., F.R.C.P., F.R.S.,

PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY; PROFESSOR OF CLINICAL MEDICINE TO THE OWENS COLLEGE.

LECTURE II.—PART II.

Comparison of the Action of Pepsin and Trypsin.

THE action of pepsin and trypsin, although similar in the main results, is certainly not identical. There is a markedly larger production of leutin and tyrosin in tryptic than in peptic digestion. Moreover, the action of the two ferments on different proteids appears to vary both in character and in energy. Milk is much more readily digested by pancreatic extract than by artificial gastric juice; but in the case of egg-albumen the advantage lies decidedly with the gastric juice. The study of the digestion of egg-albumen by the two methods yielded some interesting results. I employed for this purpose a dilution of egg-albumen with water, in the proportion of one in ten. This remains uncoagulated after being boiled in the water-bath, and furnishes a favourable medium for studying the digestion of albumen—much more favourable than the chopped boiled white of egg usually employed. It permits the ferment to be at once brought into uniform and intimate contact with the particles of the albumen, thus obviating the irregularity and want of constancy which necessarily attends the operation of a solvent acting on solid pieces of variable size, which can only be attacked progressively from their surfaces. In the raw state this solution is digested with extreme slowness by artificial gastric juice, and pancreatic extract is nearly inert on it; but after being boiled it is attacked with energy by both the gastric and the pancreatic ferments. When the boiled solution was treated, in the warm chamber, with pepsin and hydrochloric acid, the transformation of the albumen went on rapidly and without interruption to its close. In the earlier periods of the action the mixture gave a dense precipitate with nitric acid and with ferrocyanide of potassium, but this precipitation became progressively less and less pronounced, until at the end of two or three hours these reagents only produced a slight haze. The albumen was now completely digested, or at least as nearly so as could be reached, for this remnant of a reaction persisted even after a further digestion of twenty-four hours.

When the same solution was treated with pancreatic extract the progress of events was different. For an hour or two (the time varying with the quantity of extract added) there was no apparent change; but at the end of this time the mixture lost its diffluent condition, and became converted into a gelatinous mass, exactly resembling a thin starch jelly. By and by the gelatinous matter broke up into little masses, which floated in a transparent liquid. At this point the action seemed to be arrested. The floating masses of jelly remained almost undiminished in quantity after twenty-four and even forty-eight hours. When the mixture was filtered the liquid portions came through perfectly transparent, and the jelly-like matter was left in the filter. The filtrate was found to be a rich and very pure solution of peptone, uncontaminated with any undigested or half-digested albumen. The jelly-like matter was found to be insoluble in water, hot or cold, but it dissolved readily in acids, and was rapidly digested by pepsin and hydrochloric acid.

If a large amount of pancreatic extract was used, a considerable proportion of the jelly-like matter was slowly dissolved; but the main result was always the same. The pancreatic ferment was only able to convert a part of the albumen into peptone, whereas the gastric ferment converted the entire quantity, with the exception of an insignificant residuum.[1]

In the case of milk, the relation of the two ferments is reversed. Tryptic digestion of milk is rapid, and leaves only a very slight residue; whereas peptic digestion is slow, and leaves a large residue. I have some further observations to make on the digestion of milk by pancreatic extract, but it will be more convenient to take up the subject when I come to speak of the use of this ferment for the preparation of artificially digested food.

Peptogens.

I may here advert to a singular view advanced by Schiff in regard to the production and secretion of pepsin and trypsin. Schiff found that when an insoluble aliment such as white of egg (or fibrin, or meat which had been deprived of its soluble portions) was introduced into the stomach of a fasting animal no pepsin was secreted, and the albumen remained undigested; but if with the albumen certain soluble aliments were introduced into the stomach, then pepsin was produced, and digestion immediately began.

To these substances, which had the power of provoking the formation and secretion of pepsin, Schiff gave the name of *peptogens*. Among the most effective peptogens were found to be solutions of dextrine, extract of meat (or soup), infusion of green peas, bread (which contains dextrine), gelatine, and peptones. Solutions of grape-sugar, soluble starch, fat-emulsion, or gum, however, had no peptogenic effect; and milk and coffee had not much. Schiff further found that peptogenic substances were just as effective when they were injected into the blood, or into the cellular tissue, or introduced as enemata into the rectum, as when they were introduced directly into the stomach. On the other hand, when peptogens were injected into the small intestine their influence was not observed; their effect seemed to be annulled by some action of the mesenteric glands, or by some change induced in them in their passage along the thoracic duct.

On the ground of these experiments—and they were numerous and oft repeated and gave constant and decisive results—he concluded that the absorption into the blood of these soluble aliments was a necessary preliminary of proteid digestion—that no pepsin or trypsin was secreted unless these substances existed beforehand in the blood. The first act, according to Schiff, of gastric digestion was the absorption from the constituents of a meal of these soluble peptogens by the veins of the stomach. On this followed immediately the secretion of pepsin and the commencement of digestion proper.[2]

These views and experiments of Schiff have not been allowed to pass without challenge, but they have not yet been overturned. If they should be substantiated they will give, curiously enough, a scientific sanction to the prevailing custom of commencing dinner with soup.

The Milk-Curdling Ferment.

You all know that one of the most striking properties of gastric juice is to curdle milk. This property is utilised on a large scale in the industrial art of making cheese. Rennet, which has been used for that purpose from remote antiquity, is simply an infusion of the fourth stomach of the calf in brine. The curdling of casein by rennet does not depend upon the acid of the gastric juice, for it takes place when the milk is neutral or even faintly alkaline. It has until lately been believed that this property was an inherent attribute of pepsin, but this opinion is no longer tenable. Brücke succeeded, by a process I need not particularise, in producing pepsin which had an energetic action on proteids, but which did not possess, except in the feeblest degree, the power of curdling milk. Mr. Benger also found that an extract of pig's stomach in saturated brine, while it possessed energetic action as a milk-curdler, had only feeble proteolytic powers. We must therefore regard the agent in gastric juice which curdles milk as a substance distinct from pepsin.

In the course of my experiments on pancreatic extract, I made the unexpected observation that the pancreas also contained an agent capable of curdling milk. I found this

[1] Most observers have noticed the occurrence of this indigestible residuum (named *Dyspeptone* by Meissner) in the artificial gastric digestion of proteids. I have noticed the same in the digestion of milk by pancreatic extract.

[2] See Schiff's Leçons sur la Physiologie de la Digestion, vol. ii., p. 300 et seq. Paris, 1867.

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property in the pancreas of the pig, the sheep, the calf, the ox, and the fowl. In whatever way the extract of the gland was made, whatever solvent was used, this property of curdling milk was present in it; but the brine extract exceeded all others in curdling capacity. If a few drops of extract of pancreas be added to some warm milk in a test-tube the milk becomes a solid coagulum in a few minutes. Some minutes later the whey begins to separate from the curd. In short, the action resembles exactly that of calf's rennet; and, so far as I know, you could make cheese with pancreatic rennet as perfectly as you can with gastric rennet. There is, however, not an absolute identity of the two agents. I said just now that gastric rennet produced curdling in neutral and even in faintly alkaline milk; but if the alkali exceed a very small proportion ordinary rennet does not curdle milk. I found that an alkalescence exceeding that produced by one grain of bicarbonate of soda to an ounce of milk altogether prevented the milk being curdled by gastric rennet. But this is not so with pancreatic rennet. You may add two, three, or four grains of bicarbonate of soda to each ounce of milk and still the pancreatic rennet will induce curdling with undiminished energy. Milk is likewise curdled by pancreatic extract when quite neutral, and even when very faintly acid. Indeed, it appeared to me that a very faintly acid milk curdled more actively with pancreatic extract than neutral milk, but not so actively as alkaline milk.

That the curdling agent of the stomach and pancreas is a true ferment, and not some inorganic chemical agent, seems to be proved by the fact that boiling, or even heating to 160° F. (70° C.) instantly destroys its power. I found moreover that, like other soluble ferments, it is precipitated, but not truly coagulated, by alcohol—for it recovers its solubility and activity when the alcohol is removed, even after a contact of several weeks.

The curdling ferment of the pancreas is a distinct body from trypsin, as the following experiments show. (1) Some brine extract of pancreas (which was known to possess strong proteolytic energy) was acidulated with hydrochloric acid in the proportion of 1 per 1000, and then placed in the warm chamber at a temperature of 104° F. (40° C.) for a period of three hours. It was then carefully neutralised with bicarbonate of soda. When thus treated, the extract was found to have lost its proteolytic power, but its curdling action on milk was almost as energetic as ever. (2) A portion of the same brine extract of pancreas was filtered under vacuum pressure through porous earthenware. The filtered product was found to possess an undiminished faculty of curdling milk, but it had almost no power of dissolving the curds. The curdling ferment had evidently traversed the earthenware freely, but only traces of trypsin had passed through.

What is the real function of the curdling ferment? Seeing its striking reaction with milk, one's first idea is that it must have something to do with the digestion of casein. But a little consideration shows that this idea is altogether improbable. Although all mammalia start life on a milk diet, milk does not form a part of the normal diet of any adult creature except man. Nor can its universal presence in the mammalian digestive organs be regarded as a vestigial phenomenon—a "memory" of the suckling phase of their existence—for the same curdling property is found in the stomach and pancreas of the fowl, which never at any period of its life fed on milk. Moreover, it may be doubted whether the ferment in question is the actual agent which curdles milk on its passage into the stomach; for the acid of the gastric juice, which also curdles milk, would probably be beforehand with it, inasmuch as its action is a good deal more prompt than that of the ferment. In the pancreatic digestion of milk, the occurrence of curdling has appeared to me to be a distinct hindrance to the process. Has this ferment any true digestive functions? I think this is quite open to doubt. Its action on milk is apparently akin to that of the fibrin-ferment on blood—and it may likewise have some kindred purpose; but what that purpose may be I am unable to conjecture.

EMULSIVE FERMENT.—DIGESTION OF FATS.

The digestive change undergone by fatty matters in the small intestine consists mainly in their reduction into a state of emulsion, or division into infinitely minute particles. In addition to this purely physical change, a small portion undergoes a chemical change whereby the glycerine and fatty acids are dissociated. The fatty acids thus liberated then combine with the alkaline bases of the bile and pancreatic juice, and form soaps. The main or principal change is undoubtedly an emulsifying process, and nearly all the fat taken up by the lacteals is simply in a state of emulsion, and not of saponification. It is, however, quite certain that both these processes do take place in the small intestine, though in very unequal degrees. The only question in connexion with the digestion of fat which I propose to examine is:—Whether these changes are produced by the operation of a soluble ferment, or by some other and different agencies. In his latest utterances on this subject, Bernard[3] insisted that the digestion of fat, like the digestion of starch and proteids, consisted in the action of a soluble ferment, which he named *Ferment emulsif.* This ferment, he alleged, first emulsified and then saponified fats. In the intestine the change scarcely went beyond emulsion—in this condition fat was found in the contents of the lacteals. Saponification took place almost exclusively further on, and later, in the blood. It is certainly established that the pancreatic juice exercises a marked influence on the digestion of fats, and it is in the pancreas, according to Bernard, that the emulsive ferment is to be found. Bernard demonstrated that healthy pancreatic juice has quite a special faculty of emulsifying fats. Pancreatic tissue has also the same property. If a portion of fresh pancreas be rubbed up with fatty matter and water, you get an emulsion which is fairly persistent. I have not had an opportunity of examining the behaviour of pancreatic juice with fatty matter, and cannot therefore speak of its properties; but it is singular if, as alleged, the effect of pancreatic juice and pancreatic tissue on fat be due to the presence of a soluble ferment, that the extracts of pancreas possess none of the same power. I have made extracts of pancreas in various ways—with simple water, with chloroform water, with dilute spirit, with solutions of boracic acid, of borax, and of both combined, with glycerine and water, with brine, and with solution of salicylic acid, and of salicylate of soda; and yet I could not satisfy myself that any of these extracts possessed any special power of emulsifying fats, nor of liberating the fatty acids and inducing saponification. Paschutin[4] states that the emulsive ferment of the pancreas can be extracted by a solution of bicarbonate of soda. An extract of pancreas made by myself with a 2 per cent. solution of bicarbonate of soda was indeed found to have a very marked emulsifying power, but it had the same power, even in an enhanced degree, after being boiled, which showed that its emulsifying properties could not depend on the presence of a soluble ferment.

I was equally unsuccessful in my attempts to verify the alleged power of extracts of pancreas, and of crushed pancreatic tissue, to liberate the fatty acids. When fresh pancreas, finely triturated with sand, was digested with milk in the warm chamber, I could not obtain satisfactory evidence of the development of free acid from the decomposition of the fat of the milk by a soluble ferment. The pancreas itself yields a slightly acid solution when infused in water, and a mixture of milk and pancreatic tissue always showed a slight acid reaction; but when this primary acidity was neutralised, no further production of acid took place until such a time had elapsed as was sufficient to permit the development of organised ferments and the origination of the lactic fermentation. If the development of organised ferments was prevented by the addition of antiseptics, the mixture of milk and crushed pancreas remained neutral for several days. The same results followed when I operated on emulsions made with crushed pancreas and lard or olive oil. In my numerous observations on the digestion of milk with various pancreatic extracts, I never could detect the production of an acid reaction, unless organised ferments were permitted to intervene.

I obtained similar negative results with almond emulsion. Bernard attributed the formation of an emulsion when almonds (or other oily seeds) were rubbed up with water to the presence in the seeds of a soluble ferment. But I found, to my surprise, that almonds which had been boiled for seven hours still produced a perfect emulsion. As all known soluble ferments are destroyed by boiling, this result seems irreconcilable with Bernard's view. I also found that almond emulsion kept in the warm chamber for six or eight hours at a temperature of 100° F. (38° C.) showed not the slightest evidence of an increase of its original faintly acid reaction.

[3] Claude Bernard, Leçons sur les Phénomènes de la Vie, tom. ii, p. 346. Paris, 1879.

[4] Hoppe-Seyler, Physiologische Chemie, p. 257. Berlin, 1878.

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It appeared to be more probable that the fatty matter in the almond existed in the seed in the condition of a solid emulsion, and that the formation of a fluid emulsion by trituration with water was due simply to the liberation of the minutely-divided oil particles, rather than to the intervention of a soluble ferment.

It is with considerable hesitation that I venture to place myself in even apparent contradiction with so great an observer as was Claude Bernard; and I by no means pretend that these observations traverse the main conclusions for which he contended as to the digestive transformations of fat in plants and animals. The views which Bernard developed on the digestive process are based on inductions so wide, and observations so multiplied, that I feel satisfied that their substantial accuracy will be ultimately established in regard to fat, as they have already been established in regard to starch and cane-sugar.

Some observations made by Brücke promise to throw a fresh light on the digestion of fat. Brücke found that oils and fats which contained an admixture of free fatty acids—in other words, which were more or less rancid—were emulsified by a slight agitation with a weak solution of carbonate of soda. J. Gad extended these observations, and showed that even simple contact of a rancid oil with the alkaline solution was sufficient to effect a mechanical division of the oily matter. I have repeated these observations, and the results are certainly remarkable. The different behaviour of two specimens of the same oil, one perfectly neutral and the other containing a little free fatty acid, is exceedingly striking. I have here before me two specimens of cod-liver oil—one of them is a fine and pure pale oil, such as is usually dispensed by the better class of chemists; the other is the brown oil sent out under the name of De Jongh. I put a few drops of each of these into these two beakers, and pour on them some of this solution, which contains 2 per cent. of bicarbonate of soda. The pale oil, you see, is not in the least emulsified; it rises to the top of the water in large clear globules. The brown oil, on the contrary, yields at once a milky emulsion. The pale oil is a neutral oil, and yields no acid to water when agitated with it—in other words, it is quite free from rancidity; but the brown oil when treated in the same way causes the water with which it is shaken to redden litmus paper. I was surprised to find that olive oil (salad oil), which appeared quite sweet, and had not the slightest taste or smell of rancidity, gave a milky emulsion with the soda solution. This oil did not yield any acid reaction to water when agitated therewith. Nevertheless, it evidently contained a little free fatty acid (probably oleic acid, which is insoluble in water, and therefore does not acidify water shaken up with it), for when a portion of this oil was washed with a strong solution of carbonate of soda, and then allowed to separate, the oil thus freed from acid no longer gave an emulsion with the weak soda solution. It would appear that an admixture of only a very small proportion of free fatty acid is sufficient to induce emulsification—a quantity so small as not to cause any appreciable rancidity to the sense of smell or taste. This specimen of almond oil is to all appearance perfectly sweet, but it communicates a rather sharp acid reaction to water shaken up with it, and it gives, as you see, a perfect emulsion with the soda solution.

The bearing of these observations on the digestion of fat is plain. When the contents of the stomach pass the pylorus they encounter the bile and pancreatic juice, which are alkaline, from the presence in them of carbonate of soda. So that the fatty ingredients of the chyme, if they only contain a small admixture of free fatty acids, are at once placed in favourable circumstances for the production of an emulsion without the help of any soluble ferment, the mere agitation of the contents of the bowel by the peristaltic action being sufficient to effect the purpose.

This view of the matter renders it necessary that fresh inquiries should be made into the effect of gastric digestion on fats. It has hitherto been supposed that fatty and oily substances undergo no change in the stomach, but it is quite possible that something may have been overlooked. It was noted by Richet in the patient with a gastric fistula that the fatty matters were detained a long time in the stomach, and that they only passed through the pylorus with the last portions of the meal. It is also a familiar experience to most dyspeptics that rancid eructations are a frequent occurrence in the later stages of gastric digestion. If it should turn out that among the complex operations taking place in the stomach there occurred some slight decomposition of the neutral fats, and a liberation of a small quantity of free fatty acid, such a result would supply the necessary condition for the emulsification of the neutral fats in the duodenum. In speculating on this subject it is difficult to shut one's eyes to the possibility of the intervention of formed or organised ferments in the digestive process. It is well known that fatty acids are liberated in the decomposition of neutral fats by bacteroid ferments (zymophytes), and the presence of ferments of this class in the living stomach has been so repeatedly observed that it may well give rise to the suspicion that they are a normal ingredient of the gastric mucus, and have a normal function to perform in the digestion of some portions of our food. It is not, however, desirable to push speculations of this kind in advance of observed facts, and I only mention them as hints for further inquiry in regard to the digestion of fat.

Lectures
ON SOME
RECENT INVESTIGATIONS
INTO THE
PATHOLOGY OF INFECTIVE AND CONTAGIOUS DISEASES.

Delivered in connexion with the Brown Institution, at the University of London, Dec. 1879,

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LECTURE I.—PART IV.

HAVING thus described the principal generic forms of bacteria, it must suffice for me to say but little of their conditions of life and of the effects produced by their growth. As yet we are but on the threshold of our knowledge of bacteria, and, investigations having been made only on a very restricted number of species, we do not know how far the results are true of other species. I shall have to mention some points with regard to certain species when speaking of their action in the animal body: a brief outline of some main facts is all that time will now permit.

Speaking generally, all bacteria require for their growth the presence of suitable nitrogenised pabulum, the supply of oxygen, and the maintenance of a suitable temperature; and their free development depends on the sufficiency of these conditions. It has been shown, however, that they may slowly undergo vital changes if oxygen be in defective quantity. Many conditions either impair their vitality or cause their death. Heat and cold have marked effects. For some bacteria the range of temperature suitable for free growth is very restricted; probably not for all. But their tenacity of life under the influence of heat is great, and this is especially the case with the spores when exposed to a dry heat. The exact thermal death-point in fluid of the fully-developed organisms has only been ascertained with regard to one or two species, but all are apparently destroyed at a temperature much below 212° F. Some spores resist even this temperature, though only for a short time, and in a dry state may survive nearly 300° F.[1] The effects of cold have been less fully ascertained, but a temperature below freezing is not destructive of bacillus anthracis. A pressure of twelve volumes of oxygen destroys the life of spores of bacillus anthracis (Ewart). Many apparently slight causes interfere with the development of the common bacteria of putrefaction. Very minute quantities of many "antiseptic" substances do this. Wernich's experiments render it probable that bacteria themselves in their growth produce minute quantities of aromatic subetances, which, unless removed as soon as formed, act as antiseptics, and

[1] For some interesting details of the effects of high temperature on germs of monads not far removed from bacteria, see Dallinger, in the Journal of the Royal Microscopical Society, Feb. 1880.

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hinder further development.[2] Skatol, indol, kresol, and phenol are amongst these bodies. The experiments of Downes and Blunt,[3] which have not, so far as I am aware, been either controverted or confirmed, seemed to show that exposure to sunlight sterilised some cultivations of common bacteria, and that a vacuum had the same effect on urine and on Pasteur's solution. Again, it is now well known that the lower orders, common putrefactive bacteria, war against the higher, and that the growth of micrococci and bacteria arrests the development of the more highly-developed and endowed bacilli.

With regard to the vital reactions of bacteria, all recent research seem to show that bacteria are the active agents of fermentation of albuminoid bodies, and that, widely distributed as they are, everywhere swarming in countless myriads, yet the microzyme concerned in any particular process of the kind is probably limited to that process. The remarkable experiments of Professor Lister on lactic fermentation constitute one of the most conclusive pieces of evidence on this point.[4] But whether the action of the bacteria is directly due to the changes in composition caused by their growth, or to some excreted product produced in that growth, is not certain. We shall see that a similar question presents itself in relation to the pathological effects of bacteria and bacilli. I need hardly remind you that many of these points were discussed in detail by my predecessor, Dr. Burdon Sanderson, in his last course of lectures in this place. I must for the present leave this part of the subject and consider some of the views which have been held as to the relations of bacteria and allied organisms to contagion, and the methods and results of researches made with the view of ascertaining those relations.

VIEWS AS TO THE RELATION OF BACTERIA TO CONTAGION.

It is not unnatural to start with a presumption in favour of the view that, if bacteria (using the word in its widest sense) have anything to do with the production of specific diseases, they are not merely the essential morbific element or contagium, but that for each disease of the class of infective and contagious there is a separate organism, which, so far as we know, must retain its characters and be incapable of transition into any other analogous organism. If, for example, the two diseases, small-pox and measles, are each due to the action of a lowly organism of specific nature, our knowledge of those two diseases enables us to affirm with confidence that, however they may have originated in the first instance, they have maintained for some scores of years at least the same characters, that the cycle of organic change which results from the contagium of small-pox is not only definite in character, but bears the same relation to time in thousands of cases under the most dissimilar conditions of race and character, and that with rather less exactness the same is true of measles. Now, if this cycle of systemic change is directly dependent on some specific organism, it follows that the organism itself retains its properties, follows the same laws in its multiplication and reproduction in each case, and does not depart from these characters during a long succession of generations.

Hence, if we once admit that each distinct contagious disease is dependent on a lowly organism, we are led almost irresistibly to conclude that each of these organisms or contagia is a separate species. And, then, if we consider that the soil and climate—i.e., the human or animal body and its conditions—are the same for two different disease-organisms, we must, I think, be led to conceive that each organism has not only a different life history, rate of development, tendency to flourish in a particular soil—i.e., part of the body, &c.; but that distinct morphological characters may also be anticipated to exist, and that these characters may be recognised, if not in all stages of the growth of the organism, yet at some period; or by a comparison of the whole series of changes which it undergoes when grown under favourable conditions.

However crude these conceptions may be, and however little they may stand the test of a critical examination, even from a speculative or metaphysical point of view, there can be no question that such ideas most naturally present themselves to one's mind when brought face to face with the subject; that they represent the view taken by a large majority of the medical profession who have paid any attention to it; and that they have dominated, and do still dominate to a large extent, those who have made special investigations into the life history of contagia. For if this view be correct, or even approximately so, we may be able not only to isolate the organism upon which each disease depends, but we may be able to cultivate it under suitable conditions; we may draw its form, measure its size and that of each of its constituents; we may ascertain under what conditions it will grow and develop, and, what is perhaps of the highest importance, how its growth may be checked by such means as will not be deleterious to the animal body, and thus lay the foundations of a true preventive medicine.

In the first instance, then, the impulse of every one will be to search in the tissues after death for organisms, to describe their characters and differences, and their position in the several organs of the body. Then the blood and lymph, and the discharges which are known to hold the contagium, will be studied during life, and by means of cultivation, under suitable conditions, either in fluids which may afford material for their growth, or by inoculation of animals, we shall attempt to reproduce first the organism, and then by means of it the disease.

One cannot but be fascinated by such a study, by the prospect of thus tracking disease to its origin, of holding in one's hand the contagium vivum, of measuring under the microscope the size and watching the growth of each separate disease in its potential seed. Moreover, the prospect seems the only one which affords us any chance of being able by the microscope to distinguish the contagia of diseases which leave so little trace in the body as typhus or scarlet fever; if this does not aid us, how shall we penetrate more deeply into the intimate causes of these mysterious and deadly changes which cut short so speedily the life of the body?

METHODS OF OBSERVATION.

In the investigation of the various infective and contagious diseases, in order to ascertain their relation to the lower organisms, certain methods have been adopted which are common to all the forms of disease. Though well known to many of you, it may, I think, be advantageous to describe them, and to point out some of the difficulties which may be encountered in their application. It is right that we should also try to estimate them at their true value as means of discovery.

Let us take as an instance any infectious or contagious disease—such, for example, as small-pox. Now we know that the infectious power in many diseases resides in certain of the lesions, though not limited to them. The matured vesicle in vaccinia, the pustule in small-pox, the throat exudation in diphtheria, the nasal mucus in glanders, the chancre in syphilis, are practically, in the majority of cases, the source of active contagion. But we must also bear in mind that modern researches have shown that the infecting property is not limited to these more external parts, but in many cases is widely diffused through the body, though not in positions in which it can of itself become active, so that our researches must not be limited to the more obvious channels.

Now, starting with the hypothesis that the contagium is of the nature of an organism having an independent existence, but only growing under favourable circumstances, such as of soil, warmth, and other physical conditions, we should expect, if the hypothesis were correct, that we might—(1) be able to discover the organism by visual examination; (2) if we could imitate artificially the necessary conditions, for its growth and reproduction, we might, by growing successive crops of the deleterious organism, succeed in again producing the disease from a distant generation. Moreover, if we found that the organism was constantly present in the infective material, and was reproduced in a second case propagated from a distant cultivation from the *materies morbi* of the first, we should expect to find in the body the course of its transit from the site of inoculation to the secondary site of production of infection; and if the sources of infection were numerous, we might, I think, reasonably expect to find the organism widely diffused in the body. I will go further, and say that I think we might reasonably expect that if there are numerous secondary lesions there should be some definite and discoverable (I do not say discovered) relation between the lesions and the presence of organisms, as well as the constant presence of the latter.

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[2] Virchow's Archiv, Bd. lxxviii., p. 91.

[3] Proceedings of the Royal Society, Dec. 6th, 1877, No. 184, vol. xxvi., p. 488.

[4] Transactions of the Pathological Society, vol. xxix., p. 425. It may, I think, fairly be questioned whether our knowledge of ordinary molecular transformations can be strictly applied to the fermentation of albuminoid bodies, but the point is too complicated for discussion here.

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The microscopic examination of the contagious material has been made in a large number of diseases without, in most cases, any very decisive results. Such as have been attained relate chiefly to the infective diseases. But we know that these may be, and probably are, multitudes of organisms which, either themselves or their seeds, are beyond the reach of our present microscopes, and what has yet been successfully accomplished in seeing organisms which till lately remained invisible, makes it impossible to say that others far smaller do not exist. The microscope, therefore, does not help us beyond a certain point.

The method of fractional cultivation, first introduced, I believe, by Klebs, consists in growing artificially in a suitable fluid a minute quantity of the contagious material, and transplanting successively minute portions of the cultivation to fresh fluid. In order that this method should be successful, there are certain essential conditions, failing which, the results may be entirely fallacious. And even under the best conditions, this method is only of value within certain limits.

That the cultivating fluid should be one capable of supporting the life of the organism, that it should itself be free from organisms, and incapable of generating them under the conditions in which it is placed, are, I need not say, essentials. Our experiments may fail owing to the want of proper nutritive matter in the fluid, or to the absence of the right degree or duration of heat. We can only very roughly imitate the natural conditions of the body.

But let us suppose that by thus inoculating cultivating fluid with contagious material, we have succeeded in producing a definite organism, and by successive inoculations transferring it from one stage to another in a continuous series. To give our results a definite value in the explanation of contagium, we must again reproduce the same disease by inoculation of our ultimate product, and we must take precautions to prevent any possibility of exposure of the inoculated animal to contagion from other sources, or conveying a diluted contagium in our successive cultivations. Easy as these precautions may seem in theory, they are in practice very difficult of accomplishment, and I believe many errors have been made in consequence. With some bacilli of recognised form, and having very definite changes, we may follow their development step by step with the microscope. But in all the fluids which support bacterial life, we are liable to get the accidental introduction and growth of the commoner forms, the germs of which are everywhere present in the air, or of rarer forms present in certain places. Of course, as soon as these are recognised, the specimen is eliminated, and cast away as worthless, for not only do these bacteria introduce a new element, but they are inimical to the development of most of the more stable and highly-developed forms. But we cannot take the same steps to eliminate from our series all other rarer forms of bacteria, the germs of which may be present in certain atmospheres. Herein, too, lies another difficulty, the importance of which has been especially insisted on by Koch—namely, that in the case of bacilli, such as those which he found in the artificial septicæmia of mice, which are so minute as to be recognised only with difficulty, or by means of staining, it is practically impossible to watch the successive developments in such a way as to reject all the sources of error. We may try to do so by withdrawing a small quantity of the fluid with a capillary tube, but each time we do so we run the risk of the entrance of other germs, and multiply indefinitely our chances of failure. It follows that this method is scarcely applicable to organisms too small to be readily recognised and watched.

Supposing, then, that in our cultivation we do not find any visible development of organisms, we may nevertheless persist in our efforts by continuing to inoculate successive quantities of fluid, and eliminating all those in which organisms appear; and, finally, we might be able to reproduce from an apparently unaltered fluid the original disease. At present we should not thus have gained any information as to the relation of lower organisms to the contagium; we might merely have diluted it, or have succeeded in setting up certain changes in the fluid, capable of producing a deceptively similar blood-poisoning. If it were an acute specific disease, the latter should not be a source of fallacy, but it would hold good for septicæmia.

So that this method of fractional cultivation is applicable where we can produce visible and recognisable forms of life, and reproduce the disease from them, having excluded the sources of fallacy of mere dilution of contagium. But the failure then to produce visible organisms does not negative their presence and potency. Nor does the failure to produce the disease from the organism prove its non-relation to the contagious process, for the quantity of the contagium may be insufficient; it may be in an inactive form, requiring a certain degree of active development to acquire its potency, or the animal inoculated may be insusceptible, or other causes may interfere.

Time will not permit me to describe the methods which are adopted in the cultivation and the study of bacteria, and the search for them in the tissues and fluids of the body. I hope to be able to demonstrate some of these at a later period, but so much depends on minute detail, and there are so many ways of arriving at the same result, that it would be wearisome to discuss the various methods employed by different observers. Moreover, these several methods are described in detail by most writers on bacteria, to whose works I have already referred.

LIVER ABSCESS AND ANTISEPTIC PARACENTESIS.

BY SIR J. FAYRER, M.D., F.R.S.

THE cases on which the following remarks are based present clinical features of considerable interest in relation to disease which though most commonly met with in India, China, the tropics, sub-tropical or other hot and malarious regions, is not unfrequently seen here in persons who have returned from those climates, but not always with a very definite appreciation of the nature and cause of the loss of health.

The symptoms are sometimes so obscure as to render diagnosis uncertain, and treatment consequently unsatisfactory. I know of few things more difficult in certain cases than the detection of pus in the liver; and it is often long before any certain conclusion can be formed on the point. It may be, indeed, not during life. I shall refer to some points of practical interest in relation to this subject, the time when, and the place where, exploration or paracentesis should be performed.

I had punctured liver abscess in India antiseptically; but this was the first occasion in my experience in which the proceeding was conducted with all the precautions insisted on by Mr. Lister, who in this case himself performed the operation, and I am sure he must have been gratified with a result which affords corroborative evidence, were any needed, of the benefits to be derived from antiseptics. I gladly take this opportunity of expressing my appreciation of the value of a system which promises to include this dangerous form of abscess in the ever-widening sphere of its utility, and of thanking him for the kindness with which he so materially contributed towards the successful issue of a case that will be a guide and precedent in dealing with others of a similar nature; for it seems to show that paracentesis may be safely practised under the protecting influence of antiseptic spray, when otherwise the operation might be deemed questionable, if not altogether inexpedient, and that it may thus curtail the exhaustive process of disease which, if left to itself, a liver abscess entails, and save life that otherwise would have been lost.

On the 11th December, 1879, I was asked by Dr. Anderson, of Maida Vale, to see a young officer, aged twenty-three, who had recently returned from India. I found him with well-marked symptoms of liver abscess, and much exhausted by a fatiguing journey from Bombay. There was increased hepatic dulness with enlargement, chiefly upwards, and bulging of the lower right side of the thorax, but the intercostal spaces were not then protruding. He was much depressed, in great pain, was slightly jaundiced, the tongue brown and coated, was unable to lie on either side, had nausea and cough, had lost all appetite, and was unable to sleep. There were occasional rigors and profuse night-sweats. The urine was high-coloured, full of lithates, not albuminous. The evacuations were scanty, frequent, and

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clay-coloured. He was much emaciated, and presented a miserably worn and cachectic appearance. From his history and actual condition it appeared to me that suppuration was approaching the surface upwards through the diaphragm and thoracic parietes, but did not demand immediate interference in his exhausted condition. I therefore recommended that he should be allowed to rest, be carefully nursed, and that the bowels should be regulated with bitter saline laxatives, quinine given, poultices and fomentations applied over the liver, and that sedatives sufficient to insure sleep and rest should be administered, that he should be fed on milk and light farinaceous diet, and a very moderate amount of stimulants given, and any change at once reported to me.

I saw him again on the 18th December, and found the symptoms of liver abscess more pronounced; the bulging of the side had increased, and there were slight œdema and obscure fluctuation in the seventh intercostal space between the mammary and axillary lines. The jaundice was perhaps slightly diminished, but other symptoms continued much the same. Rest and careful nursing had otherwise ameliorated his condition. I recommended that the abscess should be opened without delay; and as it seemed a favourable case for antiseptic treatment, I requested Professor Lister to perform the operation, which he most kindly did, in conjunction with Mr. R. Godlee, on the 19th December. Under the influence of chloroform an incision was made through the most prominent part of the bulging of the intercostal space; it was deep, and gave rise to rather profuse hæmorrhage of dark blood, showing that vascular liver substance had been divided. This caused some anxiety for a moment or two, but bleeding soon ceased, and about twenty ounces of dark, blood-stained pus issued without any pressure, the spray being carefully directed on the wound meanwhile. The antiseptic gauze and bandages were then applied. He seemed much relieved by the operation, and expressed himself as feeling better than he had done for months.

The following notes of the history and progress of the disease, from its commencement up to the date of recovery, are by Dr. Anderson:—

CASE 1. *Summary of the Case of Lieutenant W——, aged twenty-three and a half years; five years and two months in India.*—"In November, 1878, when at Hyderabad, Scinde, Lieutenant W—— suffered from a very severe attack of fever and hepatitis, necessitating his proceeding to Kurrachee for change of air. Soon after his arrival there the regiment was ordered on field service in Afghanistan, and as his health was in some measure restored he accompanied it. During the cold weather he enjoyed fairly good health, but suffered whilst on the march from Jacobabad to Dadur from severe attacks of ague, with much gastric disturbance, on several occasions. In May last, at Dozan, in the Bolan Pass, having for some time previously undergone much fatigue and exposure to the sun, he had an attack of hepatic congestion followed by jaundice. This yielded to treatment, but left him very weak and anæmic. He was, however, gradually recovering strength, when he was again attacked (on 19th September) by acute hepatitis, accompanied by much prostration and total loss of appetite. He said he had had diarrhœa for eight months with traces of blood. The acute symptoms subsided under the administration of ammonium chloride and taraxacum with mustard poultices and hot fomentations to the side, but his strength was greatly reduced, and as the regiment was under orders to proceed to the Pishin at an early date, and Lieutenant W—— was quite unfit to undergo the hardships and exposure of field service, he was sent on six months' leave to India.

"On Oct. 3rd Lieutenant W—— left Dozan, and arrived at Kurrachee on the 23rd of that month, travelling in rough carts all but the last day in rail. During his stay there, he had rigors, fever, and cold sweats. He went before a Medical Board on the 25th, and obtained sick leave to England for two years. Two days after he went by steamer to Bombay to await the departure of a troop-ship. In the hope of a change of climate effecting improvement, he left Bombay on the 8th November, and after a very trying voyage, having had rigors and pains, he observed bulging in his side at Malta. He reached Portsmouth on December 8th. During the voyage he was under the care of a medical officer who administered quinine and nitro-muriatic acid, and ordered poultices, hot fomentations, and belladonna plasters, to allay the severe pain, but with little effect.

"Lieutenant W—— arrived in London on the 9th of December, very feeble, and unable to walk. He was suffering from jaundice, and complained of very severe pain in his right side, which was constant, and prevented him from obtaining rest. His appetite was gone, his tongue was furred and brown, his motions were clayey, and he suffered from profuse night sweats, with occasional rigors. To relieve the pain opium and bromide of potassium were administered freely, and poultices applied locally, but with only momentary benefit. On the 11th it was found that the hepatic dulness extended over a larger area of the chest than normal, and that there was considerable bulging of the right side just over the seat of pain. Recommended that he should be carefully watched, the poultices to be continued, as well as the sedative draughts; also that quinine be given every four hours, and the bowels kept open (with sulphate of magnesia). Between the 11th and 18th of December the same treatment was carried on; the night sweats and rigors increased; the temperature varied from normal to 101°, the pulse was rapid and feeble. On the 19th he recommended immediate steps to be taken for an operation.

"On the following morning Professor Lister (Sir J. Fayrer being present), assisted by Mr. Godlee, operated by making an incision about an inch and a half long in the intercostal space, and three inches external to the nipple, cutting straight down on the abscess. About twenty ounces of pus were removed, an india-rubber drainage-tube left in the wound, and over this a large dressing of antiseptic gauze.

"Dec. 20th.—He has improved in every way; little or no pain; had a good night's rest, the first for many months. Appetite improved, tongue cleaner, no sweats, temperature and pulse normal. Dressing changed; gauze stained through to gutta-percha sheeting; no pus (?).

"21st.—Slept well; appetite ravenous, but food given with caution. Temperature and pulse normal. Dressing changed; discharge considerable, but still no pus (?).

"22nd.—No pain; can sleep on either side; motions natural; appetite good; dressing changed; discharge much less; no odour; temperature and pulse normal. For the next week the dressings were changed every other day, as the discharge decreased. On Christmas-day he was able to sit in an arm-chair for a couple of hours.

"Jan. 3rd.—Doing well; has gained flesh; able to walk about. Dressing changed; only tinged with sanguineous discharge; drainage-tube shortened.—Jan. 7th: Able to go downstairs; appetite very good; no trace of jaundice; tongue clean; dressing changed; no discharge; drainage-tube cut.—After the 7th he had his side dressed only once a week; improved rapidly in strength, and on the 16th of February the drainage-tube was removed.

"From the date of the operation he has had no bad symptoms, with the exception of a slight attack of ague, for which five-grain doses of quinine were given with good effect. He has gained more than a stone and a half in weight during the last two months."

On the 9th March he appeared before the Medical Board, the wound healed and his general health restored; but, considering his history, immediate return to India is not desirable.

This is a good example of the ordinary tropical abscess, due to climatic influence and exposure. The points of interest in the case are the position of the abscess and the direction upwards in which it pointed, the period at which it was opened, the results of antiseptic treatment, and the rapid recovery; the presence of jaundice is also noteworthy, that not being a common accompaniment of this form of abscess; and its rapid disappearance after evacuation of the matter, on pressure being removed. It is satisfactory when liver abscess comes to the surface *below* the *costal cartilages*, as there is less danger in opening it through the abdominal than the thoracic parietes. Adhesion may generally be assumed to have taken place, and danger of extravasation is avoided; but when it points upwards, there is more danger, especially when it takes place high up, lest there should be effusion into the cavity of the pleura, or possibly even danger of wounding the lower margin of the lung where it overlaps the liver, though it is probable that this would be consolidated with the pleura and diaphragm into one mass. In the case cited the incision must have passed very near, if not actually, through the margin of the lung. That liver tissue was divided was evident from the profuse hæmorrhage, which ceased, however, very quickly, seeming to show that it is not of much importance so long as there is no extravasation into the cavities. The rapid recovery

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seems to show that the abscess was single, and that cicatrisation had occurred.

I have punctured liver abscesses, and washed out the cavity with solution of carbolic acid, with good results; but am convinced that the method adopted in this case is preferable, and that neither washing out the cavity nor pressure is needed. With antiseptic precautions there is little tendency to the formation of more pus, whilst the residuum finds exit through the drainage-tube; no local irritation is excited, and if the inflammatory condition which originally caused suppuration have passed away, a sanious discharge only follows, and repair may be expected gradually to go on. In the event of a second abscess forming the case would be complicated; but even then the prospects of recovery would be greater under the antiseptic treatment.

The so-called tropical abscess of the liver appears to be a result of climatic causes, to which some constitutions are more prone than others; in certain instances, aggravated, no doubt, by injudicious eating and drinking, though it may happen in those who have observed the greatest moderation. Some individuals seem to be so susceptible as to be totally unable to tolerate the climate, and though perfectly healthy in temperate latitudes, become affected by liver-disease directly they return to India. I have been compelled, reluctantly, to invalid officers on this account, attempts to resume work in India, after recovery at home, having resulted in immediate recurrence of the disease.

Tropical abscess is generally single, but not invariably so, and though always a very dangerous disease, is less so than pyæmic liver abscess, which is multiple; for if the contents can be evacuated either by spontaneous or artificial means, recovery is not only possible but probable, provided that the active condition of the disease which determined suppuration has ceased, and purulent infection has not taken place. It is a disease to which Europeans are more liable in India and China than in the West Indies or other tropical stations, and is a fertile source of invaliding and mortality, as you will gather from the following extracts from the Indian Army Sanitary Report:—

European troops in India, 1877.—Strength, 57,260; admission for hepatitis, 2490; invalids for change, 300; invalids for discharge, 22; deaths, 93.

For five years, 1871–1875, there were 1868 men invalided from the Indian army, for hepatitis.

India, 1878.—Strength, 56,475; admission for hepatitis, 2461; deaths, 127; invalids for discharge, 34; invalids for change, 285.

I find in Bryden's "Vital Statistics," that of the British army in India up to 1876, for a period of six years—viz., 1871–1876,—out of an aggregate of the average annual strength of European troops for that period:

Bengal	219,290
Bombay	63,279
Madras	67,451
Total	350,020

The average annual admission-rate for hepatitis per 1000 on the six years was—

Bengal	49·7
Bombay	44·0
Madras	70·8

That the deaths during that period were—

Bengal	427
Bombay	124
Madras	218
Total	769

That the death-rate per 1000 men was:

Bengal	1·95
Bombay	1·90
Madras	3·28

There were invalided—

Bengal	1354
Bombay	337
Madras	538
Total	2229

Or at the rate of per 1000:

Bengal	6·17
Bombay	5·33
Madras	7·98

This shows that the liability to death from hepatitis is much higher in Madras than in Bengal or Bombay, which are less tropical than the stations in Madras. The subjects of these statistics are for the most part young and healthy men. The European army in India is, in fact, a young one, only 2 per cent. being over forty-six years of age, and only 14 per cent. above thirty-five. 86 per cent. of the total are men below thirty-five years old, 65 per cent. are under thirty, whilst the restrictions placed of late on sending young immature soldiers to India have resulted in this, that the returns for 1875 show only 1264 lads under twenty, and those of 1876 only 1185. The cases returned under hepatitis are not, of course, all of abscess; many, no doubt, are due to congestion or other disease; but it is probable that a large proportion of the fatal cases were due to suppurative hepatitis. Many of them, it may be presumed, terminated sooner or later either in death from continuance of disease, or recovery after getting rid of the abscess by spontaneous evacuation, or by surgical interference. The records of Netley and other large hospitals would supply evidence of the means available in this country for studying the course and termination of tropical hepatic abscess.

(To be continued.)

ON REMOVAL OF THE TONGUE BY MEDIAN DIVISION.

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(Concluded from p. 560.)

THE following form the whole number of hospital cases in which I have removed the tongue, in part or wholly, by the method of median division with the knife, and subsequent application of the écraseur; but I may add that since my earlier cases the method has been adopted by most of my colleagues at St. Bartholomew's Hospital; and to them, not less, I believe, than to myself, it has seemed the best method of operating, when at least half the tongue must be removed, and when it is not considered advisable to divide the lower jaw.

For the details from which the following brief abstracts have been made I am indebted to the records of the surgical registrars, Mr. Butlin and Mr. Macready.

CASE 1.—Emma S——, aged thirty-seven, was admitted into St. Bartholomew's Hospital on Sept. 28th, 1876, on account of ulceration of the left side of the tongue. About three years before her admission a small fissure was noticed on the side of the tongue, but she took little notice of it until a few months ago, when it began to increase rapidly in size. Her general health is good. On the left border of the tongue is a raised ulcer with indurated base, measuring about one inch in length by half an inch in breadth. It extends to the level of the last molar tooth, but the finger can be got behind it to healthy tissue. The tongue is not adherent to the surrounding parts. There is no lymphatic glandular enlargement. On Oct. 7th the diseased part of the tongue was removed by Mr. Baker, the method adopted being that of dividing the tongue along the middle line, and afterwards looping a wire écraseur around the left half. There was not much hæmorrhage. The after-progress of this patient was very satisfactory until Oct. 17th, when she began to complain of sore-throat and tightness of the chest. On the following day (the 18th) the patient was worse, with a temperature at 8 P.M. of 104·5°. She had a harsh cough and great dyspnœa.—Oct. 19th: Temperature 104°; the urine is loaded with albumen, and has a specific gravity of 1038. About 6 P.M. the patient died quite suddenly, as if from asphyxia.

The post-mortem examination disclosed the presence of thick yellowish-white membrane on the mucous membrane of the tonsils and neighbouring parts, which could be easily peeled off; while a similar membrane covered the whole of the epiglottis, and extended to the vocal cords. About this point the membrane ceased abruptly, but was found again at the bifurcation of the trachea, extending into each bronchus, and thence into the smaller bronchial tubes in each lung. The right bronchus was completely blocked, for

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the membrane had become detached above, and had fallen down into the bronchus—this event being, without doubt, the cause of the patient's sudden death. When drawn up the membrane formed a long, continuous tube, which fitted accurately the interior of the trachea up to the point at which, when traced downwards, it had been found wanting. In other respects the lungs were in a fair condition. The kidneys were cloudy and congested.

Nothing was subsequently discovered in explanation of the diphtheritic condition which caused the patient's death. The ward in which she lay had been quite recently thoroughly cleansed, and in some parts remodelled.

CASE 2.—William B——, aged sixty-four, was admitted into St. Bartholomew's Hospital, May 22nd, 1877, on account of cancer of the tongue. About an inch behind the tip is an epithelial cancerous ulcer, with an area nearly as large as half-a-crown. The base is deeply excavated and covered by a greyish slough. The borders of the ulcer are red, nodulated, everted, and hard; the hardness extending into the floor of the mouth in the neighbourhood. Two small glands can be felt enlarged beneath the chin. The patient is a pale, ill-nourished old man. He suffers great pain both in the mouth and in the left side of the head. He has great difficulty in speaking, and saliva is continually running from his mouth. Urine, sp. gr. 1015, acid, albuminous.—May 26th: The whole tongue was removed with a whip-cord écraseur; the organ having been first incised and slit along the middle line, and each half being taken away separately.—June 10th: The patient has done well, and the wound is now healed. He was sent to the Convalescent Hospital June 22nd. When seen several weeks afterwards the mouth remained quite well.

CASE 3.—(The following case has but little bearing on the subject of the present paper, inasmuch as the operation was performed merely for the purpose of lessening the size of a large ulcerating mass of cancer of the tongue, which had extended far beyond the possibility of complete removal before the patient's admission into the hospital.)—Aug. 27th, 1877: Dennis C——, aged forty-five, felt pain in the right ear, which was followed by a swelling in the parotid region of the same side, about four months ago. Two months later the tongue became very sore, swollen, and painful, and has become gradually worse up to the present time. He feels sure that the swelling in the neck began before the tongue gave him any trouble. Now there is an irregular, nodulated, hard swelling in the right parotid region, extending to the submaxillary region, and downwards in the neck. The right side of the tongue is exteriorly affected by an ulcerating mass of epithelial cancer, and the finger cannot be passed beyond the limits of the disease.—Sept. 1st: All the teeth on the same side as the disease, which seemed likely to be a source of pain and irritation, were removed at this date.—12th: The patient still complained of intense pain both in the mouth and on the side of the head; and as a means of temporary relief the tongue was divided by a median incision, and the right half was removed. Only a portion of the diseased tissue could, however, be taken away.—14th: He has rather less pain than before the operation; but still complains of occasional violent shooting pain over the side of the head.—15th: At 8 P.M. last night the patient had a severe rigor. Temperature 102°, pulse 120.—19th: The patient died today, after well-marked symptoms, during the last four days, of septicæmia.

CASE 4. — Nov. 26th, 1877: George D——, aged sixty-two, a clerk, was admitted into St. Bartholomew's Hospital on account of an ulcer on the right side of the tongue, which began as a small lump in September last, and, as he thinks, in consequence of the irritation produced by a jagged tooth. The lump quickly increased until a fortnight ago, when it gave way and became ulcerated. The ulcer has also rapidly enlarged. Until lately his general health has been always good. The right border of the tongue, from about one inch behind the tip, and for the length of at least two inches, is now occupied by a foul irregular ulcer, having an exceedingly widespread and indurated base, and raised and thickened edges. The induration extends nearly as far back as the finger can reach, but does not extend much into the floor of the mouth, nor apparently to the middle line of the tongue. There is no lymphatic glandular enlargement. — Nov. 28th: Mr. Morrant Baker removed the right half of the tongue with a wire écraseur, after dividing the organ along the middle line with the knife. The disease extended as far back as the anterior arch of the palate, which was divided to facilitate the operation. — Dec. 3rd: There has been no trouble since the operation. The patient is doing well.—11th: Discharged from the hospital, well.

Postscript.—Within a few months after the operation an enlarged gland appeared, deeply seated in the right side of the neck beneath the angle of the jaw, and gradually increased. For some time, however, it gave the patient very little trouble; but at length it more rapidly enlarged and fungated, and the patient died in December, 1878. To the time of the patient's death (more than a year after the operation), the mouth remained perfectly healthy, with no sign of recurrence of the disease.

CASE 5.—George S——, aged forty-four, was admitted into St. Bartholomew's Hospital, May 22nd, 1878, on account of cancer of the right side of the tongue. An epithelial cancer was removed from the site of the present disease by Mr. Morrant Baker, December 26th, 1873 (nearly four years and a half ago). The scar remained quite sound until two months ago, when it became sore, and has been very painful ever since. The scar is opposite a sharp-edged tooth in the lower jaw, which causes him a good deal of pain. He has pain also when he eats, and his rest at night has been much disturbed. On the right side of the tongue, near the front, is a puckered scar, covering a space about as large as a shilling. Its borders are indurated and nodular, and its lower edge extends into the floor of the mouth. The surface is superficially ulcerated, and has patches of white thickened epithelium scattered over it. There is no lymphatic glandular enlargement.—May 25th: The whole tongue was removed by Mr. Baker. The frænum linguæ and mucous membrane of the floor of the mouth were divided with part of the genio-hyoglossus muscle, and the tongue was then incised along the middle line, and the loop of an écraseur was slipped over each half. The mucous membrane of the floor of the mouth, where it was encroached upon by the border of the ulcer, was carefully separated from the lower jaw as widely as possible of the disease.—June 21st: Nothing specially worthy of note occurred after the operation, and now the wound has quite healed.

CASE 6.—Nathaniel W——, aged fifty, an engine-driver, was admitted into St. Bartholomew's Hospital on Sept. 12th, 1878. Eight or nine months ago a pimple formed on the right side of the tongue near the tip, the patient's attention having been drawn to it by smarting after smoking a strong pipe. Of late it had ulcerated and rapidly extended. An epithelial cancer now extends along the right side of the tongue from the tip to the level of the circumvallate papillæ, but does not extend to the floor of the mouth. The surface and edges of the ulcer are now extremely hard, and a lymphatic gland just below the parotid is enlarged. The whole tongue was removed soon after the patient's admission, an incision having been made along its raphé, and the two halves removed with wire écraseurs after the connexions of the tongue in the floor of the mouth had been in great part severed. On Oct. 8th the wound had quite healed, and the patient was discharged.

Postscript (June 30th, 1879).—The patient was seen at this date (nine months after the operation). The mouth remained perfectly healthy, with no sign of recurrence. The lymphatic glands in the submaxillary and parotid regions were greatly enlarged and hard, and the facial nerve on this side was evidently paralysed.

CASE 7.—Edward D——, aged fifty-six, was admitted into St. Bartholomew's Hospital December 3rd, 1878. He was quite well until September last, when he first noticed a sore place below the tongue on the left side. It has gradually increased ever since. On the left side is a foul, irregular ulcer, involving the tongue and floor of the mouth, and extending to the lower jaw. The tissues around are much indurated, and the ulcer extends as far back as the last molar tooth on the same side. Its whole extent cannot be easily made out, on account of the way in which the tongue is bound down by adhesions. There is no lymphatic glandular enlargement.—Dec. 14th: Mr. Baker removed the whole tongue. The left cheek was first divided from the anterior border of the masseter muscle to the angle of the mouth, and the tongue was then freed from its connexions in the floor of the mouth. The diseased mucous membrane of the last-named part was also carefully gouged away from the gum at the part at which the disease had encroached on this structure. The tongue having been then incised along the middle line nearly as far as the epiglottis, and the separation of the two halves completed with the finger, an écraseur was applied over each half, well beyond the limits of the disease. After the removal of the

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tongue the wound in the cheek was brought together with a harelip-pin and a couple of silver sutures. With the exception of a moderately-severe attack of erysipelas, the patient did well after the operation, and was discharged from the hospital with the mouth soundly healed.

CASE 8.—Thomas P——, aged forty-five, a butcher, admitted into St. Bartholomew's Hospital on the 10th of January, 1879. Six months ago he first noticed a small sore on the left side of the tongue, which has since steadily increased. Within the last fortnight a swelling has appeared beneath the jaw, just behind the angle. There is an epithelial cancer extending along the left border of the tongue from near the tip to the last molar tooth. It is covered by a greyish-yellow thin slough. The edges are raised and everted. Its base and the greater part of the tongue are very firm. The submaxillary lymphatic glands and the glands in the parotid region are much enlarged and hardened.—Jan. 18th: Mr. Baker divided the tongue along the middle line, and removed the left half with the écraseur. —21st: Has passed better nights since the operation than for some weeks previously.—Feb. 15th: The wound has soundly healed. The swelling of the lymphatic glands in the neck has much increased, and now there is swelling on the right side. He has no pain in the mouth.

CASE 9.—John H——, aged fifty-two, a shoemaker, was admitted October 28th, 1879. About ten weeks ago he first noticed a sore spot on the left border of the tongue, which has gradually increased in size to the present time. About the middle of the left edge of the tongue is an irregular oval epithelial cancerous ulcer, with a raised and hardened base, and clean surface. A small hardened lymphatic gland can be felt beneath the jaw on the left side.—Nov. 1st: The whole tongue was removed by Mr. Morrant Baker. Its connexions in front and at the sides having been first in great part severed, an incision was made along the middle line with a blunt-pointed bistoury, and the separation of the two halves was completed with the finger. Two écraseurs were then applied to the two halves, and worked simultaneously. When the tongue had been almost crushed through, a ligature was applied to the pedicle beyond the écraseur, and the separation on each side then completed by cutting. The enlarged gland was then removed through an incision in the skin beneath the lower edge of the jaw.—Nov. 24th: Nothing specially worthy of remark occurred after the operation; and the patient left the hospital well at this date.

The operation to which I have here drawn attention is one which is so much less difficult than many among those recommended, that I venture to think it will often be adopted by others, as it has been by myself, in cases which at first sight may seem unsuitable for any operation at all. I refer more particularly to cases in which lymphatic glands are diseased, and too extensively to admit of removal. It is true that no long period, if any, of complete immunity from pain and other trouble can be expected. But if we cannot completely remove the disease, it is of great importance to reduce its evils to a minimum; and in these cases the removal of the cancer from the mouth gets rid at all events of the most distressing of the patient's sufferings. Cases 6 and 8 are good examples in point. In the latter the lymphatic glandular enlargement was very considerable, even at the time of the operation; but the subsequent relief was great.

ON APHASIA, WITH LEFT HEMIPLEGIA.

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SINCE, in the vast majority of cases, affections of speech go with right hemiplegia, and since left hemiplegia is rarely so complicated, it is a matter of importance to inquire as to right- and left-handedness in all cases of affection of speech. It is particularly important with regard to the well-known hypothesis of Broca and Moxon. In the *Medical Times and Gazette*, August 25th, 1866, I suggested this inquiry, mentioning the case of a man who had defect of speech with left hemiplegia. This patient lamented that the paralysis was left-sided because he was "a left-handed man." He had had hemiplegia of the right side without any affection of speech. This matter had some time before been fully discussed by Broca. The subject of left-handedness has been both philosophically and practically considered by William Ogle and Pye-Smith. In nearly all cases I have seen in which affections of speech have occurred with left hemiplegia the patients have been left-handed. Of course, it is a significant thing that affections of speech *nearly always* go with right hemiplegia; but a fact of far greater significance is that disease in but one lateral half of the brain, be it right or left, can destroy speech. There is another fact of equal significance—viz., that lesion in but one half does not produce wordlessness. For when damage of one side of the brain destroys speech the patient remains able readily to understand what is said to him, at any rate on all matters simple to him before his illness. This is proof positive that the speechless man retains nervous arrangements for words. Lesion in one-half of the brain, left most often, produces speechlessness, but lesion in neither half produces entire wordlessness. The aphasic condition cannot, I think, be properly understood unless we bear this in mind. It has been said that cases of aphasia give clear proof that thought, and elaborate thought, is possible without words. But the completely aphasic person is not wordless, although he is speechless. It is not a theoretical statement, it is a matter of demonstration that the speechless man is not wordless. I have been speaking of ordinary cases. In some cases of vast lesion in the mid region of the left cerebral hemisphere we are unable to say that the patient does understand all we say to him.[1]

In this inquiry we ought to note the sort of hemiplegia the patient has. To the best of my observation, the more the leg and the less the arm suffers the slighter is the affection of speech. And sometimes when the leg suffers very much and the arm very little there is no defect of speech, or only very transitory defect. Again, I may say, that, as Hammond has pointed out, slight and transitory hemiplegia occurs most often with that kind of aphasia in which there is a copious utterance of words, with mistakes of one word for another, with round-about expressions, &c.

A case of loss of speech (the patient could only utter the words "come on to me" or "come on," and "yes" and "no"), with left hemiplegia, under my care in the London Hospital, is noted in the Hospital Reports (THE LANCET, March 17th, 1868), as an exception to the rule that the hemiplegia with aphasia is right. In the number of that journal, April 4th, 1868, appears a letter from me stating that the patient was left-handed, my friend, Dr. Prevost of Geneva, who saw the patient with me, having suggested the inquiry. No necropsy was obtained in this case. I may here give further remarks on the patient's left-handedness. Four of his six children—those by his first wife—were left-handed; the two by his second wife were not. It is proper to state, for what it is worth, that she said she always corrected her own two children when they used the left hand instead of the right. We may, however, assume that all mothers do so. The patient wrote with his right hand, but used the left for other things—for his knife when repairing boots, &c.

Sometimes a patient is said not to be left-handed because he writes, uses his dinner-knife, &c., with his right hand. This is an error. Left-handed children are not allowed to write with the left hand, nor to use the dinner-knife, spoon, &c., with that hand. A left-handed patient recently under my care, in reply to the remark that he wrote with his right hand, said that the reason was that his schoolmaster used to walk about the school with a short stick and would hit him on the knuckles when he (the patient) had his pen in the left hand. Left-handed soldiers are not permitted to use the left hand for the sword, although, perhaps, they may in fight. A left-handed compositor could not use his left hand for setting up types.

The following is an unpublished note, nearly as I took it down at the time, some years ago, of a case of partial aphasia, with left hemiplegia. It will be seen that an important part of a sailor's work was of necessity done by the right hand.

[1] I have suggested that the process of which speech is the end is preceded by an automatic reproduction of words. It has recently occurred to me to inquire whether the process of receiving speech of others may not also require a double service of words. It may be that whilst in an ordinary case of aphasia speech is impossible from disease in the left cerebral hemisphere, and ability to understand speech remains, there may for the latter purpose be a double process, starting in the right cerebral hemisphere and ending in the higher centres of the left—centres higher than those commonly believed to be the sole speech centres.

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Thanks to the courtesy of my late friend, Dr. Harry Leach, I had the opportunity of investigating an interesting case of defect of speech, with left hemiplegia, in the Seamen's Hospital. At present the hemiplegia is very slight indeed; it amounts only to a little weakness of the arm, but it is clear that this side was considerably affected at the time when speech was lost. It will be observed that part of the history is given in the patient's aphasic language. Six months ago, when in the Calcutta river, during hot weather, the patient felt tired, and had no appetite. When one night at the wheel "could not when I see the compass tell the right thing." He remarked to a shipmate that he, the patient, had lost his speech. [Here the patient stopped in his account altogether; I urged him to go on.] "Said perhaps to-morrow night." He went to bed and "sleep for hours, and was awoke; when awake no speech. Captain came forrard." [Here I could not get to know what the captain had said; the patient's words were spoken in a low tone, and as if jumbled together.] "Was four or five or six days to be." [Then he stopped; I urged him to go on.] "There was a slate, and for three or four days, I suppose, and I thought I would try and my write and pen up, and could not do at all." I gathered from this that he tried to write. I said, "*Why* could you not write?" He replied that he did not know. He could not read at that time, although he could see. He did not know why. He was in bed one week. I asked him what the captain thought of him. "Captain said speech come a time, a little."

He could write his name readily, using his right hand. He could copy with perfect accuracy, and brought a slate with verses from the New Testament written on it. I told him to write the name of the place where he was taken ill. He wrote "Ca," and then stopped. I urged him to go on. He replied, "I can't," but in about half a minute he added "cuttir" to the "Ca." I asked the name of the place. He replied readily, "Calcutta." I next asked him to write the name of his ship. He wrote "*Thakote*," but told me the name was *Stanhope*. I then asked him to write the day of the week. He wrote "Sa," then "urday," and then "ey" (=Sautuey). I asked him to tell me the name of the day. He readily said "Saturday." Next I tried him at reading. He read quite correctly, but very slowly, word by word, like a schoolboy, but he made no mistakes. I urged him to read fast; *then* he made blunders—"virtue" for "virtue," "have" for "happily." But he stuck fast altogether very soon, and on resuming went on slowly and correctly. He wrote to dictation, with but few mistakes, and those possibly owing to defective education; but he wrote very slowly, and only word by word.

I asked him if he was left-handed. He said he was. I asked him how he knew he was. He said "Took a handful in my left." (I suppose he meant this for illustration's sake.) He always used to cut his food with his left hand. He added, of himself, that he used the needle (in mending sails) with his right hand. I asked him how this was if he was a *left*-handed man. He replied, "Whenever I come that, when I, I can't, cannot make myself." Here he stopped, and I urged him to go on and tell me why, if he were *left*-handed, he used the needle with his right hand. "Well, when I, when I do the thing, or any, any, any sort, the palm, you know they put it on the right hand." "Why?" I asked. "Because that's because why they've none in the ship—not eh, eh, palm for lab, left hand."

I gather from this and from his gestures that in using the needle he forced it through the sails by help of some leather apparatus, and that this apparatus would not fit the left hand, just as a glove for the right would not fit the left. I then remarked to him that he wrote with his right hand. He said, "Brought it to be learned with right." (Brought up to write with the right hand.)

I would remark here on the importance of noting slowness of speech and hesitation in estimating degree of aphasia. Slowness and hesitation are signs of impairment of speech. It is interesting to note that this patient wrote very slowly, and that he read worse when hurried. But the possibility that this patient was imperfectly educated renders these facts of less value. No doubt degree of education has much to do with the degree of writing power (expression by writing) in cases of aphasia. For high education in writing means that writing has become highly automatic.

There was some years ago under my care in the out-patients' room at the London Hospital a man, twenty-one years of age, who had defect of speech, inability to write and to read, who was hemiplegic of the left side. Yet there seemed to be circumstantial evidence that he was not left-handed. His father, his mother reported, had found great difficulty in getting him to use his left hand in caulking, in which the left hand has to be used. This man had had two attacks of convulsion, and it is possible that there was a double lesion. Of course without an autopsy it is impossible to be certain. Dr. Wadham (St. George's Hospital Reports, 1869) has recorded a case of left hemiplegia with aphasia. The following is from Bateman "On Aphasia:" "The subject of Dr. Wadham's case, a young man of eighteen, belonged to a left-handed family, as four of his brothers as well as himself were left-handed. This case having terminated fatally, there was found to be almost an entire absence of the island of Reil on the *right* side, its place being occupied by a large cavity containing a little fluid and a small amount of broken-down brain-matter; the *left* hemisphere was perfectly healthy." This case is one of extreme value, as there was an autopsy.

ON MEDICAL CERTIFICATES OF INSANITY.[1]

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I HAVE been induced to write a paper on the subject of Medical Certificates of Insanity, and for two distinct reasons: first, to afford those medical practitioners who have not directed much time to the study of insanity some practical hints as to the entries to be made in them, and which are wanting in the ordinary text-books;[2] secondly, to point out some imperfections in the present statutory form of certificate, and to suggest some additions and alterations, so as to render it more comprehensive, satisfactory, and complete.

I know of no position in which a medical man is placed in a greater state of embarrassment than when, perhaps without having had any previous practical acquaintance with the subject, he is suddenly called upon to treat or to advise upon the treatment of his first case of insanity. The issues are so important, involving as they do the welfare of the patient and the happiness of his family, that when he asks himself the momentous question as to whether it be a case for home treatment or for removal to an asylum, the professional man can then realise the serious responsibility attached to the opinion he will have to give to the distressed relatives; this can only serve to intensify his own anxiety. When he *has* had some previous experience of the nature and treatment of mental diseases, it will be a comparatively easy task for him to arrive at some definite opinion as to the plan to be adopted in the particular case, as well as to give valid reasons to the relatives for his decision. I may remark that, from his previous knowledge of the patient, the regular family practitioner can distinguish and appreciate any change in the demeanour, habits, and conversation of the person to be examined, as compared with the previous condition, far better than any stranger who may be called in. The medical man having decided to recommend the immediate removal of the patient to an asylum, and the relatives having consented to this, the law requires that prior to his admission there, certain statutory forms be filled up, the most important of which is the medical certificate of the patient's insanity. In the case of a private patient two such certificates are needed; in that of a pauper only one. There is no difficulty in filling up the more clerical portion of these certificates, as the printed forms always contain copious marginal explanations. The necessary form for a private patient may always be obtained from asylums receiving that class of inmates. In the case of a pauper it is the duty of the relieving officer to supply one.

For practical purposes we may divide the certificate into two distinct portions, the *statutory* and the *medical*. Let me here state that I purpose throughout my paper giving illustrative excerpts from certificates that have come under

[1] A *précis* of this paper was read at a meeting of the South-Eastern Branch (West Surrey district) of the British Medical Association, held at Farnham on March 25th, 1880.

[2] The work containing the best remarks upon the subject is the small but valuable one by Dr. Millar, entitled Hints on Insanity, and which has reached its second edition. As far as I know, the only paper on this matter is Dr. Buckwill's admirable but too short one published in the Asylum Journal, vol. vii., p. 79 et seq.

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my own personal observation at the Brookwood County Asylum.

The more strictly *statutory* portion comprises all the first or introductory portion of the form, and there are several important particulars for the certifier to bear in mind respecting it.

The first one to notice is that in the case of a private patient the medical man must "separately from any other medical practitioner" (16 and 17 Vict., cap. 96, ss. 4 and 10) examine the patient and form an independent opinion as to the existence of insanity. The law is so jealous—as it should be—of the slightest collusion between the two certifiers, that too much caution cannot be exercised in rigidly carrying out the statutory requirement. Even with respect to the two certificates being on the same paper, the judge in the recent case of Nowell v. Williams remarked: "Anything more calculated to lead to the law being broken I cannot imagine." The medical men should not be together in the same room during the examination of the patient; they should not see each other's certificates before writing their own (hence the reason why they should not be written on the same paper), or hold any converse about the case until each had finished his own certificate. A breach of any of these points might lead to the document being declared invalid in a court of law, and cause the practitioner much trouble and expense.

The second is to be scrupulously careful in filling up the various particulars as to medical qualifications, when and where the patient was examined, &c. Some years since Mr. Justice Coleridge declared a medical certificate to be invalid as it omitted to mention the name and number of the street where the patient was interviewed. It is a matter of general complaint amongst asylum superintendents as to the irregular manner in which the statutory portion of the certificate is filled up. The marginal explanatory notes are so plain that there is really no excuse for blunders of omission or commission. I have counted no less than five errors of this kind in one form. One medical man testified to have seen the patient in November instead of in February. Another, that he had examined the patient on a date five days *subsequent* to that of his certificate. All errors of this class might easily be avoided by the exercise of a little common attention on the part of the medical man, and so save a great deal of unnecessary trouble.

The third is for him to bear in mind that it is immaterial whether he uses the term "lunatic" or "a person of unsound mind," either being equally valid. By the statute (16 and 17 Vict., cap. 97, c. 132), the term "lunatic" shall mean and include every person being of "unsound mind, and every person being an idiot." There is no occasion to qualify either term in any way, such as by calling the patient a "confirmed lunatic."

The fourth point for him to notice is that, after stating the patient to be a lunatic (or person of unsound mind), the statutory wording runs thus: "And a proper person to be taken charge of and detained under care and treatment." This, it will be noticed, contains no reference whatever to any dangerous proclivities on the part of the patient as constituting the basis of asylum detention. The existence of such a limitation would prevent a large number from being sent away from home, but who certainly require asylum care and treatment equally with those who are directly dangerous to themselves or others.[3] I wish to direct especial attention to this, as the relatives of private patients sometimes urge the non-existence of dangerous symptoms as a reason against removal to an asylum; and in the case of paupers I have on several occasions known magistrates refuse to sign the order of admission unless satisfied the patient was dangerous. During the present year a case of this kind was brought under my notice, when the magistrate declined to sign the order unless the medical man certified to the patient being in this condition. This he did in the body of his certificate thus: "I believe him to be a dangerous lunatic"—a statement that was not of the slightest value, but, on the contrary, was irrelevant. The law requires the testimony as to whether the patient be suicidal or dangerous to others to be contained in the statement signed by the relieving officer in the case of a pauper, and by the relative in that of a private patient.

The fifth is for him distinctly to understand that the patient must be admitted into the asylum within seven clear days of his interview with him; not necessarily within that period of the date on which the certificate was signed, as that not unfrequently takes place some days after the examination is made. It is of especial importance for the medical man to inform the relatives of this fact in the case of a private patient, and so prevent the possibility of the patient's reception into the asylum being refused owing to illegality of the certificate from lapse of date.

A male patient was brought for admission into the Brookwood Asylum on April 20th, 1877. The certificate was dated April 14th, and testified that the medical man had seen the patient on March 21st, on which last-named date the patient "was a person of unsound mind." I need scarcely say admission was refused.

In addition to the foregoing particulars several other points also require attention—e.g., the certifying practitioner must be registered, and must be in actual practice. The patient must not be examined in an asylum or licensed house, where it is intended for him to remain. The Commissioners in Lunacy called attention to the following points in a circular issued by them a few years since:—"Certificates signed, or founded on medical examinations made elsewhere than in England or Wales [the extent of the Commissioners' jurisdiction] are not accepted as a valid authority for the detention of a patient within that jurisdiction. Every certificate should be an independent and complete document, and no reference should be made therein to another."

I now pass on to consider the essential part of the certificate—the medical; and which is required to contain a detailed statement of the symptoms upon which the medical practitioner has formed his opinion as to the patient's insanity, &c. Formerly it was not obligatory for medical men to state "the grounds" (the statutory word for symptoms) upon which this opinion was based. In the case of a private patient it was necessary to procure two medical certificates, to the effect that A. B. was "of unsound mind, and a proper person to be confined"; one certificate only being required for a pauper lunatic, who was certified to be "of unsound mind," but whether "a proper person to be confined," or not, was not alluded to. One of the greatest modern improvements in the lunacy law, was that contained in the Acts 16 and 17 Vict., capp. 96 and 97, which annulled the old form of certificates, and required that every medical man should state his reasons in detail for declaring any patient to be insane, and under the two following headings:—1st. Facts indicating insanity observed by myself. 2nd. Other facts (if any) indicating insanity communicated to me by others; the evidence under the first being of a *personal*, and under the second of a *hearsay* character.

Before the medical man attempts to commit his statements to paper, it would be well for him to pay due attention to the following points:—

1. He should thoroughly understand that he may have to defend all his "facts" in a court of law, and this alone should make him exceedingly cautious in all his written statements.

2. To avoid all hearsay evidence under the heading of facts observed by himself. The statement "he has not been to bed for eight nights, nor has he removed his clothes during that time," was included under the first heading of a certificate, and yet it could scarcely have fallen under the direct observation of the certifier. It was evidently derived from the information of others, and ought to have been relegated to the second heading, together with the name of the informant. In the position it occupied it was irrelevant.

3. To remember that all his personal facts must have been observed on the day of examination. Medical men who have been in attendance for some length of time upon the patient are frequently apt to mention symptoms that have been noted on some previous day, and which may have passed away, or were not discoverable on the certified day of examination. Here is an example:—"On the 9th instant" (the patient having been examined on the 14th)—"she was under the impression that the food she was eating or had eaten was not human food, but something very bad, for which there was a necessity for her to eat on account of something she had done." Had this been the only proof of

[3] In the remarkable case of Nottidge v. Ripley, the judge appeared to be of opinion that no person ought to be confined in an asylum unless he was dangerous to himself or others. The Commissioners in Lunacy, in a letter to the Lord Chancellor commenting upon this opinion, said: "The object of these Acts is not, as your Lordship is aware, so much to confine lunatics as to restore to a healthy state of mind such of them as are curable, and to afford comfort and protection to the rest." Moreover, the difficulty of ascertaining whether one who is insane be dangerous or not is exceedingly great, and in some cases can only be determined after minute observation for a considerable time.

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insanity, the certificate would have been illegal. Other delusions were, however, mentioned in detail, and made the document valid. Here is another: "She for some time has been in a very strange mental condition, and has been under many delusions." This was followed by a statement of existing delusions.

Medical men are frequently placed in a most awkward position by being called upon to certify in cases where after a thorough examination they are unable to give a written certificate, owing to the absence of decided symptoms of insanity, or if any be present they are of a weak kind. This occasionally happens in cases of epileptic mania with homicidal propensities, where perhaps the outbreak of violence has ceased prior to the arrival of the medical practitioner, who finds the only observable symptoms are those of epilepsy alone. Also in remittent and in recurrent mania, during the intervals of the attack, when in the former the symptoms may be undecided in character, and in the latter altogether absent. Again, in suicidal mania, he may have been called in soon after a deliberate attempt at self-destruction, the mental symptoms being in abeyance. A similar temporary absence of symptoms may occur in many other forms of insanity.

The medical man may know the patient to be insane, but at the same time can adduce no legal proof of it from the facts observed by himself. On the other hand, the relatives being convinced of the existence of insanity, may accordingly urge the medical man to certify, so that all the onus and responsibility of the case rest upon him. Under such circumstances what is he to do? The answer is very simple:—1st. Under the Statute 16 and 17 Vict., cap. 19, sec. 75, he cannot write a valid certificate of the patient's insanity unless he can testify to it by symptoms observed by himself on the day the examination took place. 2nd. His proper duty then is to advise the relatives as to proper precautions being taken to prevent the patient doing harm to himself or others; and to send for him immediately any additional and decided insane symptoms become apparent.

4. He should report the facts observed by others, under the second heading, as carefully as those under the first. This is, however, rarely done, and some certifiers omit making any entries of hearsay information. The testimony of others frequently corroborates that given by the medical man. It is also of especial service in recording acts of violence, attempts at suicide, the frequency and character of epileptic attacks, the extravagances of general paralysis, depressed habits and propensities, overt acts of insanity generally, and a variety of important matters not likely to fall under the direct personal knowledge of the certifier. It therefore not only frequently reports the most important symptoms of the patient's malady, but is also a good medium for conveying to the asylum medical officers much valuable information of the history of the case, which otherwise they might not be able to obtain. The following is a good illustrative example:—1. *Facts personal.* "He lies in bed in an apathetic state, and with a vacant expression, and answers questions in an inconsequent manner. He has been under medical treatment during the last year with no improvement in his condition, and there seems to be no chance of recovery while he remains at home; he evidently requires the regimen and moral treatment of an asylum." It will be observed that more than one-half of this portion of the certificate is irrelevant and unnecessary. 2. *Facts hearsay.* "His wife informs me that he has been unemployed during the last fourteen months, that he is quite indifferent as to the wants of his family, that he practises masturbation to a great extent even before his children, and that a month since he nearly strangled one of his children for touching the cat which he was nursing, and that she is afraid to leave him alone with them." Scarcely an indication of the nature of the disease is contained in the first portion, whilst the second is a good description of some of the principal symptoms of fatuity passing into dementia caused by prolonged masturbation.

5. He must ever bear in mind that no matter how strongly the facts observed by others may testify to the insanity, the certificate is invalid if the medical man is unable from his own personal observation to adduce such facts as will in themselves show the patient to be insane. Some time since, on returning a weak certificate to be amended, the medical man replied, "I cannot furnish you with any other facts as proofs of the woman's insanity, probably some of her relatives can if you desire them."

6. He should not be satisfied with the record of one decided symptom of insanity (such as a well-marked delusion) to the exclusion of all others. On the contrary, he should examine the patient thoroughly, and, at the least, report all the principal symptoms. A certificate which depends upon proof of insanity by the statement of a single delusion would, in an important law case, run a possible chance of being disputed as to its tenour and correctness.

7. He should take care to state all the leading symptoms—e.g., dominant delusions—and as tersely as possible, consistent with their being properly described and expressed. The omission of all mention of the principal delusion is of frequent occurrence. Here is an example:—*Facts personal.* "Talks in a very excited manner. Says he has an innumerable number of complaints. Keeps a knife by his side, with which he sometimes threatens his wife, and when asked why he does it replies that he thinks it his duty to kill her. Very restless and sleepless at night, and at times appears as if he were in a semi-conscious state." The important part in this relates to the knife, and the threats used in connexion with it. The certifier could scarcely have had a personal knowledge of these matters. If this be the correct surmise, he should have stated, "*I am informed* he keeps a knife, &c." But even if the whole account were true it was not inconsistent with sanity. Some sane but brutal husbands have been known to do the same kind of thing. The omission of the motive for wishing to kill his wife was the weak point in the certificate, and this was at once supplied by the patient himself at the time of his admission, who, being examined by the asylum medical officer, owned that he heard (imaginary) voices speaking to him during the night, and which prevented him from sleeping, and that they sometimes told him to kill himself. The certificate was returned to be amended, when the medical man added the following:—"Fancies he hears voices at night telling him to murder his wife, also that his property is increasing, and that he will come into it shortly." A good certificate need not, as a rule, be a long one. When characterised by length and diffuseness it too often contains inconsistencies, contradictions, and weak points. The longest certificate I ever had contained 311 words of the facts observed by the medical man alone, and might have been included in these short lines: "Entertains the delusion that almost every person with whom he comes in contact is in a conspiracy against him." There is no need to write out particulars at length, which simply serve to show incoherent language. Minute details to demonstrate defects of memory are equally unnecessary. The following is an extract from the certificate of a case of epileptic dementia: "Labouring somewhat under mental confusion and imbecility, as evidenced by his inability to tell me at this time the number of days in a week, of the present year, of the name of the present month, &c." "Memory defective" would have correctly expressed all the latter portion of this statement. The "mental confusion and imbecility" were entirely distinct symptoms, and were really expressive of the dulness, obtuseness, and gradual decay of the intellect so common in these cases. A certificate, if unduly short, errs in the opposite direction to a long one. The following is a good example: "Facts 1. Violent, incoherent, destroys his clothing. 2. None." The case was one of mania with general paralysis, and exhibited all the characteristic delusions of the latter disease. The term "incoherent" was scarcely applicable to his condition, and the principal symptoms (delusions), proving the patient to be insane, were not mentioned.

8. He should remember that any comment upon, or explanation of, the symptoms, is not required. Such a statement as "a condition doubtless connected with the epileptic seizures to which he is subject," is quite unnecessary. "This patient, admitted recently (into the workhouse), is suffering under confirmed melancholia"; "appears to suffer from melancholia"; appeared in two certificates, the certifier appearing to forget that these assertions simply amounted to stating the patients were insane, whereas the facts or symptoms upon which they grounded these opinions were demanded by the statute. Such a sentence as "I am of opinion this person is a dangerous lunatic" is not of the slightest value, but the facts upon which the medical man based this opinion would have materially enhanced the value of his testimony. All such expressions in no way add to the validity of a certificate, and should be scrupulously avoided.

9. He should avoid making any statement under the first heading of the certificate that is not legitimately included

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under that of "*Facts* indicating insanity," and "as observed by *himself*." Under this title one medical man stated as a personal fact: "called me a fool." Irrelevant statements cannot strengthen a certificate, but may assist in making it invalid. In a court of law, where the reception of any such irrelevant matter would be prejudicial to the interest of his client, I question very much whether the counsel engaged would not object to the reception of any such evidence, as being contrary to the requirements of the statute, and with every probability of his objection being entertained. Undoubtedly much of this kind of information should be reported to the asylum medical officer, but unfortunately the present form of certificate is defective in containing no place or heading for its insertion. When, although important, it is unable to be included under the second heading, it is always the better plan to let it form the subject of a letter to the asylum medical officer, when at the same time many medical points —such as any history of syphilis—may be noted, and which could not always be stated in any form of certificate. It rarely happens that an entire certificate is irrelevant; the following, however, is rather a remarkable example of one, and contains all the "facts" recorded by the certifier:—"In the summer he repeatedly was in the search of adders, would endeavour to play with them, so subjecting himself to be stung, which he has been on one occasion very severely; would kill them and eat their hearts. On my asking the reason, he would say if he ate a number they would cure the epileptic fits which he has suffered from for eleven years. On several occasions he has threatened to take the life of his smaller brothers and sisters." This statement contains no symptom of insanity—a belief in the curative powers of adder fat, &c., is prevalent amongst the squatters resident on the common lands in the Bagshot Sands district; and amongst the lower orders generally an ignorant belief in the efficacy of a large number of very unorthodox remedies for epilepsy is very common. The threats of violence were not inconsistent with perfect sanity. The greater portion of it consists of hearsay evidence, and none of it apparently refers to the day of examination. The certificate was returned for correction, when the medical man added the following:—"He is sullen, morose, and dejected. Answers questions in an incoherent manner, and appears quite indifferent as to his fate."

10. When called to a case of reported insanity, he must not too readily take it for granted that the patient is insane, and especially must this be borne in mind if he be a stranger to the family, and therefore probably unacquainted with the manner and habits of the person he is about to examine. It behoves him to be exceedingly particular, more especially in any doubtful case, in investigating and thoroughly satisfying himself of the nature of the symptoms. Especial care must be taken when the so-called delusion is single. Any statements that are asserted to be delusions, and yet which *might* be true, need the most searching inquiry. For instance, the following single one appeared in a certificate:—"She has a delusion that some one pays for her retention in the workhouse." An assertion that was quite likely to be true, but if even a delusion, it was a very weak one. The most difficult case for a medical man to deal with, and the one most likely to be brought under his notice, is that where the single delusion is reported to be that of jealousy on the part of the husband or wife, the subject of which strenuously asserts it to be well-grounded. The possibility of the latter, and the probability as to motive, should be well considered by the medical man before he pronounces any opinion on the case. If there were an entire absence of any other symptoms of insanity, I should for my own part refuse to sign a certificate Febrile delirium is occasionally mistaken for insanity. The acceptation of truths as delusions does occasionally take place. The certificate of a patient recently brought to the Brookwood Asylum commences thus:—"He has various delusions, all bearing on engineering projects. His first and chief project is to carry a triple tunnel under the English Channel from England to France." At first sight this has all the appearance of a delusion, but as a carefully-considered scheme I have cause to believe it was a reality. The man had been an engineer, and had conceived and worked out on paper a plan for such a tunnel, which had met with the approval of many leading men of the day (the papers proving this are in my possession). There was no reason to doubt the man's insanity, the symptoms of which appeared in the certificate. He had overworked his brain, had broken down, and becoming pauperised was sent to a county asylum. Now if this single symptom had been depended upon to prove him insane, and the question of his sanity or insanity had subsequently been inquired into by a court of law, no doubt the medical certifier would have got into serious trouble.

11. He should take into consideration the existence of blindness, deafness, partial paralysis, malformation, defects in speech, loss of teeth, infirmities of temper, peculiarities of gesture, eccentricities of conduct, or in the mode of speech, &c., many of which cause the person to be examined to be somewhat awkward and ungainly in speech and manner, especially if associated with any nervousness. These states are not unfrequently jotted down as proofs of insanity. In one certificate I received was the sentence "a vacant expression" as one of the facts indicating insanity, and yet it appeared to be entirely owing to deafness. Deaf persons, even when sane, are frequently listless and vacant, and, moreover, are apt to be suspicious from a belief in thinking they are always being talked about.

12. He should well consider that the element of any *change* in the habits, conversation, affections, disposition, dress, residence, choice of companions, &c., is of the greatest importance to notice in the certificate. In themselves all the varieties of demeanour and speech may be perfectly natural to the individual, and are therefore perfectly consistent with sanity. If, on the contrary, any of these show a marked change (often a complete antithesis) to his previous condition, they become valuable evidence of insanity. The lower classes of society may be considered as perfectly sane, even when from the force of habit they employ the most coarse and objectionable language; but the same low-life and often obscene utterances emanating from the mouth of a lady, and presenting a strong contrast to her mode and previous style of conversation, would, especially when taken in connexion with other symptoms, be a strong indication of mental impairment. Change in the style of language is well reported in the following extract from a certificate (the patient was a well-educated gardener):—2. *Facts hearsay.* "His wife says ..... that he is constantly using the most violent and obscene language before her and the children, which has never before been his habit."

13. He should be careful to use proper terms to express his meaning. In the two sentences, "incoherence of speech and manner," and "her manner wild and incoherent," the words "incoherence" and "incoherent" used with respect to "manner" are inapplicable. Again, in the sentence "all her conversation is illusive," the term "illusive" was used in a sense that scarcely agreed with the subsequent context. He should avoid as much as possible the use of single words to express the patient's conversation or demeanour, such, for instance, as "irrelevant" and "vacancy."

Above all, when he has finished writing his certificate, he should be careful to reperuse it. If this had been done after the certifier had written, "has an expression of deep dejection and an unsmiling countenance," it is probable he would have struck out the latter sentence as being superfluous.

(To be continued.)

NOTES OF A CASE OF HYPERPYREXIA.[1]

BY G. H. PHILIPSON, M.A., M.D. CANTAB., F.R.C.P.L.,
SENIOR PHYSICIAN TO THE NEWCASTLE-UPON-TYNE INFIRMARY; PROFESSOR OF MEDICINE IN THE UNIVERSITY OF DURHAM.

A. B——, aged twenty-three, unmarried, a domestic servant, was admitted into the Newcastle-upon-Tyne Infirmary, under my care, on July 4th, 1879. From information obtained from her mother, the patient's life during the past three years had been one of difficulty and hardship. In former years the patient's parents had been in good circumstances, but through misfortune their children had been obliged to enter service to gain their livelihood. Three years ago the patient had suffered from an attack of rheumatic fever, and then her medical attendant had been obliged to have recourse to narcotic remedies, but had strictly enjoined that she had not to take more than was absolutely necessary to relieve her suffering. Contrary,

[1] A paper read at the Northumberland and Durham Medical Society.

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however, to his injunctions, she had taken them in large quantities, and suffered in health in consequence thereof. She also habitually would drink spirits of camphor, eau de Cologne, or anything spirituous in nature. She obtained large quantities of chlorodyne and other narcotic preparations unknown to her parents. She could not remain easy for more than half an hour without taking something stimulating or sedative in nature. She pawned silver articles and linen goods, and even her own clothes, to obtain chlorodyne. She sometimes would lie for hours in a deep sleep, and then would become frenzied, threatening to make an end of herself. If she was not able to obtain chlorodyne or some other narcotic or stimulant, she became very depressed. According to her own version, she took these substances for the purpose of relieving the severe pain from which she suffered. She admitted that she had taken as much as five teaspoonfuls of Collis Browne's chlorodyne at one time.

In March, 1877, she was three weeks confined to bed, with a severe pain in her left side, the severity of which, upon several occasions, produced fainting. The pain became more severe, especially after movement or exertion, and in order to obtain relief she resorted to a mixture of ether, ammonia, and opium, which she was in the habit of taking, and without which she said she could not exist. Her sight at this time would become dim, and for days she was almost blind. Her medical attendant becoming alarmed lest any hurtful result might arise from the careless self-administration of these uncertain medicines, forbade the chemist to supply her with them. However, it was discovered that subsequently she had procured the same articles from other chemists.

The patient was a young woman of medium stature, stout and of pale sallow complexion. Her countenance was dull and heavy; she was inert, easily excited, and highly sensitive. She complained of great pain in the chest and back, which was greatly intensified when the cuticular surface was touched. The pain was more especially associated with the intercostal muscles, was constant and very severe, and was worse at night and in the early morning. In the middle of the sternal region, in the left axilla and at the left side of the vertebral column, the tenderness was extreme. There was general hyperæsthesia of the surface, but the sensitiveness was most marked over the back and especially the left side. The skin generally was hot and dry; during the night, and at times during the day, she sweated profusely; the sweat was very sour and disagreeable in odour, and was strongly acid in reaction. She complained of great thirst, the tongue was thickly coated, micturition was difficult, and sometimes for a whole day no urine was voided. The urine was very dark, contained a copious sediment composed of urates and phosphates; its reaction was strongly acid, specific gravity 1030, and contained neither albumen nor sugar. The bowels were constipated. The catamenia had been absent for four months. The heart-sounds, base and apex, were sharp, but were without murmur; no friction, pericarditic or pleuritic, or other adventitious sound, was heard upon auscultation. The pulse was 84, and the respirations were 18 in the minute.

The case was regarded as one of hysteria, associated with amenorrhœa and intercostal neuralgia. She was placed in bed between blankets, and was ordered the milk diet, consisting of three pints of milk and boiled rice, with two bottles of potash-water, each day. She was also prescribed the compound iron and aloes mixture, three times each day.

During the first few days after her admission, there was not anything particular to note concerning her state, with the exception of the temperature, which became abnormally high. On the evening of July 7th it was 101° F., and on the evening of the 9th it became 112°. The following morning the temperature was 112°, and on the evening of the 11th it was again 101°. For the next three days the temperature remained between 100° and 103°. On the evening of the 16th the temperature again rose to 111°, and on the morning of the 18th it fell to 100°, and on the evening of the same day it rose to 112°. Three days after her admission, on account of the very high temperature and of the increased severity of the pain, Dr. J. D. Dixon, the senior house-surgeon, deemed it expedient to substitute for the iron and aloes mixture, twenty grains of the salicylate of soda in an ounce of water every four hours.

Notwithstanding the continuation of the salicylate of soda, the pain became so intense that it was decided to administer morphia hypodermically. At first one-quarter of a grain of the acetate of morphia was employed, by which she was much eased. After repetition, however, the effect was less marked, yet she was always most solicitous for the administration, and became much excited if it was postponed, a course which was considered expedient.

On July 24th the temperature in the left axilla was 117°, the highest recorded. On this day, in the right axilla, the temperature was 110°, and in the mouth 102°. On July 28th the temperature in the left axilla was again 117°, whereas in the right axilla it was 114°, and in the mouth 112°. On July 29th the temperature in the right axilla was 115°, the highest recorded in this situation, whereas in the left axilla it was 110°, and in the mouth 116°, the highest recorded in this situation.

Respecting the precautions taken as to the thermometric observations, it may be stated that the thermometers were placed and removed by the clinical clerk, and often under the direct supervision of the senior house-surgeon. Further, that on account of the excessively high temperature three thermometers of greater range than usual were specially obtained from Brady and Martin of Newcastle-upon-Tyne, and employed. These three thermometers were fixed at the same time, one being placed in the mouth and one in each of the axillæ. The temperatures in the evening were always taken previous to the administration of the hypodermic injection. During the time the thermometers were in position a nurse was placed at the patient's bedside, and was instructed to watch carefully for, and to prevent any, movement of the arms of the patient. Occasionally the patient was sullen and obstinate, and it was impossible to persuade her to allow the temperature to be taken.

On July 26th the salicylate of soda was omitted, and she was prescribed ten grains of the sulphate of quinine, with diluted sulphuric acid and water, three times each day.

At this time the sour smell of the perspiration became more intense, the hands were unsteady, and the skin commenced to peel off the fingers. On the surface of the trunk a roseolous eruption was also noticed. Her lower extremities were cold and she had shiverings. She also complained of severe pain in the head and face. For several nights she was very violent, and caused much disturbance in the ward.

As she continued to complain much of the pain in her head and face, on July 28th four decayed molar teeth were extracted. During their extraction she remained perfectly quiet. Shortly afterwards she said, "No one knows what a woman can do when she is determined," and then she fainted.

During the remaining days of her stay in the hospital she became exceedingly troublesome, and gave rise to much discomfort to the other patients, so much so that it was necessary for her mother to be sent for, and to be requested to remove her from the infirmary. She threatened to make away with herself, and required constant and most careful watching. On the evening preceding her departure the temperature was 98°, while five days before it had been 117°.

The temperature of the atmosphere during the whole time was always between 50° and 60°.

About the middle of September, 1879, the patient returned to the infirmary to visit a friend in the female ward. From the nurse's account, she appeared to be in good health, and looked well.

Remarks.—As has been recounted, upon admission the diagnosis was entered as hysteria, associated with amenorrhœa and intercostal neuralgia, and the sequence of events shows that the view taken was correct. The treatment was ordered accordingly. Subsequently, however, when the excessively high temperature was registered, the acuteness and the severity of the suffering indicated the propriety of the administration of remedies antipyrexial in nature; but, as was clearly manifested, without any distinctive influence. The most important point of interest unquestionably was the excessively high temperature. The highest temperature registered was 117°, 19° above the normal temperature of health. Occasionally cases of very high temperature have been recorded. Of such, excluding those the result of spinal injury, or after surgical operation, the following may be specified.

Wunderlich[1] "refers to a case, in a girl aged eighteen, who was often attacked with partial hyperæmias, urticoid eruptions, local sweatings, and very changeable and varied symptoms in different internal organs. Besides this, at other times than the local hyperæmias of the skin, she exhibited all over the surface of the body, from 1° to 1½° C.

[1] Medical Thermometry, p. 166.

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(= 36° to 9° Fahr.) higher temperature than in the vagina, in the right axilla, as well as in the right groin, there was a persistently higher temperature than in the left, the difference being sometimes as much as 1° C. (= 2·7° F.) The highest temperature in this case was 103·1° Fahr. This very remarkable behaviour of the temperature, which lasted almost a year, could scarcely mean anything else but a disturbance of the vaso-motor nervous system, which, whilst it affected both sides, affected the right much more than it did the left."

Dr. Graham Steel[3] of Manchester has recounted a case that was under his care in the Manchester Royal Infirmary, in a female, aged twenty, suffering from hysteria, in whom the temperature was over 116·4°.

Dr. Horatio Donkin,[4] of the Westminster Hospital, reported that, in a female nurse, aged nineteen, during an attack of enteric fever, the temperature was over 111°.

The other points of interest, in reviewing the case under consideration, would appear to be the non-persistent character of the hyperpyrexial condition, its want of uniformity over the surface of the body, and the slight prejudicial influence of the condition upon the patient.

The non-persistent character of the hyperpyrexial condition was very remarkable, and would appear to be of significant importance in estimating the amount of actual danger to the sufferer. Often the exaltation of temperature was of very short duration; a second observation taken very shortly after the registration of a high degree might again be high, or, on the contrary, be of a lower degree, or even be the normal temperature of 98°. Respecting the want of uniformity of the temperature over the surface of the body, it was no unusual circumstance for the difference to amount to several degrees. As an illustration of this anomaly the following instance of the state may be referred to. On the 24th of July the temperature in the left axilla was 117°, that in the right axilla was 110°, and that in the mouth was 102°. This non-correspondence was no unusual circumstance. It was also distinctly associated with a corresponding difference in the hyperæsthesia. The exaltation of sensitiveness was generally most marked on the left side of the spine, the left side of the thorax, and the left arm. This want of uniformity of the temperature, conjoined with a difference in the hyperæsthesia, may be inferred to be another indication that the individual was in no imminent danger.

Regarding the apparently slight prejudicial influence of the high temperature upon the state of the patient, it is to be remembered that while the temperature was so increased as to be considered almost incompatible with life, and while she was reeking in perspiration, her mind was unclouded, and she answered questions quite coherently, the only alteration in her physical condition being that of peevishness and waywardness, a statement fittingly described as "hysterical." Another point worthy of allusion is that the pulse and the respiration never altered, the ratio being 4·5 to 1, corresponding with the normal pulse-respiration ratio. This is of diagnostic import, for, in the ordinary pyrexial condition, in which the rise of temperature is persistent, the pulse and the respiration also increase synchronously.

The conclusion, therefore, in the contemplation of the case, is, that in the absence of pericarditis, endocarditis, or other inflammation, the hyperpyrexial condition was the consequence of an influence derived from the vaso-motor nervous system, or a neurosis, and that the many and characteristic manifestations of hysterical state very fittingly indicate that the designation of hysterical neurosis is the most appropriate epithet to apply to the case.

For the very complete and extended thermometric record I am indebted to Dr. J. D. Dixon, the senior house-surgeon, and Mr. W. H. Davis, the clinical clerk. For the notes of the case I have further to express my obligation to Mr. W. H. Davis.

CASE OF PERFORATING ULCER OF THE STOMACH; DURATION OF ACUTE ATTACK, THIRTY HOURS; AUTOPSY EIGHTEEN HOURS AFTER DEATH.

By JOHN LACEY, M.R.C.S. Eng., &c.

THE following case may be of interest to the profession. The patient, up to the time of the attack, was exceptionally healthy and active.

[3] THE LANCET, 1879, p. 271. [4] Ibid., 1878, p. 678.

The body was that of a young woman about twenty-two years of age, well-nourished. There was no sign of decomposition; the colour of the skin all over the body was of a light olive. On the body being opened in the usual manner by a longitudinal incision down the median line from the ensiform cartilage to the pubis, a layer of fat was observed about one inch and a half thick, of a yellow colour, darker than usual. On opening the cavity of the abdomen a rush of a considerable quantity of air took place, and on the intestines being exposed the presence of acute inflammation could be noticed in the pinky colour and almost universal glueing together of the intestines with coagulable lymph, with here and there a patch of redness, and about three pints of grumous serous fluid of a brownish dirty red. The serous covering of the liver was dull-looking and opaque, and looked as if macerated by the fluid; some of which, no doubt, had escaped from the stomach; on looking at which, but without removing it, a brownish-red spot about the size of a sixpence was observed on the front wall of the viscus, a little to the left of the centre. The stomach was carefully removed, and the opening of the ulcer was examined from the inside; it had the appearance of being of rather long-standing, as there was much thickening of the wall of the organ in the neighbourhood of the ulcer. There were also two other ulcers, rather larger than the one that had perforated the stomach, on the posterior wall, about the same level as the perforation; they were not so deep as the ulcer in the front, but so little tissue remained that when very lightly felt the wall gave way. The gastric inner surface appeared otherwise healthy. There was observed on the outer surface at the lower part of the stomach a wrinkle, as if the organ was forming the usual hour-glass appearance or contraction that takes place in this disease. The uterus was pale and rather contracted; the ovaries dark-coloured and nodulated, and on cutting into them several cysts were divided, which spurted forth a light-coloured fluid. In the right one a yellowish cavity was observed, not so large as a corpus luteum, but evidently the product of some inflammatory action. The mesenteric glands were also somewhat enlarged. The rest of the body appeared healthy.

There had been no marked symptoms of disease in the patient before, the only observable one being the olive colour of the skin, described above, which had existed for about two months, with loss of appetite, and a slight complaint of pain after food.

I think the above fully exemplifies the insidious nature of the disease.

Trinity-street, S.E.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

RICHMOND HOSPITAL.

CASE OF INGUINAL HERNIA WITH BONE IN THE INTESTINE; DEATH; REMARKS.

(Under the care of Dr. A. ROBERTS LAW.)

A. B——, aged seventy-four, applied at noon on Monday, Sept. 15th, 1879, for admission to the hospital, having, he said, walked about two miles in great pain. He gave the following history. On the previous Saturday (13th) night he went to bed feeling well, and with no particular swelling; when he rose on Sunday morning he felt ill, and noticed a tumour in his left groin. He believed he had been ruptured for three years, because occasionally a small tumour came in his groin, which caused him no pain, and always disappeared without assistance. He had never worn a truss nor had advice. He was unable to eat anything all Sunday (14th), and had frequent calls to stool, but was able to pass only one or two small lumps of fæces, and no flatus. He felt sick, but neither retched nor vomited. Thinking the

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tumour would disappear as usual, he sought no help until the next morning (the day of admission), when he went to a medical man, who told him he had a rupture, and endeavoured for ten minutes to return it. Failing in this, the medical man advised him to apply at the hospital.

On admission, a tense elongated tumour, somewhat larger than a goose's egg, was felt in the left inguinal region, extending some way into the scrotum. It appeared very elastic, and coughing gave a dubious impulse. When manipulated, the tumour gave him pain, and as the integuments were already much reddened, no real attempt was made to reduce it. The abdomen was somewhat distended, but not tender. There was no anxious expression, no vomiting, no great spontaneous pain, and the pulse was good. The patient was put to bed and a large enema given, of which only part could be retained. It brought away a small quantity of fæces. At 2 P.M. Dr. Roberts Law saw him, and ordered an injection of morphia over the tumour. At 4 P.M., as no alteration was observable in the tumour, the patient was taken into the operating-room and put under ether. After a very short preliminary attempt at taxis, an incision about two inches and a half long was made over the centre of the tumour, and the layers divided down to the sac. On passing the finger towards the abdomen to find the stricture, a small sharp-pointed body was felt protruding through the sac wall outside the external ring. This was seized by the forceps, withdrawn, and proved (microscopically) to be the end of a thin slip of bone, two inches long, by three-sixteenths of an inch broad at its widest part; to the other end of this was attached a fibrous shred, with the colour and odour of fæces. A director having been introduced into the opening in the sac, the sac wall was carefully opened on it; this was found very thick and friable; its internal surface was dark-red. The cavity was filled by a portion of intestine, attached to which were large masses of fat. In this intestine was found a corresponding hole to that in the sac wall, through which the bone was withdrawn. The edges of these holes were of a greyish colour and sloughy appearance. On passing a director through the hole in the upper surface of the gut, the point reappeared at the opposite surface under the fat, where a second opening was found, presenting the same characteristics; thus the bone evidently transfixed the intestine and skewered it in the sac. No obstruction was made out, but one band tighter than the rest was notched, and the finger was passed freely into the abdomen, but the intestine was found adhering to the sac. The contents of the sac were left in position, a drainage-tube was put into the lower angle of the wound, and the upper part was closed by sutures. The operation was performed antiseptically. After the operation the patient was allowed iced milk-and-water, and one grain of opium was given every six hours.

He passed a quiet night, and was not sick. No flatus passed by bowel. Next morning the pulse was 120, full; temperature 100·4°. The wound was dressed; the deep parts were healed; the drainage-tube was taken out. In the afternoon he vomited twice, and once in the evening, the vomit being curdled milk in thin colourless fluid. No flatus passed by bowel. On the 17th the stitches were taken out of wound, which was nearly healed. The parts around looked brawny and dark. During the 17th retching became more frequent, not much was brought up; the vomit was once only a little greenish. Eructations of wind very troublesome. No flatus passed per anum. The tongue remained moist. The patient took beef-tea, milk, and champagne freely. In the evening the pulse became weaker, and the abdomen slightly more distended. He passed a very restless night, dozing at intervals. In the morning the condition was much worse, the abdomen much more distended. Tongue still moist. Temperature 99·4°; pulse 124, much weaker. Urine, which had been drawn off by a catheter since operation, was now dark-brown, slightly albuminous, and contained altered blood-corpuscles. Nothing had passed by bowel. The finger was forced into the wound some distance, but let out no pus. The integuments round the wound were darker and more swollen. Ordered four ounces of brandy, and turpentine stupes to be applied to the abdomen. In the afternoon the pulse failed, and the limbs grew cold. Vomiting ceased almost entirely, the breathing became laboured, and death occurred at 11.45 P.M. on the 18th, seventy-nine hours after operation.

The necropsy (sixteen hours after death) was performed by the house-surgeon. On opening up the wound about a drachm of brownish stinking pus escaped from the sac. The interior of the sac was very dirty-looking. The piece of fat in the sac had become adherent to the walls. There was no constriction in the neck, the finger could be passed into the abdomen. On opening the abdomen the intestines were found much distended. They presented points of injection all over, and had become greasy, having lost their polish. There was no fluid in the abdomen. On turning up the coils from the inner opening of inguinal canal, the colon close to the sigmoid flexure was seen passing over the aperture, and on pulling it it was found to be partially engaged in it. When the neck of the sac was slit up, it was observed that part only of the circumference of the colon was drawn into the neck, and attached to it was the piece of fatty tissue in the sac. By the fact of one side of the bowel being implicated in the neck, the calibre of the gut was greatly diminished at that point; below this the intestine was flaccid and empty. On cutting out the piece of gut and opening it longitudinally, an appearance exactly like a diverticulum was presented, which, turned inside out, showed the entrance and exit holes of the bone. The mucous membrane round the one in the upper wall was livid, in the other one the edge was thin in consequence of the perforation in the mucous membrane being smaller than that in the outer coats. There was no mark of constriction, and, except just in the neighbourhood of the holes, the mucous membrane appeared healthy. The kidneys when opened showed somewhat diminished thickness of cortex, which was tougher than natural. The capsule stripped off readily enough, but left a slightly granular surface.

Remarks.—One may observe that in this case the usual symptoms of tight strangulation of the gut were absent, but, taking into consideration the advanced age of the patient, it was thought best to operate without unnecessary delay. The operation proved satisfactorily the impossibility of reduction.

The non-passage of flatus or other contents of the intestine after the operation may have been caused by the non-return of that portion included in the sac, but the lowered vitality incident to the patient's time of life more probably prevented the intestine resuming its normal functions.

The question arises, Would the formation of an artificial anus have by any possibility influenced the ultimate result?

BIRKENHEAD BOROUGH HOSPITAL.

POISONING WITH PHOSPHORUS.

(Under the care of Dr. STEVENSON.)

FOR the following notes we are indebted to Mr. F. Grenfell Baker, M.R.C.S., senior house-surgeon:—

B. W——, a young woman, aged twenty-two, was carried to the hospital at 6.45 P.M. on Nov. 27th, by a police constable who had found her about three-quarters of an hour previously running about the streets, with, as he said, "flames coming from her mouth and hands."

The patient was a robust, well-made, young woman, and when admitted was in a very excited state, and talking incoherently. Thick luminous fumes were issuing from the mouth with her breath, and on her hands were patches of a greenish blue-looking substance, which was also luminous in the dark. The woman refused to answer any questions relative to her condition, and did not complain of any pain. A powerful odour of phosphorus was apparent around her. A strong emetic of sulphate of zinc was at once administered in water, and emesis immediately afterwards occurred. The vomited matters consisted of large lumps of undigested meat and potatoes, which when placed in a dark room were luminous, and smelt strongly of phosphorus. In a few minutes a second emetic similar to the first was given, together with a large quantity of water, which was swallowed without difficulty, and in about three minutes returned, but without any phosphorescent odour or appearance. After this the patient expressed herself as being "all right," and, refusing to remain in hospital, was conveyed to the police court, where she was charged with attempting to commit suicide. She had not long been in the Bridewell, however, when her condition became so alarming that the authorities sent her back to the hospital, where she was admitted at nine o'clock the same night.

On admission she was perfectly conscious, though some-

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what collapsed and very pale, and was constantly retching and bringing up small quantities of yellow mucus. She was immediately put to bed, with hot bottles to her feet. She complained of great thirst, with pain in the mouth and throat, but she would only occasionally speak, and then in a scarcely audible tone. The pupils were normal, pulse full and regular, and the breathing hurried and shallow. She was very drowsy, but was kept constantly awake. Small quantities of fluid, containing equal parts of milk and lime-water, were given at frequent intervals. The patient was getting very cold, and sweating profusely. There was no swelling or tenderness of the abdomen. At 12.30 A.M. no change had occurred. While the patient was being put to bed a half ounce pot, almost empty, of phosphorous paste for killing rats was found concealed about her dress. At 2 A.M. she was breathing freely, respiration thirty in the minute; temperature 100°, pulse 90, full and regular. Great pain in throat and mouth was complained of, and patient appeared to be in a stupid, half-conscious condition. The eyes were closed, and on being told to open them only twitching movements of the lids occurred. The pupils were normally dilated and responsive to light. Nothing could be got from the patient as to what she had taken, and the few words she uttered were too feebly spoken to be understood. The abdomen was very tense and tympanitic, but did not appear to be painful. An enema of castor oil with tincture of opium was given, which shortly afterwards brought away some normally-looking fæces; at the same time the urine was voided, but could not be examined on account of its being mixed with the enema. No phosphorous odour was observed about the evacuation. At this time the breath was still strongly of phosphorus, and the patient restless and sleepy. Milk at frequent intervals was given, together with a solution of morphia every four hours, and a large hot poultice to the abdomen.

Next morning at ten o'clock no change had occurred in her general condition. There seemed to be great tenderness over the throat and epigastrium. The patient appeared to be quite unable either to open her eyes or mouth, or in any way to move, as if from extreme weakness of the necessary muscles; temperature 101°; pulse 104, and irregular; respiration 26, and irregular. The pupils were normal, but there existed intense photophobia of both eyes. There was profuse perspiration. On examining the chest all the signs of commencing acute inflammation of the larger bronchi and the trachea were evident, and there was great difficulty in swallowing. Milk, together with the whites of eggs, were ordered to be given during the day, and ice to suck. Fifteen drops of tincture of opium in cinnamon water were given three times a day. At 11 A.M., temperature 101°; pulse 106; respiration 34. At 2 P.M., temperature 99°; pulse 96; respiration 30. At 4 P.M., temperature 98·6; pulse 68; respiration 24. At 6 P.M., temperature 97·4°; pulse 70, irregular and scarcely perceptible; respiration 24.

At 10 P.M., the nurse in charge sent to say the woman had died suddenly, and on seeing the body a few minutes later the house-surgeon found it lying on its back quite motionless, with no perceptible pulse, respiration, or heart's beat. The body was quite cold, temperature in the vagina 97°, eyes fixed, and she appeared in all respects to have expired. Artificial respiration was immediately resorted to, and in a few minutes the woman began to breathe very faintly, and at the end of half an hour's continuous efforts the pulse and heart's beat could just be detected, and respiration fairly carried on, though were irregular. The patient appeared to be quite unconscious. Several relapses occurred at frequent intervals, and artificial respiration had to be kept up till 1 A.M., when the breathing and pulse had much improved, though the temperature only stood at 97·4. The patient was coughing a good deal at this time, and loud râles could be heard all over the chest. No phosphorous odour was noticed in the breath.

Nov. 29th.—The patient had passed a very restless night, coughing continuously, but without any expectoration. She appeared very weak, and the mental condition was unchanged. The abdomen was distended and tympanitic, and the throat and the epigastrium were very sore. There was great photophobia. Temperature 98·8°; pulse 100, small and irregular; respiration 24, shallow and irregular. Moist râles were audible over the chest; heart's beat could not be felt, and on the slightest movement the patient appeared to be on the verge of suffocation. She coughed a good deal, but without any expectoration. At midday temperature 98·4; pulse 100; respiration 24. At 4 P.M., temperature 98·2°; pulse 80; respiration 35. At 6 P.M., temperature 96·8°; pulse 80; respiration 30. At 8 P.M., temperature 98·2°; pulse 78; respiration 30. No urine or fæces had been passed during the day, and in the evening the water was drawn off and found to be normal, without any phosphorescent appearance. The woman had taken iced milk and eggs at frequent intervals, and although there was constant retching, no vomiting occurred. The medicine was repeated during the day.

She passed a quiet night, and on the following morning answered questions put to her in a rational manner, but still in a very low, feeble tone. She complained of pain in the throat and slight epigastric tenderness. The tongue was clean, and the throat did not appear inflamed. She passed two pints of urine during the morning, which was quite normal. Milk was taken freely, and apparently without pain. She was still unable to fully open her eyes, or protrude the tongue. At 11 A.M., temperature 97°; pulse 100, irregular and very small; respiration 30. At 3 P.M., temperature 98°; pulse 100; respiration 24. At 7 P.M., temperature 98·4°; pulse 128; respiration 34. At 10 P.M., temperature 101°; pulse 90; respiration 32. At 12 temperature 98·4°; pulse 80; respiration 30. The same treatment was adopted as before.

On Dec. 1st the patient appeared to be altogether in a totally different condition. She spoke intelligently, and said she did not remember anything that had occurred during her illness, but admitted she took the poison. There was no abnominal pain or tenderness, though the abdomen was still somewhat distended and tympanitic. There was very little tenderness about the throat, and slight difficulty in swallowing. The medicine was discontinued, and the patient still kept on a diet of milk and egg, with some bread and butter. The urine and fæces were voided during the day, and appeared perfectly normal. Temperature 99°; pulse 100; respiration 25, at 10 A.M. At 10 P.M. the temperature was 98·8°; pulse 90; respiration 25. The eyes were fully opened, and tongue protruded at will.

Next day, but for general weakness, the patient appeared to have fully recovered—no pain or tenderness was anywhere experienced, and the abdomen was of the natural size. The temperature, pulse, and respiration were normal, and no sickness was complained of. The police authorities removed the patient to the Bridewell, from whence she was taken to the workhouse, where she remained for ten days, and was then allowed to return to her friends, being perfectly well.

During the whole time the woman was under observation no signs of jaundice were perceived.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Parasites in Muscle in Typhoid Fever.—Spontaneous Disappearance of Morphœa.—Lichen Ruber.—Cyst in Brain.—Aneurism by Anastomosis.—Suppuration in Larynx.—Mitral, Tricuspid, and Aortic Stenosis.—Tumour of Spermatic Cord.—Congenital Malformation of Rectum.

THE ordinary meeting of the Pathological Society was held on Tuesday, the 20th inst., J. Hutchinson, Esq., President, in the chair. An interesting communication from Mr. W. H. Power of the Local Government Board on the discovery of nematoid worms in the voluntary muscles in typhoid fever was read by Dr. G. Buchanan. Mr. Eve introduced the subject of laryngeal abscess in typhoid fever, and, on the request of the President, Drs. Greenfield and Taylor promised to bring other specimens illustrating it, and raise the discussion again.

Dr. G. BUCHANAN read a paper on Some Appearances, probably of Parasites, in the Voluntary Muscles of Enteric Fever. The observations which it described were made by his colleague, Mr. W. H. Power, who was led to investigate the subject by finding that an epidemic on board the training-ship *Cornwall*, supposed to be typhoid fever, was really trichinosis. He thereupon commenced the examination of the voluntary muscles in typhoid fever. The first

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case examined was a young man in St. Thomas's Hospital, who died from peritonitis set up by perforation of a characteristic enteric ulcer. In the pectoral muscle were found what were taken to be parasitic worms, one or more of which were seen in each specimen, and, apparently from their movements, they were still alive. Their dimensions were wholly different from those of trichina spiralis, being about a quarter of it in length and breadth. They were thickest in the middle, with one end larger than the other. They resembled nematoid worms both in the proportion of their breadth and length, and in the presence of an interior canal, apparently interrupted by some intervening organ or tissue. Another case of undoubted typhoid dying in the Seamen's Hospital, under the care of Dr. Curnow, was also examined, and in it too the same bodies were found, but in neither case were they so plentiful as was at first supposed. They were not found in all muscles equally; none have been found in the diaphragm, nor are they uniformly disseminated through a given muscle. Many slides may be examined without meeting with one. Certain much smaller bodies, having a possible relation to the larger parasites, were also found more abundantly; they are with difficulty distinguished from the muscle, and any slight interference with the slide often results in their being lost sight of altogether. With advancing decomposition the parasites, but not the smaller bodies, were found to be more numerous.

The PRESIDENT referred to a living specimen shown at a former meeting. It was a young woman, aged twenty, under the care of Dr. Porter, who a year ago was brought to him suffering with well-marked patches of morphœa, or Addison's keloid. These patches were placed irregularly, but corresponded with definite areas of nerve distribution; there was a patch close in front of each ear, and several on one arm. At the time he took accurate notes of the case. Now, only twelve months after, they have all completely disappeared, the skin merely showing a little staining and thickening. The fact of the complete disappearance of patches of morphœa is well known, but he brought forward this case, as it was one of the best proofs of it that he had ever met with, and also showed how rapid this disappearance might be. He thought Dr. H. Fagge was one of the first to draw attention to it.—Mr. MORRANT BAKER referred to a man who was under Mr. Willett's care some months ago with large patches of morphœa on the thighs; he was lost sight of for a time, but came to the hospital recently, and the patches had almost entirely disappeared, and, according to the patient's account, this improvement occurred shortly after hæmorrhage from the bowels.

Mr. MORRANT BAKER described a case of Lichen Ruber, which he had shown as a living specimen at a recent meeting. The woman, fifty-three years of age, had been under his care at St. Bartholomew's Hospital for some months. The disease began two and a half years ago, more especially on the extensor aspect of the arms and legs, where it presented large rough, almost warty patches, with slight desquamation, deeply pigmented, not weeping, but with intense itching. Some of the tops of the papules were scratched off, and this gave in places an aspect of prurigo. On the elbows there were one or two patches which were not raised, and which were much more like lichen ruber. Great difference of opinion had been expressed by those who had seen this case, some calling it an eczema, others prurigo, or psoriasis or lichen; for his own part he should prefer to call it lichen; perhaps it was the form of disease called lichen psoriasis by the President.—The PRESIDENT had used the term lichen psoriasis mainly in order to teach that the two diseases are but one and the same; he considered that psoriasis admitted of polymorphism, and that so-called lichen ruber or planus was one of its polymorphic varieties. It was certainly cured by the same remedies as psoriasis; he supposed Mr. Baker was treating his case by arsenic and tar ointment.—Dr. PYE-SMITH should have called the case psoriasis, but as Mr. Baker had seen it in its earlier stages he was best able to make a diagnosis; he could not consider this distinction of great importance, as the two diseases were so closely allied. On the other hand, the distinctions between prurigo, eczema, and psoriasis or lichen were very marked and definite.—Mr. BAKER stated that one dermatologist had called it an eczema; another thought it was an example of an undescribed disease, and should have a name to itself.

Dr. EWART showed a ramifying Cyst in the Brain. A man, aged thirty-one, was admitted under Dr. Whipham's care into St. George's Hospital in 1878. He had been attacked eighteen months previously with severe headache and vomiting. He improved, but relapsed six months later, and again in January, 1878. Soon after this attack he showed signs of mental derangement. On admission into the hospital he was found to have, in addition to the headache and vomiting, numbness in both hands. The mind gave way, he became very violent, and death took place from coma. At the autopsy the right hemisphere of the brain was found to contain a cyst. The membranes over the interpeduncular space and on the under surface of each frontal lobe were found to be thickened, the thickening consisting of a thin membrane packed closely in a depression on the brain, and sending tubular sac-like prolongations into the brain. The cyst was contained in a distinct cavity with a very smooth surface, very irregular in shape from projecting bands and columns, apparently produced by the branches of the Sylvian artery; the lining membrane looked like that of the ventricles, from which, however, it was quite distinct; it was cellular in structure. The cyst was formed of a very delicate membrane, so folded on itself that there was no appreciable quantity of fluid in it. On microscopical examination the inner surface was seen to be mammillated; under the projections was a clear space with a double row of cells, and beneath that numerous capillaries ramified. The cerebral arteries were also peculiar. The anterior cerebrals arose more deeply than usual, being covered over by the thickened membranes, and were connected by two branches close together instead of by one only. Just beyond the second of these communicating arteries the left anterior cerebral appeared to end in a misshapen knob, from which many branches arose, and particularly two which continued on over the corpus callosum in the usual position of the anterior cerebrals. The right middle cerebral artery was larger than normal, with an unusual number of branches arranged irregularly, many of which were almost occluded by hypertrophy of the intima. He thought the cyst was dependent in some way upon the irregularity of the vessels. It was remarkable to find such a lesion borne so long without symptoms. The symptoms experienced at last were probably the result of the increased growth of the cyst, or of some inflammation set up by it.

Mr. EVE exhibited specimens and drawings of Aneurism by Anastomosis of the External Ear. A woman, twenty-one years of age, was in St. Bartholomew's Hospital, under Mr. T. Smith. She stated that at birth there was a small lump at the upper part of the pinna, which pulsated; it gradually increased, and when she was six years old it was removed by ligature; two years later another portion of the growth at the back of the ear was unsuccessfully treated by pins. The whole of the pinna behind the external auditory meatus was involved, enlarged, of a dull-red colour, soft, pulsating, with a humming murmur. The temporal and posterior auricular arteries were enlarged; on pressing the carotid artery on that side the tumour became flaccid. She suffered from hæmorrhage from time to time, which gradually became more frequent and abundant. Mr. Smith removed the whole pinna, with some surrounding skin, very little blood being lost. The growth consisted of a number of anastomosing capillaries, many of them embryonic in structure. The Malpighian layer of the cuticle was greatly hypertrophied, extending down in processes, some of which were branched; the sebaceous glands were also enlarged. He thought this, which was the result of increased blood-supply, was of great interest, in its bearing upon the similar changes seen around epitheliomata. He considered the growth to have sprung from a congenital nævoid tumour.—Mr. EVE also showed three specimens of Perichondritis of the Larynx. The first was removed from the body of a man who was attacked with dyspnœa while convalescing from variola. Tracheotomy was performed, but death occurred. There was œdema of the epiglottis and ary-epiglottidean folds. Two oval ulcers were observed beneath the posterior attachments of the true vocal cords, leading into cavities containing pus, in which lay the necrosed arytenoid cartilages; the upper and back part of the cricoid cartilage was also necrosed. The other two specimens were met with in patients who had died from typhoid fever, one of whom suffered from frequent intestinal hæmorrhage, the other had very high temperature; the condition of larynx was like that in the first case, except that the cricoid cartilage was not affected. Many authorities consider this state as brought about by extension of the typhoid or variolous ulceration down to the cartilages. Liebermeister regards it as the result of a diphtheritic inflammation, but Sestier holds that the abscesses are caused by the general tendency to

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suppuration, gangrene, and necrosis met with in convalescents from typhoid fever; and in this opinion Mr. Eve concurred. In both cases of typhoid fever there had been special causes of debility—in neither of them were there other ulcers of the larynx; and the fact that the same condition is met with after variola, shows that it is not a specific effect of typhoid. Typhoid ulcers, however, may penetrate deeply.—Dr. GREENFIELD had met with these abscesses in a number of cases, he thought them quite common, and due to formation of pus either in connexion with the perichondrium or more externally. He believed it to occur during the period of acute illness, and that it often subsided. In many of his cases there had been no symptoms during life. The position of the abscess was very characteristic. He had never seen it in uncomplicated typhoid fever.—Dr. GOODHART suggested that these cases occurred in epidemics; for years he had not met with a case, and then in two years had seen four cases. He thought they sometimes started quite outside the cartilages.—Dr. DOUGLAS POWELL asked if there were any other abscesses, pyæmic or otherwise, in these cases. He thought Mr. Eve's first case might have been due to a variolous ulcer, as it occurred early.—Dr. GREENFIELD had no notes of his cases at hand, but there was no evidence of any other pyæmic or bone lesion in the last case he had seen; as a rule, he had found the abscesses in patients dying during the acute period from intense fever and deep ulceration.—Dr. TAYLOR had seen one case last year in a patient who had high fever for six weeks, and then had perforation and peritonitis; there was a large abscess. An American physician had noticed stenosis of the larynx as following typhoid fever.—The PRESIDENT asked Drs. Greenfield and Taylor to bring forward their cases and specimens at a subsequent meeting of the Society, so that they might appear in the Transactions of the Society.—Mr. EVE stated that in his first case death took place on the thirtieth day. In neither of them was there any other abscess or sign of pyæmia.

Dr. PEARSON IRVINE showed a Heart with Stenosis of Mitral, Aortic, and Tricuspid Valves. A woman, aged thirty-seven, had been sickly from birth, never able to run about like other children; seven years ago she had an attack of acute rheumatism. Death occurred from dyspnœa and exhaustion. In addition to the stenosis of the three orifices there was found a large clot in the left auricle which filled the cavity, except a passage for the blood from the pulmonary veins. Dr. Moxon showed a similar case to the Society about two years ago. An interesting question was whether the disease was congenital or acquired, or both; there was no pericarditis.—Dr. EWART had shown to the Society a case of mitral and tricuspid stenosis about two years ago, and in that also the left auricle was completely filled by a clot which was channeled out for the blood.—Dr. TAYLOR asked if there was a tricuspid presystolic murmur.—Dr. IRVINE replied that the heart was acting very irregularly, with a double ventricular systole; there was a distinct diastolic murmur, heard loudest over the lower end of the sternum, which did not lead up to the systole.

Mr. WALSHAM exhibited a Tumour of the Spermatic Cord removed by his friend Dr. Marshall, from a boy, aged four. When two years old he was treated for a congenital hydrocele, but on account of the pain he was unable to wear a truss. A fluctuating globular tumour was now noticed just outside the external abdominal ring; this disappeared, and was followed by another close to the globus major, which increased in size, and was removed. On section the tumour looked like a coiled tube. It was seen to be composed of a number of tubular systems of cells; in the centre was a space, next came a zone of dense cells without blood-vessels; then a zone of cells more loosely packed, and with bloodvessels; and outside a zone of cells in a fine reticulate stroma. The cells consisted of round nuclei in a small amount of protoplasm. In many points it was like a gumma, but there was no history of syphilis. He considered it to have developed from the remains of the Wolffian body, from its structure, its position, and from the fact that fœtal remains are oftentimes the source of morbid growths.—Dr. GOODHART stated that this tumour closely resembled one he and Mr. Butlin had examined for the Morbid Growths Committee, exhibited by Dr. Gairdner, and called a lymphoma. Several of the tumours had disappeared spontaneously, and the peculiar tubular structure appeared to offer the explanation of this fact, the cells being discharged into the spaces. In Mr. Walsham's case, too, one tumour had spontaneously disappeared.

The following card specimen was exhibited:—Persistent communication between Rectum and Genito-Urinary Tract in a new-born male child; by Mr. Shallock.

Dr. Heneage Gibbes demonstrated the stereoscopic effect with a high power of the microscope at the close of the meeting.

The meeting then adjourned.

MEDICAL SOCIETY OF LONDON.

Debate on the Lunacy Laws.

AT a meeting of this Society held on the 12th inst., Mr. F. J. Gant, President, in the chair,

Dr. CLEMENT GODSON exhibited a specimen of Placenta Succenturia which he had removed from a patient three hours after delivery. Severe secondary hæmorrhage occurred, which almost proved fatal. He believed this variety of placenta was not uncommon, and urged the necessity of thorough examination in each case.

Dr. HARRINGTON TUKE read an address on the Lunacy Laws. He said that the question of the alteration of the Lunacy Law, and the abolition or purchase by the State of private asylums, had become recently of much public interest. The intimation of possible future legislation in the speech from the Throne, the report of the Select Committee of the House of Commons, some recent lunacy trials, and the Bill introduced by the member for Swansea, had contributed to render this one of the questions of the day. Mr. Dillwyn's Bill proposed the transference of the jurisdiction exercised by the Commissioners in Lunacy over the Metropolitan Asylums from them (the Commissioners) to the justices of the peace. He pointed out the folly of thus ignoring and wasting the patient labour of thirty-five years, during which the Commissioners in Lunacy, under their distinguished chairman, Lord Shaftesbury, had secured the reputation of being amongst the most useful and indispensable of public officials. He referred to an editorial article in a medical journal, which advocated the sweeping away of private asylums from the face of the earth, and thought this expression was ill-judged. The series of remarkable articles, avowedly written by Dr. Bucknill, were generalisations upon too few facts which were not fully substantiated; and while he (Dr. Tuke) fully recognised Dr. Bucknill as the first physician and the foremost writer and thinker in his branch of the profession, he felt obliged to almost entirely dissent from his views. Dr. Bucknill had shown much power and ability in his ideas for the destruction of existing institutions, but had no suggestions for their improvement; and, admitting that some private asylums were good, it would seem more reasonable to raise the standard of the inferior ones than to abolish them. He took objection to the assertion that "this question did not interest the medical profession generally." It was not alone the fifty medical proprietors of asylums who were thus attacked; but as there were 185,000 persons certified as insane during the last twenty years, and in each case one or more certificates of registered practitioners were required, the question of improper committal to asylums became one of general medical interest; and, again, as there were few families who, with or without asking for these certificates, would consign those nearest and dearest to them to asylums without previous consultation with their ordinary medical adviser, Dr. Tuke pointed out the importance of an accurate definition of the private asylums for the higher classes, as distinguished from those receiving paupers, whether from the large State asylums or from the various institutions conducted by ladies and others in which the insane were received. The objection against private asylums that most deeply affected the public mind was "that patients were kept in asylums for profit." Now, while it is the human lot to labour, profit must be one of its incentives, and it is for the opponents of private asylums to show that such incentive has ever led medical proprietors of private asylums to wrong-doing, to base and sordid economies, or to illegal admission or detention of their patients. As to illegal admission of patients, he asserted that there were the most careful precautions taken (which he described

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in detail) to prevent such an occurrence, under the present lunacy law, and these had been so far successful. In a properly-conducted asylum illegal detention or admission would require the organisation of a vast and almost impossible conspiracy. The medical proprietor, his wife and family, the friends of the patient, "the signer of the order for confinement," the two certifying medical men, and the chaplain attending the asylum, must all join in one vast scheme of base and cruel wrong, and a case of such wrong-doing has never been adduced. Under any possible human code mistakes may occur, and we can only adopt the best means in our power to prevent them. As to the prolonged detention of patients after cure, it may fairly be demanded that such cases should be produced or some proof be given of their existence. In Dr. Tuke's experience his recovered patients had ever become his warm friends, and sometimes his frequent visitors; and this, he ventured to say, was the experience of all our psychological physicians. Regarding insanity essentially as a disease, the author was of opinion that patients might often with great advantage be placed under private medical care, but this was contrary to the opinion given by some of the opponents of private asylums, who appeared before the Committee of the House. One of the committee objected to "needy doctors," and said that patients were better in the hands of widows, clergymen, and others. Dr. Tuke thought it was well to consider what was to follow the abolition of private asylums. The patients might go to private care, as many do now; but, surely, this would rather strengthen than eliminate the so-called vicious principle of profit or otherwise. All the insane must be placed in large public hospitals. There are at present sixteen of these institutions in existence; if more are required they will follow the natural law of demand and supply. In his opinion the nearer an asylum can be made to resemble the home that the patient has lost, the more likely it will be, under proper medical treatment, to become a place of cure. Dr. Tuke apologised for the length of his paper, and for the necessity of omitting many interesting questions, and ventured to suggest that the real improvement of the speciality of medical treatment for the insane was in the hands of the medical profession at large. The ordinary medical attendant of patients in the higher class of society should make himself intimately acquainted with the treatment pursued, and the general character of the asylum to which such patient has been sent. The many petty and the few grave charges made against private asylums would dissolve in the clear light of more extended medical supervision. The knowledge of insanity would become more general, and in many ways the public mind would be set at rest upon the question whether or not the best and most humane treatment was secured for the most helpless part of the community.—Dr. SUTHERLAND said it was almost impossible for cases to be illegally detained. That very day a patient recently admitted, a colonel in the Guards, had complained of his detention; but on being given materials to write to the Commissioners in Lunacy he was wholly unable to do so. A patient, who had suicidal melancholia, was taken from his asylum contrary to medical advice, and on the same evening cut his throat when dining with his family. Others felt the protection and comfort of an asylum. A lady, who had been insane on four previous confinements, of her own free will went with her husband to the Commissioners and obtained permission to enter his asylum as a boarder. Under proper treatment a fifth attack of puerperal insanity was averted. The statement that patients were detained after recovery was unfounded.—Dr. ROGERS said he knew but little of the causes which had led the Legislature to think of abrogating or setting aside private asylums kept by medical men, of some two or three of which he had a very favourable knowledge; and he asked the author whether any facts had been brought before the Parliamentary Commission on private lunatic asylums in support of the allegations made against them.—Dr. NEWINGTON said there were as many cases of alleged improper detention fought out at the Select Committee coming from public asylums as from private, showing that it was a question of detention in any asylum of either class. As regards many lawsuits having arisen being used as an argument showing there were grounds for the accusation, he might say that only one lawsuit had ever proved successful against a medical man. The proprietors laboured under great disadvantages in answering the attacks on them, for, while they were sufficiently numerous to allow of a hostile movement being directed generally against them, all reply must of necessity become personal. He was sure this consideration had prevented many of the older generation of private asylum proprietors from speaking, and when they were silent it was not for the younger to say much. There were some absurdities in the conduct of these attacks—e.g., THE LANCET had said in an article that there was a pressing peril due to the private asylum system, which peril was that patients were discharged too soon, so as to increase the registration for cures. A few weeks after, an article in the *British Medical Journal* stated that it was on the detention of patients after their recovery that private asylums throve. Where two presumably equal authorities were in direct conflict, it may be supposed that their effect was neutralised. The general feeling educed by the Select Committee was that private asylums were improving, which opinion Dr. Bucknill had endorsed; indeed he had said that it was the right policy to try to improve them; yet suddenly, in the face of this theory, the cry was changed to one of abolition. It had been said that the interest of private asylum proprietors was to detain their patients. That was far from the truth; for, as had been said to him by an eminent member of the profession, if the patients in a private asylum could be changed every three months the proprietors would soon make their fortunes.—Dr. BUCKNILL wished to say a word with regard to the statistics adduced to indicate the large proportion of recoveries in private asylums. Unconsidered statistics may be made to prove anything. In the evidence given by the late Dr. Alexander Sutherland before the Select Committee in 1860, it was stated that out of 185 insane persons treated by him as single patients in lodgings, he had cured 74 per cent. Surprised at this large success under what are thought to be unfavourable circumstances, Dr. Bucknill referred to the last Reports of the Commissioners, when he found that, out of 5965 patients under treatment in private asylums during 1878, only 558 were discharged recovered, or 9·39 per cent. He did not hesitate to avow himself the author of the articles on Lunacy Law Reform, which had been so much discussed. He had never attempted to keep it secret, and had long ago admitted it publicly. It was surprising that with this knowledge Dr. Tuke should have stated that the author of these articles had arrived at his opinions without any foundation of fact upon which to rest them. He had facts enough, accumulated during nearly forty years of asylum experience, if without breach of professional or official duty he could state them. One fact he could repeat, which he stated to the Select Committee, that among the Chancery lunatics he visited he met with five who had recovered, and whom he considered to have been improperly detained; and he could not say that in none of these cases was there, in his opinion, any *mala fides* in the detention. He had tried to discuss the question with all courtesy and kindness towards his professional brethren, but it is not mainly a medical question, and it is not fair to discuss it on the merits of Dr. Tuke's asylum, or of any other good asylum. In criticising any social or legal asylum we have a right to refer not even to its average, but to its worst results; and in examining the private asylum system he had a right to refer to the management of the inferior asylums. Take one thing, the system of commissions for sending patients to asylums, which the Legislature has tried to stop, but which is still rife, at least in regard to pauper patients sent to private asylums. Then it is said that no cases of ill-treatment were discovered by the Select Committee in 1877. They were not inquired for, although a very suggestive fact was broadly stated by Mr. Cave, the chairman—viz., that you hardly ever find an asylum patient who does not think he has suffered unjustly. Why this almost universal feeling of unjust treatment in asylums if the inmates are well treated? It is not so in the domestic treatment of the insane, and he could fully endorse the strongly expressed opinion of Dr. Lockhart Robertson, that it would have been impossible for him to believe the increased happiness of patients removed from asylums into domestic life unless he had frequently seen it. Dr. Bucknill concluded:—"I have this evening been accused of having changed my opinion as to the undesirability of entirely abolishing private asylums. Upon enlarged experience I should be justified in so doing, but as a matter of fact I am of the same opinion still. I would not attempt to abolish any good private asylum which was well managed as a real hospital for the treatment of mental disease, or as a voluntary retreat for the chronic insane; but whenever it was necessary to imprison any insane person for a lengthened period on account of his being dangerous, that duty of locking a man up,

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except for brief exigencies, I would entrust to no private individual. Imprisonment under any form is a duty of the State, and ought only to be imposed by the authority and the officers of the State, and in places provided by the State."—Dr. HACK TUKE, after complimenting the author of the paper for the good temper he had shown in a matter affecting his personal interest, said he thought there was a fallacy in the argument that the temptation to obtain profit is not peculiar to the proprietors of private asylums; the real point is that this profit is obtained from those who are more or less helpless. Rightly or wrongly, it is this which underlies the public feeling about these institutions. Not on the ground of a sufficient amount of proved abuse would he contemplate their abolition, but on account of the feeling excited in the public mind by the false position in which the proprietors were placed. It must, however, be remembered that Dr. Bucknill had met with five cases of improper detention, and therefore it was not mere vulgar fanatical clamour that one had to consider. The proprietors deserve our gratitude, but in their own interests he thought they had better allow their houses to become State asylums, and receive due compensation, instead of being starved out by the establishment of public asylums. As regards the statistics brought forward, they certainly surprised him, because they showed that the good private asylums superintended by medical men only cured about 2 per cent. more than those carried on by lay persons. If really true, the marked distinction one was accustomed to make between the two classes of asylums would hardly be justified. The way in which the Lunacy Commissioners group the English asylums when presenting their respective percentages of cures (and which he had quoted in the *Journal of Mental Science*) appeared to Dr. Tuke to be one which may be fairly adopted when the treatment pursued in private asylums was in question. It is true that although called "private," some of them contain paupers, but when these institutions were being discussed *all* private asylums were included, whether they receive pauper lunatics or not; in fact, Dr. Bucknill had animadverted on the treatment of the latter in some of these houses. Profit was, of course, made out of the paupers as well as the rich. The cures in county asylums are, according to the statistics of the commissioners, greater than in the licensed houses, whether metropolitan or provincial. To explain this by pointing out that licensed houses receive some pauper lunatics does not obviously meet the case. It does not account for the fact that asylums receiving only paupers have more recoveries than those receiving both classes; other reasons must be sought for, and may, no doubt, exist without any blame attaching to the proprietors of private asylums themselves. Quite fair, however, as the grouping of the various asylums by the commissioners appeared to him to be, for the particular purpose in view, it would be misleading if employed to ascertain the relative amount of insanity among the rich and the poor.—Dr. L. S. FORBES WINSLOW said the question of an alteration in the Lunacy Laws and the abolition of private asylums was one which has frequently arisen. Every great lunacy case of late years has been made an excuse for attacking private asylums and their proprietors; but it is rather significant that all the allegations brought against these institutions have failed, and their proprietors in every case have come out triumphantly. Statistics in reference to a comparison between private asylums and public ones, as regards the percentage of cures, prove nothing. There were at present in his institution between fifty and sixty inmates, but very few curable cases, for the simple reason that all cases deemed curable are discharged as such before the end of the year, and only chronic cases as a rule remain. He considered the matter as one in which the honour of medical men had been unjustly attacked, and there is no reason to assume that medical proprietors of asylums would behave dishonourably more than other medical men. He could name some celebrated physicians who have been and are proprietors of these institutions. Lord Shaftesbury gave evidence in 1859 which was opposed to private institutions, but in 1878, when the last Lunacy Committee sat, he said, in reply to a question as to the present state of private asylums: "At present, from a variety of causes, the licensed houses are in a far better condition in every sense of the word; more is expended on them by the proprietors, and I must do them the justice to say that the change is very great, and, so far as the evidence I gave in 1859 is correct, I should not give it now." This is the publicly-expressed opinion of the greatest living authority on lunacy matters. Lunacy legislation is a most difficult subject, but any clause in a subsequent Act which would protect the proprietors from unjust insinuation would be hailed with acclamation by a large body of medical men, whose sole desire is the cure of their patients.—Dr. TUKE, in reply, said that it was a private Bill which he had brought before the Medical Society, and one not purporting to be founded in any way on the report of the Committee. He declined altogether to discuss Mr. C. Reade's clever but sensational novels. He thanked Dr. Newington for his remarks, and said that the case of Hall *v.* Semple would never have arisen had Mr. Hall been sent to the charge of a medical man. As to the statistics he had brought forward, the two tables followed close on each other, but were not connected. For the purpose of his argument, the first table sufficed, which showed private asylum statistics to be at least equal, if not superior, to public ones in the number of recoveries. Dr. Hack Tuke's objection to private asylums "that profit is gained from the helpless and demented, and is therefore unworthily gained," was illogical; for it was not possible to treat the helpless and demented except through their guardians under the supervision appointed by the State. In the same category as children at school, many of them were quite as able to look after their own interests as elder boys; but in any case State asylums would be liable to the same objection. Dr. Sutherland had defended his father's statistics, and had offered his case-books for inspection. This was not necessary, for the objection to his figures was manifestly absurd. The late Dr. Sutherland out of a large number of patients selected the most curable to place under care in cottages, and hence his large percentage of cures. It was difficult to follow Dr. Bucknill over the large number of topics he had entered on; but on the question of giving and taking commissions, he agreed with Dr. Sutherland in saying that he had no knowledge of such a proceeding. Dr. Tuke then thanked the President and Fellows for the kind and patient hearing they had given to his paper, and the meeting adjourned.

Reviews and Notices of Books.

Anatomy for Artists. By JOHN MARSHALL, F.R.S., F.R.C.S., Professor of Anatomy, Royal Academy of Arts; Professor of Surgery in University College, London, &c. &c. London: Smith, Elder and Co.

A Rule of Proportion for the Human Figure. By JOHN MARSHALL, F.R.S., &c. &c. London: Smith, Elder, and Co.

PROFESSOR MARSHALL has lectured for so many years on artistic anatomy at the Royal Academy and at the School of Design at South Kensington, that any work relating to a subject so familiar to him in all its bearings and details will be welcomed both by anatomists and artists. Indeed, the number of works on this interesting branch of study is very limited, and those which are of any real value to the ordinary artistic student are almost inaccessible to him. In the "Anatomy for Artists," Professor Marshall has given an anatomical description of the bones, joints, and muscles with such thoroughness, and in so clear and lucid a style, that the artist who can obtain a skeleton for reference will be quickly able to understand the structure, form, and mechanism of the human body. The surface forms dependent on the peculiar curves, eminences, and depressions belonging to each bone are most carefully described, and the changes in surface appearance produced by the various muscular movements are most clearly pointed out, so that these constitute the specially characteristic and most valuable features of the work. It will thus become the text-book for every artist who wishes to thoroughly master the anatomy of the human form in relation to the outward surface, and give him the explanation of those peculiarities of the figure with which every true student must become acquainted in order both to satisfy his own curiosity and to prevent his falling into error if he would depart in ever so little from the mere copying of his model. As Professor Marshall truly says in his most

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philosophic induction, "With the aid of anatomy alone can the artist safely advance from the individual to the ideal, and attain to special or general conceptions of form." Not only, however, is the "Anatomy for Artists" a safe guide in art-anatomy, but the anatomist himself will profit greatly by a careful study of Professor Marshall's anatomical descriptions; and the concise and accurate manner in which these are given lends an additional charm to the work. We must add that the two hundred original drawings by Mr. J. S. Cuthbert are not only artistic, as we might have expected, but are also most scrupulously correct, and reflect great credit on his skill and taste. The volume itself is most elegantly printed and bound, and the publishers may be congratulated for issuing a work on art-anatomy which in its very appearance is itself artistic.

In "A Rule of Proportion for the Human Figure" Professor Marshall has published six plates, giving the measurements of length, breadth, and depth of the different parts of the male and female figure, and from these he has deduced a rule of proportion which he conceives is more correct and more easily grasped and remembered than the older systems of proportion put forward by Dürer, Carus, Zeising, and others. Scientific accuracy is impossible in such a matter as this, but Professor Marshall's rule is, we think, more useful than the formula generally employed by art-students, and is certainly to be commended for its simplicity in comparison with some of the ingenious and elaborate systems which have been proffered for our guidance. In this rule the trunk is divided into four equal parts, corresponding with the length of the head, as measured from the vertex to below the chin, and each of these parts is subdivisible into nine smaller units. The upper and lower limbs and their various segments can also be readily expressed in *heads and units*, and the same applies to transverse and antero-posterior as well as to longitudinal measurements. It is certainly interesting to find that Professor Marshall expresses the standing height of his typical male figure in 67 units, whilst Dr. Beddoe gives 67·3 inches as the average stature of the male inhabitants of Great Britain, so that Professor Marshall's units may practically be taken as inches. The special value and necessity of being acquainted with the law of proportion must be self-evident to every artist who would wish to avoid errors which mar the best works of some of our greatest sculptors and painters. Individual examples deviate in nature from these proportions, and so the artist must diverge from them also, according to the special type or character he is desirous of portraying, but they will afford him a safe point of departure, and indicate the limits within which his creative powers must be restrained.

Traité Clinique et Pratique de la Phthisie Pulmonaire et des Maladies Tuberculeuses des divers Organes. Par Dr. H. LEBERT. Paris: Delahaye. 1879.

THERE is nothing, either on the title-page or in the text, to indicate that this is a posthumous work—the last literary effort of one of the most indefatigable observers of our day. The fresh vigour of the style, the manner in which—himself a pioneer in the path—the author has kept up with the advancing knowledge of our day, are somewhat surprising when we remember that he died a year before this book issued from the press. Not that he has embraced all the acquisitions to knowledge of tuberculosis, especially those of its minute pathology, for the book is mainly based upon personal observation; but here and there we come upon indications of his interest in and acquaintance with doctrines which have been quite recently promulgated. To take one example. In speaking of the pathology of phthisis, he alludes to the recent work of Charcot, which has gone so far to displace the doctrines of Virchow in a field of which Lebert himself was one of the earliest workers. A German, he passed much of his life in France, and in this particular branch of pathology he identified himself more or less with the French school. As an evidence of the versatility of his powers, we may mention that, besides his treatise on Pathological Anatomy and several volumes on diseases of the respiratory organs, he has published works on cholera, typhus fever, diseases of the stomach, congenital diseases of the heart, and urinary diseases, on most of which subjects he is a contributor to Ziemssen's Cyclopædia.

Lebert died in August, 1878, at the age of sixty-five, and his published works cover a period of forty years. Upon the subject of phthisis and tubercular diseases generally his name follows close upon that of Laennec and Louis, although it would be saying too much to rank him on a level with these masters. One of his earliest and best known pathological contributions was the endeavour to establish the specificity of tubercle from its microscopical characters, and although somewhat shaken in his belief by the works of Reinhardt and Virchow, he lived to see a reversion to the doctrine of unity of tubercular disease widely accepted.

The book before us deals with almost the whole range of tubercular affections, chiefly, however, with pulmonary phthisis. In one sense it is not likely to be widely read, for it is not perfect as a literary effort, nor useful for educational purposes. Had the author lived he might in many ways have rendered it more attractive as well as more profound. Its chief merit lies in the fact that it contains the sum and substance of his life's experience in these diseases. It does not offer much that is novel, or, indeed, suggestive, but it is a sound clinical and pathological record, and on every page bears the impress of careful personal observation. In this it differs from many writings upon this much-discussed subject, and compares favourably with them.

Necessarily such a work is liable to lead to rather undue self-assertion on the part of its author, and we cannot absolve Lebert from this fault. His introduction reviews his own labours in the natural history of pulmonary diseases, and he lays claim to priority in many observations, amongst which may be cited that of the inoculability of tubercle. The book is divided into five parts. The first deals with etiology and pathogeny, where he sums up against any doctrine of specificity (contrary to his earlier opinions), seeing only in tuberculosis the outcome of depraved nutrition. The second part treats of the symptoms of pulmonary phthisis, and, in turn, of lymphatic, uro-genital, cerebral and meningeal, and peritoneal tuberculosis. There is nothing which calls for special comment in this chapter, but exception may be taken to his description of the symptoms of bronchial adenopathy, for he gives only those of great enlargement, which are surely rare in primary tubercular disease. The third part deals with the pathological anatomy; and the fourth with the diagnosis and prognosis of each of the above affections. Lastly, a long section is devoted to treatment. It opens with an expression of satisfaction at the revival of therapeutics, and its new foundations upon physiological knowledge, and he happily contrasts the old empirical antiphlogistic treatment of phthisis with the modern and more rational aims at prophylaxis through climatic influences. Indeed, the chapters devoted to climatology are some of the best in the book, for they are evidently penned by one who knew personally the districts of which he writes.

HEALTH OF DUBLIN.—During the week ending the 3rd inst., the deaths registered exceeded the number of births by 31, representing an annual death-rate of 42·8 in every 1000 of the population. Zymotic diseases caused 65 deaths, 13 of which were due to whooping-cough, and 4 to small-pox. As regards the latter disease, 11 fresh cases were admitted during the week into the principal Dublin hospitals, and 8 were discharged, leaving 46 under treatment at the close of the week.

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THE LANCET.

LONDON: SATURDAY, APRIL 24, 1880.

WHAT is a Workhouse Infirmary? We are not at the moment concerned with the legal definition, or classification under a particular Act of Parliament—for example, that by which the district sick asylums of the metropolis are constituted,—but with the broad and practical question: What is the purpose and scope of an infirmary attached to a Poor-law district, including the "sick-wards" comprised in a workhouse? Is this establishment, under whatever description it may fall, a pauper *hospital?* And if it is, what sick persons should be accommodated within its walls—paupers who are invalided, or sick persons who are pauperised by their sickness? There is an important economic distinction between the two classes of possible inmates specified. If the infirmaries, or wards for the sick, attached to workhouses are provided simply for the medical care of the paupers who may fall ill in the workhouses, that is one thing, and the efficiency of these departments must be tested solely with regard to the requirements of the houses to which they belong. If, on the other hand, the infirmaries of workhouses are to be viewed as hospitals for the districts with which they are connected, then it follows that the Poor-law system contemplates something more than the mere relief of sick paupers, and includes in its programme an attempt to cure the maladies which contribute to the increase of pauperism by disabling and throwing upon the rates the poor who fall sick, and not unfrequently their families also.

We are anxious to consider this question apart from the wider topic of public provision for the sick, because it is important to ascertain precisely what the State contemplates by the hospital work in which it is officially engaged. It would be easy to assume that the infirmaries and sick wards connected with workhouses in Poor-law districts were intended solely for the accommodation of sick persons who are already paupers, but that the recent policy of ordering the great majority of poor persons applying for public charity into the workhouses disposes of the hypothesis. If a sick man applies for relief, and is sent to the workhouse, he is practically sent to the workhouse infirmary, and in so far as his poverty may be the result of his illness, it is, or should, clearly, be, the purpose of the guardians to see that his cure is carried out with the greatest possible celerity, and that he has recovered at least so far as to remove any danger of a relapse before he resumes the struggle for self-support. Unless what the Poor-law authorities are doing is made plain, unless they themselves understand it as an economic proposition, nothing is more likely than that, by stinting the means of thorough and prompt treatment in the workhouse infirmaries, guardians of the poor—or, more correctly, guardians of the rates—may be augmenting the burden they aim to reduce. Obviously it cannot be a wise policy to hurry cases of acute disease—needing for its remedy active measures and more or less costly agents and appliances—into an institution constructed, furnished, and provided for the accommodation of chronic cases. This would be a facile mode of multiplying the already large number of "permanent sick" in every district, and could not for a moment be regarded as sound financial policy. An infirmary which may answer fairly well as a department for the sick inmates of a workhouse who are already pauperised, and whom it is not deemed worth while to *cure*, is not necessarily a suitable establishment to be employed as a Poor-law hospital. The consideration on which we are anxious to insist is that the workhouse infirmaries must be made efficient as hospitals for recent or acute cases, if what is called the "labour-test" system is to be carried to its legitimate lengths.

An endeavour has frequently been made in these columns to show how large a proportion of the poverty that calls for public relief is the direct effect of illness. This fact is so obvious that to ignore it must be to persist in disregarding one of the frequent and most constant factors of pauperism. It would be a sound commercial policy to minimise the cause of ceaseless demands on the purse of the ratepayer by improving the machinery for curing disease. It is not only necessary, but expedient, that the Poor-law system should include an organisation for "medical relief," and that the service for which this agency is created should extend beyond the mere casual care of sick paupers. If there were no special reasons to inquire whether the workhouse infirmaries are performing their functions adequately, it would be important to exercise a watchful care lest they failed to grapple successfully with the small percentage of acute cases occurring among the inmates of workhouses. It would be a calamity if those who are merely classed as "paupers" should be disabled from an effort to enter the ranks of the bread-winning population by the neglect of curable disease. How much more regrettable would it be to find that sick persons plunged in poverty by their maladies were not provided with the means of recovery, but, from false notions of economy, were permitted to drift into the condition of chronic invalids, permanently dependent on the public rates!

This is evidently a matter of high interest and pressing moment. We invite the co-operation of medical officers of workhouses in an attempt to ascertain how far the infirmaries and sick wards attached to these establishments are of a character, and so conducted, as to serve the purpose of Poor-law hospitals for the cure of recent disease. It is plain that they ought to be efficient in this particular. Our standpoint in dealing with this question will be essentially *medical*. The changed policy of Poor-law relief places the workhouse infirmaries on the footing of general hospitals, and, making the most modest requirements as to the level of their efficiency, it is a duty the profession owes the public to inquire whether these institutions throughout the country are adequate to the need that exists, and which they are required to satisfy. We do not apprehend any difficulty in carrying out an inquiry which is of the most vital interest to the ratepayers generally, and we look with every confidence to the aid of those of our brethren who are engaged in the treatment of the sick poor under the Poor-law system, both those who are responsible for the hospital work accomplished, and those who, being in medical charge of the districts from which the inmates of workhouse infirmaries are received, may be able to help us in arriving

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at a just conclusion as to the number and character of the recent and acute cases so disposed. The amount of clinical material in these institutions must be very large. It is a pity, even on scientific grounds alone, that this should be sacrificed.

THE Report of the Medical Officer of the Local Government Board for the year 1878, delayed in appearance by the illness and death of Dr. SEATON, has at length been published. It has been prepared by Dr. BUCHANAN, the present medical officer of the Board, and notwithstanding that he signs himself in regard to this Report as assistant medical officer, it must be looked upon as the first annual report, as Medical Officer, from his pen. The contents of the Report are of unusual interest, if only for the reason that they in part refer to the year in which the question of so-called "animal vaccination" was forced so prominently and persistently upon professional and public attention, and they throw a fuller light than has yet been had upon the views of the Local Government Board and of its medical adviser on this important subject. They, moreover, deal with other matters of abiding and equally great interest in the sanitary administration of the kingdom.

Briefly noting the gratifying illustrations the Report affords of the steadily progressive improvement which is being gained by the present arrangements for public vaccination in the kingdom, not only in the *quantity* but more especially in the *quality* of the vaccination (and notably in the quantity and quality of the vaccination in the metropolis, the least satisfactorily vaccinated district in the kingdom), we pass on at once to offer some observations on the part of the Report relating to Animal Vaccination. This is touched upon both in its pathological and its administrative aspects. Taking the latter aspect first, it is to be observed that Dr. BUCHANAN adheres to the results of Dr. SEATON'S personal inquiry, made in 1878, into the use of vaccine lymph cultivated upon calves, and which had previously been made known by Dr. BALLARD during the progress of the Medical Conference on Animal Vaccination, held several months ago. Dr. SEATON appears to have been satisfied in the course of his investigation that while difficulties which had been encountered in the transmission from animal to animal of lymph derived in the first instance from a natural source of cow-pox had practically ceased, there still remained a marked difference in the degree of certainty with which a desired result in vaccination could be produced with fresh lymph taken direct from the calf, as compared with fresh lymph taken direct from a child. In the most experienced hands there was a proportion of failures in successfully vaccinating with fresh animal lymph, such as is not known by experienced vaccinators with humanised lymph in this country. "These failures to obtain complete results (with animal lymph) had in Berlin led to a large proportion of the children receiving an imperfect degree of protection against small-pox, and at Amsterdam and the Hague they led to the practice of making a much larger number of insertions than were regarded as necessary for protection against small-pox, merely because the operator expected that some of the insertions would fail." To introduce then vaccination with *animal* lymph, with our present knowledge of the practice, into the system of public vaccination in force in England, would be to introduce not merely a hitherto unknown degree of uncertainty into its results, but also, in consequence of this uncertainty, to further certain methods of operation which would not be likely to find favour here, and which would tend to discredit vaccination. It is improbable that English parents, who, as a rule, dislike even our regulation number of four or five insertions, and in private practice too frequently successfully contend with their medical attendant for two insertions only, would allow their children to be subjected to *ten* insertions, or permit a second vaccination to make good imperfections of the first at the end of the day week!

"The substitution of certainty for uncertainty of success in the performance of vaccination," writes Dr. SEATON in an uncompleted memoir on this subject quoted by Dr. BUCHANAN, "was the great purpose of the reorganisation of vaccination arrangements which took place in England, in consequence of the official inquiry in 1859-64 into the state of vaccination in this country—a reorganisation which had been and is working with the most satisfactory results. To admit into our system, and stamp with the sanction of Government as one of equal value, a plan to which the main objection is uncertainty, would seem to me to be an inconsistent and retrograde step." Moreover, Dr. SEATON indicates that there is no experience with animal vaccination under the circumstances of a system of vaccination such as exists here, and that it is an error to speak of vaccination from the calf to the arm in Belgium (whence our knowledge of animal vaccination has been chiefly derived) as a "National System." There, as in this country, the vaccination generally in use, both public and private, is with humanised lymph from arm to arm. Nevertheless, although the Local Government Board is responsibly concerned with the arrangements for public vaccination alone—with regard to which, according to its Medical Officer, no ground has yet been shown that would justify a fundamental change; but, on the contrary, the evidence in the possession of the Board tends strongly to confirm the soundness of those arrangements—further study is being made on the subject in its various aspects, and it is intimated that it may prove desirable to make special arrangements to this end.

With regard to the pathological aspects of the question, Dr. KLEIN, under the supervision of the Medical Officer, of Dr. BURDON-SANDERSON, and of Mr. CEELY of Aylesbury, is engaged, under instructions from the Local Government Board, in carrying out a series of researches intended to settle the disputed point whether vaccinia can be produced in bovine animals by inoculation with the lymph of human small-pox. At the end of 1878 Dr. KLEIN had not obtained any affirmative result, although his operations had extended to sixteen heifers and fifteen milch cows. It is intended, as opportunity serves, to prosecute the experiments further, and for the present the details of the observations are withheld.

One only of the reports of the local inquiries as to the prevalence of disease, directed to be made by the Local Government Board, is reproduced in the appendix of the Report—namely, Mr. W. H. POWER'S report on a strange and fatal skin disease among infants at Loughton, in Essex, that proved to be due to the presence of arsenic in "violet powder" used for nursery purposes—a report already familiar

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to our readers. The mass of the Medical Officer's Report, and that which forms its chief feature, is constituted by the third and concluding portion of Dr. BALLARD'S report on Effluvium Nuisances. This portion of the report is occupied with the nuisances arising in connexion with branches of industry in which mineral substances are principally dealt with, and nuisances in connexion with branches of industry in which matters of mixed origin (animal, vegetable, and mineral) are dealt with. The Medical Officer takes occasion of the completion of Dr. BALLARD'S great inquiry, which was entered upon in 1875, to offer some general observations upon its scope and results. He shows that its objects were, first, to learn the extent to which the public health is injured by one or another offensive trade or trade process; and, secondly, to ascertain in what measure and under what circumstances nuisance and injury to health can be avoided. In both directions the inquiry has been prolific of substantial results. Although in the first direction Dr. BALLARD was unable, during the time at his disposal, "to apply," as Dr. BUCHANAN phrases it, "the numerical method to the differential investigation of sickness and mortality, as influenced by proximity to offensive trade," he has brought together a great quantity of information from his own observation and the observations of others, which proves the large, although indeterminate, part which effluvium nuisances play in causing one place to be less wholesome than another. In the second direction of inquiry the report leaves little or nothing to be desired. Dr. BALLARD makes it quite evident that "nearly all the businesses that are now in a serious degree offensive may be carried on either without offence or with such important reduction of offence as shall make it tolerable or even trivial." This is the fact that it is important the Legislature and sanitary authorities should clearly apprehend, and it is comparatively unimportant, except as indicative of the moral responsibility of manufacturers, that, as Dr. Ballard points out, it is as much to their interest (pecuniarily) as to the interest of the public that the emanations from offensive processes should be arrested. Let us hope that the new President of the Local Government Board (whoever he may be) will see and take action upon the results derived from Dr. BALLARD'S inquiry, and particularly that he will give attention to the necessity of putting a stop to that form of perpetuation of manufacturing nuisances which may be studied on the banks of the Thames below Blackwall on the one bank and Woolwich on the other. There may be seen established and establishing themselves the offensive trades thrust out of London, without any check upon their reckless repetition of offence in their new location, heedless of the populations growing up about them, and rejoicing in the acquisition of certain vested rights, as it were, of producing nuisance. And this scandalous phenomenon is not peculiar to the Thames.

Dr. BALLARD'S Report in a complete form ought to be issued as early as practicable by the Local Government Board.

WE commented a few weeks ago on a scheme for covering London with provident dispensaries, in organic relation with London hospitals, to be built by a joint-stock company. Charity, in the eleemosynary sense of the word, is to have no part in the scheme. The members are to have the choice of their own medical men, and in extreme cases to have a claim on hospitals for admission and on the members of staffs of hospitals for their advice in consultation. The scheme is large and bold. It is promoted by Mr. STANSFELD, Sir CHARLES TREVELYAN, Sir RUTHERFORD ALCOCK, Dr. ROGERS, Dr. FAIRLIE CLARKE, and others. Reliance for the carrying out of this scheme is placed not, as we have said, on the almsgiving public, but on men of business, who, it is believed, will advance capital in a joint-stock way to supply the necessary buildings, and on the members of the large friendly societies, whose organising and administrative faculty has already been tested in the creation of large funds for providing against days of sickness. One kind of such associations is especially praised by the promoters of the London scheme—viz., that to be seen in several provincial towns, such as Northampton, Derby, and Scarborough, where the Friendly Societies, distinct in other respects, have combined for medical purposes to form a Medical Association for attendance not only on their own members, but on all and sundry other persons, without inquiry as to means or circumstances, who chose to affiliate themselves with such an association. Finally, the promoters—perceiving, what is very obvious, that such a scheme will require large funds,—though declining alms from private persons, hope to make out a strong claim when the redivision of the City Charities takes place, which have recently been under investigation by a Roya Commission.

Such are the outlines of the scheme which was brought under our notice in March, and which on Saturday last was adopted unanimously by a gathering, said to be large and representative, at the Cannon-street Hotel. The press of London has pretty unanimously accorded its approval of the scheme. There can be but one opinion as to the desirableness of reducing the amount of gratuitous medical service, both in the interest of the little-rewarded medical man and of the industrial classes, who are fast learning the value of their own services. So far as this scheme is calculated to promote this end it has our hearty approval. It is certain that the medical profession has suffered deeply from being made so cheaply and lightly available by the public. So far has this gone that there is an impression abroad that a medical man is bound to obey anybody's call night or day. His leisure may be broken, his night's rest lost, his health compromised at anybody's pleasure, and any previous inquiry as to remuneration will be considered vulgar at least, and probably unwarrantable. Men do not so ill use those who give them bread, and even to the publican who serves them with so much questionable stuff they pay an amount of money that would amply reward a private practitioner. People who give sixpence a day all the year round for beer cannot find sixpence a week for medical purposes, and become semi-paupers if they catch a cold or graze a finger. This state of things is thoroughly unreasonable, and must end. It is so unjust and demoralising that medical men will not much longer be found willing to take so-called honorary offices where such work is expected of them. We can only be thankful, therefore, to public men who give very valuable time to the amelioration of such a state of matters. Not that we would be understood to en-

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dense all the particulars of the actual scheme before us, or be thought to believe that such a meeting as that of Saturday is "large and representative" enough to carry it into execution. We do not see that the meeting of Saturday advanced the scheme at all. All the persons present have been of the same opinion any time the last ten years. The objections which we urged in March were unregarded, and must, therefore, be repeated. The medical profession was very inadequately represented, and the representatives of the existing medical charities were also conspicuous by their absence. It was represented that under this scheme members and their families would have the choice of a medical man, whereas the provincial schemes held up for imitation involve the dislocation of old medical relations and the substitution of a new and a very much underpaid medical attendant. The necessity for a joint-stock company seriously complicates the project. The proposal may have charms for men with commercial proclivities, but it does not seem likely to attract capital. Finally, we are disclaimed the idea of admitting all comers to the benefit of these institutions, as is done in the associations to be copied. Unless this is attended to the medical profession will be injured. With these serious qualifications we are glad to approve the movement in question.

A DEBATE on "bone-setting" is an unusual event in the annals of a learned Society; but there can be no question as to the utility of such a discussion as that which took place at the last meeting of the Clinical Society. Enough was said to show that it is time that attention was thoroughly directed to this subject; for more than one speaker avowed of his own knowledge that cases often fell into the hands of bone-setters after having passed from under the care of the legitimate practitioner. In one sense surgeons have to blame themselves for this, for failing to recognise the true nature of the case, they do not resort to measures which are taken by the bone-setters as a matter of routine, and not only without any basis of knowledge, but with a great parade of ignorance. No doubt the mischief that the members of the bone-setting fraternity do is very great; several instances, some with fatal results, were related the other evening; but often their rule-of-thumb practice and ignorant presumption succeed in restoring utility to a limb condemned to prolonged immobility by the surgeon, who disregarded the symptoms of the case. No doubt the "cases that bone-setters cure" are—as pointed out by Sir JAMES PAGET in his Clinical Lectures and Essays, the best guide extant on the subject—mainly those of adhesions within or (more often) *without* the joint, the result of some trifling injury or sprain; and in cases such as these the facility of reduction affords ground for the pretensions of the bone-setter.

But what shall we say of that other class of cases above alluded to, where people who follow these practices do irreparable mischief? It has been abundantly shown that many times an inflamed joint has been so damaged by manipulation as to call for its subsequent excision. In cases where absolute rest and rest alone is of avail in aiding recovery of function, to violently move the part is a serious malpraxis. It is important, then, that the example set by the bone-setters should not be followed, but the treatment of joint disease be carried out on thoroughly scientific grounds, founded, as all such treatment should be, upon sound pathological knowledge. In a recent review of the progress of surgery—published, rather curiously, in the leading daily journal—the writer fell into a grave error in making a general deduction that "a part of the body which has movement for its special function cannot be restored to integrity by the influence of rest." To be sure, he takes his examples only from injuries, but the statement is made so broadly as to lead the non-medical reader to conclude that, no matter what is the condition of a joint, movement and not rest will restore its integrity. The broad conclusion then is this: there are cases (mostly of sprains) which can be rapidly and readily cured by the manipulations which have been falsely called "bone-setting," and there are other cases (mostly of inflammatory disease) which are made infinitely worse by such measures, and which can only be rationally treated on a plan that forbids all movement whatever.

Annotations.

"Ne quid nimis."

RELIGIOUS TESTS AT KING'S COLLEGE.

IN another column we print a correspondence which speaks for itself, and the story it tells is certainly one strangely out of harmony with the spirit of the times. Of course, we can understand the position occupied by King's College as an endowed corporation, and to a certain extent sympathise with the struggle which the trustees under its Charter are engaged in to maintain at least the semblance of consistency; but the futility of their endeavours and the grotesque predicament in which the effort made places the College authorities are rendered singularly apparent by the letter of Mr. Cunningham, the secretary. Tests are, it seems, rigidly enforced "except in the case of teachers of foreign languages!" This is probably one of the funniest statements ever put on paper. Accepting King's College as the bulwark of Protestantism in London, whence, we may ask, do the champions of Church of Englandism expect to encounter the machinations of their traditional foes? If it be Popery against which they are to protect the youth of the metropolis, what rôle is the dreaded Jesuit so likely to assume as that of "teacher of foreign languages?" If the bugbear be Rationalism, Positivism or Nihilism, surely the "teacher of foreign languages" is the very man to be kept out. In short, the wolf, to whatever species he may belong, is far more likely to come disguised under the skin of a teacher of foreign languages than that of an ophthalmic surgeon. The authorities of King's College should look to this matter. Their views of duty as expounded by the secretary are as short-sighted as they are distorted. If King's College desires to retain the respect of sturdy Churchmen, the reconsideration of its policy must not be delayed. It is absurd to make a parade of keeping guard at some small wicket for the sake of a Charter when the front door is left open, and special facilities are offered for the ingress of the enemy in his most probable guise.

NURSING AT GUY'S.

THE President and Governors of Guy's Hospital have recently expressed an unequivocal opinion on Miss Lonsdale's notorious article in the *Nineteenth Century* on the Nursing at Guy's Hospital. It seems that about a fortnight ago Dr. Habershon, the senior physician, stated in a

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letter to Miss Lonsdale that he thought her presence in the wards was not desirable, and that he hoped none of his colleagues would allow her to go round with him. This letter Miss Lonsdale at once submitted to the chivalrous treasurer, who thereupon wrote to Dr. Habershon, telling him that his letter to Miss Lonsdale, and all the circumstances connected with it, should be brought before the Court of Committees, and suggesting that some explanation would be expected from Dr. Habershon, for thus summarily treating "a lady in this hospital without any reference to me in the first instance as the chief executive authority." Dr. Habershon replied that he did not consider his refusal to allow Miss Lonsdale to accompany him round the wards an interference with the treasurer's authority, and that as his own moral and professional character, as well as that of his colleagues, had been assailed by this lady-pupil in the current number of the *Nineteenth Century*, he claimed the right to protect himself without reference to the treasurer "in the first instance as the chief executive authority." The terms of this letter were unanimously adopted by all Dr. Habershon's colleagues, who, in a letter addressed to the President and Governors, called attention to the charges brought by Miss Lonsdale against the honorary medical officers and students in the articles referred to.

At the Court of Committees, held on the 14th inst., after the reading of the correspondence between the Treasurer and Dr. Habershon and the letter addressed to the President and Governors by the medical staff, it was resolved that the Court of Committees disapproved of any publication relating to the management of the affairs of the hospital by any person attached to the hospital in any capacity. The Court, therefore, felt that, under the circumstances, Dr. Habershon was justified in declining to allow Miss Lonsdale to be present while he was visiting the patients in his wards. As Miss Lonsdale's engagement at the hospital was just on the eve of expiring, it was not thought necessary or desirable to proceed to the extremity of expelling her. The Guy's staff and students may now, however, congratulate themselves that they are at length rid of the author of the alleged "biographical romance," *Sister Dora*.

URBAN AND RURAL FATALITY OF DIPHTHERIA.

AT the last meeting of the Metropolitan Association of Medical Officers of Health on the 16th inst., two interesting papers were read dealing with the prevalence and fatality of diphtheria. Dr. Alfred Hill, medical officer of health for Birmingham, described in detail the fatal prevalence of diphtheria in that town during 1879; while Mr. A. Wynter Blyth's paper was entitled "Prevention and Propagation of Diphtheria," and was based upon the author's experience in a combined sanitary district in Devonshire, which is mainly rural in character. In one essential particular the authors of these two papers appear to have arrived at exactly opposite conclusions. Dr. Hill dwells upon the fact that, although diphtheria may be said to be endemic in Birmingham, it never appears to assume an epidemic form, and states that he was unable to trace any connexion between the fatal cases in 1879. Mr. Wynter Blyth, on the other hand, insists that the disease is intensely contagious. It is beyond all doubt that very many virulent outbreaks of diphtheria in recent years have occurred in rural villages, whereas the disease seldom assumes a similarly epidemic form in large towns. In the discussion which followed the reading of the two papers these facts were freely admitted, and the question was almost suggested, whether urban and rural diphtheria can be one and the same disease. Dr. Dudfield of Kensington expressed a doubt whether all the deaths referred to diphtheria in the metropolis were correctly diagnosed, and stated that during many years' experience in Kensington he had never known two cases occur in one house, even where isolation was an impossibility. Dr. Tripe of Hackney attributed the increased fatality of diphtheria in London to more general connexion with the main-drainage system of the metropolis. It is a fact that the fatality of diphtheria in London during the past five years showed an increase of 40 per cent. upon that which prevailed in the preceding quinquenniad; but in the face of its still greater fatality in Birmingham, in which no system of sewerage exists, it is difficult to attribute the increase of diphtheria fatality in London to its main-drainage system. While, as we have noted, the mortality from diphtheria in London has been 40 per cent. greater in the last than in the preceding five years, it showed a decline of nearly 12 per cent. in nineteen of the largest provincial towns, and in Birmingham the decrease was equal to 27 per cent. In studying the nature of diphtheria with a view to its prevention, it may be useful to bear in mind the marked variations in the proportional fatality of the disease in different large towns. Such statistics may assist in the discovery of those conditions which govern the fatality of the disease in different localities. During the ten years 1870-9 the annual death-rate from diphtheria averaged 108 per million persons living in the twenty towns. In the several towns this rate ranged from 33 in Nottingham, 67 in Hull, and 68 in Bristol, to 131 in Sunderland, 182 in Plymouth, and 194 in Birmingham. Thus, during the past ten years, diphtheria has been just six times as fatal in Birmingham as in Nottingham, and the comparative immunity from the disease enjoyed by Nottingham, as well as its excessive fatality in Birmingham, should afford assistance in suggesting means for its control.

SARTORIAL ASPECTS OF THE PUBLIC HEALTH SERVICE.

A VERY serious question is beginning to agitate our public health service and certain sections of the public—namely, whether or not it is desirable that sanitary officers should wear a distinguishing dress. So far as we know, the question has arisen outside the ranks of the service, not within them; and the officers themselves may, we believe, be exonerated from having expressed any desire to be sartorially separated from their fellow-citizens after the manner of the turncock, the policeman, and the parish beadle. The question, in fact, has been raised on public grounds. It is urged, particularly in respect to the inspector of nuisances, that it is expedient he should carry about with him, in the form of a distinguishing dress, to be worn when on duty, obvious indications of his office. Not unfrequently, it is stated, appearing in the habit, as is his custom, of an ordinary individual, his functions and authority are apt to be questioned, and an undue friction created in the performance of his duties, which the wearing of a distinguishing dress would obviate. There is, possibly, something in this, but it may be doubted whether there is not another view of the question which may commend itself more to reasonable people. Probably it would be easy to design badges adapted to the respective dignities of medical officer of health and inspector of nuisances which would stamp them conspicuously whenever and wherever they appeared before the local world, and the dignity which hedges a beadle would thenceforth (if we may venture to bring the less into comparison with the greater) hedge the sanitary officers. But this very dignity, this envious borrowing from beadledom, while, perhaps, fully admissible in the numerous æsthetico-sanitary and other "Orders" which are now multiplying among us, seem to be inconsistent with the educational aim of our present sanitary organization. If sanitary officers work in their districts as they are expected to do, it is surely just as easy to learn to recognise their faces as a peculiarity of their dress, and in the exercise of func-

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tions which affect the innermost recesses of people's dwellings it appears to us essential to a sound success that the success should be gained by the individual tact of the officer, not by the flaunting of insignia of authority. If sanitary education is to be progressive, beadledom must have no part in it; and sanitary teaching in domestic matters, to be really effective, must be carried out by instructors who are themselves domestic both in habits and dress.

THE BRITON LIFE ASSOCIATION.

THIS office, in which the medical profession has a special interest, has now completed its fourth year as a new undertaking; and it must not be forgotten that, together with its own enterprise proper, it is carrying out the business obligations of the old "Briton, Medical, and General Life Association" much to the advantage of those interested in that closed concern. The annual premium income of the old office in 1869 amounted to £135,621 7*s.* 11*d.* The claims amounted to £145,817 9*s.* 5*d.* The fund in hand at the end of the year stood at £672,121 2*s.* 1*d.* And the commission charged by the new establishment for conducting the business of the old was £8234 17*s.*, or barely more than six per cent. Turning to the junior concern, we find that, notwithstanding the badness of the times, 603 new policies for £176,307 were issued in 1879, producing an additional income of £5664 14*s.* 5*d.* The total income was £21,929 6*s.* 10*d.* The claims falling due in the year amounted to £8409 12*s.* 5*d.* At the close of the year the office had in hand £61,120; a sum stated to equal the total of premium-income received since the formation of the new company for policies in force at the date of the Report. This is evidently a highly satisfactory state of the finances, and may well inspire confidence on the part of assurers. As we remarked last year, with judicious and enterprising management there is every reason to anticipate that the Briton Life Association will not only strengthen its hold on the respect of the profession, but rapidly extend it sphere of usefulness. Its claims are based on a sound commercial policy, fair dealing with the medical men brought into business relations with the office, and a determination to meet the reasonable demands of its clients in the interests of thrift and prudent foresight to the utmost limits of financial expediency and commercial success.

ILL-CONDUCTED INQUESTS.

IT may be hoped that we are now in a fair way of getting an end put to formal inquests, which are delusive to the public, and [as harassing to the friends of the deceased as a real inquiry, and generally more unsatisfactory. A few days ago at the Hammersmith police-court, a bricklayer was committed to trial for manslaughter. The prisoner and the deceased had had a quarrel, described in the *Evening Standard* of the 15th inst. The first blow was given, it is said, by the deceased, who received the next on the left side of his body. As he was falling, the prisoner is stated to have given him a second blow under the right ear, causing him to fall on his side. Dr. Webster, who was called to the deceased, found that he had been dead for some minutes. The remarkable circumstance has now to be noted. The coroner—a medical coroner—did not have a post-mortem examination made. The magistrate expressed, as well he might, his astonishment at this circumstance, and suggested that the police should have power to order a post-mortem. He said he never before heard of one not having been made in such a case. Mr. Pollard, who prosecuted for the Treasury, said there might have been a great failure of justice by the hasty manner in which the coroner conducted the examination. He undertook to convey the magistrate's opinion to Mr. Maule, Q.C., the Public Prosecutor, and Mr. Vincent, the Police Director, between whom perhaps some arrangement might be made. It is very desirable that even yet the exact facts should be ascertained. It is not often that medical coroners are found at fault. But the case before us would appear to be an instance to the contrary effect. And we are sorry to say that it is not singular. We have before us a list of four cases in which a medical coroner acted most inadequately in neglecting to take medical evidence. Amongst lay coroners the formality with which inquests are conducted, and the readiness with which medical and pathological facts are ignored, are simply bringing the whole system into disrepute. Scarcely a week passes in which the most unaccountable deaths happen, and are allowed to pass unelucidated. Post-mortem examinations are inconvenient to most medical men, but they are indispensable in many cases, especially when death happens without any medical attendance.

ROYAL UNIVERSITY OF IRELAND.

ONE of the last acts of the present Government has been to appoint the Chancellor and Senate of the Royal University of Ireland. The Chancellor is his Grace the Duke of Abercorn, and the Senate will consist of thirty-six members, recruited from the ranks of the different professional and lay elements of the community, with, in addition, several members of the nobility. The following are the names of the seven medical gentlemen who have been selected as part of the governing body of the University:—John Thomas Banks, Physician in Ordinary to the Queen in Ireland; Francis Richard Cruise; Thomas Hayden; Robert D. Lyons, M.P. for Dublin; Alexander Macalister, Professor of Anatomy in the University of Dublin; William A. McKeown; and Peter Redfern, Professor of Anatomy and Physiology in the Queen's College, Belfast. We may add, that of the thirty-six senators thirteen have been members of the Senate of the Queen's University, so that the Queen's Colleges are fairly represented on the board of the new institution.

CABUL DISPENSARY.

WE observe with much pleasure that Sir Frederick Roberts has brought to the favourable notice of the Governor-General the meritorious service performed by Dr. C. W. Owen of the Indian Medical Department in establishing at Cabul, and efficiently working, a dispensary for the relief of the sick of the native population of the city and suburbs. It appears from Dr. Owen's report that on the arrival of the force under Sir F. Roberts a temporary dispensary was opened in the rear of the headquarters' camp, but was shortly afterwards transferred to a building in the city, which was quickly fitted up under Dr. Owen's superintendence as a dispensary for out-patients and a hospital with accommodation for 70 to 100 patients. This had not been long in operation when it was found necessary on Dec. 12th to close it on account of the arrival of the enemy. When on Dec. 25th it was again taken possession of, it was found to have been completely wrecked by the insurgents, and everything taken away or destroyed, except the surgical instruments, which were saved by the compounder, a Cabuli, who hid them. Dr. Owen lost no time in getting the hospital into order again, and appears to have worked it with great zeal and success. From Nov. 14th, when the first temporary dispensary was opened in the camp, to Feb. 16th, the date of Dr. Owen's report, there had been 9658 out-patients at the dispensary, and 1305 patients in the hospital. Thirteen major and fifty minor surgical operations had been performed, and eighty-four cases of gunshot wounds, probably received in action with our own troops, were treated. The most numerous cases were eye affections, syphilis of a very severe type, leprosy, scrofula, skin diseases, and round worms. During the severe

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weather, asthma, bronchitis, and rheumatism were very common; Dr. Owen says that he had never seen such a number of asthmatic cases in his life. It is remarkable that, although scrofula is very prevalent, very few cases of phthisis presented themselves. Small-pox was common, and cases of cancrum oris, leading to the utmost state of misery among the children, were brought in almost daily. Dr. Owen entertains a very unfavourable opinion of the knowledge and skill of the native *hakims*, whose treatment appears to consist chiefly in starving their patients. He was about to deliver a course of lectures on medicine and surgery to them, as several of them had expressed a desire to hear more about Western science. The establishment with which Dr. Owen worked the dispensary consisted of a second-class hospital assistant, a compounder, a dresser, a *bhistie*, a nurse, a cook, two sweepers, and a ward coolie. Dr. Owen is entitled to great credit for his arduous and successful labours "in thus bringing into play the influences of Western medicine and surgery at once in the cause of common humanity, and as an important step towards laying the foundation of a good mutual understanding between the Government, whose servant he is, and the people of Cabul and its vicinity." We trust that the Government will not, as it too often does in the case of medical officers, forget or ignore, in the distribution of rewards, services to which so high a value is attached by the General Commanding the Army in Afghanistan.

THE PATHOLOGY OF HERPES ZOSTER.

SOME of the most interesting examples of the influence of the nervous system upon nutrition-changes are afforded by cutaneous eruptions, and of all these, that of herpes zoster stands out most prominently. The limitation of the herpetic vesicles to the lines of distribution of cutaneous nerves, whether on the limbs or on the trunk, has long led to the opinion that the eruption is neurotic in origin. The earliest anatomical investigations—of necessity few and far between—which went to prove the existence of definite changes in the nerves and ganglia connected with the seat of the cutaneous change are those of Charcot and von Baerensprung, made twenty years ago. Since then other facts have been forthcoming, and the latest contribution to the subject has been made by M. Chandeleux, of Lyons, in the *Archives de Physiologie*. This was a case of zona occurring in the track of the second and third intercostal nerves of the left side in a phthisical subject. The eruption persisted for several months before death. The lungs were extensively diseased and very adherent to the chest-wall, the adhesion being most firm and dense on the left side, opposite to the point of emergence of the second and third intercostal nerves. The subjacent intervertebral ganglia were notably swollen, nodulated, and pigmented. Microscopically these ganglia showed large tracts of sclerosis replacing nerve-cells and fibres, but it was observed that the bundles of nerve-fibres belonging to the anterior roots were healthy. The tissue in the sclerosed parts was disposed in concentrically-arranged bundles, which interlaced with one another, and were surrounded by numerous pigmentary granulations. The outer portions of the sclerosed tracts were infiltrated with small round cells, contrasting with the denser and more organised connective tissue of the central parts. There were but few vessels in the new tissue. The intercostal nerves were hardly, if at all, involved in the morbid change, which is somewhat inexplicable, if the ganglia be considered to be the trophic centres of the posterior nerve-roots. There was no degeneration, or atrophy of nerve-fibres, in the intercostal nerves corresponding to the altered areas in the ganglia, such as might reasonably have been expected to have been found. No changes were found in the main trunk and ganglia of the sympathetic. The cutaneous lesions consisted in bullæ of varying size, some discovered between the Malpighian and corneous layer of the epidermis, others between the epidermis and the dermis itself. The contents of the bullæ were granular serous material, blood-colouring matter, &c. The author publishes the details of this case because of the very marked character of the changes in the intervertebral ganglia.

THE EPSOM COLLEGE CASE.

THE suit brought against the Head Master and Medical Officer of Epsom College was not successful. The jury did not consider that any breach of trust had been committed, or wrong done to the plaintiff or the youth who so unhappily died in the infirmary of the college wherein he was a boarder. Every one will sympathise with Dr. Howell, and yet, perhaps, no one will regret to find that this school has escaped a judgment which would have been most injurious, if not ruinous, to its reputation. The contention on behalf of the school authorities was, that the deceased had been treated as a member of the family of the head master, who would have sent his own son into the same apartment, and treated him precisely as Dr. Howell's son was treated. This contention seems to have been maintained. In future it would be wise to make clear to the parents of boarders that, in the event of illness involving the possibility of epidemic disease occurring to their children, they must be removed to the wards set apart for general purposes. At the same time, every precaution ought to be taken to insure that these wards shall be kept in a condition to receive sick inmates on an emergency, and that the system of nursing and general care of such patients shall be of a nature to satisfy not only the requirements of health in the college, but those natural solicitudes which must possess the mind of every parent, and all humane persons must understand and approve. There is no need to extend the notice of this sad case, still less does it call for critical remark.

HEALTH AND MORTALITY IN PAUPER SCHOOLS.

ON Tuesday last Dr. Mouat, one of the medical inspectors of the Local Government Board, read at the Statistical Society a paper on the "Education and Training of the Children of the Poor." The paper was a valuable contribution to a subject, the importance of which, from a social point of view, cannot be over-estimated, more especially when we bear in mind that between 30,000 and 40,000 children in England and Wales are constantly under the control of the guardians of the poor, in workhouses, in separate or district schools, or in similar institutions. The political and economic aspects of the question, full of interest as they are, it is out of our province to discuss, and we must express our disappointment at the small proportion of Dr. Mouat's paper devoted to the hygienic treatment, and to the health and disease statistics relating to this large number of pauper children. We have often noted the remissness of the Local Government Board in not supplying in their annual reports trustworthy statistics of health and disease of the children in the various workhouse establishments. The opportunities for daily physical and hygienic observation and deduction afforded by these institutions are wantonly thrown away for want of a simple and intelligent system of returns, which would involve far less tax upon the officials than many other returns of doubtful value they are now called upon to make. Data for calculating even the rates of mortality in pauper schools are wanting. In this respect the Metropolitan Asylums Board is considerably in advance of the Local Government Board, as they publish in their fortnightly minutes returns showing number of residents, admissions, deaths, and discharges in

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each of the institutions under their control. Dr. Mouat states that Dr. Bridges calculated the rate of mortality in the metropolitan workhouse schools in 1873 to be 12 per 1000. We published about a year since a careful analysis of the mortality in these metropolitan schools during the three years 1875–6–7, which showed the average annual rate to be 12·8 per 1000; this differs little from Dr. Bridges' calculated rate for 1873. When, however, Dr. Mouat states that the death-rate among children in the metropolis aged two to fifteen years is 1·1 per 1000, it is evident he is misinformed. The annual rate at these ages has only ranged from 10 to 12 per 1000 in recent years, and in our analysis of the mortality in these schools, to which we have referred, we pointed out that having due regard to the age-constitution of their population, the normal or life-table death-rate for these schools is only 8·1 per 1000. The mortality in these schools, therefore, exceeds the normal rate by 50 per cent. As a matter of fact, these schools contain very few children aged under three years, and the death-rate at ages from 3—15 years in London in recent years has averaged only 8 per 1000. How much of this excess is due to the low physical stamina of the pauper children, and how much to injudicious hygienic treatment in the schools, cannot be determined without careful and uniform observations. It should not be forgotten, however, that the mortality statistics of sixteen metropolitan pauper schools showed wide variations, which should point to the necessity for further information on the subject. The rate of mortality during the three years averaged only 4·5 in the North Surrey, 6·9 in the Bethnal-green, and 7·5 in the South Metropolitan Schools, whereas it averaged upwards of 13·6 in the Holborn, 19·6 in the Forest-gate, and 42·4 in the Marylebone Schools.

THE REPRESENTATION OF THE SCOTCH UNIVERSITIES.

THE result of the elections in the Scotch Universities leaves the position of political parties unchanged, and it does not add another medical man to the House. We should have been glad to see Mr. Bickersteth in Parliament, but it would have been a misfortune had Dr. Lyon Playfair been excluded. He is not a medical man, it is true. But he is next door to being one, and has made himself so useful in connexion with educational and scientific subjects, and as a member of the Select Committee on Medical Bills, that we rejoice to see him again in the House. He will abundantly justify his friends in their support of his candidature if he helps to adjust the differences between medical reformers in the Scotch Universities, who seem to see lions in the way, and other medical reformers who see none.

TRAINING SHIPS.

WE have a double interest in the fate of the *Atalanta*—the old *Juno*. First, two members of our profession are among the missing crew; and, second, in the cause of humanity it is time to protest against the mistaken policy of sending out special ships crowded with young seamen, for the purpose of training, on exceptional voyages. The fact of any particular vessel being told off for this duty would place it in peculiar risk. When a craft is sent to sea with no other object than to cruise about and exercise those on board, sailing and ship-handling come to be the principal if not the sole objects in view; and in proportion as those in command are enterprising, will every advantage be taken of the circumstances to show "seamanship." It is needless to affirm that the perils likely to be encountered on any ordinary expedition with a legitimate purpose are sure to be less than those which would be run on a voyage like that in which the *Eurydice* was lost, or that in the course of which the *Atalanta* is now missing. It is impossible not to feel that the practice of sending vessels full of youths to sea is bad, however well the ship may be provided with a crew of able seamen. It is far better to let the boys of the Navy get their seamanship on ordinary duty. If there are no ships on the stations or in the fleet wherein they can learn to be sailors, so much the worse for our Navy, unless indeed seamanship as an art is obsolete. If this be the case, why run a needless risk in training? Again, we protest against the employment of ships of the old "Surveyor's" class on this or any other service. They were well known to roll dangerously—in fact like casks on the water; so that nothing but a feeling of indifference as to which side of the cask might happen to lie uppermost could relieve the anxiety of the onlooker. The matter is a very serious one, and requires to be rigorously re-viewed.

PARASITES IN TYPHOID FEVER.

DR. BUCHANAN'S paper containing an account of Mr. W. H. Power's observations on the voluntary muscles in typhoid fever, which will be found in our report of the last meeting of the Pathological Society, will be read with considerable interest and curiosity. Mr. Power believes that he has found certain nematoid parasites somewhat resembling, but quite distinct from, the Trichina spiralis in some of the voluntary muscles, especially the pectoralis major and psoas. If the observations are correct, they are of very great importance and interest, but at present even the least sceptical must withhold any definite opinion on the subject. For first of all Mr. Power's investigations have extended to only two subjects, and his paper may, therefore, be thought to be a little premature. He also describes certain other smaller bodies which he believes may have some relation to the parasites, but which are so evanescent that even a slight interference with the slide will often cause their entire disappearance. When we add that the supposed parasites are especially met with when decomposition has begun its destructive work; and that pathologists have for years been in the constant habit of examining microscopically the voluntary muscles in typhoid fever, and have described degeneration of the fibres, but have not hitherto met with any appearances suggestive of parasites, it will be evident that Mr. Power's statements must, in their more general bearing, be still held to require confirmation.

SIR THOMAS NELSON.

IN a recent annotation, entitled "Unacknowledged Services," we drew attention to the claims of the City Solicitor to some honourable recognition of his great services to the cause of public health and the interests and enjoyment of the people of London by the preservation of open spaces around London, notably Epping Forest, in the freeing of the bridges, and in other undertakings of public value—for example, the defence and improvement of endowed schools. It is gratifying to find that our remarks have not been wholly inoperative. Mr. Nelson has been knighted; and looking back on the matter, we are now very glad that the honour has not been conferred upon him—as a lay figure might be decorated—for the glorification of the City of London, but in direct acknowledgment of his personal worth and work.

STEREOSCOPIC MICROSCOPY.

AT the close of the meeting of the Pathological Society on Tuesday last, Dr. Heneage Gibbes gave a very interesting demonstration, showing how it is possible to get with one-twelfth oil immersion a stereoscopic effect with the ordinary binocular microscope, both fields being perfectly illuminated. The interest will be appreciated when it is added, that by this means epithelial cells were not seen as flat scales, but as spheres, standing out in all their rotundity, and that the precise relations of cells and fibres, layer by

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layer, could be thoroughly appreciated. This of course gives a much more accurate impression of the structure under examination than can be obtained by the ordinary method of examination. The specimen used for the demonstration was also of considerable interest, as it well and clearly showed dividing epithelium in the skin of the embryo salamander.

THE CIRCLES OF MEDICAL ADMINISTRATION IN INDIA.

THE *Gazette of India* of the 20th March publishes the names of the officers appointed to the new circles of medical administration in the Bengal Presidency; British Medical Service:—Deputy Surgeon-Generals J. Gibbons, C.B., to the Allahabad Division; E. J. Franklyn, to the Meerut Division; J. E. Clutterbuck, to the Oudh Division; A. Smith, C.B., to the Rawal Pindi Division; H. B. Hassard, to the Sirhind Division; H. Fraser, to the Peshawur Division. Indian Medical Service: Deputy Surgeon-Generals W. B. Beatson, to the Lahore Division; J. J. Clarke, to the Eastern Frontier District; J. E. Tuson, to the Presidency Division; R. H. Perkins, to the Gwalior District; A. C. H. De Renzy, to the Punjab Frontier District. These officers are ordered to join by the 1st April, 1880, proceeding to their stations with the least possible delay.

THE HEALTH OF ST. PETERSBURG.

DR. HUBNER'S report on the mortality of St. Petersburg in 1879 shews that the health-conditions of the city were more favourable in that year than in the years 1877 and 1878. The mortality from all causes during 1879 was at the rate of 39·0 per 1000 inhabitants, but in the two previous years it had been at the rate of no less than 46·0 per 1000. Under ordinary conditions the deaths from small-pox in the capital number about 100 annually, but in the past year they amounted to 1180. This, although unsatisfactory, is much less than the mortality caused by the epidemic of 1872–73, which carried off 4000 persons. In the course of the year, moreover, true typhus showed itself, especially among the labouring classes, who are too commonly ill-housed and "packed like herrings," as Dr. Hübner says, in single chambers, hence great overcrowding. Numerous labourers flocking into the city from the country in search of work, and failing in the search, augment the numbers of the poverty-stricken and sick.

The mortality return for the city (population 670,600) during the week ending 27th March, records 726 deaths (456 males and 267 females) from all causes. Typhus and typhoid fevers caused 16·0 per cent. of the mortality (62 deaths being assigned to maculated typhus).

LEPROSY AND THE USE OF GURJUN OIL.

THE report of the medical officer (Mr. John D. Hillis) of the Leper Asylum, Mahaica, British Guiana, for the year 1879, is chiefly interesting for the information it affords of the improved local conditions under which the lepers in that asylum are now placed, and the observations it contains on the use of gurjun oil in the treatment of leprosy. It appears that Dr. Gavin Milroy visited the asylum in 1871, and condemned the site on which it was placed, and generally the buildings, advocating their abandonment. Since then it would appear, that by the reclamation of malarious ground to the windward of the asylum, and judicious improvements of and additions to the buildings, considerable amendments have been made, and the general condemnation of Dr. Milroy no longer applies.

With regard to the use of gurjun oil, Mr. Hillis reports that "even in cases far advanced it is most beneficial, retarding the disease in a remarkable manner, and improving the general health." He is of opinion that it should be in general use in every leper asylum, and adds, "It is largely sought after by the patients, notwithstanding its unpleasantness, on account of its healing action on the leprous ulcerations and its appetite-giving properties." He quotes a series of cases in which he has made use of the oil, and thinks that if it were possible for cases to be brought under treatment in an early stage, on the first appearance of the leper spot, before the deposit of leprous matter had become serious, an attack, if not cut short, might at least be retarded in progress for many years by the administration of the oil.

SURGEON-MAJOR SIR SAMUEL ROWE, K.C.M.G.

WE are very glad to note in the recent distribution of honours that the services of a medical officer have not been overlooked. The *Gazette* of Wednesday announces the promotion of Surgeon-Major Samuel Rowe, C.M.G., to be Knight Commander of the Most Distinguished Order of Saint Michael and Saint George. Dr. Rowe, who has been for many years in the African Medical Service, did good service in the Ashantee Campaign under Sir Garnet Wolseley, and on the termination of the war was employed by the Colonial Office as Governor and Commander-in-Chief of the West African Settlements, which office he still holds.

WILLIAM SHARPEY, M.D., F.R.S.

IN another column we have noticed at length the more interesting features and episodes of the life of the late Dr. Sharpey. Suffice it, in this place, to record the regret with which his decease will be felt by the profession at large, and particularly by those who cherish the memories that cluster round a name which helps to mark off an epoch.

THE SUCCESSOR TO DR. FARR, C.B.

DR. WILLIAM OGLE, F.R.C.P., has been appointed Superintendent of Statistics in the Registrar-General's Department, in the room of Dr. William Farr, resigned.

A GOOD EXAMPLE.

WE are glad to learn that the Council of the Royal College of Surgeons in Ireland has passed a resolution to the effect that the practice of indirectly advertising through the medium of sensation articles in the general press, being beneath the dignity of the profession, is deserving of repudiation and condemnation.

A SAD accident, which, unhappily, appears likely to have a fatal issue, is reported in the *New York Times* of April 6th as having happened to Dr. C. H. H. Sayre, son of Dr. Lewis A. Sayre. The unfortunate gentleman seems, in turning round rapidly, to have missed his footing and to have fallen a depth of twenty feet, down an area in front of the Gilsey House Hotel, sustaining thereby, besides other injuries, a compound comminuted fracture of the thigh. Dr. Lewis Sayre was speedily in attendance on his son, and undertook the operation rendered necessary by the aggravated character of the injury. The ends of the broken bone were sawn off, three fragments removed, and the limb placed in position, a plaster-of-Paris bandage being employed. The sufferer is twenty-seven years of age.

A LETTER from the Local Government Board having been read at a late meeting of the Jarrow Town Council, asking what steps were being taken in conjunction with the local authorities at Hebburn towards the erection of a hospital for infectious diseases, the clerk was instructed to reply that the matter was in abeyance owing to the refusal of the Hebburn authorities to join with Jarrow in the project.

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THE first of the Shepherd Memorial Gold Medals, one of which is to be presented yearly to a student of medicine of Aberdeen University who shall have completed his third year of study, and exhibited the greatest proficiency in the principles and practice of surgery, has, after examination both written and oral, been awarded to Mr. Duncan J. Reid, of Aberdeen. The examination was conducted at Marischal College by Professor Pirrie, in presence of Dr. David Greig as assessor.

IT is announced that the Port of London Sanitary Authority are about to issue advertisements inviting candidates for the post of medical officer of health for the port, vacant by the death of Mr. Harry Leach. In accordance with an instruction of the Court of Common Council, five candidates are to be chosen, whose names are to be submitted to the Court, with whom will rest the particular selection for the office. Candidates over forty-five years of age are inadmissible.

BRIGADIER-GENERAL J. L. NATION, commanding Naga Expeditionary Force, in a despatch to the Governor-General of India in Council, writes :—"To the medical staff, Deputy Surgeon-General De Renzy, Surgeons O'Brien and Campbell, my best thanks are due, as they frequently had to perform their errand of mercy under heavy fire, and their arduous duties were most nobly and ably performed."

Apropos of communications which have appeared from time to time in our pages respecting typhoid in India, it may be well to draw attention to the paper to be read by Surgeon-General Gordon on Thursday next at a special meeting of the Epidemiological Society, to be held in the Council-room of University College at 8 P.M.

AN election for a Member of Council took place on the 15th inst., at the Royal College of Surgeons in Ireland, for the vacancy caused by the resignation of Prof. MacDowell, recently appointed examiner. Messrs. Corley and Nixon were the two candidates, the former being successful, having obtained 42 out of 71 votes recorded.

DR. G. WATERS, Surgeon Bombay Medical Service, has been appointed surgeon on the staff of Sir James Fergusson, the new Governor of the Bombay Presidency. Dr. Waters has for some years filled a similar position as medical officer to Sir Richard Temple, Bart., G.C.S.I.

PROFESSOR VIRCHOW was, on the 14th inst., returned to the German Imperial Parliament for the second electoral district of the capital as the candidate of the United Liberals, he himself voting in the Prussian Chamber as a Progressist.

THE twentieth festival of the Royal Medical Benevolent College will be held at the Langham Hotel on Wednesday, April 28th. Sir William Jenner, Bart., has consented to preside on the occasion.

BRIGADE SURGEON J. HANNAN has been appointed to officiate as Deputy Surgeon-General, Sirhind Division, during the absence of Deputy Surgeon-General H. B. Hassard, employed with the Cabul field force in Afghanistan.

BRIGADE-SURGEON F. W. MOORE has been nominated Deputy Surgeon-General of the Rawal Pindi Division, vice Deputy Surgeon-General A. Smith, C.B., on duty with the Kandahar army in Afghanistan.

THE medical committee formed to secure the return of Dr. Lyons for Dublin propose entertaining him at dinner on Saturday (this evening), at the Shelbourne Hotel in that city.

A MOTION by Professor Struthers, that it is desirable that a Professorship of Pathological Anatomy be established in the University of Aberdeen, has been unanimously adopted by the University Council.

DR. CHARTERIS has, we understand, been appointed to the chair of Materia Medica in the University of Glasgow, in the room of Dr. Cowan, resigned.

BRIGADE-SURGEON TARRANT has been appointed to officiate as Principal Medical Officer of the Northern District of York.

THE death is announced of Dr. Francesco Marzolo, Professor of Clinical Surgery in the University of Padua.

A NEW Dental Hospital was opened on the 15th inst., at Liverpool.

HEALTH OF LARGE ENGLISH TOWNS.

FIFTEENTH WEEK OF 1880.

URBAN mortality last week differed but slightly from that which prevailed in the previous week. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5458 births and 3267 deaths were registered last week. The births exceeded by 273, while the deaths were 8 below, the average weekly numbers during 1879. The deaths exceeded those returned in the previous week by 23, and were equal to an annual rate of 22·7 per 1000 of the estimated population, against 24·9 and 22·5 in the two preceding weeks. During the thirteen weeks of last quarter the death-rate in these towns averaged 25·5 per 1000 against 25·2 and 27·5 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 16·3 in Portsmouth, 16·5 in Leeds, 19·5 in Hull, and 19·6 in Bristol. The rates in the other towns ranged upwards to 27·6 in Oldham, 27·7 in Liverpool, 28·5 in Nottingham, 28·6 in Newcastle-upon-Tyne and Norwich, and again the highest rate, 29·9, in the borough of Plymouth. The excessive rate in Plymouth is still mainly due to the exceptionally fatal epidemic of measles, which shows no sign of abatement.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 531 and 449 in the two preceding weeks, further declined to 445 last week. They included 167 from whooping-cough, 107 from scarlet fever, 89 from measles, and 33 from fever, principally enteric. The annual death-rate from these seven diseases averaged 3·1 per 1000 in the twenty towns, and ranged from 0·5 and 1·1 in Brighton and Leeds, to 4·5 in Nottingham and Newcastle-upon-Tyne, 5·5 in Norwich, and 14·6 in Plymouth. Whooping-cough showed the largest proportional fatality in Newcastle-upon-Tyne, Manchester, and Salford; scarlet fever in Norwich, Newcastle-upon-Tyne, Leicester, and Sunderland; and measles in Plymouth, Nottingham, Hull, and Oldham. Measles caused 17 more deaths in Plymouth, making 213 recorded within that borough since the early part of November last. Eight of the 13 fatal cases of diphtheria were returned in London; and 4 more deaths were referred to enteric fever in Sheffield, making 74 since the beginning of the year. All the 9 fatal cases of small-pox in the twenty towns were recorded in London. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 167, 172, and 177 at the end of the three preceding weeks, further rose to 178 on Saturday last; 44 new cases of small-pox were admitted to those hospitals during last week, against 47 and 42 in the two previous weeks. The Highgate Small-pox Hospital contained 22 patients on Saturday last, a larger number than at any time since July, 1878.

The fatality of lung diseases in our large English towns showed a further decline last week. The deaths referred to diseases of the respiratory organs in London, which had been 395 and 365 in the two previous weeks, further declined to 348 last week, and were 58 below the corrected weekly average; 218 resulted from bronchitis, and 78 from pneu-

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monia. The annual death-rate from diseases of this class was equal to 5·0 per 1000 in London last week; in Liverpool the rate from the same diseases was 6·3 per 1000.

THE BRITON LIFE ASSOCIATION.

THE annual meeting of the proprietors of the Briton Life Association, Limited, was held on Tuesday in the board-room at the chief office, Strand, London, under the presidency of Mr. Francis Webb, and there was, as usual, a large attendance.

Mr. John Messent, the actuary and secretary, having read the notice calling the meeting, presented the report of accounts. From the report we gather that during the past year the Association received 810 proposals for assuring the sum of £261,483. Of these 23 for £7770 were declined; 184 for £77,405 were incomplete at the time of closing the books; and 603 policies were issued, assuring the sum of £176,307, and yielding in new annual premiums the sum of £5664. The single premiums received in respect of annuities granted by the Association amounted to £150, making a total of £5814, as the new business of the year. The receipts from premiums for the year, less the sum paid for re-assurance, amounted to £17,743; the interest to £2814; the fines and fees, £10; the profit from investments, £1361; making the total year's income £21,929. The claims for the year have been exceptionally heavy. Not only has the Society suffered, in common with other assurance companies, by the unexampled severity of the past season, but it has lost from purely accidental causes some of its most recently joined and heavily assured members. The number of policies which have become claims in the year is 24 for £8409 12*s.* 5*d.*; but a careful review of each particular case shows that the unusually heavy mortality exhibited by these figures can only be regarded as one of those contingencies against which all assurance companies are established to provide, and as affording powerful and practical evidence of the inestimable advantages to be derived by the public from an adoption of the principles of life assurance.

The CHAIRMAN said he thought he might very fairly congratulate the meeting upon the results of the operations of the Association during the year under review. Notwithstanding the great depression in trade and commerce generally, thanks to the energy of its agents and staff, the accounts showed that the Association had not only been able to hold its own, but also to show a fair and, under the circumstances, a very remarkable progress in regard to the new business done. It was well known that when trade was brisk money freely circulated, and people receiving it thought they ought to make some provision for the future; but when times were bad and money scarce then people did not care so much for the future as to maintain themselves in the present, and then life assurance suffered generally. They had, however, no reason to be discouraged with the report presented to-day, for in every important item as regarded the Company's stability there was an important advance. Truly the total aggregate of claims had been heavy for a comparatively young company, but it arose from exceptional circumstances, one being that of a gentleman who had insured with the Company, and within six months of doing so was unfortunately accidentally caught by machinery on his own premises and killed. In other respects the claims were rather below the expectancy of the office, thus showing that the lives had been selected with the usual judgment and care. The assets, both active and passive, yielded 4¼ per cent. interest. The total premium income was greater by £2132 than that of the previous year, and the available assets in hand were equal to the total amount the Association had received since its formation. In conclusion he said that the Association had the three great elements of success—an increased premium income, a decrease in its working expenses, and an increase in the interest on its investments. He moved that the report and accounts be received and adopted.

Dr. RICHARDS, the Deputy-Chairman, seconded the motion, which was adopted, *nem. con.*, without discussion.

The retiring directors were unanimously re-elected.

The appointment of Mr. R. Monckton, Colonel Harington, A. Trevelyan, and Mr. R. Milburn to seats at the board was confirmed, and unanimous votes of thanks having been accorded to the medical and legal officers, to Mr. Messent, the actuary, and the agents and staff, the proceedings closed with a vote of thanks to the chairman.

A meeting of the shareholders in the Briton, Medical and General Life Association was subsequently held under the presidency of Mr. Francis Webb.

Mr. JOHN MESSENT, the actuary and secretary, read the notice calling the meeting, and presented the report and accounts. The report said that the premium income of the year, after deducting re-assurance premiums, amounted to £135,621, the interest (less income tax) to £28,787, miscellaneous items £10, making a total year's income of £164,418. The claims had been 458 in number by reason of the debts of 405 assured lives, and have amounted, less re-assurances, to the sum of £145,817. The total expenditure of the Association, including agents' commission, amounts to the sum of £8234, or £6 per cent. on the premium; the funds in hand—i.e., the balance of assets over liabilities—amount to the sum of £672,121.

The CHAIRMAN, in moving the adoption of the report and accounts, expressed his belief in the sound position of the Society. He also pointed out that the rate of interest had been well maintained, and said that though the funds were somewhat less than was anticipated, it was due to the fact that there had been some exceptionally heavy claims; they were more than when the Society was placed on its present footing in 1875. The actuarial valuation was in progress, and he believed that when the results were made known they would be satisfactory to all concerned.

The motion having been seconded, was unanimously agreed to.

The usual routine business having been transacted, the proceedings closed with a hearty vote of thanks to the chairman, his colleagues, and the actuary.

Correspondence.

"Audi alteram partem."

RELIGIOUS LIBERTY IN TURKEY AND IN ENGLAND: A CONTRAST.

To the Editor of THE LANCET.

SIR,—The following paragraph appeared in the *Times*, April 16th, 1880:—"The Sublime Porte having expressed its desire to maintain to the utmost extent the principles of religious liberty, the high contracting Powers take note of its spontaneous declaration. *In no part of the Ottoman Empire shall difference of religion be held in the case of any person as a motive for exclusion from or disqualification for any public function, nor from the advantages of the exercise of any profession of industry.*"

The following correspondence lately passed between an intending candidate for the post of Professor of Ophthalmology at, and the Secretary of, King's College.

Comment is unnecessary. Faithfully yours,

J. B. B.

SIR,—I find one of the conditions of candidature for the posts of Professor of Ophthalmology of King's College and Ophthalmic Surgeon of King's College Hospital to be that "all candidates must be members of the United Church of England and Ireland, and must make a declaration to that effect in their application."

As I should be unable to make such a declaration, I shall esteem it a favour if you will be so good as to inform me whether I should thereby be disqualified as a candidate for these posts. I am, Sir, yours truly,

J. W. Cunningham, Esq. JOHN TWEEDY.

DEAR SIR,—I am sorry to tell you that the Council would have no power to elect you, provided you are not a member of the Church of England. Their Charter is decisive upon the subject in all cases except teachers of foreign languages.

I am, very truly yours,

King's College, London, 28th Jan., 1880. W. CUNNINGHAM.

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THE CROTON-OIL TREATMENT OF RINGWORM.

To the Editor of THE LANCET.

SIR,—May I ask you kindly to publish this final reply to Mr. Cottle's letter in THE LANCET of April 17th. I thought my communication of the 10th inst. would have been sufficient. But as he still claims priority in bringing before the notice of the profession the croton-oil treatment of chronic ringworm, described in my paper in the January numbers of THE LANCET, I must, in justice to myself, say that the *artificial production of kerion* was the course I advocated; and as Mr. Cottle still affirms that a pustular rash is sufficient, and that the production of kerion is unnecessary, the matter is settled. I advised as *my* special treatment what he does not consider necessary.

I do not for one moment suppose I was the first to use croton oil for ringworm, or that Mr. Cottle was; but this I do assert, that I have been producing kerion with excellent results in inveterate ringworm during the last six years, having notes of cases which occurred in 1875. I did verbally bring my treatment under the notice of the profession three years ago, in a long conversation on the subject with the late Dr. Tilbury Fox. I also mentioned it in 1878 to Dr. Liveing, and other dermatologists; and can prove that my paper has actually been written eighteen months. My reason for not publishing it sooner was to give the croton-oil treatment a trial during another year, as well as the oleate of mercury.

I remain, Sir, yours obediently,

ALDER SMITH, M.B. LOND., F.R.C.S.
Resident Medical Officer, Christ's Hospital.

April 19th, 1880.

P.S.—Will you allow me also to correct a mistake which is now prevalent—viz., that we have a number of ringworm cases at Christ's Hospital. Such is not the case. Our usual number is from ½ to 1 per cent., while the percentage among boys brought to us for admission is 8·4.

PATHOLOGY OF SPIRILLUM FEVER.

To the Editor of THE LANCET.

Sir,—Adverting to the discussion at the Medico-Chirurgical Society, on my communication, as reported in THE LANCET of 28th February, all I can say is that when they left me the microscopical preparations of the blood-spirillum were all clear, and two or three were even exquisite examples of the state of the blood in infected quadrumana.

I beg leave to observe that there is no possibility of an experienced eye mistaking the blood parasite for a common fungus.

To the best of my knowledge this organism is found only in famine or relapsing fever, pure or complicated. Its relationship to the pyrexia may not be immediate or direct, but within my experience spirillar infection of the blood has always culminated in a febrile attack.

I would here add that I have lately succeeded in inducing spirillum fever amongst the quadrumana by inoculating with infected blood taken during the prefebrile incubation period. This fact modifies one of my earlier conclusions.

I am, Sir, your obedient servant,

March 20th, 1880. H. V. CARTER.

Obituary.

WILLIAM SHARPEY, M.D., LL.D., F.R.S.

WILLIAM SHARPEY was born at Arbroath on April 1st, 1802, his father, an Englishman who had migrated from Folkestone to Arbroath, having died shortly before. For the first few hours after his birth his life was despaired of, and in after days he would humorously relate how the midwife, in the midst of the efforts made to insure his living, expressed in strong native accents, her opinion of the undesirability of these endeavours, since if the child lived it would be sure to prove an idiot. He learned the rudiments of the medical profession under Dr. Arrott of Arbroath, who had married his mother, and in 1817 entered the University of Edinburgh, joining the medical classes in the following year. In 1821 he gained the diploma of the Royal College of Surgeons of Edinburgh, and in 1822 he came to London, wherefor some time he studied Anatomy in the school of the celebrated Brooks, in Windmill-street. The following winter he spent in Paris, and returning afterwards to Edinburgh, graduated in 1823, the subject of his thesis for the doctorate being "Cancer of the Stomach."

A part of the next few years of his life seems to have been spent at Arbroath in private practice under his stepfather, Dr. Arrott, but his call in life at last came to him, and in 1827 he set out for the Continent, with the view partly of general culture, and partly of training himself for his future scientific career. He travelled through a large part of Germany, Switzerland, and Italy, performing his journeys for the most part on foot, bearing his knapsack, talking freely with the people among whom he passed, and gathering up that large fund of knowledge of men, places, and things which was one of the many striking features of his character. Part of the time spent abroad was, however, devoted to arduous scientific study. At Pavia under Panizza, and more especially at Berlin under Rudolphi, he dissected with great diligence, and made himself master of topographical Anatomy. The writer has often heard him speak of his time at Berlin as one of sustained and severe labour. It was undoubtedly there that he especially trained himself for his future career. He also passed some time in study at Paris, at Heidelberg under Tiedemann, and at Vienna. In 1829 he had returned to Edinburgh. In 1829 he became Fellow of the Edinburgh College of Surgeons, on which occasion he published an Inaugural Dissertation on the "Formation of False Joints after Resection." He also wrote at this time his first paper on "A Peculiar Motion in Animals, &c.," published in the *Edinburgh Medical and Surgical Journal*, the researches described in which formed the basis of the well-known and able article "Cilia," which some years later appeared in Todd's Cyclopædia of Anatomy and Physiology.

In the autumn of 1831 he spent some time in Berlin, preparatory to beginning the teaching of Anatomy. This work he commenced in November of the same year as lecturer in the Extra-Academical School at Edinburgh, having his friend Allen Thomson for a colleague as lecturer on Physiology. He continued this labour until 1836, when he was appointed successor to Jones Quain in the chair of Anatomy and Physiology in what is now known as University College, London. This post he held for nearly forty years, not leaving it until 1874, when the increasing infirmities of old age compelled his retirement. In 1855 he was appointed one of the Secretaries of the Royal Society, of which he had been made a Fellow in 1839, and the duties of this office also he resigned in 1874. The Baly medal of this Society was conferred upon him for Physiological research. In 1859 he was honoured with the degree of LL.D. by his own University of Edinburgh. He was long associated with the University of London, first as Examiner in Anatomy and Physiology, an office which he held more than once, and afterwards as Member of the Senate. He took an active part in the Royal Commission on Science appointed in 1870. He was also a trustee of the Hunterian Museum, and sat for fifteen years in the General Medical Council as one of the Crown nominees. The Government recognised the long services of Dr. Sharpey by awarding him a pension of £150 a year.

But a few years ago William Sharpey seemed a hale and hearty man, and his massive frame, in spite of increasing age, showed a vigour which seemed to promise still many years of usefulness. The onset of cataract first in one eye and then in the other, marked the first stages of his decay. The imperfection in his sight, together with some dulness in hearing, rendering him who had always been so self-reliant more or less dependent on others, and thus interfering with the freedom of his movements, had a very markedly depressing effect on him. In the spring of 1879, a severe attack of bronchitis, with alarming hæmorrhage, shook his constitution still further, and it was evident to his friends that he was gradually becoming more feeble. The greater part of last winter was spent in the mild air of Hastings, where he

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gained the double benefit of escaping the fogs of London and enjoying the society and conversation of his learned and accomplished friend Dr. Greenhill. On his return to the metropolis last month he appeared to be decidedly in better health. He had, however, returned too soon, and was, perhaps, not sufficiently careful to avoid exposing himself, for on the 1st of April he was seized with a sharp feverish attack of bronchitis, which excited alarm in the minds of his friends, and from which he himself despaired of recovering. On the 9th and 10th of the present month the fever had left him, and Mr. Marshall and Dr. Ringer, who attended him, entertained some hopes that he might recover. But on the morning of the 11th he exhausted himself by going through the process of dressing, and collapse having come on in the forenoon of that day, his powers rapidly failed, and he died most peacefully in his chair before eleven o'clock at night.

When we look back upon Dr. Sharpey's long life, we see that it had a threefold character. He was a scientific investigator, a public man of science, and a teacher. The first form of activity occupied chiefly his earlier days at Edinburgh; his middle life and later years were more especially devoted to the two latter. In all three he was eminently successful, and in each case success was achieved by dint of the same mental qualities. He was remarkable for his power of clear and sound judgment. He was also distinguished for the great amount of knowledge which he had accumulated—knowledge as accurate as it was varied. Not in matters of anatomy and physiology alone, but in reference to many other subjects, he could call up at will a long array of data in the form, not of uncertain and confused impressions and remembrances, but of clear and sharply-defined statements, the products of accurate painstaking observation preserved by means of a memory naturally retentive and carefully trained. On the other hand, the judicial attitude of his mind compelled him to keep the treasures of his memory marshalled in orderly array, available for instant and decisive use. Had he been lacking in critical power, his stores of knowledge were enough to have made him distinguished for his learning; had he been as ignorant as he was learned, his faculty of weighing in the balance and of finding out the weightier argument would still have left him a strong man. The happy union of large knowledge with clear judgment made him, or rather went far to make him, the remarkable man that he was. These qualities served him in good stead in his public services as Secretary of the Royal Society and in other offices. At a glance he would recognise the merits of a memoir, and with equal readiness he perceived and acknowledged the merits of a research which by a less competent judge might have been opposed on account of the apparent heresy of the results or neglected on account of the modesty or obscurity of the author. Two things his soul abhorred: the smartness which tries to produce something novel and startling out of crude and hasty observations, and the ambitious dulness which would fain have the public believe that something precious is contained in its lengthy and pretentious dissertations; and English scientific literature has been saved from many inflictions of both kinds by the attitude of William Sharpey. The same qualities helped to make him a great teacher. When he was in his vigour all the facts of anatomy and physiology were at his finger ends. He knew not only what many teachers are satisfied to know, the contents of the last few volumes of the scientific journals, but very much besides. He knew the old as well as the new, and was as much at home with Vesalius and Haller as with Bernard and Ludwig. His exposition of any subject was ever clear and lucid, because he knew the thing for himself, and had thought it carefully out, never being content with conning it over "for lecture purposes." It was impossible for him to be otherwise than clear, for his mind refused to harbour obscurities, and the simple secret of his teaching was that he laid open his own mind to his pupils. If there were any subject which he did not understand he candidly said so, and those who heard him knew that that subject might fairly be postponed; in all other matters his method was to lay before his hearers in plain straightforward language just how the thing appeared to him, describing the facts with scrupulous accuracy, putting down the arguments as they were arrayed before himself, and leaving on the students an impress, sometimes strong, sometimes feeble, according to the nature of the material, or the working of his own mind. In this way it came to pass that his hearers, often unbeknown to themselves, not only acquired that superficial knowledge of physiological facts and doctrines which will pass muster at an examination, and serve other similar subsidiary purposes; but also acquired the art of physiological reasoning, and caught some of the true spirit of physiological judgment. Thus it is that many of his pupils, whether engaged as medical practitioners, or following other occupations, have been enabled to arrive at sound conclusions for themselves on questions which have come up since, and have not been tossed about by every wind of false doctrine.

The same qualities are visible in his original work, and are at the same time in part the reason why his labours as an investigator seem so comparatively scanty. An exact quantitative estimation of Sharpey's work is perhaps impossible; so much of it is hidden and mixed with that of others in various publications, such as Baly's translation of Müller's Physiology, Quain's Anatomy, and the like. Whatever he did was, however, done in such a way that very little had to be undone. Every bit of work which left his hand bore the stamp of that exact large knowledge and sound judgment which we have already indicated. Small as his acknowledged contributions to science may be when judged by the number of pages, small as they still may be considered even when we include results not published in his own name, they are classical efforts which will not readily be forgotten. Had he never been a great teacher or a successful public man, his name would still be honoured as that of an investigator of very high rank. Probably the very qualities of mind which gave his character its value were in part an obstacle to abundant authorship. Many a memoir has seen the light because the author was ignorant of what had been done before; still many more have been thrust on the world because the authors were unable or unwilling to see the transparent fallacies of their own reasoning. No promptings of ambition were ever strong enough to lead Sharpey into either of these categories; or rather, let us say his ambition was too strong to permit him to publish much; his ideal of what a scientific memoir ought to be was so high that, after the first flush of the exuberant vigour of youth was over, he shrank from exposing himself to what, in his own judgment, whatever other men might think, would probably seem more or less of a failure.

There remains for us to recall to mind other features of Sharpey's character which, though dependent on his moral qualities, yet entered into all his intellectual work, and which were at the same time sources of his strength, and causes of such little weakness as he ever showed—his kindly disposition and his sympathetic nature. Without these his knowledge, large as it was, and his critical power, keen as it was, would not have had the effect they had. These moral qualities were conspicuous in him as a public man. His judgment made itself felt not only because of its intrinsic value, but because of the form in which it was given. Many a struggling inquirer has been warned off from dangers unseen to himself, or has been encouraged when desponding in his fight with that stubborn foe, Nature, by the friendly, often rather the paternal, counsels of him whose face we shall no more see. The same kindly nature and generous sympathy illumined his lectures also, and added to his strength as a teacher, for all his pupils looked up to him not only as master, but as friend.

Had Sharpey been more ambitious of fame in its commonly received acceptation, less unselfish, and perhaps we might add more combative in his disposition, he might have occupied a position in this country more conspicuous than that which he actually held, but this his friends cannot but think would, after all, have been a loss to them, and a very doubtful gain to him. His softness of heart, and his generous nature may even in some few instances have led him to befriend those who were scarcely worthy of his kindness. But the benefits of his noble devotion to science were freely bestowed around him on objects of high aspiration and lasting value; and the gentleness of disposition which some may have thought amounted to a fault, was counted by his friends as one of the great charms of his character. While they enjoyed the delights which intimate intercourse gave, of chatting familiarly with one who could converse on the most varied subjects with fulness of information and critical acumen, brightened with a lively sense of humour, and who could correct an error made in talking about the peerage as readily as a mistake about the structure of epithelium or the uses of the pancreatic juice, they nevertheless felt that the great worth of the man lay in the fact that in times of doubt and uncertainty they could come to him for the surest counsel,

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and on occasions of difficulty and despair find words of cheering encouragement, and if needed, solid and material help. All these when they heard that William Sharpey was dead mourned chiefly for the loss of a friend whose grand unselfishness knew no speck of meanness.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on Tuesday last:—

Chadwick, James Morley, Heywood, near Manchester.
Clegg, Walter Thomas, Liverpool.
Day, William Aloysius, Hampstead.
Francis, Lloyd, Carmarthen.
Fraser, Donald Alexander, L.S.A., Weston-super-Mare.
Gripper, Arthur Douglas, L.R.C.P. Edin., Ware, Herts.
Harris, John Russell, L.R.C.P. Edin., Bayswater.
Hewitson, William Andrew, Newcastle-on-Tyne.
McDonagh, James Samual, L.S.A., Hampstead-road.
Matthews, Valentine, L.S.A., Torrington-square.
Paddle, James Isaac, L.R.C.P.L., Albert-street, N.W.
Puddicombe, William Noble, L.S.A., Edgware, Middlesex.
Reuner, Charles, M.D. Würzburg, Harley-street, W.
Richardson, J. H. Howard, Worcester.
Richardson, Charles Boards, Great Hadham, Herts.
Sayer, Mark Feetham, Finchley, Middlesex.
Spranger, Francis Jefferies, Cadogan-place, S.W.
Tooth, Howard Henry, Brighton.
Walters, Frederick Rufenacht, Croydon.
Wells, A. P. Lethbridge, Windsor.

The following gentlemen were admitted Members of the College on Wednesday last:—

Ashwell, Herbert George, Nottingham.
Bedford, W. G. Augustus, Sydenham.
Bovill, Henry Howard, L.R.C.P. Lond., James-street, S.W.
Bridges, Ashley Colston, L.S.A., Worcester.
Buller, Audley Cecil, Piccadilly.
Collier, William, L.R.C.P. Edin., Stapleford, near Cambridge.
Ewbank, Henry, Plymouth.
Farmer, Septimus, Nottingham.
Hill, Alexander, Lee, Kent.
Hoyle, William Evans, Newcastle-on-Tyne.
Jerome, John William, St. Helier's, Jersey.
Jones, Rees Rowland, Newcastle-on-Tyne.
Jones, William Clay, L.R.C.P. Edin., Llyswew, Brecenshire.
Langridge, Albert Henry, Dunstable.
Mead, Robert William, M.B. Edin., Whitby, Yorks.
Owen, Richard Jeffreys, Llandovery.
Pratt, Reginald, Billesdon, Leicester.
Sloggett, Arthur Thomas, L.R.C.P. Edin., Cambridge-gardens.
Tinker, Frederick Howard, Southport, Lancashire.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on April 15th:—

Alldridge, William Edward, Fonthill House, Birmingham.
Collier, William, Infirmary-road, Sheffield.
Counsellor, Charles Eye, Cradley Down, Sussex.
Meeson, Alfred, Mill-street, Liverpool.
Stacey, Herbert Gleeson, Park-square, Leeds.
Taylor, Thomas Percy, Bocking, Braintree, Essex.
Terry, Henry George, Bilbao House, Wells, Frome.

The following gentleman on the same day passed the Primary Professional Examination.:—

Bowman, Richard, St. Mary's Hospital.

ARMIRALTY, 19th April, 1880.—The undermentioned surgeons have been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet, with seniority of 23rd March, 1880:—Bernard Renshaw, John Adlan Robertson, M.B.

UNIVERSITY OF CAMBRIDGE.—Dr. Barclay, of Caius; Dr. Ransome, of Caius; Dr. F. S. R. F. De Chaumont, of Edinburgh; and Dr. W. H. Corfield, of Oxford, have been appointed examiners for the examination in State Medicine to be held next October. Also the degree of M.D. was conferred on John Abercrombie, Caius.

THE Government of the North-Western Provinces and Oudh has sanctioned a revised scale of rewards for the destruction of wild animals and venomous snakes.

AT the meeting of the Chatham Local Board of Health, on the 17th inst., a communication was read from the Local Government Board announcing their intention to send one of their inspectors to conduct an inquiry into the advisability of sanctioning a loan for the erection of an infectious diseases hospital for this district.

IT is proposed to form a Memorial Ward in connexion with the Sunderland Children's Hospital, as a mark of respect of the public character and services of the late mayor, Mr. T. S. Turnbull.

NATIONAL ORTHOPÆDIC HOSPITAL.—A course of lectures, by the surgeons of this hospital, on spinal curvature, club-foot, and genu valgum, has been announced to be delivered on May 5th, 12th, 19th, 26th, and June 2nd. These lectures commence at 5 P.M., and are open to members of the profession.

PRESENTATION.—A testimonial, subscribed for by the officials in connexion with the Sunderland Union, and consisting of a silver inkstand and pen and pencil-case, a ring set with pearls, &c., has been presented to Dr. C. N. Foote, on his retirement from the post of medical officer to the workhouse.

THE JOHN HUNTER MEDAL.—Dr. G. A. Woods, of Southport, to whom the collegial triennial prize of fifty guineas was awarded by the Council of the Royal College of Surgeons at its last meeting, has decided on taking the gold medal to that amount instead of the cash. This is the first occasion on which it has been so obtained.

VINCENT'S HOSPITAL, DUBLIN.—A special dispensary for the treatment of ophthalmic disease, and a ward for in-patients, have been established in this hospital, in consequence of the recent regulation of the Irish College of Surgeons requiring from candidates for the diploma in surgery a certificate of clinical instruction in ophthalmology. The dispensary and ward will be under the care of Mr. Denis Redmond, the recently appointed ophthalmic surgeon.

ARMY MEDICAL DEPARTMENT.—Deputy Surgeon-General John Alexander William Thompson, M.D., to be Surgeon-General, vice J. H. K. Innes, C.B., who is granted retired pay. Deputy Surgeon-General George Pain is granted retired pay, with the honorary rank of Surgeon-General. Surgeon William Alexander Duke to be Surgeon-Major. Surgeon-Major D. Murray, M.D., has been appointed to officiate as Principal Medical Officer British Forces, British Burmah Circle, in place of Deputy Surgeon-General W. A. Thomson.

THE HOSPITAL FOR WOMEN, SOHO SQUARE.—The report read at the annual meeting of the friends of this institution held last week, whilst exhibiting apparently a balance of receipts over expenditure during the past year, sets forth the need of further pecuniary aid to meet the increased outlay arising from the cost of eight additional beds now in use as compared with the accommodation in 1876. The medical officer's report showed that there were 45 patients in hospital at the commencement of 1879, and that 440 were admitted during the year, making a total of 485, of whom 229 were cured, 104 relieved, and 13 died; the remainder having either left at their own request or been discharged without benefit. Many important cases, it was stated, were, owing to the limited number of beds, necessarily delayed for weeks before they could be admitted. This is a fact which should have great significance with the benevolent.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET *before Half-past Ten on Thursday Morning, at the latest.*

ARMSTRONG, S., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Tiverton District of the Basford Union.

BARRETT, C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Sixth District of the Bath Union.

BROWNE, L., F.R.C.S.Ed., M.R.C.S.E., has been appointed Consulting Surgeon to the Newcastle Throat and Ear Hospital.

BUTLER, F. T., M.B., has been appointed Honorary Surgeon to St. Bartholomew's Hospital, Rochester, vice W. Buchanan, M.R.C.S.E., resigned.

CRESSWELL, T. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator of the Third District of the Abingdon Union, vice J. H. Daly, resigned.

DUKE, A., M.D., M.R.C.S.E., L.S.A.L., has been appointed Consulting Surgeon to the Dover Hospital, on his resignation of the office of Honorary Surgeon to that institution.

FITZSIMON, C. C., M.B., has been appointed Assistant House-Surgeon to St. Bartholomew's Hospital, Rochester, vice W. T. Justeman, M.R.C.S.E., resigned.

FULLERTON, R., M.B., B.Ch., has been appointed Assistant Medical Officer to the City and County Lunatic Asylum, Stapleton.

HANHAM, F. W., L.R.C.P.Ed., L.F.P.S.G., has been appointed to the Fourth District of the Bath Union.

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LEEPER, G. R., M.B., has been appointed Medical Officer to the Kilderney Dispensary District of the Irvinestown Union, vice B. J. Graham, M.R.C.S.E., resigned.

MACKAY, J. C., L.R.C.P.Ed., has been appointed Medical Officer to the Fourth District of the Halstead Union, vice W. Simpson, M.R.C.S.E., resigned.

MASON, W., L.R.C.P.Ed., has been appointed Medical Officer to the Second and Seventh Districts of the St. Austell Union, vice R. F. Stephens, M.R.C.S.E., resigned.

MILLS, R., M.R.C.S.E., has been appointed Medical Officer to the Benenden District of the Cranbrook Union, vice A. A. Blakiston, M.R.C.S.E., resigned.

PARSONS, F. J., L.R.C.P., M.R.C.S.E., has been appointed Medical Officer to the Morehard Bishop District of the Crediton Union, vice C. Snape, M.D.

PRINCE, H. F., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer for the Snettisham District of the Docking Union.

ROBERTS, N. E., M.B., has been appointed Assistant Resident Medical Officer to the Workhouse and Infirmary of the Township of Toxteth Park, Liverpool, vice C. R. Woods, M.D., resigned.

WARNER, F., M.D., M.R.C.P.L., has been appointed Lecturer in Botany at the London Hospital Medical School, vice J. G. Baker, F.R.S.

WILKINS, F. W., F.R.C.S.I., L.M.Q.C.P.I., has been appointed Demonstrator of Anatomy at the School of Surgery, Royal College of Surgeons, Ireland.

WATERS, D., Surgeon on the Staff of the Governor of Bombay, has been appointed Surgeon to the Oculdass Tejpal Hospital, Bombay.

WIGHTWICK, F. P., M.R.C.S.E., has been appointed Resident Clinical Assistant to the Brompton Consumption Hospital, vice E. Maudy, F.R.C.S., resigned.

WOOD, C., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Dover Hospital.

Births, Marriages, and Deaths.

BIRTHS.

BELFAMY.—On the 16th inst., at Wimpole-street, the wife of Edward Belfamy, F.R.C.S., of a son.

BROWN.—On the 19th inst., at The Willows, Tredegar, Monmouthshire, the wife of George Arthur Brown, of a son.

COCK.—On the 6th inst., at York Cottage, Peckham, the wife of W. Cock, Esq., Surgeon, of a son.

CLARK.—On the 6th inst., at Cavendish-square, W., the wife of Andrew Clark, F.R.C.S., of a daughter.

COTTON.—On the 10th inst., at Pentyffryn, Victoria-grove, Southsea, the wife of Dr. Cotton, Deputy Inspector-General, R.N., of a daughter.

DYTE.—On the 14th inst., at Upper Bedford-place, Russell-square, the wife of D. H. Dyte, L.R.C.P.L., of a daughter.

ELLIS.—On the 9th ult., at Sitapur, Oudh, the wife of John Ellis, M.D., Bengal Medical Service, of a son.

HARDING.—On the 20th inst., at North Lawn, Westgate-on-Sea, Kent, the wife of G. Clarence Harding, M.R.C.S.E., L.R.C.P.Ed., & L.M., of a daughter.

LITTLE.—On the 13th inst., at The Elms, Victoria-park, Manchester, the wife of David Little, M.D., of a daughter.

LUCEY.—On the 14th inst., at Southampton, Hants, the wife of William C. Lucey, M.D., of a son.

MARRIAGES.

BURT—HENDERSON.—On the 13th inst., at St. Giles's, Camberwell, Alfred Burt, M.R.C.S.E., L.S.A.L., of Bourton-on-the-Water, Gloucestershire, to Amelia Mary Henderson, second daughter of James Henderson, of Adon House, Dulwich.

HOLMES—BLOW.—On the 15th inst., at the Parish Church, Layer Breton, Thomas J. P. Holmes, M.B., Surgeon-Major, A.M.D., to Gertrude Charlotte Isabella, the eldest daughter of the Rev. William Blow, M.A., Rector of Layer Breton, Essex.

PHILIP—CRUICKSHANK.—On the 15th inst., at The Manse, Turriff, Aberdeenshire, by the Rev. D. Stewart, M.A., King Edward's, assisted by the Rev. J. Bathgate, M.A., Forgue, James Allan Philip, M.A., M.B., C.M., of Meniebank House, Midlothian, to Katherine Laura, youngest daughter of the Rev. John Cruickshank, D.D., Clergyman of the Parish.

WARNER—HOWARD.—On the 9th inst., at the Parish Church, Hampstead, by the Rev. Brooke Lambert, Vicar in charge of St. Jude's, Whitechapel, Francis Warner, M.D. Lond., M.R.C.P., of 15, Finsbury-square, to Louisa, eldest daughter of William Howard, Esq., of Lyndhurst-road, Hampstead. No cards.

DEATHS.

GOURLAY.—On the 20th inst., at his residence, Weston-super-Mare, Frederick Gourlay, Esq., M.D., in his 45th year.

HAMILTON.—On February 8th, on board the steamer *Garonne*, near Adelaide, Alexander M. S. Hamilton, M.D., M.R.C.S.E., of Ballymoney, late Medical Superintendent of Cheadle Union Infirmary, aged 29. New Brunswick papers will please copy.

HENRY.—On the 6th inst., at his residence, Claremont Cottage, St. Helier's, Jersey, James Henry, Esq., M.D., Staff-Surgeon, Bengal Navy, aged 61. R.I.P.

LOCKLEY.—On the 13th inst., at Bootham, York, Thomas Lockley, Esq., M.D., and J.P. for the West Riding of Yorkshire, aged 68.

MOORE.—On the 14th inst., Richard Read Moore, L.R.C.P., M.R.C.S.E., of Wolverhampton, second son of the late Thomas Moore, of The Wergs, aged 35.

STEWART.—On the 13th inst., at Arrochon, France, John Stewart, Esq., eldest and last surviving son of the late John Grant Stewart, M.D., C.B., Inspector-General of Naval Hospitals and Fleets.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, April 22nd, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp. Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Apl. 16	29·76	S.W.	49	46	88	58	42	0·22	Cloudy
,, 17	29·85	S.	54	49	96	63	41	..	Fine
,, 18	29·91	W.	57	49	98	64	41	..	Cloudy
,, 19	29·86	S.W.	58	51	99	68	42	..	Fine
,, 20	29·84	S.W.	51	50	98	63	48	0·14	Overcast
,, 21	30·05	S.W.	53	48	92	60	42	0·03	Fine
,, 22	29·98	S.W.	52	47	87	60	40	..	Fine

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

USE OF POISONOUS COLOURS.

THE Council of the Society of Arts, having had their attention directed to numerous cases of reputed poisoning by arsenical wall-papers and other articles in general household use, have appointed a Committee to inquire into the practicability of preventing the employment of arsenic in any processes by which it is alleged to remain in finished goods, and to obtain evidence as to the effects of total prohibition of the use of such processes, or the prohibition of the sale of articles produced thereby, would have upon various trades. To promote the object in view, this Committee has issued a circular to manufacturers of colours, dyers, and others using colours in manufacturing processes, asking for information on certain specific points. The following are the questions to which answers are asked for, such answers to be returned to the Secretary of the Society of Arts, John-street, Adelphi, London, W.C., on or before the 30th April:—1. In what colours, dyes, mordants, or other preparations used in trades or manufactures in this country is any preparation of arsenic employed? 2. For what other purposes and processes is arsenic employed? 3. Do you attach any special importance to the continued use of any arsenical colours or preparations, such as leave arsenic in the finished goods? and, if so, what preparations, and for what reasons? 4. Would it be any disadvantage to you if the use of such colours, dyes, pigments, or other arsenical preparations, both of home and foreign manufacture, were prohibited? and, if so, what disadvantage?

Styrax.—It is Guttmann's, not Kolitansky's, method. Last December Dr. Burney Yeo published a note on the subject in a contemporary.

NICTITATION.

To the Editor of THE LANCET.

SIR,—If your correspondent, under the above heading in your last week's issue, will try belladonna, I think he will find it of great benefit. In a case which came under my observation some time ago, I was induced to try it in this disorder from its well-known paralysing action upon the third nerve, and its administration was speedily followed by relief. These spasms and twitchings are associated by some with disorders of the digestive apparatus, but I have generally found them follow prolonged nervous exhaustion. There is no drug so speedily powerful in restoring strength and apparently nerve power. It is best administered in combination with hyoscyamus, and, in preference, I use the succus belladonnæ, fifteen minims, with succus hyoscyami, twenty minims, three times a day. If this should fail, large doses of cannabis indica might be of advantage.

I remain, Sir, yours &c.,

Liphook, Hants, April, 1880. T. FREDERICK PRIDEAUX, M.D.

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ALDEHYD IN WHISKY.

AT a meeting of the Society of Medical Officers of Health, Dublin, held on the 15th inst., the President, Professor C. A. Cameron, read a paper of considerable length, "On the Quality of the Whisky on Sale in Ireland." As analyst for the largest proportion of Irish counties, large numbers of samples of whisky had been submitted to him for examination, chiefly by the Constabulary. Those collected at fairs, racecourses, wayside public-houses, &c., were generally of very bad quality. A certain proportion consisted of what was called "patent still" whisky, having but little in them save alcohol and a little flavouring matter—a kind of whisky which does not improve by being kept in wood, and which differs but little from the "silent spirit" imported from Germany. On the other hand, much of the whisky consisted of new whisky, containing fusel oil (amyl alcohol) and aldehyd. The latter is a substance formed by the oxidation of alcohol, and is intermediate between alcohol and acetic acid. Dr. Cameron regards it as a toxic ingredient of new whisky. It boils at 71·6°, and soon is changed, by absorption of oxygen, into acetic acid. It disappears when whisky is stored for a couple of years. Dr. Cameron states that in 1874 he suggested, when examined before a Committee of the House of Commons on Food Adulteration, that whisky should not be permitted out of bond until it was two years old, so as to allow of the oxidation of the fusel oil. He gave some instances of the poisonous qualities of new "poteen" (illicit whisky), and cited the case of a whole family poisoned by drinking for some months "poteen" containing 0·23 per cent. of amyl alcohol. Father and mother had become insane.

Dr. John Haddon.—We shall be glad to receive the "notes."

LISTER'S ANTISEPTIC DRESSINGS.

To the Editor of THE LANCET.

SIR,—In a paper which I read recently at the Royal Medico-Chirurgical Society, I brought forward statistics which seemed to me to point to the conclusion that the dressings of gauze and protection, upon which Mr. Lister and his disciples lay so much stress, are not only useless in giving greater security for the patient's recovery, but that they are positively hurtful by irritating the wound, and preventing speedy and complete union. In my experience it was an almost uniform result that wounds dressed after Lister's plan suppurated, and in many cases they sloughed; and though none of the patients died, many of the recoveries were anxious and protracted. Some of my critics said this was due to my imperfect method of using the dressings. My answer was that if the proper use of the dressings was above my intelligence, it was useless for general application, and that, whether I did or did not admit their criticism, I should go back to the old-fashioned dry lint. I have not done this exactly; but I have since employed Robinson's absorbent cotton-wool and gauze, as introduced to my notice by Mr. Sampson Gamgee, and I have had results as uniformly satisfactory as those from Mr Lister's gauze were disappointing.

I have now had fifteen ovariotomies, two abdominal explorations, and four excisions of the breast, in which I have used these absorbent dressings without any antiseptic preparation; and not only have all the cases recovered, but they have not given me five minutes' anxiety about their recovery, and the pus, if it could have been collected from the whole twenty-one cases throughout their course, would not have filled a tablespoon.

It is, therefore, to me conclusively proved that our improved results in abdominal surgery do not depend on Mr. Lister's dressings, at any rate; and now I intend to exclude the other details one by one, and place the results on record, whatever they may be.

I am, Sir, yours &c.,

Birmingham, April, 1880. LAWSON TAIT.

Unknown.—Our correspondent's letter, if published, would probably do more harm than good. A temperate statement of the grievance to the head of his service in India might lead to a modification of the rule in question; but it would be advisable to avoid making any personal remarks in it, such as occur in his letter forwarded to us.

Mr. Richard Paramore.—The use of Dr. Porter's name under the circumstances is very unjustifiable.

D. F.—We are not aware of any well-established cases of the trouble alluded to.

CONSTIPATION AS A DISEASE "PER SE."

To the Editor of THE LANCET.

SIR,—The discussion of this subject being most welcome to me and, I am certain, to many medical men practising in warm, relaxing climates, I beg, in the desire to see the matter gone into as fully as possible, and in support of Dr. R. Bell's views (THE LANCET, Feb. 14th), to state that the symptoms of chronic constipation may be found treated of in a separate chapter, under the heading of "Obstipatio Alvi," or "Stuhl-Verstopfung," in H. Lebert's "Handbuch der Practischen Medicin" (Tübingen: H. Laupp'sche, Buchhandlung).

Yours faithfully,

L. GOGOL, M.D., District Surgeon.

Murraysburg, Cape of Good Hope, March 16th, 1880.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the candidates at the pass examination for the diploma of Membership of the Royal College of Surgeons on the 16th inst., when 73 candidates presented themselves, who were required to answer at least four, including one of the first two, of the six questions:—

1. Describe the parts concerned in the operation for the relief of a strangulated hernia in the inguinal canal. Give the steps of the operation.
2. Describe the relations of the lower third of the brachial artery. Give the steps of the operation for tying it at the bend of the elbow. How is the collateral circulation carried on?
3. What are the local signs and constitutional symptoms of suppuration beneath resisting structures? Where is such suppuration likely to occur? Give the treatment.
4. Describe the structure of the different forms of nævus, and their appropriate treatment.
5. How would you diagnose the nature of a tumour in the anterior triangle of the neck?
6. Describe in detail the process of union of a simple fracture of bone.

The following were the questions on the Principles and Practice of Medicine submitted to those candidates on the following day (the 17th) who had not previously passed any examination on this subject:—

1. What are the chief causes of ascites? What are its symptoms and how would you recognise its presence? Point out the distinctions between it and ovarian and hydatid cysts and distended bladder. How would you treat it?
2. Give the morbid anatomy, symptoms, and treatment of acute pneumonia.
3. What are the properties, uses, and doses of the following drugs:—Tr. opii, pulv. opii, liq. morphiæ hydrochloratis, morphiæ hydrochloras, tr. cannabis indicæ, ext. cannabis indicæ, tr. colchici seminum, ext. colchici, liq. hydrargyri perchloridi, tr. ferri per chloridi, tr. ergotæ, tr. scillæ, oxymel scillæ, potassæ chloras, santoninum, and elaterium.

Ruination, (India.)—The promulgation of the G.O. regulating the administrative branch of the civil medical service has so completely altered matters that our correspondent's letter is now quite inapplicable. By the new arrangements the Indian Medical Service, instead of losing three surgeons-general and six deputy surgeons-general, has gained three deputy surgeons-general.

Incog. should transmit a copy of the Bill to the Bodies whose diplomas the practitioner in question holds.

EFFECTS OF AN OVERDOSE OF HYDRATE OF CHLORAL AND BROMIDE OF POTASSIUM.

To the Editor of THE LANCET.

SIR,—I do not know whether you may think the following a sufficiently notable case to refer to it in the columns of THE LANCET, or to permit this letter to appear, so as to elicit others' experience.

For some days before March 25th I had been taking a draught nightly, containing chloral hydrate, thirty-five grains; bromide of potassium, fifteen grains; spirit of chloroform, twenty minims; syrup of oranges, half a drachm; cinnamon water to an ounce and a half. On the night of March 25th, however, a mistake was made, and I was given chloral hydrate, three drachms and a half; bromide of potassium, a drachm and a half; spirit of chloroform, two drachms; syrup of oranges and cinnamon water as before. I took the whole, with the exception of about a drachm and a half, before discovering the mistake. I had just time to call for assistance before becoming unconscious. For eleven hours I was in a state of coma, and twenty hours passed before I regained consciousness. What my condition was during this time I can, of course, only gather from those around me. I am told my extremities became icy cold; that at first the action of the heart was accelerated, but after the first half hour its beating was scarcely to be felt. The throbbing of the head is described as being so violent as "almost to lift the top off." If the mouth was opened, so it remained; if closed, it remained so, as in a vice. Since recovery I have suffered from extreme weakness and nervous depression, with much pain in the back of the head of peculiar piercing character.

If recovery from such an exceptionally large dose is unique, the case may be of interest to your readers.

I am, Sir, yours faithfully,

April 7th, 1880. F. W. B., A MEDICAL STUDENT.

AN AWKWARD MISTAKE.

AT a charity dinner given on Tuesday evening, the chairman, a distinguished member of the Corporation of the City of London, asked for a fashionable effervescing mineral water. A bottle was accordingly produced, from which the worthy gentleman took about three-quarters of a tumblerful. It was not until the chairman and those who shared the bottle with him felt themselves called upon to retire somewhat abruptly, it was discovered that Hunyadi János had been given in mistake for Apollinaris!

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SNAKE-BITE.

A CASE of snake-bite is reported in the *Australian Medical Journal* by Dr. Colin Henderson, of the Ararat Hospital. The patient was a girl, aged three years, who was bitten on the wrist by a tiger-snake. The wound was scarified and bathed, a ligature tied round the wrist, brandy given, and the child brought a distance of fifteen miles to the hospital. On admission she was lethargic, vomiting occasionally, respiration feeble, pulse slow and weak, pupils contracted, extremities cold. The wounded hand was purple and much swollen. The ligature was removed, a piece of lint soaked in strong liquor ammoniæ applied to the bite, constant friction with a liniment composed of equal parts of soap liniment and strong liquor ammoniæ applied over the heart and to the extremities, and ten minims of liquor ammoniæ with a drachm of brandy in a wineglassful of milk given every half-hour. Twelve hours after the receipt of the bite the patient was allowed to go to sleep, and she awoke three hours afterwards almost recovered.

Mr. R. W. Dawson had better consult a practitioner.

VACCINATION ON THE NOSE.

To the Editor of THE LANCET.

SIR,—The following case seems to me sufficiently interesting to merit publication :—

M. S——, aged thirty-eight years, came to the out-patients' room at this hospital, with a well-marked vaccine vesicle on the right side of the nose. Twenty-five days before, her male child, aged five months, had been vaccinated. The vesicle was rather a long time in coming to maturity, and the scab remained on later than usual. This child not unfrequently scratched his mother on the nose, and to this fact she attributes the inoculation. Five days ago she first noticed a pimple on the nose, and at the same time enlarged tender glands under the lower jaw. When she presented herself, there was a well-formed umbilicated vesicle on the right side of middle of nose, about half an inch by one-third of an inch ; much redness and induration of neighbouring tissues, and great swelling of eyelid ; enlarged tender glands beneath the angle of the lower jaw. She had three good marks on the left arm from vaccination when a child. She did not present herself again until the scab had fallen off. She had been so ill with increased inflammation about the face that she had been unable to leave home.

Your obedient servant,
JOHN C. UHTHOFF, M.D. Lond.,
House-Surgeon to the Sussex County Hospital.

Brighton, April 16th, 1880.

LEAD-POISONING.

DR. EMERSON REYNOLDS, at a recent meeting of the Royal Dublin Society, exhibited a frying-pan which had been sent to him for analysis, and on being tested gave proof of lead being present. The pan was made of the ordinary sheet iron ; but, instead of being coated with tin, had been covered with an alloy of tin and lead, the latter metal existing to a considerable amount. He narrated several cases which had come under his notice of persons being sufferers from severe choleraic symptoms due to having partaken of food cooked in pans of the sort described. Any food capable of yielding acid products is liable to take up the lead, or particles of the lead may become detached, or the oil or greasy materials used for cooking, which have the power of dissolving a quantity of lead oxide, may cause the lead to be present in the food in a more or less soluble state. There is little doubt but that the symptoms attributed to various disorders have occasionally been due to cases of irritant poisoning in consequence of the ingestion of lead from this or other sources.

Mr. Algernon Hamilton.—Each State has its own laws.

SCARLET FEVER IN A SEPTUAGENARIAN.

To the Editor of THE LANCET.

SIR,—Perhaps the following case may interest your readers, as I believe it is rare to find scarlet fever in a person of the undermentioned age :—

G. C——, aged seventy years, a male, has passed through a typical case of scarlet fever, with sore-throat and rash, and is at present peeling. So far he is doing well ; but it remains to be seen whether he will have any renal complication or not.

Your obedient servant,
JOHN BUCKLE, M.R.C.S.,
Resident Medical Officer, Farm-road Dispensary,

April, 1880. Brighton.

J. B.—The following gentlemen are members of the Court of Examiners : Mr. L. Holden (President) and Mr. W. S. Savory, of St. Bartholomew's Hospital ; Mr. F. Le Gros Clark, of St. Thomas's Hospital ; Mr. J Birkett, of Guy's Hospital ; Mr. J. Marshall, of University College Hospital ; Mr. T. Holmes, of St. George's Hospital ; Mr. J. C. Forster, of Guy's Hospital ; Dr. G. M. Humphry, of Cambridge ; Mr. J. Wood, of King's College Hospital ; and Mr. J. W. Hulke, of the Middlesex Hospital.

Mr. Harry T. Walsh.—We have no recollection of the case.

GREEN-STREET COURTHOUSE, DUBLIN.

A DEPUTATION from the General Purposes Committee of the Corporation of Dublin waited on the County Grand Jury on Monday last, in order to confer as to the necessity of improving the present condition of the courthouse. The building was constructed in 1795 ; but of late years its sanitary condition was found to be very imperfect, and the Corporation received last year a communication from the Lord Lieutenant enclosing a letter from the Lord Chief Justice, complaining of the want of sanitary arrangements, as well as of the limited accommodation. The question then arose as to whether certain alterations at an estimated cost of £6000 should be carried out, or an entirely new building erected at a cost of £20,000 ; but before determining the matter it was considered advisable to learn whether the Grand Jury would contribute towards the necessary outlay. The latter body have consented, if legally authorised, to bear part of the expenses, so that shortly we may expect that steps will be taken to remove what has been an opprobrium and disgrace to the authorities for many years.

J. B.—There are several varieties of the closet wished for. We advise a visit to the Parkes Museum any Tuesday, Thursday, or Saturday between 10 and 2, when a large number may be leisurely inspected.

MEDICAL DESTITUTION IN SARK.

IF we are to believe a statement which has got into print, the island of Sark is absolutely destitute of a resident medical practitioner. How the inhabitants, who number about 600, have hitherto managed in emergencies, and in stormy weather, it is difficult to understand, seeing that the nearest skilled assistance resides in Guernsey. It is satisfactory, however, to learn that the defect has at last become manifest to the ruling Court of Sark, who have resolved to contribute the sum of £40 annually towards making up any deficiency in the income which a surgeon might obtain by practising in the island.

PROLONGED LODGMENT OF A FOREIGN BODY IN THE EYE.

To the Editor of THE LANCET.

SIR,—In your issue for April 3rd you quote a case published by Dr. Chisolm, of Boston, in which a foreign body remained impacted in the iris for twenty-three years.

As an analogous case, I may quote that of a relation of my own, who in 1851 was struck with a chip of iron from an anvil. He was treated during several weeks for the resulting iritis ; but the *locus* of the foreign body does not seem to have been discovered, for he was not himself aware of its presence. He recovered with very fair sight of the injured eye, spent about sixteen years in India, and after his return home came casually under my notice for frequent attacks, apparently not inflammatory, but neuralgic, in the injured eyeball. On examination, I find the splinter of iron, rusted, but clearly visible, sticking in the anterior surface of the iris. As there was not the least symptom of sympathetic irritation, I advised watchfulness, and to abstain from meddling.

The case is interesting as being illustrative of the possibility of an eye remaining in an approximately healthy condition for twenty-eight years, notwithstanding the presence of a foreign body.

I am, Sir, yours truly,
April, 1880. ARCHIBALD H. JACOB, M.D. Dub., &c.

IDIOCY IN HOLLAND.

THE Annual Report of the Special School for Idiots at the Hague, which has been in existence twenty-five years, has been issued. The system of "boarding-out" appears to be adopted where possible, and with seemingly satisfactory results. Thus of 417 pupils who have been under the control and instruction of the institution since its foundation 148 were boarded out. Of the entire number, 43 have gone directly into service or adopted a regular trade, while 25, in a greatly ameliorated condition, have been discharged from the school. The number of persons suffering from varying degrees of idiocy in Holland is estimated at 3000, one-third of whom are deemed to be capable of education.

Mr. W. C. Hopgood.—We would advise our correspondent against the course he mentions.

Dr. Warren, (Boston, U.S.A.)—1. The meeting will be held in Cambridge.—2. Apply to the Secretary of the Association.

THE LATE DR. DONOVAN, OF SKIBBEREEN.

WE are asked to publish the following appeal :—Dr. Donovan lost his life by typhus just as he had successfully treated a great epidemic in his district. By his death his mother and five sisters are left unprovided for, and aid cannot be had from the Medical Benevolent Fund, which merely contributes to widows and orphans. Contributions for this most pressing and deserving case will be received by the Manager, Munster Bank, Skibbereen.

J. S. S.—We possess no information beyond that which our advertising columns supply.

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A Teacher, (Leeds.)—There is no Collegiate law against a provincial Fellow being elected either on the Board or the Court of Examiners if he has time and inclination for its heavy duties. Dr. Humphry, of Cambridge, is already a member of the latter.

Mr. D. H. Cullimore.—We think the matter has been sufficiently discussed.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—In my note on "A Means of Diagnosis of Renal Calculus," appearing in your issue of to-day, I notice an omission which appears to me to take from the value of the suggestion. In giving the point for puncture with the needle, I am made to say simply "midway between the crest of the ilium and last rib"; whereas the words "and seven centimetres from the vertebral spines" were, or were intended to be, added in my MS. Yours faithfully,

ARTHUR E. BARKER.

Welbeck-street, Cavendish-square, April 17th, 1880.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Greenfield, London; Mr. V. Jackson; Mr. A. E. Barker, London; Dr. Martin, Boston, U.S.A.; Dr. Dudgeon, London; Dr. Fairbank, Doncaster; Dr. Ahmeida, Tetiba; Dr. Hardwicke, London; Dr. Althaus, London; Mr. Acland, Colchester; Dr. Cameron, Dublin; Mr. Harrison, Liverpool; Dr. A. H. Jacob; Mr. Weil; Mr. Counsellor; Mr. A. Hamilton; Sarah Dexter; Mr. Dawson; Mr. Buckle; Dr. T. F. Pearse; Mr. Gibb; Mr. Burrows, San Francisco; Mr. E. M'Q. Gray; Mr. D. H. Cullimore; Dr. Robert Lee, London; Dr. F. Robinson, London; Dr. Philipson, Newcastle; Dr. W. Roberts, Manchester; Mr. Lacey; Dr. H. S. Gale, Manchester; Mr. Treves, London; Dr. Ward, Saltburn; Dr. Ratten; Mr. Bald, Arnold; Dr. Warren, Boston; Dr. Wiltshire, London; Dr. Randall; Dr. May, Tottenham; Dr. M'Cann; Dr. Bain, Bristol; Mr. G. Parry; Mr. Challenor; Mr. Hadlow; Dr. H. Tatham, Salford; Dr. Kastulis, Alexandria; Mr. R. Freeman; Dr. M'Call Andersen, Glasgow; Dr. Sadler, Barnsley; Dr. Wallace, Greenock; Dr. Taylor, Punjab; Mr. A. de Watteville; Messrs. Calvert, Manchester; Mr. Nankivell, Rochester; Mr. Hopgood, Middlesborough; Mr. L. Tait, Birmingham; Mr. Paramore, London; Dr. Eade, Norwich; Mr. Milles, London; Mr. F. H. Butler, London; Mr. Eaton, London; Mr. Larkin, London; Mr. Hagger, Liverpool; Dr. Uthoff, Brighton; Mr. Bevan, Richmond; Dr. Duckworth, London; Dr. C. Bäumler, Freiburg; Mr. J. W. Hope, York, W. Australia; Dr. Hack Tuke, London; Messrs. Stickland and Rowe, London; Dr. Anderson, Jagdullah, Afghanistan; Mr. Gosbern, Newbury; Mr. Vincent, London; Mr. Keay, Eastbourne; Mr. Kirby, Woodly; Mr. T. Cooke; Rev. W. Buyers, Rotherham; Mr. Walsh; Dr. Pope; The Head Master of Sherborne School; Incog.; Sanitas; The Secretary of the Society of Arts; Sigma; M.B., C.M.; The Secretary of the Statistical Society; A. S.S.; A. G. P.; Omega; J. B.; M.R.C.S.; J. F. E., F.R.C.S., Bristol; D. F.; Medicus, Guy's Hospital; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Lean, Swansea; Mr. Evans, Bromsgrove; Messrs. Keith and Co., Edinburgh; Mr. Robertson, Liverpool; Mr. Medley, Oxton; Mr. Brown, Tredegar; Mr. Ballevant, Derby; Mr. Wilson, Leeds; Mr. Holmes, Maidstone; Mr. Vandray, Edinburgh; Mr. MacMaster; Mr. Henry, South Shields; Mr. Jones, Halsall; Dr. Bruce, Nice; Mr. Eburle, Easingwold; Rev. F. Redford, Silloth; Mr. Armstrong, Madras; Mr. Elliott, Carlisle; Messrs. Austin and Sons, Bristol; Mr. White, Wigan; Messrs. Rayner and Co.; Messrs. Richards and Co., London; Mr. Illingworth, Kendal; Mr. Wall, Wigan; Dr. O. Will, Aberdeen; X. Y. Z.; Medicus, Sale; Tempus; Iota; J. M., Barnsley; Vicker, Sudbury; J. A. W.; G. A. P.; Wortham; Medicus, Bermondsey; Vicker, Sudbury; F. D., Notting-hill; W. P. X.; M.R.C.S., Kensington; W. M., Brackley; Medicus, Hadod; M.R.C.S., Grantham; Medicus, West Gerton; J. L., Widcombe; L.R.C.P.; M. W., Bogmer; F.R.C.S., Rotherham; Unqualified Assistant; A. B., Rethnal-green; Surgeon, London; W., Cheltenham; Surgeon, Islington; Delta; H.; &c.

Shield, Daily Mail, Liverpool Daily Post, Bristol Mercury, Church of England Temperance Chronicle, Herald and Weekly Free Press, Bucks Herald, East London Observer, Cambridge Chronicle, Welshman, Englishman, La Independencia Médica, Los Avisos, Sunderland Daily Post, Continent and Swiss Times, Revista de Medicina, Western Daily Press, Paper and Print, Deutsch-Amerikanische Apotheker-Zeitung, El Jesuado Médico-Farmacéutico, Chicago Medical Times, Laws of Health, Boston Medical and Surgical Journal, New York Medical Record, Dental Jairus, Pioneer, Madras Mail, Birmingham Daily Post, Stroud News, &c. &c., have been received.

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Medical Diary for the ensuing Week.

Monday, April 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. T. Stretch Bowes, "On Neurasthenia, or Nervous Exhaustion, and its Treatment."—Mr. D. H. Goodsall, "On a Case of Popliteal Aneurism Cured by Esmarch's Bandage."

Tuesday, April 27.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. R. H. Scott, "On Wind and Weather."
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. F. G. Hilton Price and Mr. J. E. Price: "Further Notes on the Romano-British Cemetery at Seaford, Sussex."—Major-General A. Lane Fox will exhibit a series of Plans and Relics from Mount Gabara.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Mr. A. Willett and Mr. W. J. Walsham: "Dissection of the parts, and Remarks on the Defects in Development, producing Congenital Malformation of the Spinal Column, Bony Thorax, and Left Scapular Arch."—Mr. F. J. Gant, "On Compound Fracture of the Femur twenty years after Excision of the Knee-joint from Disease, transversely one inch above the bony union."

Wednesday, April 28.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, April 29.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Tyndall, "On Light as a Mode of Motion: Theories of Light and Colours."
EPIDEMIOLOGICAL SOCIETY.—8 P.M. Surgeon-General C. A. Gordon, "On Certain Views regarding Fever in India."

Friday, April 30.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 3 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—8 P.M. Evening Meeting.—9 P.M. Mr. Spottiswoode, "On Electricity in Transitu."

Saturday, May 1.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—2 P.M. Annual Meeting.

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THE

Lumleian Lectures

ON

THE DIGESTIVE FERMENTS, AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians,

BY WM. ROBERTS, M.D., F.R.C.P., F.R.S.,

PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY; PROFESSOR OF CLINICAL MEDICINE TO THE OWENS COLLEGE.

LECTURE III.—PART I.

THE suggestion to administer to invalids artificially-digested food appears at first sight a somewhat startling proposal. So great an interference with the order of nature would seem to go beyond the legitimate province of art; but when we reflect how largely art already interferes in the preparation of our food, the taking of this further step will appear less surprising. The practice of cooking is in reality as complete a departure from the ways of untutored nature as artificial digestion would be. Among the almost countless species of animals, not one of them, except man alone, cooks his food, insomuch that man has, not inaptly, been defined as the cooking animal.

Effects of Cooking.—The process of cooking fulfils far more important ends than that of improving the savour of food—far more important even than the mechanical disintegration which generally attends the process. It produces certain chemical changes in several of the most important alimentary principles which render them incomparably more susceptible to the action of the digestive ferments than in the uncooked state. The discovery of the use of fire-heat in the preparation of his food must indeed have constituted one of the earliest and most important steps in the process by which man has emerged from the ranks of the dumb creation. The stores of proteid and farinaceous nutriment contained in the seeds of cereals and leguminous plants, and in the bulbs, tubers, roots, and succulent stems of certain vegetables, are, in the raw state, nearly altogether beyond his powers of digestion. By the discovery of the art of cooking these immeasurable stores were at one stroke laid open to him. It is moreover chiefly by the same art that he has been enabled to take his food at intervals, in separate meals, and has thereby been for ever relieved of the necessity which is imposed on all animals in the wild state of having to spend almost the entire of their waking hours either in seeking after their food, like the carnivora, or in consuming their food, like the vegetable feeders. This immunity secured to him the untold advantage of possessing the leisure requisite for the cultivation of his higher faculties.

The practice of cooking is not equally necessary in regard to all articles of food. There are important differences in this respect, and it is interesting to note how correctly the experience of mankind has guided them in this matter. The articles of food which we still use in the uncooked state are comparatively few, and it is not difficult in each case to indicate the reason of the exemption. Fruits, which we consume largely in the raw state, owe their dietetic value chiefly to the sugar which they contain; but sugar is not altered by cooking. Salads may be regarded more as a relish for other food, and as having a *quasi*-medicinal purpose, rather than as a substantial source of nutriment. Milk is consumed by us both cooked and uncooked, indifferently, and experiment justifies this indifference, for I found on trial that the digestion of milk by pancreatic extract was not appreciably hastened by previously boiling the milk.

Our practice in regard to the oyster is quite exceptional, and furnishes a striking example of the general correctness of the popular judgment on dietetic questions. The oyster is almost the only animal substance which we eat habitually, and by preference, in the raw or uncooked state, and it is interesting to know that there is a sound physiological reason at the bottom of this preference. The fawn-coloured mass which constitutes the dainty of the oyster is its liver, and this is little else than a heap of glycogen. Associated with the glycogen, but withheld from actual contact with it during life, is its appropriate digestive ferment—the hepatic diastase. The mere crushing of the dainty between the teeth brings these two bodies together, and the glycogen is at once digested without other help by its own diastase. The oyster in the uncooked state, or merely warmed, is, in fact, self-digestive. But the advantage of this provision is wholly lost by cooking, for the heat employed immediately destroys the associated ferment, and a cooked oyster has to be digested, like any other food, by the eater's own digestive powers.

With regard, however, to the staple articles of our food, the practice of cooking it beforehand is universal. In the case of farinaceous articles cooking is actually indispensable. When men under the stress of circumstances have been compelled to subsist on the uncooked grain of the cereals, they have soon fallen into a state of inanition and disease. By the process of cooking, starch is not merely liberated from its protecting envelopes, but it suffers a chemical change, by which it is transformed into the gelatinous condition, and this enormously facilitates the attack of the diastatic ferments. A change of equal importance seems to be induced in the proteid matter of the grain. I found that the gluten of wheat was incomparably more digestible, by both artificial gastric juice and by pancreatic extract, in the cooked than in the uncooked state. In regard to flesh meat the advantage of cooking consists chiefly in its effects on the connective tissue and the tendinous and aponeurotic structures associated with muscular fibre. These are not merely softened and disintegrated by cooking, but are chemically converted into the soluble and easily digested form of gelatine. I made some instructive observations on the effects of cooking on the contents of the egg. The change induced by cooking on egg albumen is very striking. For the purpose of testing this point I employed the solution of egg albumen before spoken of, made by mixing white of egg with nine times its volume of water. This solution when boiled in the water-bath does not coagulate nor sensibly change its appearance, but its behaviour with the digestive ferments is completely altered. In the raw state this solution is attacked very slowly by pepsin and acid, and pancreatic extract has almost no effect on it; but after being cooked in the water-bath, the albumen is rapidly and entirely digested by artificial gastric juice, and a moiety of it is rapidly digested by pancreatic extract.

My object in making these remarks is to show that the changes impressed on food by cooking form an integral part of the work of digestion—a part which we of the human race get done for us by the agency of fire-heat—but a part which the lower animals are compelled to perform by the labour of their own digestive organs. It must also be borne in mind that the digestive process carried on in the alimentary canal is, strictly speaking, executed on a doubling of the exterior surface, and not in the true interior of the body. If we take all these considerations into account, it would appear, I think, not unnatural that we should try to help our invalids by administering their food in an already digested, or partially digested, condition. We should thereby only be adding one more to the numberless artificial contrivances with which our civilised life is surrounded.

PREPARATION OF ARTIFICIALLY-DIGESTED FOOD.

Dr. Pavy[1] was, I believe, the first to carry into actual practice the idea of preparing an artificially-digested food. At his suggestion, Messrs. Darby and Gosden introduced a preparation which consisted of meat reduced to a fluid state by artificial digestion. The formula for this preparation has not, so far as I know, been made public. It is still in the market, and is sent out and advertised by Savory and Moore under the title of "Darby's Peptonised Fluid Meat." A specimen of this preparation is on the table before me. It has the appearance of a light brown very thick treacle. It has a strong salt taste and an agreeable meaty flavour, without any bitterness. It is mostly soluble in water. The solution does not precipitate on boiling, nor with nitric acid, and it gives a strong reaction of peptone, with Fehling's solution, and with tannin.

I have also before me a specimen of artificially-digested meat prepared by Mr. Benger. It is a greyish-looking extract, with a pleasant meaty flavour, and is quite devoid of bitterness. It dissolves mostly in water, and the solution

[1] A Treatise on Food and Dietetics. 2nd ed., p. 559.

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gives the usual reactions of peptone in great intensity. Mr. Benger informs me that it is made by operating at a temperature of about 140° F., on finely triturated raw beef with pancreatic extract and a little carbonate of soda. The solution thus obtained is neutralised with hydrochloric acid, and then evaporated at 212° F. to the consistency of a solid extract. Both of these preparations appear to me to be much superior in value to any of the meat extracts hitherto introduced.

But, however useful preparations of this class may prove to be, in a limited range of circumstances, it is pretty evident that if artificially-digested food is to be employed on the large scale, and among all classes, means must be found to bring the preparation of it within the range of culinary operations and the apparatus of the kitchen and sick-room.

The difficulty hitherto encountered in the production of an artificially-digested or peptonised[2] food, suitable for invalids, is mainly owing to the use of the gastric method in its preparation. If you subject any native article of food—say milk, bread, egg, or meat—to artificial digestion, with pepsin and hydrochloric acid, you destroy more or less completely the grateful odour and taste, and the inviting appearance, which made it desirable as food, and convert it into an unsavoury mess, from which the human palate turns away with disgust. The unsavouriness of artificially-digested food is, however, not due to any ill taste or smell inherent in the products of digestion—which, when purified, are both odourless and free from any unpleasant flavour—but to a number of bye-products of various kinds, which accumulate as digestion proceeds. One of these bye-products is a substance with a pure bitter flavour, which seems to be a constant accompaniment of gastric digestion. It is also developed, in some cases, in the later stages of pancreatic digestion. I have not observed this bitter substance, except in the digestion of proteids. It is evidently a normal educt of the process, and its presence probably accounts, in most cases, for the bitter flavour of the eructations, of which dyspeptics complain, and which is generally attributed to the regurgitation of bile. It would be interesting to know more about this substance.

My own efforts to produce a palatable peptonised food have been chiefly directed to the pancreatic method. The pancreas excels the stomach as a digestive organ, in that it has power to digest the two great alimentary principles, starch and proteids; and an extract of the gland is possessed of similar endowments. This double power is a manifest advantage in dealing with vegetable aliments, which contain both starch and proteids.

Any extract of pancreas may be used for the preparation of artificially-digested food, but the most suitable are those prepared with dilute spirit or chloroform-water. The extract sent out by Mr. Benger, under the name of "Liquor Pancreaticus," is an almost faultless pharmaceutical preparation. It is made by extracting perfectly fresh and finely-chopped pancreas, with four times its weight of dilute spirit. By some ingenious devices, Mr. Benger has succeeded in overcoming the mechanical difficulties of the manufacture, and has produced an extract which possesses the diastatic and proteolytic properties of the pancreas in a highly-concentrated degree. It is a nearly colourless solution, with very little taste or smell beyond that of the spirit used to preserve it. It is of this preparation that I must be understood to speak in what I have now to say on the production of artificially-digested food by pancreatic extracts.

My attention was first turned to the artificial digestion of milk, and I soon found that it was possible, by means of pancreatic extract, to digest this important article of food with comparatively little disturbance of its taste and appearance. Milk contains all the elements of a perfect food, adjusted in their due proportion for the nutrition of the body. Two out of its three organic constituents—namely, the sugar and the fat—exist already in the most favourable condition for absorption, and require little, if any, further assistance from the digestive ferments. It is therefore obvious that if we could change the casein of milk into peptone without materially altering the flavour and appearance of the milk, such a result would go far towards solving the problem of supplying an artificially-digested food for the use of the sick.

Pancreatic Digestion of Milk.—When milk is subjected to the action of pancreatic extract, at a temperature of 100° F. (38° C.), in an open glass vessel, a series of changes take place in it which are highly interesting to watch. The first thing that arrests the observer's notice is that the tough wrinkled skin which quickly forms on the surface of warm milk when exposed to the air is either not produced at all, or is only produced in a very imperfect degree. In its stead there forms a slight brittle and perfectly smooth pellicle of quite a different appearance. The next thing noticed is that the milk becomes more or less softly curdled. By and by the curds begin to redissolve, and the milk gradually reassumes its originally diffluent condition. A portion of the curd is, however, very resistent, and remains undissolved for many hours. If the milk be diluted beforehand with one-third or one-fourth of its bulk of water, this curdling phase is altogether omitted, or is only observed as a slight and transient thickening. Next follows a very curious change of aspect. The milk loses its glossy white appearance, and gradually assumes a dull yellowish-grey shade which is characteristic, and the degree of which enables the practised eye to judge with considerable precision how far the peptonising process has advanced. This change of aspect is, however, by no means conspicuous, and would scarcely be remarked in a cursory observation, except by comparison with unaltered milk. While these changes are proceeding, the milk gradually loses its proper flavour, and at length develops a pure bitter taste, which is to many palates not disagreeable. No really unpleasant flavour is produced, unless the process is allowed to go on to incipient decomposition.

The progressive transformation of the casein into peptone, of which these outward signs are the indications and accompaniments, may be followed by testing the milk from time to time with acetic acid. At first the addition of the acid causes an abundant precipitation of curdy matter, but this reaction progressively diminishes in intensity until at length it ceases altogether. When this point is reached the transformation may be regarded as complete. All the casein has been changed into peptone—even nitric acid no longer causes a precipitate. The time occupied in the transformation (supposing the temperature and the activity of the preparation to be constant) depends on the quantity of pancreatic extract added, and may be made to vary from a few minutes to several hours. In the ordinary operation of preparing peptonised milk for invalids, two or three teaspoonfuls of the liquor pancreaticus are added to one pint of milk, diluted with a fourth of its bulk of water. With these proportions the process is usually completed in from two and a half to three hours.

[2] I may be permitted to use the word "peptonised" as a convenient abbreviation for the phrase "artificially digested."

Clinical Lectures
ON
LOCOMOTOR ATAXIA.

Delivered at the National Hospital for the Paralysed and Epileptic,

BY THOMAS BUZZARD, M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL.

LECTURE III.

AT the last lecture I exhibited three patients affected with tabes dorsalis. B—— was a typical case of the disease, with ataxic gait and inco-ordinate movements of the hands, lightning pains of excruciating character, and diplopia, amongst other symptoms. A—— had no ataxia of gait, but all the other characteristics of tabes were well marked. V—— was a thoroughly representative case, with no symptom wanting to complete the picture. All three, you will remember, showed entire absence of patellar tendon-reflex, the quadriceps extensor muscle retaining at the same time its normal capacity for being excited to contraction by a blow or by induced electrical currents.

Now in each of these cases, there was that condition of pupil to which attention was first called by Argyll Robertson.[1] The pupils do not contract to light, but they do

[1] Edin. Medical Journal, December, 1869: See also an interesting article on the eye-symptoms in locomotor ataxia, by Dr. Grainger Stewart: Brain, July, 1879.

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contract during accommodation. I purposely refer to this peculiar condition of the pupil just now, because it seems to me that it constitutes a further instance of that removal of reflex in tabes of which so remarkable an example is offered by the absence of response to a blow upon the patellar tendon. The symptom is of great importance, for it is extremely frequent. Some highly interesting experience has been published by Vincent on this point.[2] Out of fifty-one tabetic patients which he had the opportunity of observing in Charcot's clinique there were only four whose pupils reacted normally. In seven there was complete immobility of the pupils (usually combined with amaurosis), and in forty the pupils did not react, or reacted imperfectly, to light, but contracted during accommodation.

It occurred to me that the ophthalmoscope would offer a convenient mode of testing this symptom, the examination thus being able to be made at the same time that the state of the fundus oculi is observed. The following is the mode of examination which I have devised, and which answers perfectly. The patient should be directed to look over your shoulder at some object in the distance. With the ophthalmoscopic mirror you then cast a strong light upon his eye, whilst at the same time you watch for any variation in the size of the pupil through a convex lens of about +12 placed behind it. Supposing that the pupil does not contract to light, the patient may next be told to look alternately at the distant object and at one almost in a line with it, but within ten inches (or still nearer, if he be myopic) of his eye. Uniform illumination of the surface of the eye should be maintained during the continuance of the examination, and the diameter of the pupil watched as the patient's gaze is shifted from one object to the other. It is necessary to be careful that no fallacy creeps in from the patient regarding your face (and thereby accommodating), when he should be looking at a distant object.

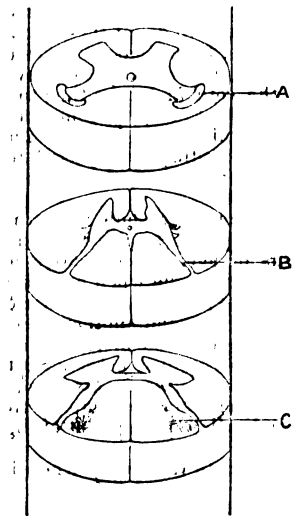
It appears to me (and I am alone responsible for the suggestion) that a very interesting generalisation can be derived from this symptom. It may be put as follows. As I have said before, in a large proportion of cases of tabes the natural movement of the iris consequent upon light falling upon the eye does not occur, or occurs only slightly and imperfectly. The iris does move, however (the pupil contracts), when the patient looks at an object placed near to his face. Now, to quote Donders, "the movements of the iris are of two kinds, reflex and voluntary. Reflex action is exhibited as constriction of the pupil in consequence of the stimulus of incident light upon the retina." It is this reflex movement which is so frequently abolished or impaired in tabes. The movement (contraction of the pupil) which is associated with accommodation for near objects, and which, as Donders shows, is to be considered voluntary, remains, in the large majority of cases, unimpaired. We cannot help seeing in this a remarkable analogy with what happens in the leg. The tabetic patient can kick his foot upwards—i. e., voluntarily contract his quadriceps extensor muscle—perfectly well. The contraction, however, which in a state of health follows, by reflex action, the stimulus of a blow upon the patellar tendon, does not occur, or occurs only to a limited extent. Time will not permit me to go further into this interesting point. I would only remark that the fact described lends additional support, so far as it goes, to Pierret's view, that tabes essentially attacks the *sensory* side of the cerebro-spinal nervous system. Reflex movements, as we know, are excited by impulses which travel along afferent (sensory) nerves.

In the three patients referred to an important symptom has occurred in addition to those which have been already described. B—— has suffered occasionally from "darts of pain from one side of his head to the other." A—— has anæsthesia of the left half of his face and the interior of his left cheek. "In eating he is apt," he tells us, "to bite the cheek." He can feel but little on the left half of the tongue, and his taste on that side is not so perfect as on the right. He does not feel a touch (I learn from Mr. Brooster's notes) on the left half of the palate, and scarcely on the left half of the pharynx. He also suffers from pains in the back of his head." V——, when he came to us, was affected with facial paralysis of the right side, which had immediately followed severe electric-shock-like pains of three weeks' duration. I shall have to show you a fourth case, in which one-half of the face and tongue is anæsthetic; a fifth case, in which the lightning pains in the head have been so severe as to give rise to the suspicion of intracranial tumour, and a sixth case, which began with sharp shooting pains in the head.

In these three patients we have pains or anæsthesia occurring in some part of the head. How are we to explain this in a disease which affects in so pronounced a fashion the posterior columns of the cord and posterior roots of spinal nerves? As regards the pains which A—— experiences at the back of his head, they occur in the district principally innervated on each side by the great occipital nerve, the internal branch, you will remember, of the posterior division of the second cervical nerve. We have, therefore, to do with a spinal nerve, after all, although its distribution is to the head. It is evident that such a mode of irritation of its posterior root as causes, when the posterior roots of the nerves supplying the trunk and extremities are in question, the characteristic "lightning pains" in them, is sufficient to explain the occurrence of similar pains at the back of the head.

In the two other cases the pains occupy the district supplied by the fifth nerve. According to Quain the sensory portion of the fifth nerve arises from a collection of grey substance beneath the outer part of the floor of the fourth ventricle in its middle third. In front of the nucleus a bundle of descending fibres mingled with much grey matter passes down to the lower part of the medulla oblongata. Huguenin describes this descending root as forming at this point a crescent, which encloses the gelatinous substance of the posterior horn. Hence it can be traced as low, it is thought, as the level of the third or fourth cervical vertebra.

In the accompanying diagram the crescent-like cup of the posterior horn (A) represents the descending or spinal root of



the trigeminus about where the medulla oblongata ceases and the cord begins. B indicates the posterior root zone of the second cervical nerve (the sensory origin of the great occipital nerve). The lowest section in the diagram is supposed to be at about the level of the fifth cervical nerve, and C shows sclerosis of the posterior root zone, the seat of the essential change in tabes. It is evident, then, that an extension upwards to B and A of the changes connected with the posterior root zones of the cord (C) must involve in succession the sensory origin of the great occipital nerve and the descending root of the trigeminal, and in this way we have the nerves which supply between them almost all the integument of the head and face in continuous relation with that particular system of fibres, sclerosis of which gives rise to the pains of tabes.[3] Now, it occurred to Pierret to search for changes in the descending root of the fifth in a case of tabes. In a certain case he found that there did exist around this inferior nucleus of the trigeminal nerve

[2] 'Des phénomènes oculo-pupillaires dans l'ataxie locomotrice et la paralysie générale des aliénés.' Par Ch. Vincent: Paris, 1877.

[3] For the sake of simplicity the great occipital nerve is alone considered. The remarks apply equally, of course, to the small occipital and great auricular branches of the second and third cervical nerves.

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a well-defined sclerosis, the form and connexions of which recalled exactly what is found in the cord of ataxic patients. With this fact before us, and bearing in mind the relations which I have described, we shall not be surprised to find that symptoms pointing to lesion of the sensory portion of the fifth nerve and the great occipital are really very common in tabes. It is remarkable that this is a point which is frequently to a great extent overlooked, the oculo-motor symptoms and those belonging to the extremities having to a large extent monopolised attention. From a diagnostic point of view its recognition is important. Unless we bear in mind this contingency, a patient's description of intense pain in the head, so severe as to dwarf other symptoms by contrast, is liable to put us off the scent of tabes dorsalis. May not certain cases of obstinate cranial neuralgia prove to depend upon sclerosis limited to a certain district of the medulla oblongata? It is worth considering whether there are any points to guide us in reference to this possibility.

In an ordinary case of trigeminal neuralgia it is most common to find the pains limited to the district of one or more of the three divisions of the nerve, and it is not often that exploration fails to discover one or more tender spots in situations where experience leads us to expect them to be found. But in the pains (otherwise neuralgic in character) which occur in the region of the fifth nerve in tabes, this accurate mapping out of the district of one or other division of the nerve is not, according to my experience, observed. Moreover, the pains are much more liable than in the case of ordinary tic to affect both sides of the head, either coincidently or in turn. And this is what might be expected; the changes in the posterior columns being disposed to attack more or less symmetrically, though usually not with equal violence, the two sides. The same remarks apply to the occipital nerves. In occipital neuralgia, ordinarily so termed, on the other hand, the district of one or other nerve, not of both, is usually the seat of pain. Flying, so called "neuralgic" pains in the head, then, *when they attack both sides and do not map out the district of one or other division of the fifth nerve*, should lead to attentive examination for symptoms of tabes. No doubt these may be wanting, as it is quite conceivable, from what we know of the pathology of posterior sclerosis, that the disease may commence in the upper part of the cord and take time to descend; or even, there is reason to think, may, in some cases, remain limited to the locality in which it originated. But at a later period symptoms may be ordinarily expected to show themselves which will tend to refer the pains in the head to a tabetic origin.

The patient whom I now show to you presents a striking example of the cephalic symptoms of tabes. J. D—— is forty-nine years of age, by occupation a sweep. He had small-pox badly, and ague when he was a lad, and he has also suffered from syphilis. A daughter of his is imbecile, one of his sons has fits, and another, who is now blind, had fits in infancy. There is no history of a fall or mechanical injury. The patient applied here in September last on account of *excruciating pains in his head*, "as though," he said, "it was being scranched up." He was blind, there being only qualitative perception of light with the left eye.

Now, intense pain in the head, when it is coupled with amaurosis, is very suggestive of the presence of an intracranial tumour, and the idea that the patient was suffering from some encephalic growth crossed my mind at once, as he began to tell his story. When we came to examine him with the ophthalmoscope, we found that both optic discs were atrophied. Now this was, in the circumstances, to be expected, and the information which the fact afforded, although important, was not conclusive. If instead of atrophy of the discs we had found optic neuritis, this condition, when taken in connexion with the intense severity of the pain in the head, would have gone far towards enabling us to pronounce a somewhat confident diagnosis of intracranial tumour. But the condition was one of atrophy, and atrophy, as you are aware, may be (to speak only of two causes) either a consequence of optic neuritis or due to posterior sclerosis. Now, in most cases in which the atrophy is recent one has not much difficulty in saying to which category a particular example is to be referred. When atrophy succeeds optic neuritis, there is usually to be found for some time afterwards more or less trace of effusion about the disc, the edge of which frequently wears a blurred look. The artery is often diminished in calibre, and the veins may retain more or less of the tortuosity by which they were characterised when the disc was swollen. In sclerosal atrophy, on the other hand, these signs are wanting, and the vessels, undiminished in size, appear as if applied against an opaque white or bluish-green disc, which presents a clear and sharply-cut outline. But these distinctions are not always so pronounced, and in this particular instance one would have felt disinclined to say positively whether the observed atrophy had resulted from optic neuritis or not.[4] It is true that there were no signs of antecedent swelling of the disc or effusion, and no tortuosity of the vessels, such as one commonly sees after optic neuritis. But it is surprising how completely the swelling of a disc may after a time disappear, and what little evidence of the nature of past changes is sometimes left. The ophthalmoscopic signs, therefore, although they pointed only to a wasting of nerve-fibres, with overgrowth of connective tissue, were not, properly speaking, conclusive, especially when the condition was taken along with the clinical history of terribly severe pain in the head. I may mention here that I lately examined after death a man who had incomplete atrophy of the optic disc in one eye, and some amblyopia in the other. His symptoms were purely cerebral, and he died of brain softening. Yet my colleagues, Dr. Hughlings Jackson and Dr. Gowers, who were kind enough to examine the eye independently during life, were of opinion that the atrophy was not secondary to neuritis, and Mr. Brudenell Carter, who also obliged me by examining him, thought that it was of the kind seen in locomotor ataxia—a sclerosal atrophy, in fact. I was, for my own part, doubtful, but more disposed to think it secondary to neuritis, for one or two of the veins at some distance from the disc were somewhat more tortuous than appeared natural. However, after death, I found a small tumour pressing upon the left optic tract, and flattening it. Such pressure might cause an atrophy, which would be indistinguishable from that of tabes. Whether or not there had been at any time antecedent neuritis in connexion with the presence of the tumour must remain, I think, very doubtful. At any rate, there was cause enough for the atrophy in the pressure of the growth. I mention the case as an illustration of the doubt which may sometimes exist upon this point, and as a reason why, in a man who came to us with optic atrophy, and intense pain in the head, I did not feel inclined to decide at once whether his case was one of intracranial tumour or not. Our next step was to test his patellar tendon-reflex. It was absent in both legs. Here was evidence, therefore, at once of the existence of a spinal lesion. This reflex is not lost as a result of cerebral lesions, so that, whatever else there might be (and this, of course, did not preclude the existence of an intracranial growth), there was lesion of the spinal cord or spinal nerves. The clue thus given was followed up, and the following results elicited. Two years and a half previously his sight began to fail, the right eye first. At times he saw double. For some years he had been subject to pains in his thighs, on and off "very quick indeed"; "like an electric shock," he said, "sometimes so sharp that he would jump up, or be obliged to get up and straighten his limbs." The pains in the head, upon which I have insisted, did not begin till about two years previous to his coming under observation, when the pains in the limbs had already existed for a long while. He worked, it seems, up to Christmas, 1878, but then found that he could not see the numbers on the doors of the houses. He was not aware that he staggered until October, 1878, when, whilst sweeping a chimney in a lady's house, he was ordered out "on account of being drunk," being at the time, he pleads, perfectly sober. Latterly, the pains have affected the arms as well as the legs and head. The patient's own description of the pains, as taken down by Mr. Broster, is very characteristic. "It is like," he says, "a violent shock of rheumatics coming lightning speed up and down your limbs, flying up and down." There is no loss of cutaneous sensibility anywhere, but when he is in bed he does not know where his feet are. The muscular power of his limbs is not very perceptibly impaired, but he says that his right leg seems to be getting weak. His pupils are very small indeed. They do not contract to light, but they contract during accommodation.

There can be no doubt that the patient is suffering from tabes dorsalis, and as little, I think, that the optic atrophy is sclerosal, and the pains in the head due to lesion of the descending root of the fifth, and probably also of the great

[4] Gowers, in his able work on Medical Ophthalmoscopy, remarks of "primary" and "secondary" atrophy, "it is doubtful whether the two forms can be distinguished by the ultimate aspect of the disc."

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occipital nerves. The pains he tells us affect both sides of the head, and the forehead.

Whilst upon this subject of optic atrophy, I will show you another man who has been kindly sent to me by Mr. Macnamara. He is a labourer, forty-four years of age, who besides suffering from aortic regurgitation, is affected with incomplete atrophy of both optic discs, but especially of the left. The disc presents a lustre like that of a tendon. When asked if he had difficulty in walking, he said he "could walk as well as ever he did in his life," and illustrated his assertion by a very fair performance. You see, indeed, that there is nothing in his gait which would be likely to attract your attention. His pupils are small. There is a very slight reaction in the right one, and the left does not contract at all to light; but they both act well enough during accommodation. He tells us, and I have inquired most carefully on this point, that he has never had any pain whatever, neither had he seen double; but when we tested his patellar tendon-reflex, we found that there was none in either leg, and when we inquired more particularly about staggering, he allowed that his brother when walking with him had more than once said, "Why, anyone would think you were drunk."

With the exception, then, of this reported stagger, only occasionally observed, the patient presents no sign of tabes to help us in our diagnosis of the cause of the optic atrophy, except the absence of patellar tendon-reflex, and the existence of the "Argyll Robertson symptom" (to use Dr. Grainger Stewart's designation). Can we doubt that they are amply sufficient?

But where even one of these two symptoms is absent I am disposed to think that in certain cases we may make our diagnosis with a good deal of confidence. I will give you an instance. A gentleman, aged thirty, was lately brought to me by Dr. Roose, of Brighton, on account of increasing blindness, supposed to be due to lesion of the central nervous system. The patient had enjoyed excellent health except for an attack of syphilis five years previously. Last May he found that vision with the right eye was failing, and this difficulty has gradually increased, so that there is now only qualitative perception of light with it. It was some time after the right had begun to fail that he found the left eye going also in the same way. On examination with the ophthalmoscope I found what appeared to me to be the signs characteristic of grey degeneration (sclerosal atrophy) of each optic nerve, most advanced in the right. The discs presented no atrophic excavation. They had a tendinous lustre, the veins were rather large in proportion to the arteries, and there was a slight tortuosity in one of them. Patient's perception of colour was imperfect. Scarlet was called "brownish-yellow," green "slaty-brown," a vivid magenta "pale blue." Blue and yellow were described correctly. Careful inquiry showed that he had never had any pain in the head, vomiting, or any other cerebral symptom, such as might have been expected were the atrophy the result of optic neuritis. But, on the other hand, there had been no flying pains in his limbs nor diplopia. Nor was there any ataxia of gait or tottering with the eyes shut. The pupils acted readily to light. There was no anæsthesia, and no trouble with the genito-urinary organs. There was nothing indeed to be noted but the gradually increasing atrophy of both optic nerves. With one exception. I found the patellar tendon-reflex absent in the right leg, and present to only a slight degree in the left. The quadriceps extensor muscle responded readily to blows upon it and to induced currents.[5]

If I have succeeded in conveying an idea of the importance of this test, as exemplified in many forms of the disease we are considering, you will, I think, be disposed to see in this case, as I do, one of tabes dorsalis, which as yet presents itself in a very restricted form.[6]

[5] Since the above was written the tendon reflex has disappeared also from the left leg.

[6] Fourteen years ago Dr. Hughlings Jackson pointed out, in the Medical Times and Gazette, September, 1866, that there was at least a clinical gradation in the symptoms from what was called "uncomplicated amaurosis" to locomotor ataxia. He founded this idea upon the occurrence of characteristic shooting-pains in many cases of amaurosis, in which the ophthalmoscopic changes in the discs were of the character of those met with in tabes. He believed that amaurosis was sometimes the first symptom of this disease. For some time past this view has been accepted, and cases of optic atrophy, with lightning pains and without other symptoms, have been classed with locomotor ataxia. It is only since quite a recent date that Westphal's observations in reference to absence of patellar tendon-reflex have brought us the most important confirmation of this view in the occurrence of the symptom, as in the last case, where none of the other recognised signs of locomotor ataxia have presented themselves.

LIVER ABSCESS AND ANTISEPTIC PARACENTESIS.

BY SIR J. FAYRER, M.D., F.R.S.

(Continued from p. 635.)

I AM indebted to Surg.-Major Don, A.M.D., for the following information respecting the relative frequency of hepatitis and liver abscess in European soldiers in foreign stations:—

Year.	Strength.		Admitted.	Died.	Invalided.
Bengal.					
1870	34,090	Hepatitis	1920	152	249
1871	35,452	Hepatitis	1919	5	241
1872	36,839	Hepatitis	1814	3	210
		Abscess	89	55	43
		Ab. with dysent.	45	43	—
Madras.					
1870	9,936	Hepatitis	635	41	131
1871	10,684	Hepatitis	713	41	58
1872	10,892	Hepatitis	586	5	70
		Abscess	43	35	—
Bombay.					
1870	10,557	Hepatitis	424	11	49
1871	10,838	Hepatitis	464	18	30
1872	10,898	Hepatitis	350	12	41
		Abscess	12	8	—
China.					
1870	546	Hepatitis	15	0	1
1871	516	Hepatitis	8	0	0
1872	789	Hepatitis	15	1	0
		Abscess	1	1	—
Japan.					
1870	624	Hepatitis	15	1	1
1871	395	Hepatitis	6	1	0
1872	—	—	(No returns for this year)		
Straits.					
1870	571	Hepatitis	34	1	0
1871	571	Hepatitis	21	0	5
1872	708	Hepatitis	26	0	0
		Abscess	1	1	—
Ceylon.					
1870	906	Hepatitis	37	5	10
1871	(Not given)	Hepatitis	44	1	10
1872	1001	Hepatitis	40	5	2
Mauritius.					
1870	665	Hepatitis	22	0	1
1871	(Not given)	Hepatitis	13	1	1
1872	469	Hepatitis	4	0	1
Cape and St. Helena.					
1870	2441	Hepatitis	66	4	16
1871	2473	Hepatitis	24	0	6
1872	2484	Hepatitis	23	1	3
West Indies.					
1870	1432	Hepatitis	2	0	0
1871	966	Hepatitis	12	0	0
1872	1112	Hepatitis	2	—	2
		Abscess	1	0	0
Bermuda.					
1870	1908	Hepatitis	8	0	1
1871	1733	Hepatitis	6	0	2
1872	1770	Hepatitis	5	0	0
Canada.					
1870	4519	Hepatitis	10	0	0
1871	2383	Hepatitis	12	1	1
1872	1602	Hepatitis	3	0	9
Gibraltar.					
1870	4397	Hepatitis	17	0	4
1871	4428	Hepatitis	16	0	6
1872	4066	Hepatitis	9	0	4
Malta.					
1870	4799	Hepatitis	26	5	6
1871	4977	Hepatitis	26	2	7
1872	4855	Hepatitis	27	0	4
		Abscess	2	1	0

From these returns it will be seen that the disease is more prevalent in India than in the West Indies.

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It is thought by some that liver abscess is due to absorption of septic matter from dysenteric ulceration in the bowel; others have thought that liver abscess is the cause, and not the result, of dysentery. I am inclined to regard them as independent, though often co-existent, and due to the same climatic causes; and I believe that it occasionally does *result* secondarily by absorption from the ulcerated bowel, and is then of the nature of pyæmic suppuration, in which case it is apt to be multiple, and more serious in character than the ordinary form of abscess.

The early symptoms preceding suppuration in the liver are those of congestion, swelling, pain, high temperature, fever preceded by chills or well-marked rigors, and sweats. There is cough, pain in the right shoulder and hypochondrium, inability to lie on the left side, owing to the weight of the swollen and dependent liver; nausea or vomiting, from pressure on the stomach, or irritation of the vagus; a yellow tinge of the skin and eyes; sometimes a high-coloured state of the urine and lithic deposits. These symptoms, together with the bulging of the side, between or below the ribs, leave little doubt of what has occurred. But there are cases in which the symptoms are not well pronounced, and yet an abscess may form and escape detection until bulging and fluctuation, or sudden evacuation of its contents through the bowels, the lung or stomach, or into the peritoneum, reveals the true state of matters. In the last case the result is generally fatal; in the former sudden exhaustion, amounting to collapse, may accompany a discharge of pus, or suffocation from effusion in the lung may prove fatal. The amount of pain depends on the part of the viscus implicated. If the matter be deep-seated in the parenchyma, at a distance from the peritoneum, the pain is comparatively slight or absent. If it approach the surface, or commence there, the pain may be severe. In any case there is a sense of distress and uneasiness felt most distinctly when the patient turns on his left side. Decubitus on *either* side is often painful.

In many cases of hepatitis, the patient is suffering also from malarial cachexia, and is liable to recurrences of febrile paroxysms which render it doubtful whether the chills or rigors are due to this or to suppuration; where there has been no malarial fever, the chills or rigors may be so slight, or so mixed up with other uneasy sensations, as to have escaped notice, and the patient denies having had them at all.

Again, if the abscess be small and central or posterior, the pressure is so slight on surrounding parts that the stomach is not affected, neither is pain felt in the right shoulder, nor uneasiness in the left side in the recumbent posture. In such cases the patients are apt to be regarded as suffering simply from general deterioration of health, disordered stomach and bowels, and congested liver from malarial cachexia, until the true nature of the case is revealed by the occurrence of the symptoms I have just described, or when, after death from diarrhœa, exhaustion, or other cause, it may be discovered that either an encysted and quiescent abscess still exists; or a certain amount of caseous matter in a contracted cavity shows that an abscess had formerly existed, but has undergone a process of drying up; or after years of broken health fresh inflammation may light up suppuration in or around an old abscess, and prove rapidly fatal.

The following cases will illustrate the subject under consideration:—

CASE 2.—An English officer, aged twenty-nine, was exposed, on military duty, to the fierce July sun in the north-west of India during the greater part of an afternoon. This was followed by severe headache and general malaise. A few days later he felt severe pain in the right side, and was placed under treatment. Three days later, on the 16th, the pain increased, and he had fever; leeches were applied over the liver. In the evening he had a rigor. During the next few days the pain increased; he had more leeches, aperients, and salines. The acute gave way to a diffused pain and weight in the hepatic region. Blisters were then applied. A swelling made its appearance four inches from the spine, below the ribs. He was then sent to Calcutta, where I saw him on the 4th September. He was weak and anæmic, with a yellow tinge of the skin. The liver was enlarged, and just below the last rib there was a fluctuating swelling. Pulse 100; skin cool and moist; no pain, but uneasiness and a sense of fulness in the side; breathing slightly embarrassed. His tongue was clean; bowels rather costive; appetite fair. I opened the abscess, and drew off through a cannula eighteen ounces of thick dark-coloured pus; the cavity was washed out with a solution of carbolic acid, one drachm to a pint of water. The cannula was left in the wound; the cavity yielded eight ounces of pus in the evening, and was again washed out with the carbolic acid and water.

Sept. 6th.—Drew off eight ounces; removed cannula, as it was causing irritation. There was no fever, and he was much relieved; the pulse less frequent. An aperient was given, as the bowels were confined. The wound was kept distended with a plug of lint soaked in glycerine and carbolic acid. Takes food and bitter beer with appetite. Quinine and sulphuric acid ordered; bowels to be kept open with sulphate of magnesia. Pulse 88; no fever.

8th.—Doing well, the quantity of pus daily diminishing; in the morning six ounces, evening two ounces. Eats and sleeps well; is in very good spirits.

9th.—Continued to improve. Two ounces of pus drawn off this morning; half an ounce in the evening. No fever. Pulse 78 to 84. Appetite good. The saline aperient to be repeated when bowels are confined.

10th.—Half an ounce of pus this morning; a quarter of an ounce in the evening. The cavity is evidently contracting. Pulse 74. He looks better.

11th.—Was fatigued by preparations for a sea voyage. Three-quarters of an ounce of pus in the morning; about one drachm in the evening. Pulse slightly quickened. He sailed this morning for England.

A report came from Ceylon that he was well enough to go on shore for a walk.

This is a good example of simple abscess of the liver in a young man of steady and regular habits. There was no history of dysentery or diarrhœa; it apparently commenced by congestion, terminating rather insidiously, as so frequently happens, in suppuration, which probably commenced about twelve days after the first symptoms of congestion. As inflammation approached the surface, the pain increased, and peri-hepatitis caused adhesion of the right lobe to the parietes. There was reason to believe that the abscess was solitary, and not due to septic absorption from dysenteric ulceration. The prognosis was favourable, as latterly the abscess had caused little constitutional disturbance. The rapid contraction of the cavity showed that repair was vigorous. Recovery proceeded rapidly under the influence of change of climate and sea air.

The following case shows the insidious manner in which liver abscess sometimes forms:—

CASE 3.—A young Englishman, aged about twenty-one, of fair complexion and healthy, vigorous frame, of rather irregular habits, after a residence of three years in Bengal complained of anorexia, hepatic fulness, general sense of failing health, disordered bowels, sometimes confined, sometimes relaxed; tongue loaded. He was anæmic, and the skin had a yellow tinge; tongue coated; pulse quickened. There had been neither rigors, chills, cough, nausea, nor vomiting. The liver was enlarged downwards, but there was no bulging, neither much tenderness on pressure. Saline aperients, to relieve the portal congestion, were ordered, and he was sent to sea for change of air; returned in a few days, and went to reside a short distance from Calcutta, continuing to perform his official duties.

When I saw him some weeks later he looked pale and thin, but was in good spirits, and at his work as usual; indeed he had not been absent more than a day or two. Though still weak, he was rapidly regaining strength. He informed me that one day, soon after his return from on board ship, after dining with some friends, one of them, in romping, accidentally gave him a squeeze by bending his body, which compressed his side. This was followed immediately by symptoms of collapse, with coughing and vomiting of a large quantity—a basinful—of purulent matter. A liver abscess had opened into the stomach, and evacuated. On recovering from the shock, he soon began to regain strength, and before very long was restored to health.

This case shows how insidiously the liver may suppurate without more marked symptoms than may be seen in cases of malarious poisoning, in which the general deterioration of health is expressed by occasional feverish attacks, attended by some hepatic congestion; the first evidence of the formation of matter being its sudden evacuation in the manner described. On the other hand, the most characteristic indications may have been present, including rigors, chills, high temperature, sweats, vomiting, with hepatic swelling and pain, and subside without any evidence that pus has formed; indicating acute congestion, which has resolved, or that an abscess may have formed and been removed by absorption, or have opened into the intestine, and passed

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away so gradually as to be unobserved by the patient, who has regarded it as a phase of diarrhœa, from which he was already suffering. In fact, the diagnosis of liver abscess often escapes detection by the most acute observers.

Another case is that of an English officer, aged forty-two, of slight frame, but previously in good health, who had been in India several years, and returned to England suffering from symptoms of hepatic disease.

CASE 4.—"Col. R. B—— went to India in December, 1868. Since that time has spent twenty-one months in England. Returned to India in July, 1874. Up to this his health had been good. In the beginning of February, 1877, when at Mhow, he began to be ill. Pain sometimes severe on the left side of the back of the head; his skin became yellow; he was feverish, his spleen was enlarged, and the left side bulged; this was blistered and soon subsided. The pain in the head continued; he lost flesh, and seemed weak and ill. On the 27th of February he embarked for England. In Bombay he got worse, and on the voyage to Port Said was very ill—restless nights, intense weakness, loss of appetite, hands tremulous, shivering fits, and night sweats. He arrived in England on 2nd of April. He had had excellent health in India previously, and led a most active and very temperate life. He was at Delhi in December and January, in tents. Very hot days, very cold at nights. He used to be out all day, but was very careful in protecting his head from the sun. It was not until a fortnight after his return to Mhow that he began to complain of pain in the head—the commencement of this illness."

I found that the liver was enlarged downwards; his skin was tinged with bile, his face pinched and anxious, his urine occasionally loaded with lithates, bowels constipated; pulse from 100 to 120 and 130, very easily excited; great debility and nervous depression; walks in a stooping attitude and looks feeble; slight tenderness on pressure over the lower margin of the liver, no pain nor enlargement of the spleen; other organs apparently normal. The morning temperature was 100° to 101°, but rose in the afternoon to 102° and 103°. The general aspect was that of one suffering from hepatic suppuration.

I watched this case with much interest for several weeks, during which the progress was slow but satisfactory. There was gradual return of strength, less nervous depression, improvement in the condition of the urine and secretions, and a steady decline of temperature from 103° to 100°, and 99° to 98°, especially when he was under the influence of five-grain doses of quinine and hydrochlorate of ammonia, a valuable remedy, for the use of which in liver disease we are indebted to Dr. Stewart, B.M.S., taken three times a day. Pulse gained force, slower and less irritable; appetite, spirits, and the general aspect of convalescence gradually increasing.[1] It is impossible to say whether suppuration had taken place or not. A small abscess may have formed, that either had become quiescent and was gradually drying up, or may still some day reveal itself through the bowels, if it had not already done so unobserved.

The thermometer is, perhaps, the best indication of the changes going on in the liver, and the absence of other marked symptoms makes it difficult to form a diagnosis. One can only wait and watch the tide of daily temperature, pulse, and the state of the excretions. The continued depression of health, and the persistence of high temperature in such cases, especially if accompanied by chills and sweating, even though slight, point to suppuration; and it must be remembered that pus *may* become encysted, quiescent, and so localised as to have little or no apparent disturbing effect on the general health, and yet such a condition is fraught with danger from any accession of inflammation in the cavity or its vicinity, and the consequent increase of the primary abscess, or the development of new ones. Hence the importance of great care on the part of those who have suspected liver abscess, and the danger of exposure to any cause, climatic or dietetic, that might tend to set up fresh mischief.

CASE 5.—M. D——, aged twenty-three, came under my observation in Calcutta in April, 1867. He had been in Calcutta for about three years, had enjoyed good health until recently, and was neither intemperate nor irregular in his habits. On March 4th he had had ordinary fever, but when I saw him in April, though there had been no great amount of pain, there were well-marked indications of the formation of pus, but neither jaundice nor diarrhœa. The liver was enlarged downwards, and a prominence below the ribs was evidently due to an abscess. On the 19th of April I introduced a trocar and cannula, and gave exit to a large quantity of pus. The cavity was washed out with a weak carbolic solution, the cannula was left in, that more pus might be drawn off at intervals. He was much relieved, and soon improved. But to better his chances of recovery, and to get him away out of the intense heat of April in Calcutta, he was put on board a steamer, with the cannula still in the wound. He improved so much on the way home that it was removed before he reached Suez—"in about fourteen days." Within three months he had recovered, and ten years later I saw him in good health. He returned to India, and is, I believe, still there.

(To be concluded.)

[1] As I write, March 30th, 1880, he has come in to see me, having just returned from India. He looks in excellent health. Has had no liver trouble. Has recently suffered from renal calculus. Urine now healthy, except that it is rather phosphatic. It is interesting to note the occurrence of this calculus in reference to the damaged liver.

A NEW TREATMENT OF GONORRHŒAL OPHTHALMIA.

BY C. BADER,
OPHTHALMIC SURGEON TO GUY'S HOSPITAL.

GONORRHŒAL OPHTHALMIA, at all stages, is to the oculist a source of great anxiety. Whether local treatment—ice, bleeding, scarifying, caustics (all painful and often more than useless)—or general medical treatment (mercury, &c.), be employed, we meet cases, even if treatment be began at an early stage, in which the sight of one or both eyes is lost.

The treatment adopted in the following cases suggested itself by the fact that mercury, if thoroughly applied locally, has a destructive effect upon contagion. In vaseline, in itself of antiseptic origin, we have an invaluable means of bringing and keeping mercury in contact with mucous membranes, such as conjunctiva, urethra, &c.; daturin or atropin are added to counteract disturbances which, during the ophthalmia, may proceed from the iris and deeper parts of the eye. An ointment was employed, consisting of nitric oxide of mercury one grain, daturin one-fifth of a grain, vaseline one ounce.

CASE 1.—J. R——, aged seventeen (January 21st, 1879), suffers from gonorrhœa, ninth day. When seeing the patient with Dr. Wooley of Dalston, he presented all the symptoms of gonorrhœal ophthalmia in its acute stage. Eyelids of right eye blue, red, swollen, and so tense that only the lower third of the cornea could be seen; it was yellow and opaque; there was profuse purulent discharge. The left eye was healthy.

I considered the eye nearly lost, and felt justified, instead of the usual treatment, to try the effect of an ointment made of daturin and nitric oxide of mercury, of each one-fifth of a grain, vaseline one ounce.

I thoroughly washed away the discharge with tepid water, then with a large camel's-hair brush freely, though with difficulty, pushed the ointment beneath the upper eyelid of the right eye; this caused no pain whatever. Both eyes were then bound up with lint thickly smeared over with the ointment. The attendant was informed of the dangerous nature of the discharge, and was told to wash it away every third hour, and to apply fresh lint spread over with ointment to the eyelids of the inflamed eye.

For four succeeding days I applied the ointment myself beneath the right upper eyelid. On the third day the patient became slightly delirious, probably from the effect of the daturin. The mercury was increased to one grain, the daturin remaining one-fifth of a grain.

On January 30th I received the following from Dr. Wooley:—"The eye is very much less swollen to-day, but he has complained of severe pain. The delirium, which he was suffering from, has not returned, and he has made good progress.

February 1st.—Much better; ointment applied beneath the upper eyelid as before; fresh lint used once daily only; pus washed away repeatedly during the day; cornea visible throughout lower third, still opaque but not ulcerating.

3rd.—Eyelids again swollen with much pus. From this

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day rapid progress was made. As soon as the eyelids opened freely, the application of the ointment with the brush was discontinued, and only lint and ointment applied every morning to both eyes. The left eye kept free from inflammation throughout.

March 5th.—Both corneæ clear; eyelids open freely.

I saw the patient once during the summer. He was completely cured; both corneæ clear.

CASE 2.—W. W——, aged three years and a half (November 6th, 1879), was sent to me by Dr. Ward of Finsbury Circus. The father of the boy, on inquiry, stated that the boy had slept with a servant who suffered from gonorrhœa. To admit of the treatment being carried out carefully, the boy was taken into the eye ward, Guy's Hospital. On admission the left eye was sound, the right suffered from acute gonorrhœal ophthalmia (eyelids red, tense, swollen; much chemosis, with conjunctiva protruding, profuse purulent discharge). On examination under chloroform only the lower third of the cornea could be seen; it was clear, with the surface softening along the margin. Portions of the conjunctiva of the lower eyelid were covered with a grey opaque substance, as seen in mixed cases of diphtheritic and purulent ophthalmia.

The pus was thoroughly washed away with tepid water. The ointment, with a large camel's-hair brush, was well pushed between the upper lid and the eyeball, and thickly applied to the conjunctiva. Both eyes were kept bound up with lint thickly spread over with the ointment. Fresh lint was applied every morning. Every third hour during the day the discharge was washed away with tepid water (the left eye being bound up), and the ointment pushed beneath the upper eyelid. This caused no pain, and the boy bore it quietly. On the third day the grey covering had disappeared from the conjunctiva.

On Nov. 13th the application of the ointment beneath the upper lid was discontinued; the lint was changed every morning, and the lids cleansed with tepid water.

Nov. 17th.—The eyelids open well; the conjunctiva is still congested; the cornea smooth and clear.

28th.—Discharged cured.

CASE 3.—B. E——, aged seventeen, was admitted into the Eye ward on Jan. 13th, 1880. His medical man states, "The youth came to me ten days ago with the eye much in the same condition as it is now. He had a week's treatment with tonics and the daily dropping of nitrate of silver solution (one grain to an ounce). The boy suffers from gleet." The right eye was healthy. In the left cornea, near the outer margin, was a deep large ulcer near perforation; the adjoining cornea was infiltrated with pus; there is iritis, chemosis, swelling of eyelids, and slight purulent discharge.

The ointment (atropin being substituted for daturin) was applied beneath both upper eyelids, and both were kept bound up with lint smeared over with ointment. This was repeated daily.

Feb. 3rd.—Much improved.

10th.—The patient was discharged. Right eye sound; left eye, surface of cornea smooth, outer third opaque, pupil somewhat irregular, fairly dilated. Was told to wear a shade, and to apply the ointment to the inner surface of the under lid at eight, two, and five o'clock.

CASE 4.—E. T——, aged twenty-six (Feb. 12th, 1880), was admitted with purulent ophthalmia of both eyes. Left cornea, small opacity near outer margin; right cornea, two opacities. Some iritis. Much chemosis and swollen eyelids, with moderate purulent discharge. The ointment was applied beneath the eyelids at eight, two, and five o'clock daily, and the eye kept bound up with lint and ointment. No pain whatever on application of the ointment.

Feb. 20th.—Patient was discharged with dilated pupils; smooth cornea, slightly opaque. All swelling of eyelids and conjunctiva had disappeared. She was told to wear a shade, and to apply the ointment to the inside of the under lids at eight, two, and five o'clock.

CASE 5.—B. S——, aged four (Feb. 20th, 1880); badly fed; has had whooping-cough for the last two months; cannot be admitted into the Eye ward. Both eyes are affected; the eyelids swollen, purple, tense, can hardly be raised. Conjunctiva highly chemotic. Both corneæ transparent, peeling along the margin. The ointment (nitric oxide of mercury and atropia of each one-fifth of a grain, vaseline one ounce) was, under chloroform, freely pushed between the upper lids and the eyeballs; both were bound up with lint smeared over with ointment.

Feb. 24th.—Judging from the size of the pupils, the mother, though shown how to apply the ointment, must have done so very imperfectly. The ointment, under chloroform, was again applied as above.

27th.—Same application under chloroform. All swelling of eyelids and conjunctiva has subsided. Corneæ clear and smooth.

ON MEDICAL CERTIFICATES OF INSANITY.

BY T. N. BRUSHFIELD, M.D.,
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(Continued from p. 641.)

THE difficulty that medical men experience in framing a certificate is due to several causes, among which may be mentioned an imperfect knowledge of the nature and symptoms of the malady, and doubts as to which are the principal symptoms; but the prevailing difficulty appears rather to consist in the want of knowing the leading principles that should guide them in arranging and recording the "facts" they have ascertained.

Insanity is so protean in its character—no two cases being alike,—that all I can attempt to do is to indicate the principal division of symptoms that may require to be mentioned in the certificate, and to arrange them in the most simple and practical form. Undoubtedly the simplest form of division is into the three heads of the *appearance*, *speech*, and *conduct* of the patient; or, in Dr. Bucknill's words, "how he lives, what he says, and what he does." So that no point of importance might be omitted, I have elaborated this triple division into the following sets of symptoms. The arrangement is not a very philosophical one, but it will be found very convenient for the medical practitioner to bear in mind both in the examination of his patient and in the subsequent certificate.

Appearance.—Dress.

Speech.—Absence of speech, delusions, coherency or incoherency, memory, change in the higher emotions (speech), and other abnormalities.

Conduct.—Danger to others, danger to self, change in the higher emotions (action), propensities, general demeanour, and other abnormalities.

Appearance.—This does not, as a rule, receive its proper share of attention in certificates. It includes the general attitude of the patient as well as the facial aspect. The latter is often pathognomonic of some forms of the disease, and its description tends to strengthen the other recorded symptoms. For instance, what could be more expressive than "is of dull and heavy aspect" in a case of epileptic hebetude passing into dementia, or "facial expression of grief and dejection" in a patient suffering from acute melancholia. The wild and excited countenance in mania; the expression of pain and anxiety in some forms of melancholia; the dull, unintellectual visage, with averted eyes, in masturbation, &c., should all be mentioned. On the other hand, it is necessary to describe the kind of expression. Not only is this absent in the following certificate, but the whole of the symptoms taken collectively afford no proof of insanity, and yet the patient was suffering from acute hysterical mania: "Wildness and peculiar expression of countenance, numberless statements plausibly spoken as facts not having the slightest foundation in truth." Again, an entry like this: "She has the physiognomy of a patient with dementia," is of no value to anyone, since it does not describe the character of the peculiar physiognomy, and many sane persons would scarcely like to be declared insane on account of their demented look. Peculiarities of dress, especially when they show a marked change from the usual habit, should be recorded.

Absence of speech.—Some of the most difficult cases in which the medical man has to certify to insanity are those marked by obdurate silence, so that direct evidence is unobtainable from the patient's conversation. The symptom itself is an important one when allied with others. It may be owing to simple inability, as in some cases caused by sudden fright or shock; but in the majority of instances the patient can but will not converse. This may be owing to

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general inertness, fatuity, hysteria, melancholia, simple perversity, &c. The certifier should endeavour to ascertain the cause, and, if successful, should state it. Unless the cause be known, a prognosis could only be guessed at. The following case was well investigated by the medical man, who was able to trace the silence to the existence of a delusion:—*Facts personal.* "The woman stares vacantly and stupidly at you when asked a question, but cannot be induced to speak, and appears to suffer from melancholia." The certificate was returned to be amended, when the following was added: "During the interview, which lasted a quarter of an hour, she continued to pace up and down the room, wringing her hands and groaning, but would reply to no question put to her." *Facts hearsay.* "Her husband informs me that for over a month his wife has rarely spoken, will not eat, appears quite indifferent to family and surroundings, and labours under the delusions that she has committed adultery, and that she has contracted venereal disease." This case was peculiar, inasmuch as the evidence of delusion rested entirely upon hearsay evidence. It was also a very instructive one, as showing how much a medical man can effect by making full inquiry into the whole history of the case, and stating the result of his investigation. The secondary testimony he obtained was of the greatest value in the subsequent treatment of the patient. The observations of the asylum medical staff corroborated those of the certifier. The patient had acute melancholia, from which she made a good recovery. She owned that during the period of her silence she felt frequently urged to commit suicide. The following certificate of one of this class contains a good example of motive-guessing when the patient would not speak:—"She has been before confined at Wandsworth on my medical certificate. She mopes about in a most melancholy way; will speak to none; will answer no questions; and obstinately refuses to take any food or do anything she is advised,—I imagine, as before, under a fear that she will be poisoned."

Delusions.—The larger number of cases of active insanity that fall under the notice of the medical men are characterised by delusions, and as they usually constitute the most important symptoms of the disease, I may be excused for devoting a little time to their consideration. The existence of a delusion not only at once demonstrates the patient to be insane, but simplifies the work of the medical practitioner in constructing his certificate. A well-marked delusion is of sufficient import to be detailed as one of the chief, if not *the* chief symptom exhibited by the patient, and which all the others relating to appearance and conduct will serve to corroborate. In a court of law a delusion is accepted as a proof of insanity. Many judges and eminent lawyers are apt to go a step beyond this, and to say that insanity cannot be proved without it, an affirmation that is not agreed to by psychologists, and if true would exclude a large number of persons who are now declared to be insane. To constitute an insane delusion the presence of cerebro-mental disease as a causation must be recognised. This at once excludes the false beliefs (sane delusions) which may pervade temporarily or permanently whole communities or nations.

Three classes of delusions as symptoms of insanity are recognised:—Hallucinations, illusions (delusions secondary), delusions proper (primary). The first two depend upon disorders of the special senses, but whereas hallucinations are subjective, illusions are objective. In hallucination there is false perception—a man fancies he sees or hears persons who have no real existence. In illusion there is a mistaken perception, a person, for instance, fancies the patterns of a wall paper to consist of live objects, another fancies he sees angels, where others notice clouds only. Both these conditions are perfectly consistent with acknowledged sanity, and so long as they are recognised by the individual who is the subject of them as sports of the imagination, he is considered as a sane person. Immediately, however, they are believed in as realities that no reasoning will disturb, they become, in this secondary condition, evidences of insanity, and are considered as delusions. Another class of delusions are of primary origin, and consist of an endless variety of false beliefs and ideas, not traceable to affections of the special senses. The legal term for all these conditions is simply "delusion," and I strongly recommend that this word be used in a similar sense by medical men, and so prevent the occasional confusion of terms in the certificate, of which the following may be cited as an example in which the patient, although the subject of hallucinations, was considered to have no delusion. "He appears to have no one positive delusion, but his mind is in a very confused condition, speaks of persons being secreted in and under the bed."

Insane hallucinations are much more frequent than illusions. Auditory hallucinations are of common occurrence, and yet medical certificates rarely mention them. The importance of their presence cannot be overrated, and their recognition by the medical man enables him to point out the probably unfavourable prognosis, and also to warn and guard against violence on the part of the patient towards others, and which he is prone to commit under the guiding direction of the imaginary voice.

If a patient entertains specific delusions, their nature and character must be recorded to make the entry valid. The sentences "full of delusions," and "continued restlessness and talking, with delusions," without further description, destroy the value of the certificates. Their insane character is sometimes so manifest that it is often thought unnecessary to call them "delusions"; as, for example, in the following certificate, where the first-named had the character of illusions and the latter of hallucinations. "She informs me that for several months past she has been accustomed to converse with birds, who frequently bring messages to her, and whose language she understands quite as well as she does mine; that she broke a pane of glass the other day for mischief; that the Almighty frequently reveals Himself to her in the shape of a dove, and that she is constantly hearing the voices of her mother and son conversing with her outside the door." But where their insane nature is not so apparent, and especially if they are possible truths, then it becomes a positive necessity to state definitely that they are "delusions," and indeed it is the more advisable plan to make this the invariable rule. A difficulty sometimes occurs where a medical man is assured that certain statements are delusions, and yet he is of opinion they are possible truths. If he is satisfied in other ways of the existence of insanity, it would be better for him to add, "I am informed these are delusions." I am not certain whether it would not be the wiser plan to add the name of the informant. In the following two examples the certificates were returned to the medical men to be amended, the subsequent additions proving the insane character of the patients' statements being added in each:—"States that his wife wants to poison him, and is following him about for that purpose"; addition, "this being a delusion." "Says that her daughter has been done away with—that last night she heard her screams whilst she was being murdered"; addition, "which statements are delusions." The imaginary ideas are sometimes reported by medical men as though they were absolute truths, as in this example: "Has written 'in his sleep' a large scroll, which is to make him immensely rich; he presents it to Lord Beaconsfield to-morrow; it will insure him the title of prince or emperor. Holds communion with spirits. He is to be the emperor over all nations." If these entries had been qualified—the first, for instance, in this form, "He informs me he has written in his sleep, &c.," and had added, "All these statements being delusions," the certificate would have been a very good and strong one.

A leading feature of a delusion is its remarkable persistency, in this respect contrasting strongly with the evanescent and variable character of the incoherent statements made in chronic insanity, or some of the extravagances uttered in general paralysis. That one is mistaken for the other, the two following examples will show:—"She is incoherently raving, and under the delusion that the woman next her is her sister." The case was one of acute mania, and the so-called delusion appeared to be an incoherent expression that was probably forgotten a few minutes afterwards. "The patient wants his legs cut off, ground, and cooked for breakfast—says that human flesh is a great improvement to his food." This case was one of confirmed general paralysis, and exhibited all the delusions of grandeur, &c., and exalted ideas so common in that disease. For instance, he declared his bones were made of diamonds, that he was strong enough to lift twenty tons, &c. The statement contained in the certificate was one of those extravagances uttered by general paralytics, but it was non-persistent, and in this differed from an ordinary delusion.

I append a few extracts from certificates in illustration of insane hallucinations, illusions, and delusions proper,

[1] The whole of Chapter 2 in Brierre de Boismont's work on Hallucinations is devoted to "Hallucinations co-existing with Sanity," and which contains a large number of examples. See also Dr. Blandford's article on "Auditory Hallucinations" in the Journal of Mental Science, vol. xix., p. 507 et seq. There appears reason to believe that all the instances mentioned were accompanied by a varying amount of cerebral disorder, not, however, amounting to insanity.

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with a few short comments on each:—"Labouring under delusions—(1) when she has been walking the streets and looking at people they seem to change to the likeness of others; (2) although told that I am the medical officer she is under the impression that I am a person named George Grant, and continually asks the question 'Are you not George Grant'?" A good example of illusions of sight. "He says that he can see the root of all evil sitting on a beam in the ward." An unusual form of hallucination of sight. "I find him strange and incoherent in his language. He told me he had been in a trance forty days, and that he cannot go to his work because he sees dogs which terrify him." Hallucination of sight stated as if an actual truth. "Whilst speaking to him he fancied there were mice running about the room, that he heard burglars getting into the house, that different people whom he knew were coming through the door of the room, though it was shut, and he would stand up to salute them." A well-marked case of hallucinations of sight and hearing. "Talks in a hesitating and rambling manner. Says his head has been cut off, and stuffed with snakes; that his heart and liver have been taken out by men, washed, and put back again." This patient told me he could feel the adders moving about in his head; it appeared to me to partake more of the character of an illusion connected with the sense of touch than that of a delusion proper, under which latter term Dr. Blandford (p. 15) classed a somewhat similar case. The man was also the subject of auditory hallucinations. A good illustrative example of varieties of delusion in the same individual. "Does not believe her children are hers, and fails to recognise them when brought before her. Sees black men (natives) with white caps on at the foot of the bed, who disappear when she addresses them." An intermittent form of hallucination of sight, very uncommon. "She has a delusion that some one is continually, or almost continually, shooting poison into her body." An illustration of illusion of the sense of touch. On admission she confirmed the statement contained in the certificate—namely, the assertion that poison was shot into her by various things, such as a gun, telescope, &c., and that it felt like an electric shock. "Is incoherent and irrational in her language, and suffers from delusions; believes that her food is poisoned, and that she is informed of this by invisible means." A fairly common form of illusion of taste. "Her manner is very excited, and she has various delusions, one of which is that she has committed some heinous offence which is an unpardonable sin." A common delusion in some forms of melancholia. "He is under the delusion that he has lost all his bowels and inside, and is perfectly void of strength. Vacant countenance and expression. He says if he attempts to walk the wind gets into his legs, and he is blown away." "Very melancholy; fancies that he has starved his daughter, and that he is to be punished by being starved himself. Believes that his daughter is very ill in consequence of his treatment. She is in fact quite well and well off, and married, as he says, to a 'good fellow,' who is well able, and does take care of her." A good instance of an occasional form of suicidal melancholia, when the patient attempts to commit suicide, so as to avoid the consequence of an imaginary calamity. "That she is beset with delusions respecting the police having combined to persecute and annoy her. That wherever she goes the constables and detectives follow her. That they have taken lodgings in her house with similar views as regards her. That a constable inspecting a dog licence is a detective in disguise. That ordinary lodgers in the house are really police, &c. Her manner, aspect, and features show great nervous excitement, and she is exceedingly garrulous, incoherent, and discursive in her talk." This is a well-marked type of a class of cases of tolerably frequent occurrence, where the patient believes she is the victim of general persecution—that everyone is in a conspiracy against her. During her asylum residence she declared that all the staff, as well as the patients, were in league against her. Said they wanted to poison her food, &c. It appeared very odd for her husband to declare she was quite sane, and that her statements were true.

"Looks wild, talks incoherently, and told me he was in Deptford, although in Bethlem Hospital, and that Her Majesty has left him four millions of money, and also a publicanhas left him four millions of money, which is untrue." These grandiose delusions are commonly present in general paralysis, and are usually associated with exaggerated and exalted ideas of all kinds. In the instance just quoted the patient had all the ordinary symptoms of the disease. Taken by themselves these delusions are not pathognomonic of general paralysis, as the following certificate will show they may be present in other forms of insanity. The date of the certificate is Sept. 28th, 1860, and the patient, aged sixty-six, weak-minded from birth, is yet a hearty, healthy man, whereas, had he been a general paralytic, he would probably have died within two or three years after his admission. "He is in a morbidly-excited state, incoherent and threatening, fancying himself possessed of great wealth, legal knowledge, and the strength to vanquish any number of soldiers or constables, using threats of personal violence to his sister and neighbours." Loss of personal identity is a frequent symptom, of which the following are fair examples:—"At times he is perfectly silent, and will not answer, at others he is excitable, and says he is Jesus Christ." "Violent, incoherent, states that he is the Emperor Napoleon." The next two contain the whole of the entries in their original form; the first is obscure, the second invalid; both were returned to be amended:—"Irrational and sullen, and says and does the most irrational things, for which he can give no reason." "Very violent, and called me Dr. Kenealy; also saw objects in the fire."

Coherency and Incoherency.—The patient may be perfectly coherent and yet be the subject of delusions; these are the cases to which Locke's remark applies—viz., "Having joined together some ideas very wrongly, they mistake them for truths, and they err as men do that argue right from wrong principles." Swearing, violent, abusive, and obscene language may be as fairly coherent in the insane as it is in the sane when uttered under circumstances of great rage. In certificates these points should be stated for what they are worth, without the necessity of including them under the term of incoherence. Again, coherency of language is undisturbed in the simplest form of melancholia unattended with delusion, and also in cases of emotional insanity. Incoherency characterises two opposite forms of insanity—acute mania and dementia, but the causes are different in the two. In the former the flow of ideas is too rapid, in the latter there is direct failure of the mental powers. I will give quotations illustrating each condition. The first two were taken from certificates of the same patient (the subject of acute mania) by two medical men. 1st. "She is in a state of violent mania, rushing about, shouting, hallooing; threw her arms round my neck, and called me her saviour; that I was holy and pure, then she fell on her knees and began praying." 2nd. "She is in a state of raving mania, pacing round the ward in her chemise and raving incoherently." The next was a case of subacute mania passing into chronic insanity. "She talked incoherently and incessantly. She appears unable to talk about one subject, but branches off into a variety, and mixes one thing up with another." The last was a case of dementia. "There is evidence of confirmed imbecility both in appearance and speech. When accosted he is bewildered or confused, and answers questions at random or incoherently, and with hesitation. There is failure of memory and appreciation of common facts." Respecting the use of the term imbecility in this instance, it is better to restrict it to cases of congenital deficiency or arrest of proper brain development in early life, and to use the word dementia when the patient has once had his brain fairly developed, but its powers are in a state of decay.

It is often of the greatest use in certificates to mention the manner in which the patient replies to questions, giving an illustration where possible—whether he answers them coherently, incoherently, irrelevantly (as when his reply would have been a proper one to a totally different question), irrationally, by repeating the same word or phrase whatever the nature of the question, by repeating the last words of the question asked—like an echo.

Memory.—There may be a defect of the memory of past events only, or of recent events only, or of both. The memory of recent occurrences gradually fails as age approaches, and is more obvious in ordinary senile dementia, where the persons often appear to live, as it were, in a past world. In confirmed dementia following chronic mania or general paralysis, the failure is often very marked. The degree of defect or of failure should if possible be noted. In the following case the failure was not complete at the time of the patient's reception into the asylum, but became so soon afterwards: "She has an irritability of the skin common amongst insane persons, picking at and rubbing her skin. She has loss of memory, mutters incoherently, and

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says she does not know what she says when she speaks." The allusion to the condition of the skin is noteworthy, as being on a par with the belief that existed a few years since as to the peculiar odour of the insane. I do not think that insane persons are more liable than sane ones of similar age to this irritability of the skin. When, however, it does exist, it is often made more manifest in the insane by their habit of picking it.

(To be continued.)

ON

VERSION, FORCEPS, AND THE EXPECTANT PLAN IN THE TREATMENT OF CONTRACTED PELVIS.

By WILLIAM T. LUSK, M.D.,

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THE following remarks are intended to apply to the three most common forms of contracted pelvis only—viz., the flattened non-rachitic pelvis, the flattened rachitic pelvis, and pelvis equally contracted in all the principal diameters.

It is evident that the plans of treatment to be discussed are only admissible where the contraction does not exceed limits within which, under favourable circumstances, it is possible to deliver a living child through the natural passages. In most of these cases the appropriate treatment would be the induction of premature labour between the thirty-second and thirty-fourth week. But the physician may be first summoned after the end of gestation has been reached, or he may, at an earlier period, have decided against the induction of premature labour. At full term, supposing the head to present, the latter, at the beginning of labour, is prevented by the pelvic narrowing from entering the brim of the pelvis, and is usually freely movable. The conduct of the first stage of labour should be directed to preparing the way for the subsequent delivery of the child. To this end every pains should be taken to prevent rupture of the membranes before the cervical dilatation has become complete. The patient should be cautioned against restless movements in bed, and from leaning down during the pains. Examinations per vaginam should be made with great care, and should be avoided, except when absolutely necessary. The largest-sized Barnes's dilator, moderately distended with fluid, placed in the vagina to exert counter-pressure upon the cervix, is at times of use where the membranes have a tendency to protrude in the form of a narrow cylinder. Attention should likewise be directed to faulty positions and presentations of the child's head. Should these be dependent upon a pendulous abdomen, the fundus of the uterus should be elevated, and the normal relations of the uterine axis maintained by a suitably-adjusted bandage. Excessive lateral obliquity may be corrected by placing the patient upon the opposite side. Should transverse narrowing require a deep descent of the occiput, this can be furthered by placing the woman upon the side to which the occiput is directed. When, on the other hand, it is desirable to promote the dip of the forehead, the patient should be made to lie upon the side of the face. The reason of this is obvious, as, when the breech falls to a given side, the cephalic pole has a tendency to move in the opposite direction.

The right use of position as a corrective force depends upon the degree of accuracy with which the character of the pelvic deformity is estimated, and upon a proper appreciation of the mechanism appropriate to the ascertained deformity. When the sagittal suture looks forward toward the symphysis pubis, so that the posterior parietal bone becomes the presenting part, a firm compress above the pubis may be advantageously employed to press the head backward, and approximate the sagittal suture to the median line.

The pains, when weak and inefficient, should be strengthened by the warm vaginal douche; when the source of exaggerated suffering, they should be mitigated by morphia, by rectal injections of chloral, or by the administration of an anæsthetic.

Should, by good fortune, the rupture of the membranes be postponed until after completion of cervical dilatation, one of two contingencies may follow:—1st. The disproportion between the head and the pelvis may prove to be slight, so that a considerable segment of the cranial vault may be felt below the brim. Then, provided the head enters the pelvis in conformity with the mechanical laws dictated by the character of the pelvic deformity, the expulsion of the child may be left to the natural uterine forces. 2nd. No engagement may take place, the head continuing freely movable at the brim. Under such circumstances the disproportion may be assumed to be considerable. The physician has therefore to ask himself whether he shall await the action of the pains in the expectation that the head will gradually adapt itself to the pelvis, or whether he shall at once proceed to perform version, and drag the child rapidly through the straitened diameters. Forceps, as a means of delivery before fixation of the head, should be discarded, not because they cannot be employed with success, but because their use, even in the most skilful hands, is extra hazardous.

The question of waiting, or proceeding at once to version, is one that will always be decided largely by the individual experiences of the accoucheur. It is, however, vain to deduce rules of practice from the conduct of those who have enjoyed exceptional opportunities, and who usually have developed exceptional skill in some one special direction. It is to be remembered that in contracted pelves, in case the pains prove inadequate to overcome the obstacle to delivery, the alternatives in head-presentations are forceps and perforation. But there are very few experienced operators who have not a more or less personal predilection for either forceps or version, and this unconscious bias exercises necessarily, to some extent, a determining influence upon their choice. It is well known that there is hardly any subject which has been the source of so much heated controversy as the one at present under discussion. For the profession at large, however, there is little to be gained from the spirit of partisanship. The general practitioner not only requires instruction in the special advantages possessed by each measure, but needs to have presented to his attention parallel statements of the dangers and difficulties from which neither procedure is free.

In considering the application of version to the treatment of contracted pelves, it is well to state in advance certain points which are rarely alluded to, probably because they are matters of tacit agreement between the contending parties, to whose disputes we mainly owe our present knowledge in relation to the subject. The first of these is that the intent of the operation is to save the life of the child. In the case, therefore, of a dead child, or of one in which the heart sounds have notably begun to fail, version affords no advantage over perforation. For the same reason the conditions must be such as to hold out a reasonable hope of rapid delivering of the child's head without the infliction of necessarily fatal lesions. Now, there does not appear to be any well-authenticated case of the delivery by version of a full-time living child through a flattened pelvis measuring less than two inches and three-quarters in the conjugate diameter. But even with three or three inches and a quarter, the result will still depend upon the length of the transverse diameter. Thus, in extreme degrees of the justo-minor pelvis, with the reduction of nearly an inch in all the diameters, the difficulties of delivering the after-coming head, even with the aid of the perforator and the cephalotribe, are wellnigh insurmountable. Again, the contraction should be limited to the pelvic brim, for where the contraction is continuous or progressively increases toward the outlet the fate of the child is not even doubtful.

The other point of importance is that with three inches and a half and upward in the conjugate no interference in the rule is called for. Since it has become the custom to measure pelves with accuracy, the profession has learned that these moderate degrees of deformity exercise their influence not so much in a mechanical way as in the modifying effects they produce upon labour. A large proportion of the cases terminate spontaneously. If the pains fail prematurely, the conditions are generally such as to make it an easy matter to deliver with forceps. Difficulties only arise where the head is unusually large and incompressible, or in faulty positions, such as the anterior dip of the head in justo-minor pelvis, and the presentation of the posterior parietal bone in the flattened varieties.

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Thus version is indicated in contracted pelvis only when the child's heart beats with nearly unimpaired vigour, and in pelves measuring between two and three-quarter and three and a half inches antero-posteriorly, with the contraction limited to the brim, and with sufficient amplitude in the transverse diameter.

The advantages of version in contracted pelvis grow out of the unquestioned fact that the after-coming head passes more readily the contracted brim than the normal head-first presentation. This superior facility is attributable to the entry of the head by its smaller bimastoid diameter. At the same time, the fronto-occipital descends in the transverse diameter of the pelvis. The pressure of the conjugate is encountered by the bitemporal diameter of the child's head, which measures half an inch less than the biparietal. Tractions upon the trunk of the child bring to bear simultaneously pressure upon the head from many points in the pelvic walls. As a result, bilateral flattening is effected, and a deep groove, usually near the coronal suture, is produced in many cases upon the posterior cranial surface by the pressure of the projecting promontory. The bulk of the head is still farther diminished by an over-riding of the bones at the sagittal suture, and, where the transverse diameter is insufficient, by the crowding of the occipital beneath the parietal bone. A reduction of the cranial contents is brought about by the retreat of a considerable portion of the cerebro-spinal fluid into the spinal canal. All these changes are induced rapidly, and are not dependent upon the activity and strength of uterine pains.

The method of performing version and extraction in contracted pelvis is, with few modifications, the same as in pelvis of normal size. In contracted pelvis great care requires to be taken lest the arms become reflected upward to the sides of the child's head, or crossed upon the neck. To avoid this difficulty it is desirable to introduce the hand over the abdomen of the child, and bring down the arms before the engagement of the shoulders. In delivering the head, traction may be made upon the lower extremities and shoulders, according to the method of Kiwisch, or traction may be made with one hand upon the shoulders, while two fingers of the other are inserted into the child's mouth. Provided by either of these methods the relation of the head to the shoulders is such that no twisting of the neck takes place, the amount of force that can be employed without producing fatal lesions is often something astounding. Thus Rokitansky, experimenting with the bodies of still-born infants, found the utmost strength put forth by two men upon the trunk insufficient to cause rupture of the vertebral ligaments and separation of the articulations. It is usual, however, to combine pressure from above, exercised by a skilled assistant upon the head through the abdominal walls, with tractions from below. Schroeder[1] states that this practice is coeval with podalic version. It was known to Celsus, and recommended by Ambrose Paré. It has found warm advocates in Pugh, Wigand, Martin, Krestellar, and, in this country, in Tayler and Godell. Both the latter gentlemen have made valuable suggestions regarding the technical management of difficult cases, which are well worthy of special mention. Dr. Tayler at first draws the body directly backward, while the head is forced by supra-pubic pressure downward and backward into the pelvis. So soon, however, as the head begins to advance, he raises the body of the child, and directs pressure upon the head to be made downward and forward in the axis of the outlet. In case of failure or delay he has sometimes succeeded by intentionally directing the back of the child to the sacrum, and then causing the occiput of the child to be pressed downward and backward into the nearest sacro-iliac space, with the face looking upward, while traction is made in the axis of the outlet. Dr. Goodell, after first drawing in the direction of the outlet, with the assistant pushing downward and backward, reverses the direction, and sweeps the child's body backward upon the coccyx, the neck likewise being forced downward and backward into the hollow of the sacrum with all one's powers. Where the projection of the promontory is not very marked, he likewise recommends, as something of assistance, a pump-handle movement, the range of oscillation extending from the axis of the outlet anteriorly to very firm pressure on the coccyx posteriorly.

(To be concluded.)

[1] Handbuch der Geb., Aug. 6th, s. 307.

TREATMENT OF NÆVUS.

BY BENJAMIN WALKER, L.R.C.P.

THE following two cases of nævus are thought worthy of record, being interesting from their situation, and from the difficulty of treating them by the old method of ligature or suture, which were fairly tried and failed, and from the facility with which they were cured, one by the sodium ethylate of Dr. Richardson, the other by the actual cautery.

Laura L——, aged thirteen months. Nævus over right parotid gland, in size from half-a-crown to a crown piece; skin has a pinkish-blue mottled appearance, and is involved in about one-half its extent. The growth is prominent, and increases in size on crying, it is also gradually getting larger. On August 27th, 1878, it was operated on by wire ligature, previously transfixing with needles, and again on Sept. 9th and Nov. 6th, but without arresting the progress of the growth. On Nov. 12th sodium ethylate (of one-half saturation) was painted over it, and the application repeated three times in the next fortnight, and five times more at intervals of a month or two, till on August 3rd, 1879, the nævus was practically cured, the only marks perceptible being from the surgical interference (the entrance and exit points of the needles); had the ethylate been used from the first there would have been none, and its application is attended by little or no pain. To Dr. Richardson we are indebted for a most valuable addition to our armamentarium.

William B——, aged five months, a child at the breast, was brought to me on August 28th, 1878, with a nævus of the upper lip, involving the mucous membrane, and extending to the gum over the site of the incisors; skin not involved. It gave to the child a pouting and prominent upper lip, and was increasing in size, so as to interfere with prehensile power at the breast, and the child was beginning to fail in its nourishment. On August 28th it was operated on by transfixion and ligature, and subsequently by sutures on Sept. 9th and Dec. 17th, but it was most difficult to secure the whole by either method, and the nævus rapidly increased in size. On Dec. 25th the child was placed under chloroform, and the actual cautery applied pretty deeply into the growth in two or three places. Slough separated in a few days, and has left a perfect lip without any disfigurement.

Spondon.

CASE OF POISONING BY OXALIC ACID.

BY CHARLES FAIRFAX NURSEY, L.R.C.P. EDIN. &c.

ON the 7th January last I was called to see a woman, aged twenty-eight years, who had taken poison. I obtained the following particulars:—The patient had been drinking very heavily since Christmas-day, and to such an extent that on the day she took the poison she was bordering on delirium tremens. She left home on the morning of Jan. 7th and purchased in the town exactly half an ounce of oxalic acid, which, on her return at 9.30 A.M., she dissolved in warm water and swallowed. She vomited immediately and went to bed, where she remained vomiting in much agony until she was discovered by a neighbour at 1.15 P.M., lying on her side nearly dead. Fortunately the neighbour recognised her dangerous state, and obtained from her that she had taken oxalic acid. So he cleverly gave her carbonate of magnesia in water until my arrival, which was at 1.30 P.M., exactly four hours after swallowing the poison. She was then almost in a state of collapse; little or no pulse; just able to say that her throat and stomach were on fire. There was constant vomiting, tinged with blood; and cramps and numbness, with slight convulsive movements, in the limbs. The mucous membrane of the mouth and throat was entirely covered with a white coating, due to the corrosive action of the poison. As the patient could, and was only too willing to swallow, I continued the use of the carbonate of magnesia solution until she had consumed three or more pints of it, after which I gave her nothing but lime-water freely occasionally mixed with milk. Vomiting continued, and reaction set in. The body towards 6 P.M. became warm. Pulse returned, with slight colour in the cheeks. The epigastric and abdominal pain was severe, but the cramps slowly subsided. At 8.30 P.M. I gave up the lime-water,

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and ordered ice to be sucked constantly, with an ounce of compound tragacanth mixture every hour in milk. In the morning I found my patient doing well, and, with the usual management in such cases, she was able in three or four days to come downstairs. During the treatment of the case I had the valuable assistance of my friend Dr. Dixon of Sunderland.

Remarks.—Considering the empty and inflamed state of the patient's stomach—the result of hard drinking—when she took more than a poisonous dose of the drug, and the length of time which elapsed before an antidote was given, it seems strange that she did not die long before any treatment was adopted.

Sunderland.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

TRANSPLANTATION OF TESTICLE FROM GROIN TO SCROTUM.

(Under the care of Mr. WOOD.)

GEORGE D——, aged thirteen, was admitted on the 8th February last. When quite young a tumour was noticed in his right groin, which always disappeared when he was lying down, but reappeared when he walked about. He had worn a truss as long as he could remember. By this means he had always prevented the descent of the tumour till ten days ago, when it slipped past the truss, and could not be returned. Four days after, he experienced great pain in the right groin, the tumour increasing rapidly in size, with sickness and constipation.

On admission, there was found at the right external ring a solid tumour, irreducible, excessively painful, and with no impulse on coughing. There was absence of the right testicle from the scrotum. The diagnosis was—an inflamed undescended testicle. An ice-bag was applied, followed in a week's time by diminution of the testicle to its original size; it could not, however, be returned to the abdomen.

On Feb. 28th Mr. Wood exposed the testicle, which was found to be somewhat smaller than its fellow, by a vertical incision over the external ring. The cavity of the tunica vaginalis could not be found, and seemed to have been obliterated. The testicle, especially at its upper border, was attached to the pillars of the ring by very firm adhesions, which were with some difficulty broken down. Mr. Wood then freed the cord for about an inch and a half, and though he found it considerably shortened, by making traction he was able to bring the testicle down about an inch. He then everted the scrotum, stitched the testicle by catgut to the everted part, put a small drainage-tube in, sewed up the opening, and applied a pad firmly above the testicle, the whole operation being performed antiseptically.

The patient slept well on the night of the operation. Next day the testicle, though slightly retracted, was still well out of the external ring. There was no pain complained of, the wound united by primary adhesion, and the drainage-tube was removed on March 10th. The temperature was never over 99°. On March 15th the patient was discharged, wearing a water-pad truss, which was specially constructed to keep the testicle in the scrotum.

For these notes we are indebted to Mr. W. S. Miller, M.R.C.S., surgical registrar.

SAMARITAN FREE HOSPITAL.

CYSTIC SARCOMA OF BREAST; EXTIRPATION; NEUBER'S BONE DRAINAGE-TUBE; GOOD RESULT; REMARKS.

(Under the care of Dr. GEORGE GRANVILLE BANTOCK.)

A. D——, aged thirty-seven, single, was admitted on Nov. 26th, 1879. She had a cystic tumour of the right breast, as large as a turkey's egg, without any glandular enlargement in the axilla. The tumour affected the outer half of the mamma. She had also an abdominal tumour, which presented all the characters of an uterine fibroid. Its connexions were such as to forbid any surgical interference. The former, however, called for early operation, as the skin over the most prominent part was becoming very thin, and threatened early rupture. Menstruation came on two days after her admission, and it was not till Dec. 17th that she was ready for operation.

The tumour when first observed, about two years and a half before, was as large as a pigeon's egg, and was situated near the outer edge of the breast. It was then tender to the touch, but not painful. It had increased most rapidly during the last six months.

On Dec. 17th the tumour was removed, with the whole mamma, by two elliptical transverse incisions embracing the nipple. Three arteries were tied with silkworm gut, and the ends of the ligatures were cut off short. Compression forceps sufficed for other bleeding points. The wound was closed in its inner half (three inches) by a continuous suture, and in its outer by interrupted sutures, of silkworm gut. Before the latter were tied a bone drainage-tube nearly three inches long, about a quarter of an inch bore, and about half a line thick, prepared according to Neuber's instructions, was inserted. The operation was performed under phenol spray, but the wound was not washed out. The outer end of the tube was trimmed level with the skin; and, instead of the small safety-pin recommended by Neuber, it was secured by means of a piece of silkworm gut passed through it transversely, with ends two inches long. Next the wound, and over the end of the tube, were placed fourfold pledgets of thymol gauze, then alternate layers of thymol and carbolic gauze to the extent of probably twenty folds, and they were secured by a many-tailed gauze-bandage. Over this a thick pad of salicylic wool was placed, then Lister's eight-fold dressing, and again a many-tailed bandage, with shoulder-straps, also of gauze. As much discharge was not anticipated, it was thought unnecessary to follow Neuber to the letter in the matter of the dressing.

On the 18th, under the spray, the dressings were removed. There was very little discharge, and the wound looked as well as possible. The dressings were reapplied in the same order, with the exception of omitting the first bandage. Menstruation reappeared.

On the 24th the wound was exposed without the spray, and seen to be united throughout. There was not a trace of redness; only the gauze over the tube's mouth was soiled. The tube was quite fixed, flattened, and the presenting portion was dry and otherwise unchanged. The whole of the continuous suture, and two of the others, were removed. Vaginal discharge was very free.

On the 27th, with a view of ascertaining what was becoming of the tube, the wound was again exposed. The gauze was soiled to about the size of a shilling, just going through four folds. Another suture was removed, leaving the one next the opening. All the white and unchanged portion of the tube was cut away. Beyond this granulation tissue had invaded it. *In fact it had become organised.* The patient was allowed out of bed, although the uterine discharge had not ceased.

On the 30th the last suture was removed. No trace of bone could be seen, but a flattened body could be felt occupying the site of the tube, and it was evident that instead of melting down and coming away in the discharge it had become organised in its entirety.

On January 3rd there only remained a small granulating surface, less than the diameter of the tube. By the 9th it was quite dry, and the patient left the hospital on the 13th.

Remarks by Dr. BANTOCK.—In this country attention was first publicly called to the bone drainage tube by Mr. MacCormac in an address delivered before a meeting of one of the Metropolitan Counties Branches of the British Medical Association, held at St. Thomas's Hospital on Dec. 3rd last. Mr. Krohne had already shown me some of these tubes which he had made according to Neuber's directions, and on Mr. MacCormac's suggestion. I was then waiting for the time when my patient would be ready for operation, and I made up my mind to try the new tube so highly spoken of by Neuber, who is supported by Esmarch. Neuber cannot be said to have been in a hurry to proclaim his invention, for

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it was not till he had observed thirty-six cases to their termination that he published his paper.

The following represents his general conclusions. He says that when a bone tube is put into a fresh wound in a good subject, no particular change is observable within the first twenty-four hours, but soon after that time the outer surface loses its smoothness and presents a worm-eaten appearance, and the thickness of the tube seems to diminish gradually under a slow melting process. In this way its solidity is so much impaired that by the fourth or fifth day it collapses under the pressure to which it is subjected. After six or seven days it is reduced to a pulpy gelatinous mass of more or less cylindrical form, and by the tenth day all trace of the tube has disappeared, except the part which is not exposed to the action of the tissues, and which is usually to be found loose in the dressings about this period. The rapidity of absorption varies in different individuals, depending on constitutional conditions and the state of the wound. In one case of amputation of the leg (to which he specially calls attention) in a patient much weakened by long illness, and the subject of albuminuria, the tube was not absorbed in fifteen days, although the wound had healed almost throughout by first intention. In another case of a more vigorous patient, after amputation of a large part of the scrotum, no trace of the tube could be found after the tenth day. He observed that the tube disappeared quicker in cases attended with discharge than in those without. He especially claims for his method that fewer dressings are required than with the ordinary india-rubber drain, and that it produces no irritation.

As far as my case goes I think I must admit both these claims. Had it not been for my anxiety to see how the tube was behaving, instead of exposing the wound on the seventh day, I might have left it undisturbed for a whole fortnight. So perfect has the healing process been, that the skin slips freely over the underlying tissues, and the tube moves with it. This indicates the only point of difference—viz., that after a lapse of twenty-six days the tube can still be felt, apparently of its original size, but flattened. Is it an unmixed gain that it has become organised instead of being absorbed or coming away in the discharge after having served its purpose? Still, on the whole, the result is very satisfactory. The lips of the wound at the end of twenty-four hours appeared to be perfectly glued together. Throughout the whole course of the treatment the patient felt nothing of her breast wound, and I am inclined to attribute the elevation of temperature on the second and third days, when it ranged between 99·6° and 100·4°, to the disturbance in the fibroid uterus. One of her usual periods had only just ceased a few days before the operation, and the same night the discharge returned, attended with considerable pain, especially for the first three or four days. All this time, however, the pulse was unaffected. In length of treatment this case does not compare favourably with the last case of the same kind, in which the tube was removed on the fifth day, and the healing process was quite complete by the eighth day. But of the two subjects the latter was certainly the more favourable for operation.

In the table of cases Dr. Neuber gives three cases of ovariotomy, of which two died (of peritonitis), and one recovered. The date of the first dressing in this case was the twelfth day. I do not hesitate to say at once that in this operation the bone-tube is wholly unsuitable, and that to use it is only to court disaster. In this case the principle is entirely different, and the peculiarities of the bone-tube are at once seen to defeat the object in view.

Dr. Bantock adds:—Since the above was written I have again used Neuber's tube—viz., in a case of irreducible hernia of omentum through the femoral ring, in which I unwittingly performed the radical operation for hernia introduced by Professor Socin of Bale. The case was rather obscure, as at no time while she was under my observation had any intestine descended. On the 17th inst. I cut down upon the swelling, and at once saw its nature. Completely isolating the sac, I then opened it, broke down an adhesion of the omentum, and tried to return it. As it resisted reasonable efforts I applied a ligature close to the ring, and cut away the omental mass. The stump at once receded. I then put a ligature around the neck of the sac, and cut it off. Both these ligatures were of silkworm gut, and the ends were cut off short. A small bone-drain was put in, and the wound closed by six sutures. On the 19th, the blood, which had escaped from the tube, had dried up in the gauze dressing, and the wound was quite dry throughout. On the 22nd, there was only a slight stain on the gauze just over the tube's mouth, and I cut away the end of the tube as close as possible, for this purpose pressing back the skin, so that the edges of the skin overlapped the tube. On the 24th, the skin had come together and united, and the healing was thus complete. On this day I removed the sutures. In this case also the tube was found firmly fixed at the first dressing, and its organisation was even then assured. It is still to be felt under the skin. There is reason to hope that this operation will prove a radical cure, as the ring was not stretched, and the ligatured neck will form a firm and resisting plug.

LEEDS GENERAL INFIRMARY.

CASES UNDER THE CARE OF MR. OGLESBY.

FOR the following notes we are indebted to Mr. Porritt, assistant house-surgeon:—

CASE 1. *Toxic effects after using strong solution of atropine.*—John A——, aged seventy, was admitted on the 6th of December, 1879, for the extraction of a cataract. He was a builder, and a strong, healthy man, who did not seem to be more than sixty years of age. A solution of atropine, containing two grains of atropine to the ounce, was at once ordered for the eye twice a day, and nothing noteworthy was observed after its use. On Dec. 9th the cataract was extracted by Graefe's method. There was a friable cornea, but the operation was completed successfully, with, however, the escape of vitreous before the removal of the speculum preventing the removal of soft matter by the scoop. Solution of atropine (four grains to the ounce) was dropped into the eye, and the pads applied.

For three days after the operation the patient complained of no pain, but on the third day, Dec. 12th, the pupil was found filled with soft matter. There were iritis and redness of the globe of the third degree. The artificial leech was applied to the temple, and one ounce of blood taken away, and six drops of a solution of atropine, containing ten grains to the ounce, were ordered to be placed in the eye every third hour.

On the 16th the night nurse reported that he had passed a restless night. He complained that his mouth and throat were dry. The sound pupil was widely dilated, and no skin eruption was observed. There was a vacant expression in the face, and he was slightly delirious, but answered questions rationally. The atropine was at once discontinued, and two ounces of the compound senna mixture were administered. At 8 P.M. the delirium had increased; he was irritable and more restless. There was paralysis of the lower extremities, and on attempting to walk he fell forwards, and had to be supported by the nurse. The bowels having been well opened, an eighth of a grain of morphia was injected subcutaneously, after which the patient fell into a sleep which lasted until morning, when he awoke sensible and well.

In this case the solution of atropine was placed in the eye eight times, the quantity used being equivalent to one grain of the alkaloid. This strong solution of atropine has been used on many occasions without any untoward effects.

CASE 2. *Fatal toxic symptoms after using a weak solution of atropine.*—William J——, aged fifty-nine, of Hunslet, had an iridectomy performed on the left eye twelve years ago, as a preliminary to the extraction of a cataract. In the interval between the two operations he attended as an out-patient, and was ordered a solution of atropine containing two grains to the ounce. After he had placed drops of the solution in the eye three times, he felt giddy and sick. The sound pupil was largely dilated; violent vomiting came on; the pulse became feeble and small, and the extremities cold. There were dimness of sight and vertigo, but no delirium, and on visiting him he was found in a state of complete collapse. He was wrapped up in hot blankets, and stimulants were administered, but he did not recover from the effects of the atropine until three days after the symptoms first appeared.

Out of the very large number of cases which have come under the care of Mr. Oglesby where it was necessary to use a solution of atropine for ophthalmic purposes, the above-named cases are the only ones in which symptoms of poisoning occurred.

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Medical Societies.

CLINICAL SOCIETY OF LONDON.

Acute Rheumatism with Multiple Embolisms.—Amputation in advanced disease of the Hip-joint.—Secondary Hæmorrhage from the Stump of the Thigh, with Calcarcous Degeneration of the Vessels.

THE ordinary meeting of this Society was held on April 23rd, Dr. E. H. Greenhow, F.R.S., President, in the chair. A remarkable case of multiple embolisms from endocarditis in acute rheumatism was read by Dr. Southey. A case of advanced hip-disease, for which amputation was performed through the joint, was communicated by Dr. Stokes, of Dublin. Davy's lever was employed to control hæmorrhage, and the case was successful. Another contribution of surgical interest was one by Mr. Cripps, upon secondary hæmorrhage, due to extreme calcareous degeneration of the arteries of the lower limb.

Dr. SOUTHEY read notes of a case of Acute Rheumatism with Multiple Embolisms. The patient, a widow, aged fifty-six, of nervous temperament, came under Dr. Southey's care at St. Bartholomew's Hospital, on the eighth day of an attack of acute rheumatism. It was the seventh attack, and she had been treated previously at the hospital for the same disease. On admission, there was general hyperæsthesia, swelling, and tenderness in right parotid region, painful swelling of left hand and knee. In addition to an erythematous blush the skin presented ecchymotic and purpuric spots over trunk and limbs. Temperature 102·4°; pulse 120; respiration 36. The præcordial dulness was increased, and there was a systolic apex murmur (which had been noted three years previously); fulness and tenderness of abdomen, with evidence of splenic enlargement. She was given fifteen grains of salicylate of soda every four hours, which was discontinued after the fourth dose, owing to the supervention of delirium On the eighth day the highest temperature was 100°, lowest 99°; pulse 108; respiration 42. She was less rational; passed urine involuntarily; the parotid swelling had increased. On the ninth day the temperature was 99·2° to 100°; pulse 128; respiration 52. There was drooping of the left eyelid and less restlessness and pain. Death took place on the morning of the eleventh day, the patient becoming rather suddenly comatose twelve hours before. The post-mortem examination was made by Dr. Moore. No pus in the affected joints; patches of recent embolic softening met with in corpora striata, left cerebral hemisphere, and left lobe of cerebellum; spinal cord normal; right parotid gland congested, not suppurating; the mandibular articulation not diseased; ecchymosis in the larynx, and œdema of lungs. There was universal adhesion of the pericardium, a calcareous patch existing over the right auricle. The heart was large, and its cavities dilated. The most notable feature was the occurrence of numerous minute embolic areas studding the endocardium on both sides. The muscular substance was granular. Mitral orifice of large size; the valve fringed by vegetations. The liver and kidneys contained recent infarctions of variable size, and the intestines presented numerous ecchymotic spots. Dr. Southey considered the case to be one of acute rheumatism *plus* ulcerative endocarditis, with embolisms of skin leading to purpura (he believed embolism to be generally the source of "purpura rheumatica"). He had noticed this tendency of endocardial vegetations to break down and give rise to minute multiple embolisms in old ague cases, but he had never before seen so extensive an embolic affection of the heart-muscle itself. The condition of the nerve-centres suggested that capillary plugging is one of the causes of hyperpyrexia.

Dr. STOKES (of Dublin) read notes of a case of Amputation through the Hip-joint, in which Davy's method of preventing hæmorrhage had been satisfactorily employed. The patient, a tall, muscular man of forty years of age, a shoemaker and sexton by occupation, was admitted on August 29th, 1879, with signs of advanced coxo-femoral arthritis. The disease dated from a fall on the hip sustained in the year 1846. The immediate effect of the injury subsided under treatment, and for five years he was free from any symptoms, but in 1851 another injury again evoked the disease, from which he suffered till 1856. He then took to bootmaking and remained well till in 1871. Tired of a sedentary life he became a car-driver. At the end of 1878 he was in hospital for seven weeks, having been thrown from his car and again injured the hip. In April, 1879, he was obliged to take to his bed. The slightest motion gave him exquisite pain, and when admitted he was worn out from pain and want of sleep. Pulse 120; temperature from 99° to 102°. There was much eversion of the foot, and great apparent shortening of the affected limb. Three sinuses existed on the outer side of the thigh, two passing upwards and one downwards; denuded bone could be felt through the former. There was a large bed-sore over the sacrum, and the man's condition altogether most pitiable. His urine had to be drawn off, and great distress was caused by evacuation of the bowels. He had no desire for food. The alternatives of excision and amputation were considered. Against excision were the chronicity of the case, the probably wide extent of bone disease, and the great exhaustion of the patient. On the other hand, there is only one record of successful amputation of hip for disease, and that in a child eight years of age. On Oct. 1st Dr. Stokes amputated through the joint, Lister's antiseptic precautions being rigidly observed. The circulation in the limb was readily and completely arrested by means of Davy's lever, which was combined with Charles Bell's method of raising the limb and applying a bandage over it. The operation was made with an antero-external and postero-internal flap, as in Mr. MacCormac's case published in the *Brit. Med. Journal* of Jan. 4th, 1879. A carbolised silk ligature was placed on the femoral artery, the other vessels secured by catgut. The case made uninterrupted progress towards recovery; the pulse and temperature were seldom above the normal, and the man returned home in December, and resumed the shoemaking trade. Dr. Stokes remarked that the wound was kept perfectly aseptic for eight days after the operation, all the sinuses having been well scraped and treated with chloride of zinc at the operation. Some diseased bone was gouged out of the acetabulum, and the specimen (exhibited) of the femur showed extreme necrosis of its upper end, almost the whole of the head being absorbed, and two small sequestra being detached from it. The compact tissue of the shaft of the bone was extremely thin. The absence of shock went far to confirm Langenbeck's view that loss of blood is the main cause of shock after operation. It was noteworthy that in the two successful cases of amputation of the hip in Dublin the lever had been used and Listerian precautions carried out.—Mr. HOWARD MARSH said the Society was indebted to Dr. Stokes for coming so far to give them the record of this interesting case, and to bear his testimony to the value of Mr. Davy's method. That method had now been tried several times and had been discussed by the Society; still it did not seem to have received sufficient attention. He himself was much impressed by this method on its introduction, because shortly before he had seen a patient die from loss of blood from the posterior flap. The hip was being amputated for secondary hæmorrhage after ligature of femoral artery for aneurism. Lister's tourniquet could not be applied because of the rapid breathing of the patient, who was in extreme peril at the time of the operation. Every care was taken to control bleeding from the anterior flap; but the patient sank, presumably from loss of blood from the posterior flap. Shortly after that, Mr. Marsh assisted at a case of amputation of the hip in a child, when the lever was used and with perfect success. At the previous discussion on this subject it was asked whether any dangers followed the use of the lever. He had not heard of any; but, of course, great care must be employed.—Mr. HUTCHINSON, speaking of the propriety of amputation in cases of very severe disease of the hip, said that his impression was that a certain number of very bad cases were lost from unwillingness to resort to amputation. He had four times performed amputation in preference to excision; in two cases with complete recovery, but two became the subject of amyloid disease. In one of the cases the operation was certainly the means of saving life—the patient, a young woman, being extremely emaciated from the long-lasting disease of the joint. She is now in perfect health. All the cases occurred prior to Mr. Davy's method being introduced; but Lister's tourniquet or Esmarch's bandage (in three cases) was applied. No ill result accrued from the apparently for-

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midable procedure of tying an elastic band tightly around the abdomen. He did not use Lister's spray and gauze in these cases; but employed lead and spirit lotion, and washed out the wound with spirit. In another case he should adopt Listerism, but still none of the above cases suffered for want of it. Dr. Stokes acted most judiciously, not only in deciding upon the operation, but in undertaking it so promptly. Mr. Hutchinson knew of a case where the patient died during the delay occasioned by the friends demurring to the extreme measure of amputation before other opinion was sought.—Mr. MACCORMAC said that it was plain a certain number of cases of hip-disease called for amputation because there were cases of a severe kind, which did not get well after excision. There was a lad now under his care at St. Thomas's Hospital, who was sinking from the disease, for which excision had been performed, and who would have recovered if amputation had been permitted by the parents. Amputation of the hip was called for also in cases of large and rapidly-developing tumour of the femur—such as that one he had recorded to which Dr. Stokes had referred. The patient was in a condition of extreme hectic due to a rapidly growing sarcoma, and the amputation afforded immediate relief. As to the question of shock, Langenbeck, speaking chiefly of cases of injury, avowed his belief that no shock occurs, except from loss of blood. But although in this case of his (Mr. Mac Cormac's) no blood was lost, the aorta being controlled by digital compression, yet after the limb was removed the lad was in a state of collapse, and appeared almost as if dead. — Mr. BRYANT said, the question of preference being given to amputation or resection depended to a large extent upon the age of the patient. In the young resection was comparatively a successful operation; in the adult excision of the hip was almost always fatal. In the adult there was not much experience of excision of the hip; but in cases of extreme hip disease he quite felt with Mr. Hutchinson that perhaps surgeons were too timid of venturing upon amputation; and the case brought forward by Dr. Stokes would have a valuable effect in encouraging surgeons to interfere in cases of advanced disease in adults—cases where resection would be almost hopeless. He would add his testimony in support of the value of Davy's lever. He had used it in a case of amputation for tumour of the neck of the thigh-bone, Mr. Davy kindly applying it; and certainly not more than two or three ounces of blood were lost. Loss of blood was the chief element of danger in amputation of the hip. He was accustomed to cut down at once on the artery, and to secure it by twisting both its severed ends, and at the same time to apply a carbolised catgut ligature to the femoral vein before proceeding further with the operation. In the case of tumour he had mentioned, he was struck by the scanty loss of blood, especially from the posterior flap. — Dr. GILBART SMITH asked Mr. Mac Cormac whether the shock produced in his case might not have been due to the compression applied over the aorta affecting the solar plexus. — Mr. MAC CORMAC said the pressure was applied immediately above the umbilicus. He did not think it was likely to have exerted any injurious influence on the solar plexus. A very small amount of pressure sufficed to control the flow of blood. — Mr. PARKER said he had amputated at the hip, in a child thirteen years of age, for diffuse periostitis of the upper end of the femur. The femoral vein was plugged. Although there was perfect control over the arterial circulation, much venous oozing took place, to which he attributed the fatal result that ensued. So great an amount of venous bleeding was unusual, and formed a serious difficulty in the operation. Dr. Stokes's case was interesting in view of a recent discussion at the Society upon hip disease, for it illustrated a point he had then raised that portions of the epiphysis were often detached as sequestra. Had these sequestra being removed some time before, it was possible that the patient might have recovered without loss of his limb.—Dr. STOKES, in reply, thanked the members for their comments which endorsed the line of action he had taken. One of the reasons why amputation was not more frequently had recourse to, was the fear of fatal result following the operation, and, until the introduction of Mr. Davy's method, there was always a great risk of this from loss of blood. Seeing that the mortality after amputation exceeds 50 or 60 per cent., it was not unnatural surgeons should hesitate to have recourse to it. The interference with respiration was an obvious disadvantage to the employment of Lister's tourniquet or Esmarch's bandage for compression of the aorta—a disadvantage got rid of by the use of Davy's lever. He still believed hæmorrhage to be the constant cause of shock; but he did not remember that Langenbeck held it was the *only* cause. In cases of amputation of the hip the bleeding is mainly from the posterior flap, so that in this respect Mr. Bryant's case was exceptional. Had the case come earlier under his notice, and he had been satisfied of the existence of the sequestra, he should certainly have removed them. But he did not think their presence alone caused the disease, which was most extensive, and involved the acetabulum as well as the femur.

Mr. HARRISON CRIPPS read notes of a case of Secondary Hæmorrhage from the Stump of the Thigh, with calcareous degeneration of vessels. The patient, a sallow, emaciated man, sixty-four years of age, was admitted into the Royal Free Hospital in November, 1878, with a large ulcer of ten years' duration on the leg, which had rapidly increased in size, and assumed a fungating appearance. The femoral glands were only slightly indurated. The leg was amputated just below the knee by anterior and posterior flaps, and a circular incision through the muscles. In the attempt to ligature the tibial arteries they gave way, their walls being extremely brittle from calcification. Acupressure also failed from the same cause, and the vessels being now broken off deeply between the bones, Mr. Cripps was obliged to reamputate above the knee. The femoral artery was found to be less brittle than the tibials, and was ligatured. Twenty-eight days after the temperature rose, the stump became swollen, and an attack of arterial hæmorrhage occurred. Chloroform was given, and the femoral artery was cut down upon and tied in continuity by carbolised catgut. But at the end of the fifth week hæmorrhage took place from the seat of the second ligature. It was controlled by pressure kept up along the course of the vessel, from the end of the stump, by means of a specially-contrived pad. The patient, however, died from exhaustion four weeks later. The post-mortem examination showed general calcareous degeneration of the arteries; a clot filled the femoral artery as high as the profunda. Mr. Cripps remarked that, in the first instance three courses were open to him—viz., application of pressure along the course of the main vessels in the leg; or pressure over the main vessel in thigh; or amputation higher up. He selected the third course as not interfering with the blood-supply of the stump, and as admitting of acupressure if the ligature of the femoral proved unsuccessful. Then, when the secondary hæmorrhage occurred from the stump, he might have reopened the flap and attempted to secure the bleeding vessel, or have ligatured the artery in its continuity, or again amputated higher up. The last course was precluded by the reduced condition of the patient; and he only regretted that the plan finally adopted on the further recurrence of hæmorrhage—viz., that of pressure along the course of the vessel—had not been followed in preference to the ligature in continuity.—Mr. HEATH did not think it possible for a surgeon to be aware of the condition of the arterial walls before operating; and in dealing with those brittle arteries broad serrated forceps should be used to draw down the vessel rather than the sharp-pointed forceps which tore through the coats. Pressure would do much to control hæmorrhage provided it be fairly applied, and not made too low down. Seeing how long a limb may be left blanched and empty of blood without injury, there was no reason why pressure should not be maintained sufficiently long to insure the formation of a clot. The precept, *Nimia diligentia*, was as applicable in dealing with cases of hæmorrhage as in other matters; and he therefore agreed with Mr. Cripps that perhaps it would have been better not to have tied a vessel which was found to be so extensively diseased, but to have trusted to the effects of pressure.—Mr. BRYANT agreed with Mr. Heath that it was unwise to use sharp-pointed forceps in dealing with atheromatous vessels. But if such a vessel be seized with well-serrated forceps, by simple torsion alone and the breaking up of atheromatous material, there was much better chance of arresting hæmorrhage. He had now constantly adopted torsion for many years, and in that time had often employed it for atheromatous vessels, and felt sure that no secondary hæmorrhage would occur if no bleeding took place during the first few minutes, his practice being to leave the forceps on the artery for a minute or so after the torsion. Secondary hæmorrhage was due to ulceration of the vessel from the ligature, and therefore he pleaded for torsion. He had never had a case of secondary hæmorrhage after torsion. He endorsed what Mr. Cripps had said as to the mode of dealing with the secondary hæmorrhage, except that where he suggested re-

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amputation; for, as Mr. Cripps himself had formerly shown, the bleeding in such cases is from the lower part of the vessel. Pressure along the vessel was therefore the surest measure to adopt.—Mr. MACCORMAC asked if the effect of position had been tried.—Mr. CRIPPS, in reply, said that, during the operation, the stump was raised up, but without any appreciable effect on the force of the bleeding. On the first two trials to tie the tibials he used the ordinary pointed forceps; but on the third occasion he tried to catch the artery by torsion forceps, but the vessel had receded too far back. Re-amputation was had recourse to because of the impossibility of arresting the hæmorrhage in any other way. Then afterwards, in dealing with the stump, he feared to employ pressure owing to the swollen and tender state of the limb, and resorted to ligature in continuity, seeing that there was no risk of gangrene ensuing. Still he believed that pressure above and below the bleeding point is the best means for arresting hæmorrhage.

The Society then adjourned.

EPIDEMIOLOGICAL SOCIETY.

AT a meeting of this Society, held at University College, Gower-street, on April 3rd, Sir Joseph Fayrer in the chair, a paper was read by Dr. G. B. LONGSTAFF, on "Some Statistical Indications of a Relationship between Scarlatina, Puerperal Fever, Erysipelas, and certain other diseases," of which the following is an abstract:—The reader of the paper described an application of the graphic method to the statistics of the causes of deaths in England and Wales published in the annual reports of the Registrar-General. He stated that by representing the death-rates as curves, and comparing together the annual fluctuations of these curves, he had been led to divide the causes of death in this country into four groups—(1) the diarrhœal group, being directly related to the heat of the summer; (2) the bronchitic group, having a similar relation to the cold of winter; (3) the scarlatinal group, under consideration that evening, and (4) a provisional group, comprising all the other causes of death not at present known to be much influenced by meteorological conditions. A large diagram was exhibited, showing the death-rates from pyæmia, puerperal fever, erysipelas, scarlatina, laryngitis, croup, diphtheria, cynanche maligna, quinsy, and rheumatism with disease of the heart or pericardium, all graphically represented by variously-coloured curves. All these curves exhibited more or less marked indications of four periods of epidemic fatality separated by periods of comparative quiescence, but some of the elevations were more marked in one curve, some in another. The curves of puerperal fever and erysipelas appeared to be almost identical, and those of croup and diphtheria were also very closely allied. The diagram showed very clearly the varied headings under which deaths from diphtheria were returned in the country at the commencement of the great epidemic of 1858-9. The curve of rheumatic fever was also closely related to that of erysipelas, a point reserved for further investigation. Dr. C. Minor, of the United States, had called attention in 1874 to the close connexion between erysipelas and puerperal fever, and Dr. Longstaff's examination of the fatality of these diseases in the eleven registration districts of England and Wales for the last twenty-five years furnished a strong confirmation of his results. In order to approach this subject from another point of view, a diagram was shown (copied by permission from a paper by Messrs. Buchan and Mitchell in the *Scottish Meteorological Journal*) in which was given the mean weekly deaths in London from the same diseases for thirty years. The results gained by a comparison of the curves in this diagram on the whole confirmed the result obtained by the reader of the paper and indicated in the diagram first referred to. Laryngitis, and to a less degree scarlatina, were exceptions. But, again, puerperal fever and erysipelas closely resembled one another, as did diphtheria and croup. The amount of rain in each year, as well as the number of rainy days, seemed to be closely related to all the diseases under consideration, but in an inverse manner. The relative dryness or wetness of different seasons of the year showed no very apparent connexion with the fatality from diseases of the scarlatinal group, but a year on the whole wet almost invariably corresponded with low mortality from several or all of the members of this group, whereas in very dry years epidemics of these diseases occurred. The notable fact being that the same rule does not apply to small-pox, measles, whooping-cough, or typhoid fever. The explanation would appear that rain acted as a purifier of the air, washing the poison out of it, though it was not apparent why it only removed certain poisons. In the opinion of the reader of the paper the facts brought forward suggested that the poisons of puerperal fever and erysipelas, as also those of diphtheria and croup, were identical, and that the multiplication of species in the classification of disease should be avoided as far as possible.

Reviews and Notices of Books.

Clinical Lectures and Essays. By Sir JAMES PAGET, Bart., F.R.S., &c., Serjeant-Surgeon Extraordinary to Her Majesty the Queen, &c. Edited by HOWARD MARSH, F.R.C.S., Assistant-Surgeon and Lecturer on Descriptive and Surgical Anatomy at St. Bartholomew's Hospital. Second Edition. London: Longmans, Green, and Co. 1879.

To the honest practitioner, no less than to the philosophical student of medicine, it is deplorable that the exigencies of medical professional life in these days should encourage or require the uncultured and inexperienced or the needy, the arrogant, and the ambitious to write much and often, while they almost entirely prevent the skilled, the learned, and the experienced from writing at all. Sir James Paget is a conspicuous victim of this unhappy dispensation. It is many years since Mr. Paget, by his famous Lectures on Surgical Pathology, opened up to his professional brethren the promise of many valuable and substantial additions to surgical literature. But this promise has never been adequately realised. In 1875—that is, after the lapse of nearly a quarter of a century—Sir James Paget, timidly, and not without an apology, republished a selection of his Clinical Lectures and Essays, most of which had already appeared in medical journals or in hospital reports. These lectures and essays were, as a matter of course, well received, and a second edition has been called for. As the preface announces, few changes have been made in this edition. Four lectures on Gout in some of its Surgical Relations have been added, and an essay on some of the Sequelæ of Typhoid Fever. The editor has, moreover, largely augmented the notes and index. The new lectures on Gout in its Surgical Relations are replete with wise and judicious clinical observations, the results of a long and varied experience. Speaking of some of the consequences of injuries befalling the gouty, Sir Jas. Paget warns practitioners against the use of arnica lotion in liniments or in other local applications.

"I am not sure," he says, "that it is useful in any case; but I know that in the gouty it very commonly produces what is called erysipelas, or severe inflammation of the skin, often with vesication, always with intense heat and pain or burning, often spreading far beyond the part to which the arnica is applied, and in this way much more troublesome than the injury which it is meant to cure."

We are told that all gouty persons repair injuries of their joints more slowly than those who are healthy, and that gout may be suspected when, in a person of middle or later age, an injured joint does not recover in due time. Many of the unmanageable cases of gleet following venereal gonorrhœa may also, it is stated, often be referred to gouty inflammation producing thickening and contraction of the submucous tissue of the urethra.

Not a tithe of the richness of these and the other lectures could be exhibited by any summary. To be adequately appreciated they must be read over and over again. We must, however, in parting, point out a statement that has been allowed to stand in the second edition—namely,

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that in the operation for femoral hernia "the first incision may be *vertical in a line drawn straight down from the spine of the pubes*" (the italics are ours). Such an incision would be surely too much to the inner side of the hernia.

Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques. Tom. xxviii. PIL—POI. Directeur de la Rédaction Dr. JACCOUD. pp. 752. Paris: Baillière et Fils. 1880.

THIS volume contains seven large articles and numerous notices of subordinate subjects. The former include Placenta, by Eugène Marchal; Plaies, by J. Rochard; Pleura and Pleurisy, by Fernet and D. Heilly; Plomb, by Prunier; Pneumonie, by Lépine; and Poitrine, by L. Merlin. The article on Pneumonia is the longest in the book, and is very completely worked out. The subject is treated by M. Lépine under the following heads:—1. Acute lobar pneumonia, which has twelve pages of closely-printed bibliography appended to it, containing the names of upwards of 500 authors, sufficiently attesting the interest that this affection has excited. 2. Broncho-pneumonia. 3. Chronic pneumonia. M. Lépine pays a just tribute to the genius of Laennec. Laennec's description of pneumonia, both in regard to its anatomical and clinical features, he says, was made by the hand of a master, and notwithstanding the labours of his successors, has left little to be added. The chief fact that has been ascertained in regard to the first stage or stages of engorgement since Laennec's time is, that the alveoli are partly filled with red globules, and by large cells, containing from one to three nuclei. These cells are evidently modified endothelial cells. Yet it must not be considered that this is pathognomonic of inflammation, for it has been shown by Friedländer that similar modifications of the cells may be seen in other states, and especially in œdema. In the stage of red hepatisation the lung presents a granular aspect on section. These granulations are due to the infundibula, which are filled with masses of fibrin, and these masses can be separated by scraping the surface, and are then found to be nodulated on the surface, the projections representing the alveoli. On microscopic examination these masses are seen to consist of fibrin threads, with white and red corpuscles in their meshes. In the stage of grey hepatisation a section presents scarcely anything more than masses of white corpuscles, with here and there large cells full of fat granules and pigment molecules. The leucocytes appear, from the recent investigations of Buhl, to be derived not only from the blood by diapedesis, but from the lymph, and by proliferation of the connective-tissue cells. The frequency of pneumonia is extraordinarily great, averaging from twenty to thirty per thousand in all the great hospitals of Europe. In regard to the causes of pneumonia, whilst the author admits cold, or rather a chill, to be the most common one, he admits, in addition, exhaustion, toxic agents, local injuries, lesions of the nervous system, miasmata, and the previous occurrence of certain febrile conditions. The greenish colour of the expectoration is due, he finds, to the presence of biliverdin, as may be shown by Gmelin's test. As compared with that of bronchitis, the expectoration in pneumonia contains no alkaline phosphates, whilst salts of the expectoration in bronchitis contain from 10 to 14 per cent. In pneumonia, the expectoration is richer in soda than in potash, whilst the reverse is the case in bronchitis; and lastly, the expectoration in pneumonia contains 8 per cent. of sulphuric acid, whilst that of bronchitis only contains 3 per cent. The various sounds heard on auscultation are very fully given, and he notes that crepitation has not quite the diagnostic value that Laennec attributed to it, since Grisolle, Woillez, and others who have paid special attention to this point, have satisfied themselves that in many instances (eighteen times in sixty-three cases, Woillez), crepitation either did not occur at all or at a late period only. An interesting section is devoted to the subject of pulmonary ventilation in pneumonia. Under ordinary circumstances the air expired by a healthy man contains nine-tenths of the oxygen inspired—i.e., $CO_2 : O = 0{\cdot}9$, but in double pneumonia $CO_2 : O = 0{\cdot}59$; and when one lung only is attacked, $CO_2 = 0{\cdot}72$ to $0{\cdot}63$. An interesting point has been made out by Schülein in regard to the temperature in pneumonia, which is not only that the periphery is maintained at a very high temperature, but that the curve of temperature of the extremities follows that of the axilla; so that the pneumonic patient not only loses much heat, but loses that heat with a regularity that does not occur in any other febrile affection. Tracings are given both of temperature and of the pulse. The remainder of the article is worked up with exemplary care and minuteness. The subject of treatment commences with a reference to the expectant plan, which yielded Dietl, a pupil of Skoda, such excellent results in 1849, the mortality being only 7 per cent., whilst the mortality in those who were bled was 20 per cent., and in those subjected to tartarised antimony also exactly 20 per cent.; but it is pointed out that at a subsequent date (1854), notwithstanding the expectant plan was still thoroughly adhered to, the mortality rose to 20·7 per cent., whilst Wunderlich had a mortality of 27·5 per cent. and Leudet of 25—28 per cent. Although the various means of treatment generally adopted are mentioned, this part of the subject is discussed with much brevity. We have left ourselves no space to allude to the other articles, and especially that on the chest, which is exhaustive.

NEW JOURNALS.

WE have before us early numbers of several new additions to medical journalistic literature. The *Deutsche-Amerikanische Apotheker-Zeitung*, published in New York, but in the German language, is intended as an organ for "apothecaries, doctors, chemists, and druggists," the "doctors" being apparently thrown in promiscuously, the chief part of its contents being designed for the class of pharmacists. *El Jurado Médico-Farmacéutico* is a weekly journal of medicine, surgery, and pharmacy, published in Madrid, the first number of which has just made its appearance. Although not a new periodical, since it is already in the second year of its existence, the *Annals of the Anatomical and Surgical Society of Brooklyn* is little known in this country. It is issued monthly, and edited by Dr. Charles Jewett. The April number contains, amongst other articles, a lecture by Dr. Wyeth, on the anatomical reasons for dextral pre-eminence in man, and papers on the surgical treatment of facial neuralgia, on uterine tumours, and an interesting biographical sketch, by Dr. G. J. Fisher, of Colot, and other old lithotomists. The periodical is admirably printed. Another monthly American periodical began its existence with the present year, the *Independent Practitioner*, devoted to "Medical, Surgical, Obstetrical, and Dental Science." It is edited by Drs. Harvey Byrd and Wilkerson, and is published at Baltimore.

CITY OF DUBLIN HOSPITAL.—The trustees of this hospital have appealed for funds to carry on the work of the institution in an efficient manner, and without reducing the number of patients admitted to the wards. In 1875 the hospital received £1160 from the Sunday Hospital Fund, and in consequence the directors provided additional wards, improved the dietary, increased the number of nurses, and appointed a resident surgeon at a salary of £100. As, however, additional institutions shared in the Hospital Fund after 1875, the receipts from this source fell off, and the result has been that on the 31st of last December a debt was due of close on £2000. Subscriptions amounting to £589 have already been received, and we trust that the amount required will shortly be obtained.

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THE LANCET.

LONDON: SATURDAY, MAY 1, 1880.

NO reformers are more urgently affected by the new political situation than medical reformers. When the Parliament was dissolved three private Medical Bills were before the House of Commons, or rather before the Select Committee of the House. The authors of these Bills, or their chief promoters, were Dr. LUSH, Mr. ARTHUR MILLS, and Mr. ERRINGTON. No less than two of the three are out of the present Parliament. Besides this, Mr. WHEELHOUSE, another member of the Committee, whose proclivities were strongly in favour of medical reform, has not been successful in the recent election. These gentlemen had made themselves familiar with the question; and Dr. LUSH, in particular, had not only, by his successive Bills, shown the really urgent points in medical reform, but in the last two Parliaments, at one or two important junctures, boldly used his position to stop measures, promoted by strong Governments, which would most prematurely and inadequately have dealt with the subject. The absence of these gentlemen from the new House of Commons is a great disadvantage to the cause of reform. The whole disadvantage, however, is not yet stated. Mr. FORSTER, one of the most earnest and honest of public men, went into the investigation of the amendments needed in the Medical Act as seriously as any other member of the Committee. His position as a leading member of the Opposition might have supplied him with a plausible excuse for declining to serve on the Committee. But he not only consented to act, but to take the chair of the Committee in 1879; and in 1880, though he declined the responsibility of the chairmanship, he continued to take an active interest in the inquiry, and did actually preside at the sitting at which Professors GAIRDNER and STRUTHERS gave their evidence. It would be sanguine to expect Mr. FORSTER, in office, and as the Secretary for Ireland, to give as much attention to the amendment of the Medical Act as he managed to give last year while in opposition. We must be satisfied if he continues his personal interest in the question, and uses his great influence in the Government to induce it to appoint a new Select Committee to complete the investigation which is so well begun; and this much we, for our part, will confidently hope for from Mr. FORSTER. There is an idea in some quarters that the Committee, at its last sitting, recommended the closing of the inquiry. Nothing is more erroneous. The Special Report of the Committee, agreed to on the 12th of March, runs as follows:—

"Your Committee are of opinion that, in consequence of the approaching dissolution of this present Parliament, it is not possible to complete the evidence which bears on the Bills referred to them. That the Bills be, therefore, reported to the House without amendment, together with the minutes of evidence taken before them, and an appendix."

Here is the judgment of the Committee that the evidence taken by it was incomplete. We have only to remind our readers that the Committee was hoping, before the unexpected notice of dissolution, immediately to be favoured with the evidence of Sir WILLIAM JENNER, to show how incomplete the evidence is, and how important it is that the work left undone by the late Parliament should be vigorously commenced and completed by the new one. It would be strange indeed if so good a piece of reform, begun by a Conservative Government and heartily helped by several members of the Conservative party, were to be abandoned by a Liberal Government backed by an unprecedented Liberal majority. Such a course would be disrespectful to the Select Committee and to the witnesses examined by it.

The enemies of reform may fancy this a favourable break in the process of investigation, and they may be excused for hoping that their individual corporations, with their half-diplomas and one-sided examinations, will be granted an indefinite lease of life. We scarcely think that these bodies will themselves so read the signs of the times. If they are wise they will accept the inevitable, and join those who honestly and eagerly wish to put the entrance examinations of the profession on a more satisfactory footing, and to equalise them in the several divisions of the kingdom. It must not be forgotten that the present Government is committed to a conjunction of Boards as deeply as, or even more so, than the late one was, and that it has learnt by experience that this reform cannot be secured without a contemporaneous reform of the constitution of the General Medical Council. Under such circumstances we venture to hope that there will be no further resistance to needed changes, which are likely to be moderate and reasonable in proportion to the promptness with which interested bodies agree to them.

It only remains for medical reformers to agree to resume their work with vigour and harmony. It is scarcely likely that actual legislation will take place this year, but there seems no reason why the evidence should not be completed during the present session, and all be in readiness for an amending Bill in the beginning of 1881. We would urge upon all sections of medical reformers united action, with a view to secure the re-appointment of the Committee and the examination of witnesses conversant with the defects of the present Acts, the faults of the General Medical Council, and the shortcomings of the existing system of medical education and examination. The Parliament will soon be absorbed in great constitutional and political questions, and the best time for asking its attention to the useful but unromantic question of medical reform will be at the very beginning of its life.

IT must be confessed that the doctrine on which the practice of quarantine is founded is both plausible and seductive. It assumes the practicability of arresting the dissemination of infectious or contagious diseases by preventing for a time any communication between the sick and the persons who have been in direct or indirect, or even possible, association with them and their healthy fellows as yet uncompromised by exposure to any chance of the infection; also by laying an embargo upon and keeping apart for a longer or shorter time anything — goods, merchandise, carriages, ships, &c.—which might become a vehicle for the transmission of infection from an infected person or locality. The doctrine of quarantine, in fact, assumes the possibility of, and the practice aims at, shutting out *all* sources of

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infection from a healthy community. Such shutting out at first sight appears to involve little difficulty, but it was comparatively early recognised in practice, if not in theory, that a presumed efficiency of quarantine was very much a matter of locality; in other words, that quarantine was more likely to be successful in seaports than in inland places, and in preventing the incoming of foreign infection, than in arresting the spread of infection that had already effected a lodgment or was current in a country. So it happened that in process of time quarantine came to be regarded as specially a maritime question, and in seaport towns only, as a rule, has the system taken a permanent form among measures of sanitary police. It is particularly in its maritime relations that quarantine has retained, and still retains, its hold upon civilised nations. On the sea-coast, and as against the importation of foreign infection, the doctrine as applied in practice should hold good, unless some egregious fallacy underlies it; for what more simple (in appearance) than the supervision and isolation of all vessels, passengers, and cargoes coming from places whence they may be likely to, or even may possibly, bring with them some deadly infection! Now this, as relating to a matter of observation, and as affecting not only maritime but also inland quarantine, is a question of experience, and this experience, as we read it in this country, teaches us that while the doctrine of quarantine theoretically considered may in a certain sense be right, it has hitherto been found impossible to carry that doctrine out effectively in practice.

So marked has been the failure of quarantine to arrest any considerable extension of infectious disease, such as plague, cholera, yellow fever, &c., that in 1848-49 the General Board of Health of this country used this failure as an argument to disprove the infectious nature of these diseases! It is now known that the failure arose largely from the impracticability, in countries where any activity of commerce exists, of closing all the avenues by which infection could make its way. Contraband of quarantine was one of the commonest incidents of attempts to enforce quarantine stringently, and may be looked upon as a normal complement of the system. Moreover, in all great extensions of disease the initial extension has generally occurred before the danger was anticipated, and the imposition of quarantine has taken place after the mischief which it was designed to avert had been accomplished. This was notoriously the case in the great epidemic of cholera which invaded Europe and the Western hemisphere in 1865. The fact here referred to throws doubt even upon the applicability of quarantine in islands and places out of the ordinary routes of commerce, and whose relations with the outer world are so restricted as to give more or less reasonable hope that they can seclude themselves. Putting aside the cruelties which too frequently attach to the system, and the follies which have characterised its administration, as not essential to it, and regarding quarantine simply in its medical aspects as a measure for arresting the spread of infection, the teachings of experience we hold to be overwhelmingly against its efficacy for this purpose. True it has been asserted that we owe the recent escape of Europe from a general dissemination of plague to the strict measures of quarantine put in force by the Russian Government on the Volga. It is not explained by the asserters how the earlier measures of quarantine established by the Russian Government against the Persian ports on the Caspian to prevent the spread of plague from Ghilan and Mazanderan to Russian territory by the sea-route, and even the suppression of traffic with these ports for a while, failed to check that spread. Still less is it explained in what fashion a system of quarantine effected its object when the disease of which it was sought to prevent the dissemination had practically ceased (as was the fact) before any measure of quarantine was adopted in the infected district on the Volga. Certainly the world hardly ever before witnessed so strange an example of epidemic lunacy as that which occurred upon the news being made public in the first week of January, 1879, that plague had appeared on the Volga. The disease virtually came to an end in the second week of that month, yet beginning with that week, and for several weeks afterwards, European Governments vied with each other in reviving obsolete methods of quarantine, maritime and inland, against the compromised country, and against the uncompromised countries of each other. Even the British Government yielded to the general infection of alarm, and, in its fear, under the plea of political exigency did not hesitate to announce the revival of our old quarantine law, and to traverse our public-health administration—in other words, to transfer the functions of protecting the kingdom from invasion of plague from the skilled medico-sanitary officers of our seaports to the unskilled fiscal officers of the Customs, and the mere routine procedure of the Quarantine Act! And so also of certain recent westerly movements of cholera, and their seeming arrest in the Gulf of Suez, it does not seem to have been observed that this conclusion is much wider than the facts justify.

Quarantine starts from the fundamental position of the desirability of arresting or limiting the spread of infectious disease. Of this desirability there cannot be a question; but quarantine has failed to bring about such arrest, and so far as it may have contributed to limiting the spread, this has not arisen from any peculiar virtue in quarantine itself, but from circumstances incidental to its exercise, and not necessarily connected with it. Much of the error still existing with relation to the assumed merits of quarantine arises from a failure to discriminate between those matters which are essential to the system and those matters which in recent years have become superadded to it. In so far as it has proceeded and still proceeds upon arbitrary lines of secluding the sick and the so-called compromised healthy, and of crude, incongruous chemical disinfections, quarantine has been and is an unmixed evil, not only from its futility, but more especially from its diverting attention from a true prophylaxis of infectious disease. In so far as it may have contributed to a clearer knowledge of the conditions under which the isolation of persons and things is desirable and may be advantageous, and of the hygiene of ships, and of masses of persons, such as pilgrims and emigrants, journeying both by sea and by land, quarantine may indirectly have yielded certain advantages, but advantages wholly disproportionate to the cost at which they have been gained, and which were attainable in a much simpler and more effective fashion. Quarantine, in fact, is but the perpetuation of a traditional practice which had its origin five centuries ago in the dark ages of physic, which is fundamentally unchanged notwith-

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standing certain modern verbal veneerings, and which is inconsistent with our present knowledge of the habits of infectious diseases.

In this country and in Denmark, quarantine has for some time ceased to have a medical signification. It is retained on the statute-book, and ordinarily exhibited in certain formal administrative measures, to obviate disabilities which would else be imposed upon our shipping in the ports of Governments which adhere to the practice of quarantine. Here the general sanitary administration of the kingdom is so devised that every district, inland or coastwise, is enabled to deal with infectious disease, coming from whatever source, by removal of the conditions which would foster its development, by preventing reckless dissemination of infection, by isolation of the infected individual, and by disinfection. In addition and with reference to foreign infections, port sanitary authorities are given the power as regards cholera to medically inspect persons arriving in ships from infected places, to remove and isolate the sick found on board (letting the healthy go free), and to use such processes of disinfection as to the vessel and the articles thereon as may be deemed necessary. This method of dealing with foreign infection is founded not upon imaginative beliefs as to possibilities of infection, but upon actual observation of probabilities, and there can be no doubt that it is equally applicable to plague and yellow fever as to cholera. The method here referred to has been termed the system of "medical inspection" as contrasted with "quarantine." Experience shows that it does all that the most efficient quarantine can be hoped to do, and this more effectually, without involving those grave hardships to individuals and interruptions and disturbances of commerce which have arisen and must arise from quarantine. Quarantine having failed to *shut out* infectious disease, is thereby condemned; the *limitation* of infectious disease may be effected in other and better ways, of which the system of "medical inspection" is an example. It is not asserted here that that system may not be capable of amendment, but it is affirmed that, being founded upon actual observation and forming part of a method of dealing with infectious diseases, in view of their limitation, which obtains throughout the whole country, it has greater claims upon professional and public confidence than a system like quarantine, which is founded solely upon assumptions that have been discredited by experience, and of which the administration, with reference to disease prevention, is an insult to ordinary intelligence. It ought to be sufficient to condemn even the formal administration of quarantine in this country, that the quarantine (Customs) officer, not long ago, in one great port, questioning the master of a ship as to sickness on board, could pass the ship into dock with more than one person dead of cholera in it, and that the Customs' "rummager," whilst "rummaging" the same ship, could turn a man dying from cholera over in his berth without recognising the fact. Again, in another great port, about the same time, the quarantine officer, shouting out his questions to the master from his boat alongside, gave free passage to a ship with cases of cholera on board to be landed in the seaport town. And these are but samples of the sort of intelligence (!) which enters into the quarantine administration of English ports. It is derogatory to England that she should submit to continue hideously farcical, and, so far as the public health is concerned, highly detrimental proceedings such as these, to meet the unreasonable demands of certain Continental Powers; it is more than derogatory when real precautions can be substituted for sham ones—precautions of a nature which it is difficult to believe would not be accepted in lieu of obsolete quarantine arrangements by the Powers in question.

WE are instituting an inquiry concerning the hygienic conditions of school life, and the physical and mental training of the young in establishments, whether public or private, devoted to educational purposes for gain. It is important that the question should be carried into the class of schools, not always so called, conducted by clergymen and others who "take boarders" to educate "with their own children." We ask, and expect to receive, the cordial help of those who are engaged in this work, counting with confidence on the fact that a spirit of earnestness pervades the ranks of those who are engaged in the care and culture of the young, and therefore any new light which may be thrown on the principles of mental and physical education as an applied science must be welcomed as it deserves to be. In order to make the investigation really useful, the largest possible number of facts must be at our disposal, and the task of collating the data so obtained for the purposes of inference must needs be heavy and arduous. We shall approach the subject without prejudice of any kind, and it may be said at the outset that we do not expect to find any grave scandals or defects to be exposed. The days which permitted the system illustrated by that master of social caricature, the late CHARLES DICKENS, to flourish have gone; and although history repeats itself, Dotheboys Hall is not likely to be reconstructed, at least not on the old foundations. The faults of to-day are for the most part errors of judgment, or defects arising out of, if not due to, circumstances. There may be some lack of progress, but even this is probably the result of failure to recognise the importance of the issues involved rather than of indifference. In a word, we regard the profession of educators as composed of honourable and earnest workers; and it is solely with the desire to aid their enterprise, so far as the science of health and development is concerned in the care and culture of youth, we interpose.

The outline we have sketched for the guidance of those who are willing to give us their help in the preliminary stages of this inquiry, indicates as topics for the statement we are anxious to receive from every schoolmaster and educator the following questions:—1. How many boarders have you, and what are their ages, generally? 2. Were the premises now appropriated as a school-house built for that purpose, or adapted? What is the nature of the ground on which the building stands? Describe the locality, and give particulars as to climatic conditions. 3. What cubic air-space is allowed to each sleeper in the dormitories or bedrooms? 4. What is the size of the apartment used as a schoolroom, and how much cubic air-space is there for each pupil? 5. What is the ordinary diet, as to the quantity and kind of food, and how are the meals distributed? 6. What time is spent in school-work, and what hours are devoted *wholly to*

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play? State the hours of retiring to bed and of rising, and mention the arrangements for visiting the sleeping apartments at unexpected times. 7. What cases of illness occurred in the school during the years 1878-9, and what has been the general state of health in the establishment? If any epidemic disease has visited the school, please state the circumstances. 8. What are the sanitary arrangements of the establishment as regards drainage, closets, lavatories, bathing, towels, brushes, &c. &c.? 9. What provision is made for the isolation of cases of infectious or contagious disease in the event of a *sudden* attack? 10. What system of medical inspection is adopted? Does a medical man systematically visit the establishment, or does the "doctor" only attend when called in to treat a case of sickness? Nothing depends on the precise terms employed, but, in response to the expressed wish of our correspondents, we offer this suggestion of points on which it is desirable our Commissioners should be at once informed.

We depart somewhat from our usual practice, in opening an inquiry of this nature, by addressing the responsible managers of the institutions it is desired to inspect, but the reason will be obvious to anyone who reflects on the magnitude and great importance of the undertaking to which we now stand committed. It would clearly be impracticable to visit a tithe of the smaller, but in a practical sense, the most important, establishments in the country; while no investigation of this class could prove of any great value unless it covered the whole field. The course we intend to pursue is simply this. Having ascertained how far the great body of teachers may be willing to take advantage of this offer of help in their work—which we shall be entitled to infer from the number and nature of the replies with which we are favoured—it will be incumbent upon us to consider in what light the reticence of those who are not disposed to regard the inquiry with favour ought to be viewed, whether, in short, their unwillingness is based on reasonable grounds. The proportion of refusals to co-operate will, so far as we can yet judge, be very small, and it may suffice to deal with the cases individually. Our sole object is to get at the *facts* relating to the education of the youth of this country, and to study the various systems of care and training which at the moment prevail. In the end, we propose to give the results of our inquiry in the form of reports and suggestions, with a view to formulate the conditions of health in body and mind, as definitely as may seem to be expedient. These results will be the mean of vast multitudes of experiences, tested by the methods which science creates and applies to the details of practical life. It will now be apparent how essential it is to secure the co-operation of all experienced educators, and to their known anxiety to do the best for the youth committed to their guardianship we now appeal.

AT the last monthly meeting of the Board of Management of the Manchester Infirmary it was stated that a sub-committee had been appointed to have an interview with a sub-committee of the Medical Board, in order to consult as to the desirability of the medical students paying something to the funds of the infirmary. It appears that hitherto they have not contributed anything towards the maintenance of the institution, although the whole of its appliances, instruments, &c., have been freely placed at their disposal.

Annotations.

"Ne quid nimis."

"A GREAT POLITICAL OPPORTUNITY."

UNDER this heading, in our issue of April 10th, we wrote as follows:—"The weak point in the English system of government as at present constituted, is the isolation of the department which *theoretically* gathers up the reins of local self-government and places them in the hands of the Ministry, but which *practically* not only fails to perform that necessary function, but entangles the ribbons and frets the team.....It is easy to cut the Gordian knot of this difficulty, and to render the process of reconstruction facile by the simple and timely precaution of placing a strong and wise man at the head of the Local Government Board, and making him a member of the Cabinet.....We have long and importunately insisted on the claims of the country to a Ministry of Public Health. *This need would be satisfied if the Minister upon whom it devolves to carry out the provisions of the Public Health Acts were a member of the Cabinet.* The immediate effect of such an arrangement would be to make the health interests of the country *an integral part of the Ministerial policy.* It could not be otherwise. And thus we should gain in fact what the country has been repeatedly promised in a figure of speech, a policy having for its maxim *Sanitas sanitatum, omnia est sanitas.*"

In no spirit of vainglorious exultation, but with sincere gratification, on behalf of the profession THE LANCET represents, we now record the fact that this policy has commended itself to the judgment of the Prime Minister, and has been carried into effect. Mr. Dodson, a statesmanlike legislator of tried ability, in whom the profession and the public will have the fullest confidence, has been appointed President of the Local Government Board with a seat in the Cabinet. It is only necessary to repeat that the step we recommended, and which has now been taken, "is certainly one which must have a keen interest for the medical profession and the country at large, because it will create a Ministry and give us a Minister of Health—a double boon, which political feeling and public expediency both urgently crave."

By this procedure Mr. Gladstone has, at the outset of his new career, established a strong claim on the respect and good feeling of the not unimportant medical services connected with Public Health and the Poor Law department, and given a practical pledge of reforms which are urgently needed, and could not, under any circumstances, be long deferred. It was a timely and sagacious measure to concede the recognition we have so long struggled to obtain. The path is now cleared of many difficulties, and the Government may count on the support of the medical profession on grounds broader and more permanent than any mere considerations of political sympathy, or party claims.

VACCINATION IN THE METROPOLIS.

A DIMINUTIVE, but suggestive, ray of light is thrown upon the defective administration of the Vaccination Act in the metropolis by a letter addressed by the Local Government Board to the Shoreditch Board of Guardians, and read at their meeting of April 14th. It appears that Dr. Stevens, one of the central authority's inspectors of vaccination, has

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reported that the vaccination returns from Shoreditch are very low as compared with other metropolitan parishes, and that he attributes this shortcoming principally to the great bulk of the children born in the workhouse escaping vaccination. Dr. Stevens recommends that the Shoreditch Guardians should follow the example of the guardians of St. Pancras and St. Giles, Westminster, and give the medical officer of the workhouse a small fee for each child vaccinated in the workhouse. This recommendation is to be considered, and, meanwhile, the Shoreditch Workhouse is to be permitted to store up fuel for the next epidemic of small-pox. As we understand this question, the Local Government Board casts on the one hand the duty of vaccinating children in the workhouse upon the medical officer, but, on the other, it admits that this duty should not be thrust upon him except in consideration of some special remuneration for it. The guardians have a discretionary power in granting such remuneration. Thus it happens that the Local Government Board in effect deprecates the performance of his strict duty in this matter by the medical officer, and if, as in the case of Shoreditch, the guardians elect to be governed by the literal requirements of the Local Government Board's orders as to the duties of the medical officer, vaccination is liable to be very much if not wholly neglected within the workhouse walls. An anomalous state of things of this sort would have been hardly tolerable under the old poor-law administration; but now that the poor-law and public-health administration are brought together under one central authority, it is a public scandal that trumpery administrative difficulties of this kind, created by the central authority itself, should not be removed.

POPLITEAL ANEURISM.

THE interesting case of popliteal aneurism successfully treated by Esmarch's elastic bandage, showed to the Medical Society on Monday last, is one of the best results of this treatment yet obtained, and Mr. Goodsall must be congratulated upon it. The aneurism was a large one, had developed rapidly, and from all appearance had a very free communition with the artery—a large mouth to the sac. The treatment differed slightly from that hitherto employed, for the bandage and tubing were left on the limb for three hours—a very long time—and the bandage below the aneurism for an hour longer, during which all flow of blood through the artery must have been stopped. The treatment was really employed for four consecutive hours; for all that time there must have been complete stasis of the blood in the aneurism and adjoining part of the artery. When the bandage was removed the artery above was not subjected to compression, digital or instrumental, as has been customary, and no pulsation was at any subsequent time detected in the sac. In this case, therefore, there was rapid coagulation of the blood both in the aneurism and adjoining artery, which speedily resulted in complete cure. In many cases when the bandage has been removed pulsation has been much lessened, or even very slight indeed, and, under the use of digital compression, has gradually disappeared altogether. In these cases the clotting has at first only taken place in the aneurism, and the circulation in the still patent artery has transmitted pulsation to the tumour. When the force of the blood-current was diminished the clotting was enabled gradually to extend from the aneurism to the artery. In other cases, again, the pulsation, at first greatly lessened, has gradually increased to its original intensity; here the clot first formed has, in all probability, been gradually disintegrated. Mr. Bryant's case of popliteal aneurism which ran this course, in which gangrene of the foot supervened upon the case, confirms this view, for the gangrene is most easily explained by embolisms from the aneurism. Mr. Goodsall's case lends support to the view originally set forth by Mr. Gould in our columns that this plan of treatment is most successful in aneurisms with large mouths, in which the clotting readily spreads into the artery, for in his opinion the cure results from the plugging of the artery, and not from the filling of the aneurism.

THE REPRESENTATION OF THE UNIVERSITY OF LONDON.

THERE is now no doubt that the member for the University of London is to be raised to the peerage, and a vacancy will thereby be created in that constituency. Rumour has already been busy with the name of his probable successor in the seat; and it has been strongly urged by Dr. Joseph Rogers, in the *Times*, and also by Mr. Reginald Harrison, of Liverpool, in a letter to us, that the opportunity should be seized for securing a medical representative. No one can be more desirous than we are to see more representatives of the medical profession in the House of Commons, but when we remember that the medical graduates of the University form barely one-third of the constituency, it seems almost impossible for the University to be represented by a medical member, unless his claims be so great as to commend him to the whole constituency on other than purely medical grounds. Should such a candidate be found, he would prove a most desirable addition to the House of Commons; but so far as can be judged of the result of the recent election at the University, it seems clear that it would be a matter of great difficulty to secure a candidate from amongst the medical graduates who would find favour with the vast majority of the electors. The Master of the Rolls, Sir Julian Goldsmid, and Sir John Lubbock, are all named as probable candidates for the representation of the University.

BAGOT v. BAGOT.

THE celebrated cause of Bagot *v.* Bagot, commenced in April, 1878, in the Irish Probate Court before Judge Warren, has at length terminated in a compromise. The main facts of the case are as follows:—Christopher Neville Bagot emigrated to Australia in the year 1844, and after an absence of some twenty years he returned to England, having amassed a large fortune, amounting to nearly £6000 per annum, invested in land, and some £60,000 of personalty. On August 8th, 1875, he married Miss Verner, he being fifty years of age and she twenty-two, and ten weeks after marriage Mrs. Bagot was confined with a boy. Bagot seemed pleased to have a son, and treated the boy as his own, until March, 1876, when he first seems to have conceived the idea that the child was not his; and in September, 1876, he made a will practically disinheriting Mrs. Bagot's boy, leaving him only some £10,000, and Mrs. Bagot an annuity of £1000 a year, and bequeathing the bulk of his property to his brother. Mrs. Bagot after her husband's decease in May, 1877, brought an action against the executors of the will, on the ground that her husband was not of sound mind when the will was executed. In support of the will, the defendants proved that in 1869 C. N. Bagot was completely paraplegic, the result of injuries in Australia; and that, although he made a fair recovery, he began in the year 1872 to have symptoms of locomotor ataxy. A good deal of evidence was given at the trial by a number of medical men, including Mr. James Teevan, Dr. Habershon, Dr. Poore, Dr. Althaus, Dr. Banks of Dublin, Dr. Gordon of Dublin, Dr. Lockhart Clarke, Mr. Haynes Walton and Mr. Porter of Dublin, to show that locomotor ataxy was well developed in 1873, and continued progressively to get worse until his death, in 1877. All these gentlemen agreed in stating that it was exceedingly unlikely that Mr. Bagot could be the father of Mrs. Bagot's boy, and one went

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so far as to declare that it was impossible. The medical evidence brought by the defendants was rebutted by that of Dr. C. B. Radcliffe. The jury at the first trial gave a verdict to the effect that Bagot was under a delusion with regard to the paternity of his child, and that when he made his will he was "not of sound mind, memory, and understanding." A new trial was ordered, but on the eve of its commencement the matter was settled by compromise, and Mrs. Bagot's boy will receive £25,000 instead of £10,000, and the bulk of the property will go to the testator's brother, in accordance with the terms of the will.

TEN YEARS' INFANT MORTALITY IN LARGE ENGLISH TOWNS.

IT is now ten years since the improved form of the Registrar-General's Weekly and Quarterly Returns first afforded uniform and detailed mortality statistics relating to twenty of the largest of our English towns. These returns, published during the past ten years, contain an aggregation of statistics bearing upon the rate of infant mortality in these twenty towns, which is full of interest for local sanitary authorities, and indeed for all concerned in the progress of public health. More than two and a half millions of births were registered in these twenty towns during the ten years; and it is scarcely a satisfactory commentary upon the care of infant life in them to know that 171 of each 1000 of the infants born in these towns during the ten years died before reaching the age of one year. In the whole of England and Wales, exclusive of these twenty towns, the rate of infant mortality did not exceed 139 per 1000 during the same period. It is some satisfaction to know, however, that this excess of infant mortality in our largest urban districts is beginning to show a considerable decline; the rate was equal to 179 per 1000 during the five years 1870-4, and declined to 164 in the more recent quinquenniad, equal to a decrease of 9·5 per cent. Infant mortality averaged 158 per 1000 in London, whereas it was equal to 184 in the nineteen provincial towns. On the other hand, the decline of infant mortality was much greater in the provincial towns than in London. Comparing the two most recent quinquenniads, the decline of infant mortality was but 3·7 per cent. in London, whereas it was 12·1 per cent. in the nineteen provincial towns. These figures afford but one of many signs of more successful sanitation in our provincial towns than in our huge and mismanaged metropolis. It will not be without interest to note the average rate of infant mortality during the past ten years in each of the twenty large towns. The rates per 1000 of births, ranged in order from the lowest, were as follow:—Portsmouth 141, London and Brighton each 158, Bristol and Plymouth each 160, Sunderland 166, Wolverhampton 167, Birmingham and Hull each 174, Sheffield 176, Oldham 177, Newcastle-on-Tyne 178, Nottingham 182, Salford 184, Bradford 187, Manchester and Norwich each 188, Leeds 192, and Liverpool and Leicester each 216. The constantly wide difference between the rates of infant mortality in Portsmouth and Leicester (141 and 216 per 1000) during the ten years under notice points to the existence of conditions unfavourable to infant life in Leicester which ought to be determined and removed. Whether the waste of infant life in Leicester be mainly due to causes which may be described as sanitary or social, they are causes distinctly within human control. Medical officers of health, however, constantly deplore their inability to reduce excessive rates of infant mortality; and it is impossible to doubt that in this department of sanitation much good would result from the formation of local sanitary associations, in which the help of educated women might be turned to good account in instructing their less informed and poorer sisters in the necessary improvement in the treatment and management of infants. We have noted that infant mortality has shown a marked decline during the past ten years, which may to some extent be due to the low rate of mortality caused by infantile diarrhœa during the cold summers of 1877 and 1879. The rate of decline, however, although general, was by no means uniform in the different towns. A comparison of the rates in the two past quinquenniads shows that the decline in Bristol and Plymouth did not exceed 1 per cent., and in Bristol 5·4 per cent.; while the decrease was equal to 15·2 per cent. in Bradford, 16·1 per cent. in Newcastle-on-Tyne, 19·6 per cent. in Liverpool, and 20·9 per cent. in Leeds. It is but natural that the largest decline should have occurred in those towns in which the greatest excess prevailed; but it is worthy of note that in Portsmouth, where the lowest rate of infant mortality existed in both the quinquenniads, the decrease in the more recent period was equal to 9·8 per cent. Infant mortality is pretty generally accepted as a sensitive test of sanitary condition, and it may therefore be hoped that statistics bearing on this subject will receive at the hands of health authorities more attention than they have hitherto commanded.

"LOOKING FORWARD" AND "LOOKING BACK."

THE ministry to minds diseased is a distinctly medical function, and there is a "preventive" aspect of medical psychology, not less important than the personal hygiene of the physical life. Nearly all the mental troubles that do not *directly* spring from organic disease—some of which may be reflexly the cause of physical changes in the cerebral and nerve structures they maltreat—are distinctly traceable to the effects of morbid imagining, and nearly all the disorderly mental processes of this class consist in unwisely "looking forward" or "looking back." Hope feeds on the future, and despair is poisoned by the dread of it. The misery of regret and disappointment is a creature of the past. The secret of health of mind and moral integrity consists in taking so firm a footing in the *present* that the mental equilibrium may not be easily disturbed. There is no need to ignore the lessons of the past, or to disregard the objects and obligations of the future, but it should not be forgotten that human life, with its opportunities, its duties, and its responsibilities, is an affair of *now*. We are led to offer this caution and recall the facts to memory because medical science has something to answer for in making men and women miserable by the discovery of incipient disease, which if simply unrecognised might in many instances have been harmless. The mental aspects of clinical practice are, we fear, too often left out of the count.

A LUNACY INQUIRY.

AN inquiry was opened at the White Hart, Brislington, near Bristol, on April 16th, before Mr. Nicholson, Master in Lunacy, and twenty-two jurors, concerning the state of mind of Charles Pierce Melly, formerly of Liverpool, but now an inmate of Dr. Fox's asylum at Brislington. The inquiry was promoted by Mrs. Melly, the wife of the alleged lunatic, who was represented by counsel. Mr Melly conducted his own case, and in so doing effectually convinced the jury (after three days) that he was insane and incapable of managing his own affairs. The history of Mr. Melly's case, as elicited at the inquiry, was interesting and instructive. It appears that he had been a merchant in Liverpool, and was noted for his sound judgment in matters of business and his successful speculations. In the year 1878 he became rather reckless in money matters, quarrelsome with his friends, and otherwise eccentric. In July, 1879, he became possessed by delusions as to assassins haunting him, imagined himself a member of a secret society, and carried a revolver loaded with cotton-wool and butter, which he fired upon a person who came to serve him with a writ.

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He was placed in the Liverpool Asylum in July, 1879, and transferred to the Brislington Asylum in the following month. The unhappy gentleman's conduct while examining and cross-examining witnesses was marked by much flippancy, sharpness, occasional wittiness, and now and then by violent expressions and actions. Notwithstanding his occasional sallies of mental sharpness, the jury had little difficulty in coming to their decision, and, but for the conduct of the lunatic himself, the inquiry would not have extended beyond one sitting. At one stage of the proceedings the patient caused much amusement by putting on the counsel's wig and gown, and refusing to part with them until a policeman was brought to try the effect of official persuasion.

TESTIMONIAL TO DR. THOMAS ANDREWS, F.R.S., OF BELFAST.

IN December last a committee was formed to obtain funds for the purpose of commemorating the retirement of this gentleman from the vice-presidency of the Queen's College, Belfast, and up to the present close on £1400 has been promised or received. It has been determined to place a portrait of Dr. Andrews in the institution with which he was for so many years identified, and, should the subscriptions permit it, to found a Scholarship in the college in connexion with chemical science. For these objects a sum of about £3000 will be required, and we have no doubt that the application of the committee for the remaining half of the necessary amount will be successful. Dr. Andrews formerly held the post of Professor of Chemistry in the Queen's College, Belfast, and, as our readers are no doubt aware, is a chemist of world-wide fame, having made some most important discoveries in connexion with this branch of science. It was at first uncertain whether a bust or portrait of Dr. Andrews would be presented to the college; but the subscriptions for the latter have been sufficient, and an artist has already been engaged to carry out the wishes of the donors in this respect.

SCARLET FEVER.

TWO reports have been issued by the Local Government Board—one by Dr. Thorne Thorne on an extensive outbreak of scarlet fever in Mr. Barnardo's village home for destitute girls, Barkingside, Romford, the other by Dr. H. F. Parsons on recent prevalence of scarlet fever in, and the general sanitary condition of the Bedlingtonshire Urban Sanitary District, Durham. In Mr. Barnardo's home, between the 28th December, 1879, and the end of the second week of February, 1880, not less than 159 cases of scarlet fever occurred among a population all told of about 440. The outbreak was singular in its mildness, not one fatal attack having occurred. Dr. Thorne writes in the highest terms of the sanitary conditions under which the children reside, and of the general excellent state of their health. The source of the original infection was not obvious, but it seems probable that it was derived from a parcel of clothing sent by way of gift to the Home from a family which had had scarlet fever within it. The earlier cases were so slight as to excite no attention, and hence the disease was disseminated largely before its existence was suspected.

Dr. Parsons was called upon to study scarlet fever in Bedlingtonshire under very different conditions. The locality is a colliery district, containing several large villages, which present those indications of sanitary indifference and negligence too generally characteristic of such villages. Here scarlet fever appears to be rarely if ever absent.

The two reports enable us to form a painfully vivid picture of the difficulties which beset a sanitary authority and its officers in their efforts to contend successfully with scarlet fever. In the one case the insidiousness of the infection of the disease in the beginning of the outbreak seems to set at fault preventive measures, however well contrived; in the other case the prospect appears to be equally disheartening from the difficulty of eradicating the conditions which appear to determine the persistent prevalence of the malady in the district. We want more light on the localities of permanent prevalence of scarlet fever in the kingdom and on the conditions determining this permanency there. The subject is one which might well enlist the careful attention of the Medical Department of the Local Government Board, and which deserves that attention.

FRACTURES OF THE NASAL BONES.

IN the March number of the *Annals of the Anatomical and Surgical Society of Brooklyn*, U.S.A., Dr. Mason has published a paper on "Fractures of the Nasal Bones." As a result of experiments on the dead subject he concludes that in all cases of fracture with depression of the nasal arch, the nasal processes of the two superior maxillæ are always broken, and on the same plane. After alluding to the difficulty of successfully treating these cases, and pointing out that the mucous membrane of the nose is so sensitive that it cannot bear the pressure of any cannula or compress sufficiently firm to raise and support the depressed fragment, he suggests a novel procedure of his own. It is to correct the deformity, and then pass a needle across the nose from side to side through the line of fracture. A small piece of ribbon or bandage is then placed across the nose and fastened over the ends of the needle. The needle may be withdrawn about the sixth day. If the line of fracture is not symmetrical, the bones are to be drilled at suitable spots. Unfortunately Dr. Mason omits to state whether he has ever tried his method of treatment.

WALSALL COTTAGE HOSPITAL.

THE Walsall Cottage Hospital, lately the scene of most of the labours and triumphs of "Sister Dora," is likely to become the arena of a contest between a number of the honorary medical officers on the one side, and the lay authorities and a "Sister" on the other. A circular, pointing out some of the defects of the medical management of the hospital, and suggesting appropriate remedies, signed by a large number of medical men interested in the institution, has been addressed to the subscribers. If we may accept the statement of the grievances as true, the recommendations are not only temperately made, but are cogently reasonable. Among other matters it is proposed first, that there shall be a house-surgeon, and that the surgical cases shall be treated by him, and be under his care, subject to the supervision of the members of the honorary surgical staff; second, that the duties of the sister shall be limited to the nursing and domestic departments. Equally just and rational seem to be the proposals, that each of the honorary surgeons be allotted a week for the reception of in-patients, and have assigned to him two days a week for seeing out-patients.

CHARGE OF STARVING.

MISS SCOTT, the keeper of a boys' school at Hastings, has been committed for trial on the charge of endangering the life of her servant-maid, named Hauseman, by giving her insufficient nourishment. Dr. Ashenden and Dr. Parsons were called to see the girl in March last, and they found her, in the house of her mistress, apparently dying of starvation. The emaciation was extreme. There was hectic fever, and the peculiar odour of starvation. She had had convulsions, and there was gangrene of one of the toes. The bed was wet through. The girl was altogether in a horribly neglected state. She has been removed to the workhouse, and has already picked up thirty pounds in

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weight, although still too ill to attend before the magistrates to give evidence. Some details were given as to the amount of food provided for the inmates of Miss Scott's establishment, but these were inconclusive, and the defence is reserved.

THE BRADFORD FEVER HOSPITAL.

MR. RIX, the resident-surgeon of the Bradford Fever Hospital, has introduced a new kind of bath into that establishment, which, in these days of treating fever by cold bathing, bids fair to be a great boon to both nurses and patients. The bath, which used to be in a separate room, is now placed in the centre of the ward, the patients being wheeled up to it in their beds. It is so constructed that curtains can be easily erected and drawn, and privacy be thus secured. When not in use the bath is covered and converted into a table for the patients. The bathing of patients, which previously was attended by considerable difficulty to the nurse and some discomfort to the patient, has now become an easy and comfortable process, one which can be performed at any hour by a single attendant. The idea seems to us to be a good one, provided the waste-pipe and overflow-pipe of the bath have no connexion whatever with the sewers of the hospital.

MR. JOHN SIMON, C.B.

THIS gentleman has resigned his seat in the Council of the Royal College of Surgeons, to which he was elected in July, 1868, in conjunction with Mr. Holden (who now fills the President's chair) and Dr. Humphry of Cambridge. Mr. Simon was re-elected in 1876, and was elected President of the College in 1878. There will now be four vacancies in the Council to be filled up by the Fellows in July next—viz., one caused by the death of Mr. H. Hancock, and the resignation of Messrs. T. B. Curling, F.R.S., and G. Busk, F.R.S.

ON Wednesday, at the sitting of the Court of Appeal, at Westminster, Sir Hardinge Giffard, Q.C., applied to Lords Justices Brett, Cotton, and Thesiger, for an extension of time to enable him to move on behalf of the plaintiff in the action of Howell *v.* West and Jones, appealing from a judgment of the Queen's Bench, refusing a new trial on the grounds that the verdict at the trial before the Lord Chief Justice and a special jury at Westminster was against the weight of evidence, and misdirection. Their lordships granted the application.

THE condition of the public schools of New York appears to be attracting attention just now in that city. Some idea of the extent of the evils existing in those institutions, says *Gaillard's Journal*, "may be formed from the fact that in one school (in East Forty-second-street) at least five per cent. of the teachers are temporarily invalided; many of them suffering from diseases of the eye produced by too strong a light." The laws of health as regards ventilation and cubic space would seem also to be to a large extent ignored.

A MEETING of the Council of the Royal College of Surgeons in Ireland will take place on May 4th, to elect eight Examiners to examine for the Fellowship and Letters Testimonial, three to examine for the diploma in Midwifery, and a similar number to examine students as to their proficiency in General Education.

THE death is announced of Dr. Hamilton, late medical superintendent of the Leeds Union Infirmary. Dr. Hamilton, who resigned his post last year in consequence of illness, was on a voyage to Australia, when he was seized with an attack of congestion of the liver, which rapidly proved fatal. He was aged twenty-nine.

IN the Afghan war despatches, Surgeon J. Duke is mentioned as "conspicuous for his unremitting attention to the wounded under a heavy fire." Amongst the names of officers whose good services Brigadier-General Baker had "great pleasure in recording" appear those of Surgeon-Major C. A. Atkins, A.M.D., and Surgeon J. Lewtas, Corps of Guides.

THE proposed site of the infectious diseases hospital to be erected at Torquay appears to be exciting considerable opposition. Most of the objections urged, however, are such as would apply to any situation of a hospital of the kind with the needful accessibility from centres of population.

THE Lord Lieutenant of Ireland has appointed Mr. S. T. Gordon, A.B. T.C.D., L.K.Q.C.P.I., to be surgeon to the Royal Irish Constabulary, vice Mr. E. Leclerc, resigned. Mr. Gordon is a son of the late President of the College of Physicians of Ireland.

A TELEGRAM from Ekaterinoslav, published by the *Golos*, states that diphtheria is spreading in the Novomoscow district, and that hundreds of children have been attacked by the malady. A detachment of doctors and nurses has been despatched to the affected villages.

THE medical officer of health of Brighton has been instructed by the Sanitary Committee of the Town Council to take proceedings, under the Public Health Act, to compel owners of manufactories to adopt within one month the best means of preventing the emission of smoke from their works.

DR. W. H. BROADBENT will deliver the Annual Oration at the rooms of the Medical Society of London on May 3rd, at 8.30 P.M. The subject chosen is, "The Pulse and some of its Indications."

THERE is no foundation for the statement that diphtheria is epidemic at Chelmsford gaol. A single case occurred a few weeks ago, but probably the disease was contracted outside the establishment.

AMONG the candidates for the post of Medical Officer of Health for the Port of London are the following:—Dr. Domett Stone, Mr. Mantle, and Dr. Benjamin Browning.

A BILL has been introduced into the Californian Legislature to prohibit the payment of percentages on prescriptions to physicians by druggists.

THE accident to Dr. C. H. H. Sayre, to which we referred last week, has, we regret to state, terminated fatally.

IT is proposed to apply for a Government loan for the purpose of building an infectious disease hospital at Chatham.

THE vestry of Bangor have at last decided to establish a local Board of Health for the town.

MEDICAL EDUCATION IN INDIA.

WE have received, through the Surgeon-General of Bombay, copies of five addresses delivered by his Excellency Sir Richard Temple, the Governor of the Presidency—three of them to the native students at the Grant Medical College in 1878-79 and -80, and two to the students at the Medical Schools at Poona in 1878 and 1879. They are interesting as showing the progress which medical education is making in India, the views held respecting it by so able an administrative authority, and the practical interest he has taken in so important a subject.

From these addresses we learn that at the Grant College

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two standards of medical education were recognised—the higher, for the licentiate and M.D. degree; and the lower comprising two branches, the apothecaries' class and the hospital assistants' class. The instruction in the hospital assistants' classes was given in the vernacular. The period of study for the higher stand extended over five, and for the lower over three years. During the famine in Bombay the want of subordinate medical officers was greatly felt; and, with a view to increase their numbers, it was then decided to create two medical schools—one at Poona and the other at Ahmedabad—for hospital assistant vernacular classes, which were thereafter to be discontinued in the Grant Medical College. The school at Poona was opened in 1878 and that at Ahmedabad in 1879, and both seem to give promise of answering the purpose for which they were created. The Grant College is now devoted entirely to the education of students for the higher standard. In his first address to the students, in 1878, Sir Richard Temple sketched out the intended changes above noticed, and justified the course adopted by Government of extending the lower standard of medical education by the circumstances of the country, the lamentable deficiency of educated medical practitioners, and the duty of saving the people from "the tens of thousands of quacks of various sorts and denominations who are obtaining employment," and to whom the native population naturally apply in the absence of qualified practitioners. "Unless we provide a proper and adequate medical staff and sufficient strength for the whole Presidency, we shall still leave the sick people at the mercy of those empirical remedies, of those quack medicines, of those remains of barbarous and antiquated superstitions which still exist in this country." Sir R. Temple looks forward to the period—apparently still far distant—when it will be possible to introduce into India laws to prevent the practice of medicine by unqualified persons. In the concluding portion of his address Sir Richard adverted to some of the weak points of the students, and inculcated upon them the necessity of acquiring promptness and decision in applying practically the theoretical knowledge acquired in the schools—firmness and nerve, combined with delicacy and precision of handling in surgery—courage and self-reliance in confronting prejudices, combating with ancient superstitions and bearing the frowns of their countrymen, and in fearlessly exposing themselves in the way of duty to the risks of infection and contagion—and, above all, enthusiasm in their work, the enthusiasm of humanity in preventing disease and assuaging suffering.

In his second address, delivered in 1879, Sir R. Temple took up the subject of preventive, as distinguished from curative medicine, and stated that it was probable that by comprehensive measures "80,000 deaths annually might be prevented, or rather deferred," in the Bombay Presidency. He dilated at some length upon the importance of hygienic education; registration of vital statistics; purification of the water-supply; examination of food, of air, and of dwellings; conservancy, including drainage; utilisation of sewage; sanitary engineering; vaccination; and prevention of contagious diseases; and impressed upon the students the necessity for continuing their studies of these important subjects after leaving the college.

In his third, and farewell address, Sir Richard, having on previous occasions discussed curative and preventive medicines, and, as he conceives, exhausted these topics, gave a brief *résumé* of the leading introductory lectures delivered at the principal medical schools in London in 1877–78 and 79, as reported in THE LANCET. Marking "the lofty tone, the comprehensive thoughtfulness, the moral earnestness, the philanthropic enthusiasm, and the truly religious sentiment by which they are pervaded." It appeared to him that the opinions expressed in them might with great advantage be brought under the notice of the students in the Grant College, and were well worthy of their thoughtful consideration.

It is gratifying to learn on such authority that medical education is receiving so much attention from the Government, and making such satisfactory progress in India. It is also matter for congratulation to find that so able an administrator and so hardly-worked an official as Sir R. Temple can find time, and has the inclination to direct his energies to the promotion of so important an object. A careful perusal of these addresses makes us feel regret that their author did not succeed in securing his election as a member of the new Parliament, where his services might have been of much value alike from his knowledge of Indian affairs and from the interest which he evidently takes in the promotion of sound medical education.

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HEALTH OF LARGE ENGLISH TOWNS

SIXTEENTH WEEK OF 1880.

THE excessive death-rates which have very generally prevailed in our large towns since November last have now declined, and the rate of mortality has fallen below the average. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5510 births and 362 deaths were registered last week. The births exceeded by 325, while the deaths were 213 below, the average weekly numbers during 1879. The deaths showed a further decline of 205 of those returned in recent weeks, and were equal to an annual rate of 21·3 per 1000, against 24·9, 22·5, and 22·7 in the three preceding weeks. During the past three weeks of the current quarter the death-rate in these towns has averaged 22·2 per 1000, against 26·3 and 26·0 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 13·6 in Portsmouth, 13·7 in Leicester, 19·0 in Brighton, and 19·6 both in Leeds and Bristol. The rates in the other towns ranged upwards to 24·9 in Norwich, 25·0 in Sunderland, 27·5 in Salford, 28·8 in Nottingham, and again the highest rate, 32·0, in the borough of Plymouth. The fatality of epidemic measles in Plymouth showed a further increase last week.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 445 and 449 in the two preceding weeks, were 455 last week. They included 132 from whooping-cough, 108 from measles, and 107 from scarlet fever. The annual death-rate from these seven diseases averaged 3·2 per 1000 in the twenty towns, and ranged from 1·5 to 1·6 in Brighton and Leeds, to 6·3 and 13·9 in Nottingham and Plymouth. Measles showed the largest proportional fatality in Plymouth, Nottingham, Oldham, and Sunderland; and scarlet fever in Sheffield, Norwich, and Salford. Eighteen more deaths resulted from measles in Plymouth, making no less than 231 recorded within that borough since the middle of November last. Nine more deaths were referred to fever, principally enteric, in Sheffield. Small-pox caused 15 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had slowly increased from 167 to 178 in the three previous weeks, further rose to 187 on Saturday last; forty-eight new cases of small-pox were admitted to these hospitals during last week, against 42 and 44 in the two previous weeks. The Highgate Small-pox Hospital contained 26 patients on Saturday last, a further increase upon recent weekly numbers.

The fatality of lung diseases, which has shown so constant an excess during the past few months, is now rapidly declining. The deaths referred to diseases of the respiratory organs in London, which had been 395, 365, and 348 in the three previous weeks, further declined to 295 last week, and were 84 below the corrected average; 176 resulted from bronchitis, and 90 from pneumonia. The annual death-rate from diseases of this class was equal to 4·2 per 1000 in London last week; the rate from the same diseases in Liverpool was 6·2 per 1000.

THE ADELAIDE HOSPITAL, DUBLIN.—The annual meeting of the friends of this charity was held on April 20th. The report stated that the new buildings were opened in October last. The institution now practically consists o two distinct hospitals, the main building with the Madeleine wing being used for non-infectious medical and surgical patients, while a separate and isolated hospital has been erected for fever cases. These improvements have involved a large expenditure, so that a considerable debt has been incurred, and it has been found necessary to restrict the admissions to a less number of patients than the institution is capable of accommodating. This condition of things the committee trust the increased liberality of their fellow-townsmen will enable them to amend.

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Correspondence.

"Audi alteram partem."

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—Your remarks in THE LANCET of April 3rd, on the difficulty of procuring genuine Chian turpentine, and pointing out the unfavourable results which must occur in the treatment of cancer by the use of a spurious drug, appeared very opportunely; and I have reason to know that they were well received by the profession and the public, and that they effected the desired purpose by causing the profession to be specially solicitous to procure the genuine article. I regret, however, to find from numerous letters sent to me by medical men requesting my opinion as to the genuineness of drugs supplied to them, that it is necessary to further caution the profession against the practice of some druggists, who supply either a wholly factitious article, or a Chian turpentine adulterated with some other resin of an inefficient and sometimes of an injurious description.

Of the large number of specimens sent to me not more than five per cent. had any pretensions to be genuine. Some pills guaranteed to be prepared from the genuine drug were also submitted for my approval, and I found them to be prepared either from Venice, or strained crude turpentine. I have also had numerous letters from medical men asking to be informed whether a peculiar irritability of the skin with other symptoms resembling those of acute urticaria, were incidental to the administration of the remedy, and also inquiring as to the best method of treating the complication, and the means of preventing it, as it interfered materially with the progress of the treatment. Other patients having derived no benefit from a remedy given, although fairly tolerated, it was proved that they were not taking the genuine turpentine. I may state that I have never found the symptoms above-mentioned to be produced by the administration of the genuine remedy, and I have no hesitation in stating that when they do appear they are an indication of an impure drug being given. The violet-like odour of the urine always becomes manifest on the administration of the impure drug, but I believe that it is invariably absent when the genuine drug is taken. If there is odour of the urine at all, it is much milder, and of a more fragrant character.

It is self-evident that the substitution of an impure drug has a tendency to bring the treatment into discredit, besides being a positive cruelty to the patients. It is possible that the lavish supply of the impure article at extravagant prices may have arisen from ignorance on the part of the druggists of the properties of true Chian turpentine, as I am unwilling to believe that their commercial morality is so lax as to induce them deliberately to substitute an impure turpentine for the pure article.

I may add that, as the purity of the drug is an essential condition of successful treatment, I cannot hold myself responsible for the validity of many of the trials which are now being made, nor can I admit that they constitute a fair test of the new method of curing cancer.

I am, Sir, yours, &c.,

Birmingham, April 27th, 1880. JOHN CLAY.

To the Editor of THE LANCET.

SIR,—On 27th March, 1880, you published a most interesting article upon the Treatment of Cancer of the Female Generative Organs by a new method, which method appears to be by the internal exhibition of Chian turpentine. Pereira makes the obtaining of this drug as exceedingly problematic. Fifty years ago, in the drug market, it was seldom ever seen, yet it was rarely sold as a *manufactured* article on the spot, mostly Venice turpentine being one of the articles used, in its spurious manufactory. I have been lately obliged by a letter from Horner and Son, by Mr. Bowdas, dated April 5th, 1880, to the effect that no true Chio was to be had. There is a great demand for it, and the firm had written abroad for some. I procured some very old Chio turpentine, and Professor Rodgers supplied the following analysis:—

Resin and volatile matter	98·06
Ash, after burning	1·94
Composed of	
Silica	·78
Alumen, iron, and silicate of iron ...	·029
Lime	·52
Residuum, chiefly fine sand	·62
	1·949

Mr. Kensington, in his Compilation of Analyses, gives the *ash* of the seed of the Strasburg turpentine, or the Abies picea, as follows:—

Potash	21·75
Soda	6·76
Magnesia	1·67
Lime	1·54
Phosphoric acid	39·65
Silica	11·71
Peroxide of iron	1·31
Chloride of sodium	·57

Both these analyses show silica in considerable quantity, and if it cannot be procured in sufficient amount, I recommend in its place the use of the Strasburg turpentine.

In 1874 I published in the *Edinburgh Medical Journal* a short essay upon the medicinal properties of silica in cancer, &c., having had considerable experience in that disease. I only had one case which responded to treatment so quickly as Professor Clay's, but the patients have been well two, four, and ten years, with no return. The real efficacy of silica lies, however, not in its promoting *cure*, but in its giving freedom from *pain*. Now and then it cures, not always, and located in any part; but on true medullary cancer it appears to have little power, except that it appears to change somewhat the character of its structure first. The form I employ is that of lozenges, and by their being artificially prepared, I, of course, know how much resin, lime, silica, &c., each contains, but given in organic preparations the amount is very uncertain.

I will conclude this letter with a short extract:—"The quantity of silica, when used artificially, being two grains in the twenty-four hours, is much larger than that introduced by drinking two or more pints of Messisquoi or Bethesda waters daily. But it must be borne in mind that iron or sulphur, taken as natural chalybeates or alterative waters, give much greater results than the same ingredients and the same proportions prepared artificially, probably because they are more soluble and better adapted to enter into the circulation when prepared naturally than they are when prepared artificially; but however the matter is explained, about the result there can be no doubt; that a one-tenth part supplied from Nature's laboratory is equal to *one* part prepared artificially."

I am, Sir, your obedient servant,

South Belgravia, April 7th, 1880. RICHD. F. BATTYE.

THE CROTON-OIL TREATMENT OF RINGWORM.

To the Editor of THE LANCET.

SIR,—I have read with much interest Mr. Alder Smith's and Mr. Cottle's communications on the treatment of ringworm by croton oil. No doubt the system of producing inflammation in the skin by counter-irritants sufficient to overcome the pre-existing disease is a good one, and was taught by the late Mr. Startin many years ago, but I think these gentlemen carry their treatment almost too far, for I have seen cases of ringworm in which croton-oil liniment, carbolic acid, oleate of mercury, and other powerful irritants, have produced most painful sores and nasty ulcerations. Indeed, I have had a few cases brought to me in this state, and I cannot help thinking the treatment is somewhat heroic to young patients.

In some hundreds of cases of ringworm that have come under my notice the last few years, I find that much milder irritants will, I may say always, effect a cure, no matter how chronic the disease, and some I have seen of years' duration yield to a simple and careful treatment. For instance, careful washing the scalp night and morning with soft soap, and, if there

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is already suppurative inflammation, soft soap mixed with yelk of egg, and the nightly inunction of an ointment of white precipitate, twenty or thirty grains to the ounce of vaseline or benzoated lard; and, in the more chronic cases, daily brushing into the roots of the hair a modified "Coster's paste" (composed of iodine pigment, three drachms; creasote, half an ounce; oil of cade, half an ounce) is always effectual, at least in all the cases I have had to treat, and I do not know that I have lost sight of many that were not quite relieved.

Dr. Alder Smith desires to draw attention to the "efficiency of the croton-oil treatment in the production of kerion as a certain and speedy cure in the most inveterate forms of the disease." It would be interesting to know how soon a cure is effected by this treatment. I find it is a difficult thing to give a certain prognosis of cure under *two* or *three* months at least—that is to say, the complete destruction of the parasite, and a healthy growth of new and sound hair.

I am, Sir, yours truly,

Sackville-street, April 26th, 1880. JAMES STARTIN.

To the Editor of THE LANCET.

SIR,—As Mr. Smith's letter in reference to the above subject, in this week's LANCET, may possibly lead to misapprehension of the principles of treatment of ringworm I have endeavoured to indicate, may I be permitted to repeat that an essential part of my plan is that in certain conditions of chronic ringworm, it is advisable to produce an inflammation involving the tissues at least to the depth of the hair-follicles. To be one of the means of effecting this a crop of pustules must fulfil the conditions named in my letter in THE LANCET of April 17th.

I am, Sir, your obedient servant,

WYNDHAM COTTLE, M.B. Oxon., F.R.C.S.

Savile-row, W., April 24th, 1880.

TRANSVERSE DEPRESSIONS ON THE NAILS.

To the Editor of THE LANCET.

SIR,—The note that you recently published, giving an account of an instance of arrested nutrition of the nails during illness, was brought to the notice of a gentleman who having himself afforded an example of this curious appearance, has sent me an account of his own case. Although not a medical man his description is careful, and affords evidence of accurate observation.

In August, 1878, when forty-nine years of age, he was seized with a severe illness; he was unconscious for three days, his life being despaired of, but eventually he made a good recovery, being in bed only for a month. Shortly after the attack it was observed that there was a groove on all the nails, both of the hands and the feet, neither the patient nor those about him having ever heard previously of such an occurrence. The foot marks disappeared first, but the lines on the hand-nails were not cut away until nine months had elapsed. The length of time occupied by the marks on the foot-nails until they advanced to the edge of the nail was not noted. My correspondent informs me that he has a good circulation, that he usually covers his feet warmly, but does not cover his hands, and that his nails and hair grow with unusual slowness.

The points to be noted in this case are first, the fact that the groove on the nails of the hand may persist for nine months (an unusually long time, so far as our present data teach us) before it is finally lost; and secondly, that, contrary to what Dr. Beau leads us to look for in such cases, the mark on the toe-nails disappeared first.

I am, &c.,

Queen Anne-street, W., April 13th, 1880. G. THIN, M.D.

"HERPES GESTATIONIS."

To the Editor of THE LANCET.

SIR,—The cases of "Herpes Gestationis" narrated by Dr. Stanley Gale in THE LANCET for April 17th appear to illustrate some points of interest in the physiology of the reproductive system.

In each instance the eruption began to appear shortly before delivery (three or four days); recurring with several pregnancies. It may be regarded as precisely analogous to—indeed is in some respects identical with—eruptions which in many women almost invariably precede the menstrual flow: they are the ectodermic manifestations which in a more or less pronounced manner accompany menstruation; and they exemplify the grand law of periodicity which pervades that function.

These dermic changes may aptly be likened to the moulting of birds, and other of the lower creatures; indeed, being sexual, they are truly analogous. Every woman who menstruates displays more or less epidermic change at the "periods;" and if closely observed will show either (*a*) increased pigmentation of the skin and its appendages—e.g., freckles, areolæ of nipples, hair—or a little acne, herpes, urticaria, eczema, or altered sweat (ectodermic), or (*b*) coryza, bronchial catarrh, or mucous flux from the bowel, with, in rare cases, casts: (endodermic). (Parenthetically it may be said that casts of the bowel are met with about nine times more frequently in women than in men.)

This and other kindred, but as yet imperfectly observed or understood, points relating to the physiology and pathology of menstruation, I hope, with your permission, to discuss more at large in your pages through my course of systematic lectures about to be delivered.

I have the honour to be, Sir, your obedient servant,

ALFRED WILTSHIRE, M.D., F.R.C.P.

Wimpole-street, W., April 19th, 1880.

RELIGIOUS LIBERTY IN TURKEY AND IN ENGLAND: A CONTRAST.

To the Editor of THE LANCET.

SIR,—Will you allow me to make a few observations on the letter of "J. B. B.," under the above heading in your impression of April 24th.

In the first place I would observe that religious equality was first proclaimed in Turkey in 1839 in the Tanzimat, but the declaration (repeated in 1856) has always remained a dead letter, which "J. B. B." would find to be the case were he a rajah. But the cases cited are not parallel. King's College never did proclaim religious equality. It was established on religious principles, just as University College and the London University were established on secular principles.

I am sure that Mr. Tweedy would find no Government post barred to him on account of his religion, whatever that may be. If such were the case he would have a just cause of complaint, and might then compare the declarations of the Sublime Porte (untruthful as they are) with the practice of the British Government.

I am, Sir, yours, &c.,

Athenæum Club, April 27th. HUMPHRY SANDWITH.

SALICYLATE OF QUININE.

To the Editor of THE LANCET.

SIR,—For the benefit of those who are wishful to try the effects of the above in rheumatism, I append a formula (of my own), which I have used with benefit for some time:—Salicylic acid, one drachm; disulphate of quinine, ten grains; simple syrup, one ounce; strong liquor ammoniæ, one drachm; water, to twelve ounces. The mode of mixing to be adopted is as follows: put the acid and quinine together into the phial, with about eight or nine ounces of water, agitate briskly for a few seconds, let the mixture stand a little while uncorked, then add the liquor ammoniæ, again agitating, then the syrup and the remainder of the water. A few drops more of the ammonia may be required to get a perfectly clear solution. I have found the addition of tincture of digitalis at times advantageous.

I am, Sir, yours truly,

JOHN DEARDEN, F.R.C.S.

Church, near Accrington, April 7th, 1880.

THE LONDON HOSPITAL.—The committee representing employés of the Great Eastern, London, Tilbury and Southend, and North London Railways announce that the next annual ballad concert, in aid of the funds of the London Hospital, will take place at St. James's Hall on Tuesday, May 4th next.

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Obituary.

DR. HEATON, F.R.C.P., OF LEEDS.

VERY many of our readers will have shared the sincere regret with which we announced the death of Dr. John Deakin Heaton, after a very brief illness, in the 63rd year of his age.

On the afternoon of March 24th he attended a meeting of the committee of the Yorkshire College, but left before the business was concluded. Feeling cold, he walked quickly to another public meeting, but still complained of chilliness, and went home to bed suffering, as was soon ascertained, from an attack of pneumonia, to which he succumbed at five o'clock on the morning of March 29th. During the brief period of this last illness he was attended by the principal members of the profession in Leeds, including Dr. Eddison, Dr. Allbutt, Dr. Barrs, (house physician at the General Infirmary), and Mr. Pridgin Teale.

Dr. Heaton was a native of Leeds, and was educated at the Grammar School there, and subsequently at the Leeds School of Medicine and at University College, London. At the former of these institutions he gained five medals in as many different subjects, and in the latter the same number of prizes, including the gold medal in Medicine and the Fellowes gold medal for Clinical Medicine. He also carried off the silver medal awarded by the Apothecaries' Company for Botany—open, as our readers are aware, to all medical students. In the examination for the M.B. of the University of London he obtained the gold medal in Botany and other honours, and in the M.D. examination in 1849 he received the gold medal for the best commentary on a case in medicine, and the "Certificate for Special Proficienoy in Medicine." In 1842 he spent some time in Paris, attending the medical practice of the hospitals, and after a long Continental tour he commenced practice in Leeds, where he thenceforth continued to reside.

Thus qualified, it was but natural that he should early become associated with the Medical School of Leeds; he first lectured there on Botany, then on Materia Medica, and subsequently on the Practice of Medicine—the last for more than twenty years; and he also held the responsible office of treasurer to the Council of the School, of which he was three times president. He was successively elected physician to the Dispensary and the Fever Hospital—during his connexion with which he had two severe attacks of fever—and to the Leeds General Infirmary. In 1849 he was elected a Medical Fellow of University College, and in 1868 had the honour of becoming a Fellow of the Royal College of Physicians. He was also a Fellow of the Royal Medico-Chirurgical Society and of the Medical Society of London, and was the contributor of various papers to the several medical and literary periodicals.

Besides his professional labours, Dr. Heaton took an active part in most of the educational and benevolent institutions of the town: for four years—1867 to 1870—he was president of the Philosophical Society, and for many years its honorary librarian. He was also Chairman of the Committee of the Yorkshire Board of Education, and member of the first School Board for the borough; as a Justice of the Peace for the West Riding, he was energetic in the magisterial work of his district. He was, besides, a trustee of funds for charitable uses (well known as the "Pious Uses Trust"), was honorary physician to the Tradesmen's Benevolent Institution, to the Unmarried Women's Benevolent Institution, and the Leeds Town Mission; consulting physician to the Women and Children's Hospital; and one of the trustees of several of the livings of Leeds.

But the institution with which Dr. Heaton's name will be the most permanently and gratefully remembered is the Yorkshire College for the Promotion of Science and Literature: from 1869, when, as chairman of the Executive Committee of the Yorkshire Board of Education, he first took up this idea, he steadily worked for the furtherance of the plan, until in 1875 the College was inaugurated, and it is now firmly established as one of the great permanent institutions of the district, having an estate and buildings of its own, and a large staff of able professors. In recognition of these services to education, the Clothworkers' Company of the City of London conferred upon him the honorary membership of their company, and at the same time he was admitted a citizen of London.

The list of the offices and posts of responsibility and honour which he filled prove that there was ample grounds for the high esteem in which Dr. Heaton was held by his fellow-townsmen and the public generally. It may be said, indeed, that he attracted to himself in a singular manner the confidence of those around him; his extensive knowledge and his aptitude in bringing that knowledge to bear, his cultured mind, his great experience, his clearness and soundness of judgment, and the unflagging diligence (one of his special characteristics from boyhood) he showed in discharging any duty which he undertook, making him a most valuable counsellor and assistant in all the matters which were brought under his notice. His loss will be long and greatly felt in connexion with many of the most important public institutions of the district.

The funeral of Dr. Heaton took place on April 2nd, and, under the circumstances which we have stated, it is not surprising that the sad occasion brought together such a numerous gathering of mourners as has rarely been seen at the graveside of one of our *confrères*, for it included not only his personal and professional friends, but great numbers of others, amongst whom were most of the leading inhabitants of Leeds and its vicinity.

EDWARD JACOMB ASBURY, M.R.C.S. ENG., &c.

MR. EDWARD JACOMB ASBURY died on April 1st, 1880, at East Retford, Notts, aged fifty years, from apoplexy. He was the fourth son of the late Jacob Vale Asbury, Esq., surgeon, of Enfield, Middlesex, with whom he was in extensive practice for some years. Afterwards he succeeded to the practice of the late Dr. Allison of Retford, Notts, where he carried on a large and select practice up to the time of his death. He held the appointment of medical officer of health. He gained much experience during the Crimean war, and when at Westminster and Enfield, during a severe epidemic of cholera, was appointed surgeon to a district, which task he performed with unceasing energy and the greatest kindness to the sufferers. His loss is deeply regretted by his patients and a large circle of friends. He leaves five children under age.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were elected Fellows of the College on Thursday last:—

Barlow, Thomas, M.D. Lond., Montagu-street.
Coupland, Sidney, M.D. Lond., Nottingham-place.
Dickinson, Edward Harriman, M.D. Edin., Liverpool.
Donkin, Horatio Bryan, M.B. Oxon., Upper Berkeley-street.
Fox, Cornelius Benjamin, M.D. Edin., Chelmsford.
Goodhart, James Frederick, M.D. Aberd., Weymouth-street.
Kelly, Charles, M.D. Lond., Worthing.
King, Robert, M.B. Camb., Harley-street.
Mahomed, Frederick Henry Horatio Akbar, M.D. Brussels, St. Thomas's-street.
Shaw, Thomas Claye, M.D. Lond., Banstead Asylum, Surrey.
Topham, John, M.D. Lond., Collingham-road.

The following gentlemen having passed the required examination, were admitted Members on the same day:—

Dunbar, James John Macwhirter, M.B. Lond., Ladbroke-grove.
Lubbock, Montagu, M.B. Lond., Foulis-terrace.
O'Connor, Bernard, M.D. Queen's Univ., Brook-street.
Tirard, Nestor Isidore Charles, M.B. Lond., King's College.
Whittle, Ewing Maud Glynn, M.D. Dub., Cambridge.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on April 22nd:—

Barratt, Herbert James, Bedford.
Benson, Alfred, Settle, Yorkshire.
Davis, William George, M.D. Pennsylvania, Philadelphia.
Frampton, T. H., Tewkesbury, Gloucester-terrace.
Hockridge, Thos. Granville, M.D. McGill Univ., Westbourne-pk.
Parkes, Louis Coltman, Weybridge, Surrey.
Perkins, G. C. Steele, Exeter.
Permewan, Arthur Edward, L.S.A., Redruth, Cornwall.
Reid, Norman Macbeth, Croydon, Surrey.
Rowlands, Hugh Pugh, L.S.A., Bryngwyn, Towyn.
Vise, Christopher, Holbeach, Lincolnshire.
Wheeler, Albert, L.S.A., Southsea, Hants.
Whiting, John, Beccles, Suffolk.

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Of the 74 candidates examined during last week, 44 passed to the satisfaction of the Court and obtained their diplomas; 5 passed in Surgery, and when qualified in Medicine will be admitted Members; the remaining 25 failed to reach the required standard, and were referred for six months' further professional study. Eight candidates who had passed in Surgery at previous examinations, having subsequently obtained a medical degree or licence recognised by the College, were also admitted Members.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at Meetings of the Board of Examiners on April 26th, 27th, and 28th:—

John R. S. Robertson, William B. Benjafield, George A. Atkinson, James G. Houseman, Bernard L. Mills, James D. Dunlop, Edward B. C. Walker, Herbert H. Ashdown, Ernest E. Maddox, John L. Gibson, and Samuel Macken, Edinburgh; Charles H. Evers and Charles S. Blair, Newcastle-on-Tyne College of Medicine; Thomas H. Williams and Charles S. Young, Glasgow; William H. Wilcock, Anthony A. Ward, John H. Naylor, William J. Waddington, and George F. S. Arthy, Leeds School of Medicine; William E. Bradley, John Rodley, William H. Winder, and Herbert E. Edlin, Owens College, Manchester; Frederick A. Saunders and William A. Martin, Liverpool; Henry L. Jones, Cambridge and St. Bartholomew's Hospital; William W. Banham and George R. Beardmore, Sheffield School of Medicine; George J. Myles, Bristol; Frank J. Allen, Cambridge; Daniel Riordan, Queen's College, Galway; G. N. Cornish, King's College; John F. Bolton, John Hoole, M. Carrington Sykes, and Robert W. Jalland, St. Bartholomew's Hospital; George T. Lee and Ernest F. Grose, University College; Frank T. Rampton and John H. Spitsly, St. Mary's Hospital; Hugh Heald, Liverpool; Alfred de Winton, Guy's Hospital; Thomas Taylor, Middlesex Hospital; Arthur de C. Sloan, Westminster Hospital; John Oxford, St. Thomas's Hospital.

UNIVERSITY OF DURHAM.—At the Easter Term, 1880, the following gentlemen passed the First Examination for the degree of Bachelor of Medicine, held at the College of Medicine, Newcastle-upon-Tyne, on April 19th, 20th, 22nd, and 23rd:—

Baker, John Hopper.
Brett, James, M.R.C.S., L.S.A.
Coley, Frederic Collins, L.R.C.P., M.R.C.S.
Hamilton, George Clarendon.
Lee, Henry Boynton.
Mears, Frederick Charles.
Mears, William Pope, M.R.C.S., L.S.A.
Robinson, Alfred.
Rowell, Robert Henry.
Sheppard, William John.
Smith, William Harvey, M.R.C.S.
Wheatley, Arthur William.

Four candidates were referred in all subjects. One candidate was referred in Botany, and one in Chemistry.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on April 22nd:—

Breach, James Henry, Yattenden, Newbury, Berks.
Gibbs, Alfred Napier Godby, Clifton, Bristol.
Morris, Edgar Freeman, St. Owen's-street, Hereford.
Pitman, William Weston, Acacia House, Highgate.
Spackman, Henry Robert, Pennfields, Wolverhampton.
Thomson, Thomas, Approach-road, Victoria-park.

The following gentlemen on the same day passed the Primary Professional Examination:—

George Milner Cole, St. Bartholomew's Hospital; Joseph H. Surtees Sumner, London Hospital.

At the Preliminary Examination in Arts held at the Hall on April 23rd and 24th, 137 candidates presented themselves, of whom the following passed and received certificates of proficiency in General Education:—

FIRST CLASS (in order of merit).—1st: T. H. Fisher. 2nd: Mary Emily Dowson. 3rd: W. Lansdale. 4th: E. H. O. Little and Arthur William Jones. 6th: Edward Felix, H. J. Hawthorn, and J. Martyn.

SECOND CLASS (in alphabetical order).—F. W. Abbott, B. Badcock, J. S. Batchelor, G. H. Bate, G. P. Batt, N. J. N. Bray, Samuel J. Brooks, F. St. John Butler, C. Burland, H. L. Cade, J. W. Cafferata, J. S. Coakey, H. W. Chambers, J. C. Christie, W. A. Clarke, John Crisp, F. Evered, R. C. Featherstone, W. J. Fern, Octavius S. Fisher, H. Fox, C. B. Francis, R. Freeman, G. F. C. Gardiner, J. Girvin, T. W. Gibbard, C. B. Gilson, W. H. Godfrey, W. H. Hall, F. W. Hamp, C. J. Heath, T. S. Heaton, A. B. Holberton, W. J. Hosford, W. W. Howard, H. L. Hudson, W. A. Jacobson, T. G. Lavie, J. L. Lewis, G. C. Macdonald, A. A. Macfarlane, J. G. Mackay, F. W. Metcalfe, Anne Emily Mills, W. A. Musbet, F. Nuttall, R. Pinhorn, R. H. F. Routh, Agnes Russell, D. S. Saunders, F. A. Saw, Albert W. Smith, Cecil Smith, J. Baker Smith, Robert E. Smith, Sophia Emilia Smith, C. F. White, J. R. Williams, W. R. Wolfe, Edwin P. Wright, Sydney C. E. Wright, and R. B. Wyeth.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following gentlemen passed the Final Examination for the Surgical qualification at the April examination:—

Hodge, James, Dundee.
Stewart, James, Kirkintilloch.
Young, Patrick R., Bebington.

The following passed the First Professional Examination:—James Gillies, John Humphreys, David Forsyth, Archd. S. Macphail, Henry Jones, John Aitken, Sheridan Dean, Charles Jackson, and John S. Forrest, all of the Glasgow School; Jos. Givan, Belfast School; Jos. H. Wallis, Dublin School.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following passed the Final Examination for the Edinburgh and Glasgow Double Qualification at the examination held on April 12th and following days:—

Brandreth, Charles L., Blackpool.
Thornley, Joseph, Bolton.
M'Ilwraith, Samuel, Glasgow.
Wallace, Robert, Glasgow.
Hyrons, Ernest Augustus, Glasgow.
Milroy, James, Glasgow.
Peck, John Huntly, Glasgow.
Passanha, Vincent Adolphe, Dublin.
Till, George William, Glasgow.

The following passed the First Professional Examination for the Double Qualification at the April examination:—

G. B. Buttery, Ed. A. Cook, James Gilroy, Charles A. Gray, M. H. Guest, John Lyon, John Macdonald, A. R. Mathieson, Henry Oakes, and A. W. White, all of the Glasgow School.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the Court of Examiners recently held the undermentioned obtained the Fellowship of the College:—

Banks, Samuel Henry (Surgeon-Major).
Potter, Henry (Surgeon-Major).

ALDERMAN WHITAKER, M.D., has been placed on the Commission of the Peace for the borough of Belfast.

FLEET-SURGEON W. PATRICK has been appointed to the *Britannia*; Staff-Surgeon T. Browne to the *Royal Adelaide*.

DR. SHELTON, Principal Medical Officer at the Garrison, Halifax, Nova Scotia, is about to vacate that post, having received orders to proceed to Aldershot.

A COMBINED meeting of the North Western, Northern Counties, and Yorkshire Associations of Medical Officers of Health will be held in Leeds, on Friday, May 7th.

ON Wednesday evening the thirty-fifth annual dinner of the German Hospital at Dalston was held at Willis's Rooms, the Duke of Connaught presiding. The subscriptions announced were about £3650.

AT the quarterly meeting of the Naval Medical Compassionate Fund, held on the 13th instant, Dr. H. J. Domville, C.B., Inspector General, in the chair, the sum of £70 was distributed among the various claimants.

THE thirty-second anniversary of the City of London Hospital for Diseases of the Chest was celebrated on Wednesday at the Cannon-street Hotel, under the presidency of Mr. C. T. Ritchie, M.P., when the subscription list amounted to about £3000.

THE Local Government Board have notified to the Local Authorities their intention to issue an order for the amalgamation of the township of Bredbury and Romiley, in the Stockport Union, for Local Government purposes, from the 29th of September next. This is in answer to a requisition from the people of Romiley, who were otherwise unable to obtain efficient means of drainage and water supply.

EARLSWOOD ASYLUM FOR IDIOTS.—The friends of this excellent institution held their thirty-third annual festival on April 22nd. The Earl of Rosebery presided over a large and influential company on the occasion. It is satisfactory to learn that the asylum, which contains 565 inmates, collected from all parts of the kingdom, is now free from debt. Subscriptions to the amount of £2047 were announced by the secretary in the course of the evening.

UNIVERSITY OF LONDON.—The following examiners for 1880-81 were elected at a meeting of the Senate held on Wednesday:—Practice of Medicine: W. H. Dickinson, M.D.; and C. Hilton Fagge, M.D. Surgery: John Cooper Forster, M.B.; and Prof. John Wood, F.R.S. Anatomy: Prof. John Cleland, M.D., and Prof. Redfern, M.D. Physiology: Philip Henry Pye-Smith, M.D., B.A.; and Prof. J. Burdon-Sanderson, M.D., LL.D., F.R.S. Obstetric Medicine: J. M. Duncan, M.D., LL.D., F.R.S.E.; and Henry Gervis, M.D. Materia Medica and Pharmaceutical Chemistry: Prof. E. B. Baxter, M.D.; and F. T. Roberts, M.D., B.Sc. Forensic Medicine: Prof. Ferrier, M.D., M.A., F.R.S.; and Thomas Stevenson, M.D.

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ROSTREVOR WATER SUPPLY.—A scheme for the water supply of this town has been approved of by the Local Government Board for Ireland, and the works will be commenced without delay.

ROYAL HOSPITAL FOR INCURABLES.—The annual festival of the friends and supporters of this hospital was held on April 23rd. A new wing has been built at one end of the building, and it is proposed to erect another wing at the opposite end. At present the number of inmates is 183, and of pensioners 419. The cost of maintaining the former was last year a little over £10,000, whilst the pensions amounted to £8000 a-year. The appeal of the chairman resulted in subscriptions amounting to £4300.

SOUTH LONDON SCHOOL OF PHARMACY.—The medals and certificates for the term ending 15th April were presented by the secretary on the 17th April to the following successful competitors:—Senior Chemistry: medal, Mr. Price; certificate, Mr. Carruthers. Junior Chemistry: medal, Mr. Hill; certificate, Mr. Waring. Materia Medica: medal, Mr. Williams; certificate, Mr. Horne. Botany: medal, Mr. Walkley; certificate, Mr. Waring. Pharmacy: medal, Mr. Waring. The secretary's prize, for Organic Chemistry, was presented to Mr. W. Williams.

DONATIONS TO MEDICAL CHARITIES.—Mr. W. C. Jones of the Elms, near Warrington, has given £500 to the Infirmary of that town. The Grocers' Company have given £100 to the North London Hospital for Consumption at Mount Vernon, Hampstead. Messrs. Coutts and Co. have given an additional 30 guineas to the Royal National Hospital for Consumption and Diseases of the Chest at Ventnor. Captain Charles George Hammond, 16th Lancers, of Brighton, bequeathed £150 each to the Lock Hospital and St. George's Hospital. The Duchess of Norfolk has given £100 to Queen Charlotte's Lying-in Hospital. The Charing Cross Hospital has received £100 each from Mr. Philip D. Tuckett and Mr. R. C. L. Bevan.

Medical Appointments.

Intin ations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ATTHILL, R. C., L.R.C.S.Ed., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer for the Parish of St. Osyth, in the Tendring Union.

BERRY, W., M.R.C.S.E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Honorary Medical Officer to the Royal Albert Infirmary, Wigan, vice Hart, resigned.

BLYTHMAN, C. S., M.B., C.M., M.R.C.S.E., has been reappointed Medical Officer of Health for the Swinton Urban Sanitary District. £30 per annum.

BOND, W. J., M.B., L.R.C.S.Ed., has been reappointed by the Aylesbury Rural Sanitary Authority Medical Officer of Health for No. 7 District. £15 per annum.

BOULTER. Mr. W. E., has been appointed Assistant Medical Officer for the Workhouse and Infirmary of the Woolwich Union.

BURMAN, J. W., M.D., L.R.C.S.Ed., has been appointed Medical Officer to the Barnsbury District of the Hungerford Union.

CEELY, R., F.R.C.S.E., L.S.A.L., has been reappointed by the Aylesbury Rural Sanitary Authority Medical Officer of Health for No. 8 District. £12 12*s.* per annum.

CHURTON, T., M.D., has been appointed Honorary Physician to the Leeds General Infirmary.

CLARKE, J. St. Thos., M.B., F.R.C.S.E., &c., has been appointed Honorary Surgeon to the Leicester General Infirmary.

CONRY, J. T. C., L.K.Q.C.P.I., has been appointed Medical Officer to the Salford Union Workhouse, vice C. A. Mercier, M.B., resigned.

DALTON, N., M.R.C.S.E., has been appointed Resident Medical Officer to Queen Charlotte's Lying-in Hospital, vice T. L. Browne, M.R.C.S.E., resigned.

DENNY, C. J., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator to the newly-formed District of Blackwater and Eversley. Also reappointed Medical Officer of Health to the Hartley Wintney Union Rural Sanitary Authority.

DE WOLFE, G. H. H., M.D., has been appointed Honorary Physician to the Sheffield Public Hospital for Diseases of the Skin.

DUNSMURE, J., M.D., has been appointed Examiner in Clinical Surgery in the University of Edinburgh, vice T. Keith, M.D., resigned.

HAMES, G. H., F.R.C.S.E., has been appointed House-Surgeon to the Western General Dispensary, vice S. J. Knott, resigned.

HARDWICKE, H. J., M.D., M.R.C.P.E., has been appointed Honorary Physician to the Sheffield Public Hospital for Diseases of the Skin.

HAZARD, J., M.R.C.S.E., has been appointed Honorary Surgeon to the Sheffield Public Hospital for Diseases of the Skin.

HEX, H., L.R.C.P.Ed., M.R.C.S.E., has been appointed Assistant-Surgeon to the City Provident Dispensary and Surgical Appliance Association, vice P. R. Webb, L.R.C.S.I.

HOOPER, C., M.R.C.S.E., L.S.A.L., has been reappointed by the Aylesbury Rural Sanitary Authority Medical Officer of Health for No. 1 District. £18 per annum.

IRELAND, Mr. A., has been appointed Resident Medical Assistant at the Aberdeen Royal Infirmary.

KNOTT, S. J., M.R.C.S.E., L.S.A.L., has been appointed Surgeon-Accoucheur to the Western General Dispensary.

LEE, R., M.R.C.S.E., L.S.A.L., has been reappointed by the Aylesbury Rural Sanitary Authority Medical Officer of Health for No. 6 District. £18 per annum.

LEITCH, J., M.B., C.M., has been appointed Medical Officer of Health for the Holme Cultram Urban Sanitary District, vice Gordon. £20 per annum.

LEVINGE, E. G., A.B., M.B., L.R.C.S.I., L.M., has been appointed Medical and Sanitary Officer of the Lucan Dispensary District, and to the Local Royal Irish Constabulary, &c.

LITHGOW, T. G., L.R.C.P.L., L.F.P.S.G. & L.M., L.S.A.L., has been appointed Medical Officer and Public Vaccinator to the No. 6 District, comprising Farnborough and Cove, of the Hartley Wintney Union, Hampshire.

PALMER, F. C., L.K.Q.C.P.I., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health to the Brigg Local Board, vice Dr. Paterson, resigned.

PARADISE, T. D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Lowton District and the Workhouse of the Leigh Union, vice Brideoake, resigned.

PEARCE, G., M.D., M.R.C.S.E., has been appointed Honorary Surgeon to the Leicester Infirmary.

POPE, E., M.R.C.S.E., L.S.A.L., has been reappointed by the Aylesbury Rural Sanitary Authority Medical Officer of Health for No. 2 District. £15 per annum.

POWELL, J., jun., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Court Star of West Surrey Lodge of Foresters, Weybridge, vice J. J. Sealy, resigned.

RAMAGE, Mr. J., has been appointed Resident Surgical Assistant at the Aberdeen Royal Infirmary.

RYGATE, B. R., M.B., M.R.C.S.E., L.S.A.L., has been appointed District Medical Officer of the St. George's-in-the-East Union.

SPENCER, C., M.R.C.S.E., L.S.A.L., has been reappointed by the Aylesbury Rural Sanitary Authority Medical Officer of Health for No. 4 District. £23 8*s.* per annum.

WHITE, J. R., M.B., L.R.C.S.I., L.S.A.L., has been appointed Medical Officer to the Second District of the Ongar Union.

WILCOX, R. W., M.R.C.S.E., L.S.A.L., has been reappointed by the Aylesbury Rural Sanitary Authority Medical Officer of Health for No. 5 District. £25 10*s.* per annum.

WILLIAMS, W., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Carmarthen Infirmary, vice E. T. Evans, resigned.

Births, Marriages, and Deaths.

BIRTHS.

EDWARDS.—On the 19th March, at St. John's, Antigua, West Indies, the wife of Arthur E. Edwards, M.R.C.S.E., of a son.

GORDON.—On the 20th ult., at Amersham-road, New-cross, S.E., the wife of John Gordon, M.D., of a daughter.

HARDING.—On the 20th ult., at North Lawn, Westgate-on-Sea, Kent, the wife of G. Clarence Harding, M.R.C.S.E., L.R.C.P.Ed., & L.M., of a daughter.

LANCASTER.—On the 22nd ult., at Lewisham High-road, S.E., the wife of H. F. Lancaster, M.D., of a son.

MARRIAGES.

MILLER—DUNCAN.—On the 21st ult., at Littlegill Farm, Lesmahagow, by the Rev. James Arthur Gray, Free Church, Lesmahagow, assisted by the Rev. James M. Cruickshank, St. Rollox U.P. Church, Glasgow (brother-in-law of the bridegroom), John Miller, M.D., of Springburn, Glasgow, to Ellen Wilson, youngest daughter of the late John Duncan, Esq., Farmer, of Littlegill.

PATTISON—JOYCE.—On the 29th ult., at St. Martin's-in-the-Fields, by the Rev. Richard Westhorpe, Edward Seton Pattison, M.R.C.S.E., L.R.C.P.Ed., to Minnie, eldest daughter of Walter Joyce, Esq.

DEATHS.

BROWN.—On the 24th ult., at 64, Lyndhurst-road, Peckham, London, Helen Agnes Daisy, only child of Dr. William Brown, of Dunedin, New Zealand, aged 6 years.

FERGUSSON.—At 48, Claremont-square, William Edward Laing Fergusson, M.D., after a few hours' illness. Friends will please accept this intimation.

GOURLAY.—At his residence, 1, Victoria Buildings, Weston-super-Mare, Frederick Gourlay, M.D., in his 45th year. Friends will kindly accept this intimation.

HAMILTON.—On the 8th February, on board the s.s. *Garonne*, near Adelaide, Alexander McLeod Staveley Hamilton, M.D., M.R.C.S.E., late Medical Superintendent of the Leeds Union Infirmary, aged 29.

HEATH.—On the 22nd ult., at Doverscourt, Essex, Edward Heath, M.D., R.N.

HENRY.—On the 8th ult., at his residence, Claremont Cottage, St. Helier's, Jersey, James Henry, Esq., M.D., Staff-Surgeon, Royal Navy, aged 61. R.I.P.

LLEWELLYN.—On the 10th ult., at 152, Whitechapel-road, Llewellyn Llewellyn, M.D. St. And., M.R.C.S.E. & L.S.A.L., aged 60. Interred in the family vault.

MOYLAN.—On the 20th March, on board H.M.S. *Euphrates, en route* to India, W. J. Moylan, Surgeon, A.M.D., son of J. Moylan, Esq., of Rathkeale, co. Limerick, in his 32nd year. Buried at sea. Sincerely mourned by his sorrowing widow and friends.

RUSSELL.—On the 19th ult., at High-street, Lurgan, Philip Crampton Russell, M.D., aged 70.

SAYRE.—On the 11th ult., Charles Henry Hall Sayre, M.D., eldest son of Lewis A. Sayre, M.D., aged 29.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

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Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE HEALTH OF STONEHOUSE.

THE medical officer of health for Stonehouse (Mr. T. Leah) reports that the mortality in his district, for the first quarter of the present year, was at the rate of no less than 53·20 per 1000 of the inhabitants per annum. This arose from the exceptional prevalence and great mortality of an epidemic of measles, common to Stonehouse and the conterminous towns of Plymouth and Devonport. As the measles began to subside, a sudden and very general outbreak of diarrhœa among adults occurred. Mr. Leah's report, as it appears in the *Western Morning News*, does not throw any light upon the sources of the exceptional prevalence of measles and of the outbreak of diarrhœa. Quite half of the mortality from measles, it is stated, occurred among children of Marines. This at least would seem to call for some official inquiry into the location and sanitary administration of the Marine establishment there.

House-Surgeon.—It is very unfair; but fees are not usually paid for the attendance of house-surgeons as witnesses at inquests on persons dying within the walls of hospitals.

PERSISTENT VITALITY OF THE UMBILICAL CORD.

To the Editor of THE LANCET.

SIR,—About a month ago I was requested to see a baby, three weeks old, suffering from this very curious condition. The nurse informed me that the ligature used at delivery and the piece of cord (on its distal side) had fallen off about the usual time, but there were no signs of the cord separating at the navel. The child suffered great pain, and for the last few days had cried almost without ceasing. On examination, I found a fleshy outgrowth, fully an inch long, projecting from the umbilicus. It was quite rigid, with a raw granulating appearance, bleeding on the slightest touch, and extremely sensitive, and there was a small central depression at its free extremity. The nurse stated that she had to change the dressing frequently on account of a watery oozing from it. The urine, however, was passed *per vias naturales* in normal quantity. The central depression did not lead into a canal. A strong silk ligature was applied tightly to its base at its junction with the umbilicus. This was attended by some hæmorrhage, as it cut its way through in tightening the knot. Pressure and cotton-wool stopped the bleeding readily, and the latter was left on as a dressing. Next day, on removing the dressing, there was nothing visible but a small thread of dead tissue, which was snipped off with a pair of scissors. In three more days the ligature came away with the dressing, and the navel assumed a normal appearance. The umbilical cord at birth was observed to be unusually thick.

Remarks.—The nature of this case is highly interesting from several points of view: (1) Although the ligature applied at birth had dropped off about the fifth day, the piece of cord on its proximal side had remained attached to the body, become granulated over, and exhibited great vitality. (2) As throwing some light on the much-disputed point of the presence of nerves in the umbilical cord; for it was highly sensitive to the touch, and a source of great suffering to the little one, as evidenced by incessant crying. (3) It is a rare condition, and somewhat allied to a case of patent urachus mentioned by Mr. Bryant, though the difference between the two is important, and at once apparent.

Yours truly,

CHARLES R. WILLIAMS, M.B., C.M. Edin.

Ashby-de-la-Zouch, April 26th, 1880.

Mr. C. J. Stocker.—We are not aware that the precise form of stethoscope has been tried. It would probably be found that the difficulty of maintaining the ear nozzle in position would render it useless, and that, even if successful, it would have no advantage over the ordinary form.

THE POTTER'S FIELD.

IN a notice of the Report of the Board of Health of Louisiana in the *American Journal of Medical Sciences* for April, p. 519, there occurs the following:—

"The bulk of the book is made up of minute reports from the sanitary inspectors of the seven districts in which the city of New Orleans is divided. These records give in detail the facts upon which the generalisations already referred to are founded. It is not, therefore, necessary for us to review them separately, and we will content ourselves with the following indignant protest from Dr. George Holt, of the fourth district, in regard to the pauper burying-ground, the condition of which must go far to account for the dread in which strangers hold the poisonous atmosphere of New Orleans during the summer months:—'This is now the potter's field, a low marsh wherein the sexton performs his heavy task faithfully and as best he can, sometimes floating to their graves the dead and weighting them into their homes, the whole graveyard being often a foot under water. The nature of his field renders it impossible for him to dig these graves deeper than has been his habit. But this is potter's field—an injurious infliction and an outrage upon the living, a disgrace to our humanity, to our morals, and to our city; an indecency perpetrated upon the dead *because they died poor!*"

Volunter Surgeon.—The legal aspects of the case can only be properly considered by a lawyer. We assume that there were sufficient data for the statement, so that its substantiation need not be difficult. As the memorial was a joint one, the signatories may of course reply collectively. A reporter may attend any public meeting.

P. S. F. — We are not aware of any legal objection to a practitioner taking the office of local "registrar of births and deaths," although he may hold certain union appointments.

SIMPLE DISLOCATION OF THE ASTRAGALUS (REDUCED).

To the Editor of THE LANCET.

SIR,—I was on the point of reading the letter in your impression of April 17th on this injury, when I was called to see a young woman, aged about twenty, who had fallen and hurt her foot. She was descending a flight of steps when she fell, and her foot twisted under her. I found that she had sustained a simple dislocation of the body of the astragalus forwards from off the os calcis, and from under the tibia and fibula. The front part of the foot was twisted inwards; some movement of the foot upon the leg could be obtained. The head of the astragalus apparently remained in the concavity of the scaphoid; but the posterior part of the bone or body turning on the head, as on a pivot, was displaced forwards and outwards. The outer edge of its saddle-shaped facet formed a sharp prominence about an inch and a half in front of the external malleolus; beneath this was felt the facet for the fibula, and behind this again the sharp concave edge of the posterior and external facet for the os calcis. When the patient was under chloroform, the astragalus was quite movable in this abnormal position. There was considerable swelling of the soft parts, and some bruising of the skin over the sharp bony prominence. The woman was taken into the hospital under Mr. Humphry. Chloroform was at once administered, and after some manipulation I was able to replace the bone. It returned to its normal position with a sudden jump and a peculiar "crunching" noise, audible at a distance of several feet.

The case seems to me to differ from those usually recorded, in that the head of the bone remained in position, that neither the astragalus nor the foot was fixed, and in the ease with which the dislocation was reduced.

Your obedient servant,

JOHN C. UHTHOFF, M.D. Lond.,

House-Surgeon to the Sussex County Hospital.

Brighton, April 20th, 1880.

To the Editor of THE LANCET.

SIR,—The letter of your correspondent, Mr. Gore, recalls to my mind a case of simple dislocation of the astragalus which occurred to me in March, 1869, but which in the hurry of work I failed to report.

W. H——, a man, aged fifty, was driving a sow, which would run across the road in front of a horse and cart. He drove the sow on, and then tried to step back out of the way, but, failing to get quite clear, the wheel passed over the front of his left foot, he falling on his back, while the foot was held in this position. I was driving past at the time, and had the man carried home, about 2000 yards distance. On examination, the shape of the foot was so peculiar as to leave no doubt as to the nature of the injury. The absence of the heel, together with projecting bone on the instep, with the skin tightly stretched over it, showed clearly the outline of the astragalus. There was intense pain, but no swelling. I made the man lie down, and hug his thigh as tightly to him as possible. Then standing at his foot, I made firm extension on the heel with both hands, while with my thumbs I pressed firmly on the astragalus. With the second attempt it went back to its place with a loud snap. I bandaged the foot, and applied cold, but little effusion took place. Two nights later, hearing that the sow was littering, he could not resist coming down and attending upon her the whole night, without any bad result, however, and in three weeks he was walking about as usual.

I may add that a very good "sucking pig" formed a not inappropriate first instalment of the doctor's fee.

Your obedient servant,

April 19th, 1880. MARTINDALE C. WARD, M.D., &c.

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AN ANTIDOTE TO CARBOLIC ACID.

DR. GENFTLEBEN states that sulphuric acid is a good antidote to carbolic acid, entering into combination with it, and forming an innocuous compound. His formula is dilute sulphuric acid, 10 grms.; mucilage of gum arabic, 200 grms.; simple syrup, 30 grms. A tablespoonful of this mixture to be given every hour. Carbolic acid is unfortunately so often taken in error, even in spite of its powerful odour, that there will be abundant opportunities of testing the value of this recommendation.

"A GOOD EXAMPLE."

To the Editor of THE LANCET.

SIR,—In your last week's issue you draw attention, under the above heading, to a recent resolution of the Council of the Royal College of Surgeons in Ireland against indirect advertising by members of the profession, and no doubt the regulation, if carried out, would be advantageous. I may also suggest that a resolution might also be adopted by the same body which would not be out of place, to the effect that meeting homœopathists in consultation was contrary to the dignity of the Licentiates and Fellows of the College. *Verbum sapienti.*

Your obedient servant,

April 27th, 1880. F.R.C.S.I.

TAPEWORM IN THE LUNGS.

AT a late meeting of the Philadelphia Academy of Natural Sciences, Dr. H. C. Chapman described the lungs and liver of a monkey which were completely disintegrated and filled with cysts produced by an immature form of tapeworm. The animal had belonged to the collection in the Philadelphia Zoological Gardens.

M.R.C.S.—Superintendent registrars of births, deaths, and marriages are appointed by the guardians of the poor of each union or registration district; the clerk to the guardians has, however, a prescriptive right to the appointment. The emoluments of the office arise from fees.

Mr. J. M. Kennedy.—Dunglison's (Messrs. Churchill).

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE following were the questions on Anatomy submitted to the 154 candidates at the primary examination for the diploma of Membership of the College on the 23rd April, when they were required to answer four, and not more than that number, out of the six questions, between the hours of one and three o'clock:—

1. Describe the first rib, naming the structures in immediate relation with it.
2. Describe the ligaments connecting the skull with the spinal column.
3. Describe the coverings and coats of the testicle.
4. Give the dissection necessary to expose the posterior tibial artery; describe its course and relations, and name its branches and their anastomoses.
5. Describe the pelvic fascia in the male, its attachments, arrangement, and relations.
6. Describe the course, relations, and distribution of the musculo-spiral nerve.

The following were the questions on Physiology submitted to the candidates the same day, and with the same conditions, between the hours of four and six o'clock:—

1. Describe an act of deglutition, mentioning in the order of their action the muscles engaged, and their nervous supply.
2. Describe the structure of a lobule of the lung. State the changes which the air and blood respectively undergo in respiration.
3. Describe the conditions requisite for the performance of a simple reflex act. Give examples of reflex acts occurring without sensation, and of others associated with sensation; in each case specifying the several parts concerned.
4. Give the physical characters of urine. What are its normal constituents? State the circumstances which cause variations in them within the limits of health.
5. Describe the structure of a Graafian follicle, and give the changes that take place in it after the discharge of an ovum.
6. How may the function of a nerve be determined? What are the functions of the first four cerebral nerves?

THE QUALITIES OF SEA-WATER AS A POTATION.

To the Editor of THE LANCET.

SIR,—The non-arrival of the training-ship *Atalanta*, with its freight of over 300 lives, and the horrible suspicion that if the ship floats, its living freight is suffering the agonies of thirst from an insufficient supply of water, lead me to address you this note on the important question, How far can life be supported in extreme cases by sea-water? Every year the same pitiful tale is told of shipwrecked sailors, supplied with food, dying of thirst. "Water, water everywhere, and not a drop to drink." Can this be possible? Hoping that you may agree with me in thinking that the question is worth sifting in a scientific journal like THE LANCET, I venture to raise it.

Tales of "castaways" abound with cases of water privation, in which men who have resisted the temptation to drink salt-water have survived; whilst those who have yielded have *speedily* paid the penalty with their lives, dying generally in an outburst of delirium or suicidal mania. So have said the survivors. But it must be remarked that, granted their intelligence, the survivors were not in a fit state to make accurate observations at the times referred to. The main facts, delirium and death, can be easily accounted for in other ways. Exhausted men, moved by the terrors of approaching death, and exposed freely to the chill night winds and noon-tide sun by turns will often die delirious without the intervention of salt-water. Nor, under any circumstances, is it clear why sea-water should act as a *rapid* poison. Not much can be gained from a consideration of the facts of the case as related by survivors broken down in mind and body.

Sea-water is practically of the same composition throughout the world. A specimen taken from the Bay of Bengal, and analysed by Surgeon-Major H. King, M.A., Professor of Chemistry, Madras, was found to contain 3·325 parts of salts per cent. by weight. A specimen taken from the English Channel, and analysed by Schweitzer, contained 3·523 parts per cent. of salts. Subjoined are the analyses in full. To save space the salts are denoted by their symbols:—

	Sodic chlor. $NaCl$.	Pot. chlor. KCl.	Mag. chlor. $MgCl_2$.	Mag. sulph. $MgSO_4$.	Calcic sulph. $CaSO_4$.	Cal. carb. $CaCO_3$.	Cal. brom. $CaBr_2$.	Water. H_2O.
English Channel ..	27·06 ..	0·76 ..	2·66 ..	2·99 ..	1·40 ..	0·08 ..	0·03 ..	964·77
Bay of Bengal ..	26·06 ..	1·20 ..	2·81 ..	1·82 ..	0·36 ..	.. ..	.. ..	966·75

Leaving calcic sulphate and carbonate out of the question as being inert, potassic chloride and magnesic bromide as being insignificant in amount, it will be seen from the foregoing that there are only three salts to be considered—viz., common salt, magnesic sulphate, and magnesic chloride. A pound of sea-water would contain, according to the Channel, or strongest analysis, 188 grains of common salt, 25 grains of magnesic chloride, and 20 grains of magnesic sulphate. These quantities are not in a theoretical sense injurious. Ten times the amount of magnesic sulphate, found in a pound of sea-water, would be considered an ordinary purge. Magnesic chloride is also purgative, but freely diluted, as in sea-water, in much larger quantities than 25 grains. And 188 grains of common salt are less than the average amount excreted from the human body daily. Numerous experiments made in England and France shew that the amount of salt daily excreted, under ordinary circumstances, varies from 175 grains to 274 grains. A certain amount of the salt ingested is decomposed and used up in the system, the chlorine going to the formation of chlohydric acid, required for stomach digestion, and the sodium helping to preserve the balance of density in the fluids of the body. Moreover, some amount of common salt is retained in the body; in the blood, 100 parts of the ash of which contains 54·7 parts of common salt, and in the intestinal tract, in which sodic chloride exerts a most necessary antiseptic and anthelmintic action. It is probable, in view of the foregoing, and of the excretion daily of an amount of salt averaging 225 grains, that over 400 grains of salt should be taken daily to supply the normal wants of the system. This is about the amount consumed from all sources daily by a well-fed person. In the French army the ration of salt is 0·5 ounce, in the navy 0·77; in the Russian army it is 1·59 ounce. But exceptionally large quantities of salt may be taken without hurt. It is no rare thing to give young children for several days together large doses of table salt, in addition to that in their ordinary food, to get rid of worms. Children so treated do not fail in health. For that matter there do not appear to be any cases of the poisonous action of common salt on record, if we except tales of shipwrecks. Nor does it seem likely that the magnesic salts taken with common salt, in the proportions given, can be very injurious. In many parts of India, where the people evaporate salt-water in shallow clay basins exposed to the sun, and scrape up and eat habitually the whole of the product as common salt, no ill effect worth mentioning is observed. These people, it must be supposed, from their method of salt manufacture, eat larger quantities of magnesic chloride and sulphate daily than are found in a pound of sea-water. On the seaboard of Ireland it is a common practice for the peasants to drink a large mug of sea-water every morning for the "good of their health"; they also boil their potatoes in sea-water, and get the full benefit of the magnesic salts both ways, with robust health.

The *Journal de la Société de Médecine de Caen et de Calvados* published some time ago, from the pen of M. Juan, an account of the salt-water drinkers of the Oceanic Islands. These remarkable people, who live on the madreporic atolls of the Pacific, such as the Paumoton Islands, where there are neither brooks nor springs, drink *all the year round* brackish well-water, which is nothing but sea-water imperfectly filtered. M. Juan also mentions the case of a ship which went to Mexico in 1838 with troops. The water on board ran short, and was rationed in small quantities. Some sailors consequently began to drink sea-water, but were soon obliged to leave it off. One man, however, persevered until the ship arrived in Mexico. This man never complained of the sea-water; the only difference remarked in him was that he got yellower.

Here are shown theoretical and practical reasons, from which it may be concluded that in extreme cases, given a food supply, such as ship's biscuit, a pound or more of sea-water may be taken daily with a reasonable hope of prolonging life.

I am, Sir, yours faithfully,

JAS. J. L. RATTON, M.D.,

Dublin, April 20th, 1880. Surgeon-Major.

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WAKES.

A FEW days ago a man was summoned at the Birkenhead Police Court for neglecting to properly disinfect his house after the occurrence of typhus fever in it. But the defendant proved that disinfection had been attended to, and the case was dismissed. The nuisance inspector, however, in the course of the proceedings mentioned a fact which, if true, shows the danger as well as the folly of the practice of "waking" the dead. He said this was the thirty-first case of typhus fever which had originated in the neighbourhood from the exposure of a dead body at a wake last November.

G. H. P. asks if San Goarshausen on the Rhine is a resort against hay fever? We have been unable to find any information on the subject.

An Aberdeen University Student.—Of course if the true skin is destroyed it cannot be replaced. Repair will be by a cicatrix of connective tissue.

ARSENIC IN SKIN DISEASE.

To the Editor of THE LANCET.

SIR,—Mr. Malcolm Morris's letter in your issue of April 17th, in which he says that "arsenic should never be combined with any other drug....in order to obtain its full therapeutical value," will surprise not a few of your readers.

I am in a position to take a distinctly opposite view, because my practice is in some respects peculiar, attached as I am to a Manchester hospital. Many patients come from towns round about. When from any cause they are ill, lazy, careless, or out of work, a visit to the "club doctor" or to their local infirmary takes the place of one to Manchester. In scores of such cases I find that the medico consulted prescribes for the cough (or what not), and, finding that the patient has been attending the Skin Hospital, gives him, besides, solution of arseniate of potash in water, with the remark that "he will get as much good from that as from anything he will get at Manchester." I have thus, Sir, a large experience of the value of arsenic uncombined, and I unhesitatingly say that not one patient in fifty will gain as much benefit from it as he would if it had been judiciously combined with other drugs. Does it not seem reasonable, as skin diseases are often aided and abetted, if not caused, by functional or structural alterations in various systems other than the cutaneous, that drugs such as liquor potassæ, tincture of capsicum, "or even iron," should be of great use? It is, of course, open for Mr. Morris to reply that he is writing not of benefiting the patient, but "of the full therapeutical value of arsenic." Well, Sir, the subject is sufficiently important for me to hope that some gentlemen of large experience, and whose opinions are of weight, will favour us with their views on this matter. I differ *toto cœlo* from this view of Mr. Morris, and I sum up thus: A patient comes to me suffering from psoriasis. We all know that arsenic is *the* remedy. Mr. Morris would give it alone, while I would combine it with other drugs according to the circumstances of the case. Which is the right view? I pause for a reply. I am no enthusiast in the use of arsenic, but prescribe it about 400 times per annum.

In conclusion, let me remind those interested in this matter of the very uncertain strength of Fowler's solution as sold by wholesale druggists. I have met with five cases of patients suffering from symptoms of arsenical poisoning, who had been taking, or supposed they were taking, arsenic, but from some accident had their prescriptions made up at a different druggist's shop. One last objection to Mr. Morris's dictum is this—viz., patients are all too ready to ask "What is good for such and such a disease?" They already have practically command of chloral, laudanum, chloroform, and chlorodyne. Should the verdict of the profession favour Mr. Morris's view, we must add arsenic.

I remain, Sir, yours truly,

Manchester, April, 1880. H. STANLEY GALE.

M.R.C.S., L.R.C.P., &c.—Apply to the Secretary of the Graduates' Association, Dr. F. E. Pocock, 20, Golborne-road, Upper Westbourne-park, W.

Poor-law Surgeon might write to Dr. Joseph Rogers, whose address is now 33, Soho-square, W.

J. H. W.—We do not know the address.

ECZEMA.

To the Editor of THE LANCET.

SIR,—I shall be obliged if any brother practitioner would suggest some remedy for the cure of eczema rubrum. I have a case in which I have tried everything I know.

Yours faithfully,

April 21st, 1880. M.R.C.S.

FEES FOR MEDICAL EVIDENCE AT INQUESTS.

To the Editor of THE LANCET.

SIR,—Can a coroner compel me, a house-surgeon, to make a post mortem examination, walk to the place where the inquest is held, and remain there for *three* hours while the other witnesses were giving their evidence, then to give my own skilled evidence, and walk back again to hospital without a fee?

Yours faithfully,

W. S. BYRNE, M.B.

Metropolitan Free Hospital, Commercial-street, April, 1880.

*** This is a question which ought to be tried. When the inquest is held *in* the hospital, no fee is given. This is intolerable; but we doubt whether the additional trouble entailed by attending at another place would not give ground for a fee.

TYPHUS IN GREENOCK.

THE medical officer of health (Dr. James Wallace), in his report for the five weeks ending the 3rd April, reports twelve cases of typhus as occurring during that period. One case came from Port Glasgow, and the other eleven were distributed among four families. Six were traceable to cases previously reported on, while five (all in one family) had the disease imported apparently from Largs.

Mr. R. Fullerton.—The announcement is inserted in THE LANCET of April 24th.

"TOBACCO-HEART."

To the Editor of THE LANCET.

SIR,—In your journal for January 3rd I read a letter from the late Dr. Parkes upon tobacco-smoking. In this letter he expresses a doubt as to the evil effects of the use of it. The tenour of that letter leads me to suspect that Dr. Parkes was not thrown in contact with a class of cases which we have in New England, and which, for want of a better term, I have called in the index to my cases (all being, more or less fully, recorded at the time of examination); "Tobacco Heart."

Many years since I satisfied myself that a person could smoke two or three cigars daily for many years, and often without difficulty; but some sensitive natures could not use even that amount without suffering. The majority of smokers are not so abstemious, and the use of five or ten cigars daily will very frequently cause pain and uneasiness about the region of the heart, and, at times, palpitation; these will be the most marked, if not the sole, symptoms complained of. Such patients have no œdema, no marked dyspnœa. They can walk fast around the room without getting out of breath. There are no physical signs save of health; they have none of the congestions of the lungs observable so often when organic valvular lesions exist. Nevertheless, the cardiac pain is so annoying that the patients can hardly be persuaded to believe that there is no organic disease; much less can they be led to believe that tobacco is the sole cause of their trouble, and that the first step to be taken is to give up wholly the use of the stimulant.

Similar, but less striking and annoying, effects are sometimes produced in this country by coffee. I have thought that the stimulating influences of our climate may contribute to this result; for Americans who may take coffee with ease in Europe, often begin to suffer after their return home. Some persons find it impossible to use coffee, even in minute quantities, after once their system has been, as it were, saturated with it. Similar results follow the use of tobacco.

You may ask why I, at this distance from you, undertake to write an answer to Dr. Parkes's private letter. Dr. Parkes I never had the happiness to meet; but we knew one another, and occasionally corresponded, and I always looked upon him as one of your noblest Englishmen. An opinion given by him *meant something*. It seemed to carry weight. If I had seen that letter before Dr. Parkes died, I should certainly have written to him upon the subject. It is for this reason I now send to you.

I remain, respectfully yours,

Boston, U.S.A., March 29th, 1880. HENRY I. BOWDITCH.

Occasional Reader.—1. The London University.—2. Refer to the Calendar.

Subscriber.—We have no reason to believe the contrary; but the question is a legal one.

CASE OF SUPERFŒTATION.

A CASE of an extraordinary character is recorded in *Gaillard's Medical Journal* for April. The author of the narrative is Mr. W. H. Tate, who states as follows:—

"Several years since Dr. D—— was called to attend Mrs. N—— in confinement, whom he found in labour with her second or third child. He delivered her of a healthy male child, which had no signs of deformity except enlargement of the abdomen. The child prospered well, though its abdomen daily increased in size, and at the age of five weeks he was sent for to perform an operation on the child, which he declined doing. About twenty weeks after its birth Dr. D—— was called again in haste; the infant having fallen against a stove whilst amusing itself with playthings, and cut its head considerably. On arrival he found the child dead. The post-mortem revealed a fœtus in the abdominal cavity, which weighed about five or six pounds. Umbilical cord attached to the great omentum, and the head of the fœtus attached to the lower portion of the child's stomach; top of the head extending several inches into the stomach; hair on head of fœtus three or four inches long."

MEDICAL ETIQUETTE.

To the Editor of THE LANCET.

SIR,—I would ask the Editor of THE LANCET whether it is in accordance with strict etiquette for a practitioner who has been called in consultation with the family attendant to supersede him in the charge of the case if the friends become dissatisfied with its progress?—Yours &c.,

April, 1880. VERITAS.

DIAGNOSIS OF RENAL CALCULUS.

To the Editor of THE LANCET.

SIR,—In your impression of April 17th a letter appears from Mr. Barker, on "A means of Diagnosis of Renal Calculus." In this method Mr. Barker has been preceded by the late Dr. Simon, of Heidelberg, who, in his work on the Surgery of the Kidneys, describes a sound on the principle of an exploring trocar for the detection of stone in the kidney.

Yours obedient servant,

Tottenham, April, 1880. E. HOOPER MAY, F.R.C.S.

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COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Buzzard, London; Mr. C. Bader, London; Mr. L. Holden, London; Mr. Startin, London; Dr. Baylis; Mr. Cottle, London; Sir Sherstone Baker, London; Dr. Lewis; Mr. Culpin; Mr. Green, Bath; Mr. Byrne, London; Mr. B. Parkin, Sheffield; Mr. Stocker, Upton; Dr. Goldie, Leeds; Dr. Sandwith; Mr. Marshall, Manchester; Mr. W. J. Smith, Rotherham; Mr. Lush, Fyfield; Mr. C. R. Williams, Ashby-de-la-Zouch; Mr. Lenihan, Salford; Mr. Parsons, Hastings; Dr. A. Duke, Dublin; Dr. Lowe, Lynn; Dr. Hare, London; Mr. Cæsar; Dr. Garlick, London; Mr. Mogford, London; Dr. Marshall, Nottingham; Dr. H. Dunbar; Mr. Reckitt, Newark; Mr. Popert; Mr. Walner, London; Mr. Page; Captain Hobson; Mr. Rix, Bradford; Dr. Lloyd, London; Mr. Kempe; Lieut. Fox, R.N.; Dr. Mawer, Bucharest; Mr. Edwards, Carlisle; Mr. Bull; Mr. R. Harrison; Mrs. Haycroft; Mr. Latham, London; Messrs. Weiss; Mr. Radford, Ben Rhydding; Mr. Baker, Birkenhead; Mr. Foster, London; Mr. Gaddis, London; Dr. Skrimshire, Holt; Mr. Watt, London; Messrs. Richardson and Co., Leicester; Mr. Brayn, Glasgow; Dr. Redwood, Rhymney; Surgeon-Major Currie, Dawlish; Mr. Roebuck, Leeds; Messrs. Cornish Brothers; Mr. Wilson, Huddersfield; Messrs. Smith and Son, Manchester; Mr. Hoblin, Aylesbury; Messrs. Curtis and Co., London; Mr. Courtenay, Lucea; Dr. Rogers, London; Mr. Murphy, London; Mr. S. Snell, Sheffield; Dr. Armstrong, Newcastle-on-Tyne; Dr. Gee, Liverpool; Mr. Davies, Carlisle; Mr. Woodhouse, Hertford; Mr. Gunning, Enniskillen; Mr. Foweraker; Mr. G. W. South, Blackheath; Mr. Cant, Lincoln; Mr. Wyld, London; Dr. Page, Kendal; Mr. Godfrey; Mr. Goodsall, London; Dr. Lucas, Quettah; Mr. Fowler, Lincoln; Mr. T. Butler; Dr. Evans, Cardiff; Mr. Steele; Mr. Nursey, Sunderland; Mr. Sephton, Liverpool; Mr. Mahon; Commander Dawson; Mr. S. Eaton, Dublin; Mr. Canty, London; Mr. Watson, South Stockton; Mr. D. Edwards, Denstone; Mr. Peachell, High Wycombe; Mr. Mackeniss; Mr. Rugg; Mr. Partridge, Alvechurch; Mr. Craigie, London; Dr. Bartholemeusz, Quettah; Dr. Tatham, Salford; Mr. J. Morris; Subscriber; A. N.; An Aberdeen University Student; The Secretary of the Faculty of Physicians and Surgeons, Glasgow; D. M.; M.D., Demerara; H. A.; P. S. F.; W. R. R., Birmingham; A. K. N.; D. J.; Sacul, London; Veritas; Devoniensis; &c. &c.

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, April 29th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia. in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Apl. 23	30·09	W.	50	46	97	63	40	..	Cloudy
,, 24	30·08	W.	55	51	84	60	43	..	Cloudy
,, 25	29·98	N.W.	54	49	93	59	46	..	Cloudy
,, 26	30·01	N.	51	47	85	53	40	..	Overcast
,, 27	30·26	N N E	45	41	77	51	35	..	Hazy
,, 28	30·13	N N E	47	43	..	52	40	..	Cloudy
,, 29	30·23	N.	47	44	94	56	41	..	Cloudy

Medical Diary for the ensuing Week.

Monday, May 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.
MEDICAL SOCIETY OF LONDON. — 8½ P.M. Conversazione. — Annual Oration by Dr. W. H. Broadbent. Subject: "The Pulse and some of its indications."

Tuesday, May 4.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. R. H. Scott, "On Wind and Weather."
PATHOLOGICAL SOCIETY OF LONDON. — 8½ P.M. The following Specimens will be shown:—Imperforate Anus; Volvulus in an Infant; Complete Necrosis of Lower Jaw, with Cancrum Oris; Diffuse Sarcoma of Liver in an Infant aged three weeks; Ossifying Chondrosarcoma of the Left Femur, with Secondary Growths; Congenital Talipes Varus and Talipes Calcaneus; Tendo Achillis divided in a Case of Pseudo-hypertrophic Muscular Paralysis; Sequel of a Case of Syphilitic Gummata; Kidneys showing the Cystic Degeneration of Adults; Complete Excavation of one Lung; Acute Fatty Atrophy of the Liver; Aneurism of Aortic Arch Rupturing into Trachea; Congenital Syphilitic Ulceration of the Tongue; &c. &c.

Wednesday, May 5.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
EPIDEMIOLOGICAL SOCIETY.—7 P.M. Council Meeting.—8 P.M. Surgeon-General John Murray, "On Removal in Epidemic Cholera." — Dr. Lawrence Hamilton, "On the Report of the German Medical Commission on the Outbreak of Plague in the Province of Astrakan in 1879."
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimen: Encephalocele, by Dr. Godson. — Papers: Dr. Braxton Hicks, "On Recording the Fœtal Movements by means of a Gastrograph"; also, "On a Case of Extra-uterine Fœtation; sudden urgent Symptoms; Abdominal Section."—Dr. C. H. Carter, "On two Cases of Extra-uterine Fœtation, with Results."

Thursday, May 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Tyndall, "On Light as a Mode of Motion: Theories of Light and Colours."
HARVEIAN SOCIETY. — 8½ P.M. Mr. Reeves, "On Rectal Stricture, with special reference to Rectotomy and Twenty-five Colotomies."—Mr. Cripps Lawrence, "On Rickets."

Friday, May 7.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—8 P.M. Evening Meeting.—9 P.M. Professor Flower, "On Fashion in Deformity."

Saturday, May 8.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor H. Morley, "On the Dramatists before Shakespeare."

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THE

Lumleian Lectures

ON

THE DIGESTIVE FERMENTS, AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians,

BY WM. ROBERTS, M.D., F.R.C.P., F.R.S.,

PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY; PROFESSOR OF CLINICAL MEDICINE TO THE OWENS COLLEGE.

LECTURE III.—PART II.

Modified Casein or Metacasein.—The conversion of casein into peptone does not take place by a direct transformation of the one body into the other. You all know that milk does not curdle or coagulate in the least degree on being boiled, but when milk is subjected to the action of pancreatic extract (provided no alkali is added) it speedily loses this negative property and curdles abundantly on boiling. This coagulation on boiling is most intense a few minutes after the addition of the extract, and it very gradually diminishes in intensity as the action goes on, and ceases altogether at the same time that acetic acid ceases to cause a precipitate. It was moreover found that if the milk was boiled at the period of the greatest intensity of this reaction, and thrown on a filter, the whole of the albuminoid matter of the milk was caught on the filter in the form of curds, and the filtrate showed not the slightest reaction of casein. These reactions revealed the interesting fact that in the transformation of casein into peptone by pancreatic extract, the first step in the process is the conversion of casein into an intermediate body, and that it is this intermediate body which is subsequently gradually changed into peptone. This body may provisionally be called "metacasein," signifying thereby that it is still casein, but in a modified condition. Metacasein is characterised by two reactions, which, taken together, serve to distinguish it from other proteid bodies; it is coagulated by boiling in neutral media, and it is precipitated in the cold by acetic acid. The conversion of casein into metacasein in pancreatic digestion takes place almost suddenly, as is shown by the following experiment, performed on the 3rd December:—Five cubic centimetres of pancreatic extract were added to 100 cubic centimetres of milk, diluted with one-fourth of its bulk of water, and maintained at blood-heat. The first slight, almost doubtful, evidence of coagulation on boiling was perceived in three minutes; in five minutes coagulation on boiling was pronounced; and in nine minutes it had reached its maximum. From this point coagulation on boiling, and precipitation on the addition of acetic acid, diminished in intensity *pari passu* very gradually for a period of two hours, when both reactions finally ceased.

Taking these observations and reactions together, it is evident that the conversion of casein into metacasein constitutes a first and distinct step in the transformation of casein by trypsin, and that this step is antecedent to the further and slower changes by which metacasein is transmuted into peptone. It is impossible not to see in this a striking analogy with the sudden transformation of gelatinous starch into soluble starch under the action of diastase, as described in a previous lecture.

When milk is rendered slightly alkaline by the previous addition of a little bicarbonate of soda, no precipitation on boiling occurs during its digestion by pancreatic extract. But the metacasein is nevertheless produced, and its presence may be detected by carefully saturating the alkali, and then boiling. For although metacasein is precipitated on boiling when the solution is neutral, it is not precipitated when the solution is even slightly alkaline. This is the reason why, in preparing peptonised milk for the sick, it is desirable to add to it a small quantity of bicarbonate of soda.

The foregoing account of the behaviour of milk with pancreatic extract will greatly facilitate the comprehension of the practical rules which must be followed in preparing peptonised dishes for invalids. I confine myself for the present to articles of which the basis is milk, or farinaceous gruel, or both together.

Peptonised Milk.—A pint of milk is diluted with a quarter of a pint of water, and heated to a temperature of about 140° F. (60° C.). Two or three teaspoonfuls of liquor pancreaticus, together with ten or twenty grains of bicarbonate of soda, are then mixed therewith. The mixture is then poured into a covered jug, and the jug is placed in a warm situation under a "cosey," in order to keep up the heat. At the end of an hour or hour and a half the product is boiled for two or three minutes. It can then be used like ordinary milk.

The object of diluting the milk is to prevent the curdling which would otherwise occur and greatly delay the peptonising process. The addition of bicarbonate of soda prevents coagulation during the final boiling, and also hastens the process. The purpose of the final boiling is to put a stop to the ferment action when this has reached the desired degree, and thereby to prevent certain ulterior changes which would render the product less palatable. The degree to which the peptonising change has advanced is best judged of by the development of the bitter flavour. The point aimed at is to carry the change so far that the bitter taste is distinctly perceived, but is not unpleasantly pronounced. As it is impossible to obtain pancreatic extract of absolutely constant strength, the directions as to the quantity to be added must be understood with a certain latitude. The extent of the peptonising action can be regulated either by increasing or diminishing the dose of the liquor pancreaticus, or by increasing or diminishing the time during which it is allowed to operate. By skimming the milk beforehand, and restoring the cream after the final boiling, the product is rendered more palatable and more milk-like in appearance.

Peptonised Gruel.—Gruel may be prepared from any of the numerous farinaceous articles which are in common use—wheaten flour, oatmeal, arrowroot, sago, pearl barley, pea or lentil flour. The gruel should be very well boiled, and made thick and strong. It is then poured into a covered jug, and allowed to cool to a temperature of about 140° F. Liquor pancreaticus is then added in the proportion of a tablespoonful to the pint of gruel, and the jug is kept warm under a "cosey" as before. At the end of a couple of hours the product is boiled, and finally strained. The action of pancreatic extract on gruel is twofold—the starch of the meal is converted into sugar, and the albuminoid matters are peptonised. The conversion of the starch causes the gruel, however thick it may have been at starting, to become quite thin and watery. The bitter flavour does not appear to be developed in the pancreatic digestion of vegetable proteids, and peptonised gruels are quite devoid of any unpleasant taste. It is difficult to say to what extent the proteids are peptonised in the process of digestion by pancreatic extract. The product, when filtered, gives an abundant reaction of peptone; but there is a considerable amount left of undissolved material. Most of this, no doubt, consists of insoluble vegetable tissue, but it also contains some unliberated amylaceous and albuminous matter. Peptonised gruel is not generally, by itself, an acceptable food for invalids, but in conjunction with peptonised milk (peptonised milk-gruel), or as a basis for peptonised soups, jellies, and blanc-manges it is likely to prove valuable.

Peptonised Milk-Gruel.—This is the preparation of which I have had the most experience in the treatment of the sick, and with which I have obtained the most satisfactory results. It may be regarded as an artificially-digested bread-and-milk, and as forming by itself a complete and highly-nutritious food for weak digestions. It is very readily made, and does not require the thermometer. First, a good thick gruel is prepared from any of the farinaceous articles above mentioned. The gruel, while still boiling hot, is added to an equal quantity of cold milk. The mixture will have a temperature of about 125° F. (52° C.). To each pint (650 cc.) of this mixture, two or three teaspoonfuls of liquor pancreaticus, and twenty grains of bicarbonate of soda, are added. It is kept warm in a covered jug under a "cosey" for a couple of hours, and then boiled for a few minutes, and strained. The bitterness of the digested milk is almost completely covered in the peptonised milk-gruel; and invalids take this compound, if not with relish, without the least objection.

Peptonised Soups, Jellies, and Blanc-manges.—I have sought to give variety to peptonised dishes by preparing

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soups, jellies, and blanc-manges containing peptonised aliments. In this endeavour I have been assisted by a member of my family, who has succeeded beyond my expectations. She has been able to place on my table soups, jellies, and blanc-manges containing a large amount of digested starch and digested proteids, possessing excellent flavour, and which the most delicate palate could not accuse of having been tampered with. Soups were prepared in two ways. The first way was to add what cooks call "stock" to an equal quantity of peptonised gruel, or peptonised milk-gruel. A second and better way was to use peptonised gruel, which is quite thin and watery, instead of simple water, for the purpose of extracting shins of beef and other materials employed for the preparation of soup. Jellies were prepared simply by adding the due quantity of gelatin or isinglass to hot peptonised gruel, and flavouring the mixture according to taste. Blanc-manges were made by treating peptonised milk in the same way, and then adding cream. In preparing all these dishes it is absolutely necessary to complete the operation of peptonising the gruel or the milk, even to the final boiling, before adding the stiffening ingredient. For if pancreatic extract be allowed to act on the gelatin, the gelatin itself undergoes a process of digestion, and its power of setting on cooling is utterly abolished.

Peptonised Beef-tea.—Half a pound of finely-minced lean beef is mixed with a pint of water and twenty grains of bicarbonate of soda. This is simmered for an hour and a half. When it has cooled down to about 140° Fahr. (60° C.) a tablespoonful of the liquor pancreaticus is added. This mixture is then kept warm under a "cosey" for two hours, and occasionally shaken. At the end of this time the liquid portions are decanted and boiled for five minutes. Beef-tea prepared in this way is rich in peptone. It contains about 4·5 per cent. of organic residue, of which more than three-fourths consist of peptone, so that its nutritive value in regard to nitrogenised materials is about equivalent to that of milk. When seasoned with salt it is scarcely distinguishable in taste from ordinary beef-tea.

The extreme solubility of digested products—whether of starch or of proteids—detracts from their acceptability to the healthy. To them they appear thin and watery—they miss the sense of substance and solidity which is characteristic of their ordinary food. But to the weak invalid without appetite this sense of substance or thickening is generally an objection, and they take with more ease an aliment which they can drink like water. The jellies and blanc-manges, on the other hand, give to invalids of more power that sense of resistance and solidity which is desired by those of stronger appetite.

Clinical Remarks
ON
STRICTURE OF THE URETHRA.

BY EBEN. WATSON, M.A., M.D.,
SENIOR SURGEON TO THE GLASGOW ROYAL INFIRMARY.

WE have at present three cases of stricture of the urethra in Ward No. 17, and these seem to me so typical of the great bulk of such cases that I wish to call your attention to them. I shall first notice a few points in their history and treatment, and then make a few remarks on the general subject.

The first case we come to is that of an old soldier, who has served both in Africa and India, and who has for many years been the subject of stricture. Some years ago he was under my treatment, and was dismissed cured for the time; but having neglected to have a catheter passed after leaving the hospital he has now returned worse than ever. His water comes in a very small stream after great pressure and straining. I began the treatment by passing a silver catheter (No. 7 Eng.) down to the stricture, and found that its progress was arrested in the spongy portion at the posterior part of the scrotum. From that point along the whole median line of the perineum a hard and somewhat bulky tumour was felt. He was then put under the influence of chloroform, and after trying various sizes I introduced No. 2 Eng. silver catheter, which was retained in his bladder till the evening, when it was withdrawn on account of the pain it caused. This was done on the 18th December last.

Next day the stream of water had improved, but he still felt pain referred to the left groin. Fomentations were assiduously applied to the side and to the perineum, his bowels were opened with castor oil, and he had a hot sitz-bath, followed by a laudanum injection each night.

After a few days' rest (24th December), and without chloroform, No. 2 was again introduced with great difficulty, and retained for a few hours. I then employed the bougies olivaires and silver catheters of gradually enlarging sizes until he could bear them to be retained for several days and nights continuously. Finally, a full-sized catheter (No. 10) was introduced, when the patient left with instructions to have the catheter passed twice a week.

In this case the deposit of lymph causing the stricture was very thoroughly organised, and therefore it was hard and cartilaginous to the feeling. For the same reason it yielded slowly to the plan of somewhat interrupted dilatation which I was obliged to adopt. Some patients bear continuous dilatation very well, and are quickly cured; others do not bear it so well, and it is a great mistake—a mistake which has brought this plan of treating strictures into some discredit—to insist on the retention of the catheter when it causes pain or severe rigors. A more gradual dilatation is rather to be recommended in such cases, until the stricture is able to receive a No. 5 catheter, after which the patient can generally bear it longer in the bladder, and the further dilatation proceeds more rapidly. In this cautious way I have treated a great many cases of stricture, both in public and private practice, without any death, and with no bad effects whatever.

I put all such cases under full doses of the iodide of potassium, and I believe that by its action, and by the pressure of the catheter, as well as by the diminution or absolute removal of straining in micturition, which is the fertile cause of renewed congestion of the parts, I obtain in many cases the absorption of the lymph-deposit, and something very like a cure of the complaint. Instead of the so-called rapid divulsion of a stricture leaving the urethra in a better state than dilatation by catheters, I think it really leaves it in a worse state, because the rupture caused by it in the urethra or in the surrounding areolar tissue must be filled up with new lymph, and thus the morbid mass is increased instead of being diminished; and, although a full-sized catheter may be sooner introduced with ease than it can be in the method of dilatation, still, the new material in the ruptured tissue being even more contractile than the old, the calibre of the urethra must be maintained for some time by catheterism. Hence the one method is about as long as the other for the patient; and I have seen bad results occur after Holt's operation, while dilatation has been free from any such in my experience. The question of internal urethrotomy did not arise in this case, because of the success which attended the use of the catheter, yet I believe it was just such a case as would have appeared to some surgeons a suitable one for that operation. From the amount and hardness of the mass of lymph surrounding the stricture, urethrotomy was certainly more reasonable than Holt's operation; but, though that operation would have facilitated the early introduction of the catheter, I do not see that it would have yielded a better result; in fact, I think the objection to both operations is the same—viz., that a fresh deposit of lymph is rendered necessary by either cutting or tearing the urethra at the stricture, and thus an addition is really made to the morbid condition. Hence the full relief—for we cannot call it cure—in such cases is not obtained at an earlier date than by dilatation, which, as I previously said, leaves the urethra in a healthier state than either of the other operations.

The next case to which I call your attention is also one of old stricture. It was at one time cured by the late Mr. Syme in the Edinburgh Infirmary, and has been sent to my wards as an impassable stricture. I, however, managed to pass a fine catheter, and succeeded in treating the case to a favourable termination just as the previous case was treated. The patient was always very nervous and had several severe rigors, for which he seemed to get advantage by using ten-grain doses of quinine, as well as from hot sitz-baths and morphia suppositories.

Many writers on stricture place great importance on the kind of instrument used for passing the stricture. I believe that experience in the use of an instrument is of more im-

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portance than the exact kind of it. Some surgeons use nothing but flexible bougies, some rely on steel probes or sounds with slightly bulbous points, and others adhere to the catheter. I myself prefer the last-mentioned instrument, while I do not neglect to use bougies in difficult cases, when the passage is too twisted for the catheter at first; but nothing straightens the urethra so well as the catheter, and, as the urine escapes through it, it may be retained for a longer or shorter time in the bladder with safety and advantage. Then, as to the curve of the catheter I care very little, but on the whole I prefer a larger curve than that which is usually employed at present.

The third case was one of still greater difficulty than either of the others. It was likewise sent in as an impassable stricture, and it had had much treatment by catheters and otherwise before admission. Under chloroform I with great difficulty inserted a No. 1 catheter, but on the patient's recovering from the anæsthetic no urine flowed through it, and it was therefore withdrawn. It was found, unfortunately, to have some dirt in its tube, but the introduction made micturition so much easier that no instrumentation at all was attempted for a few days. I ought to have mentioned that the man was in a very weak and poor state of health, and had not been able to take more than a very little food for days previous to his admission to the hospital. This feature of his case was improved, his bowels were opened, and he was soothed with opiate suppositories. On about the eighth day, however, after his admission to the hospital, I found at my morning visit that extravasation had taken place. The perinæum and scrotum were already red and swollen. I therefore lost no time in performing perineal section on Syme's staff, at the same time freely incising the swollen parts. The urine came away abundantly by the perineal wound, and though a catheter could now be easily introduced from the point of the penis into the bladder, I did not retain one, but continued the opiate treatment with fomentations to the parts affected.

All went on well till the third day, when the man rapidly sank and died; and on inspection of the body, that staining of the tissues and organs with blood, already in a state of decomposition, which is so characteristic of septicæmia in its acute form, was everywhere found. On squeezing the parts pus was seen to escape from them, otherwise nothing particular was discovered.

In reflecting on this case, I think the cause of its unfortunate issue was quite obviously acute septicæmia from the rapidity of the sinking, without any other symptoms except slight jaundice and profuse sweating, as well as from the post-mortem appearances noted above. Then as to the cause of the extravasation, the only theory I can form is that from long and frequent straining before admission the upper part of the stricture had become softened and ready to burst, and that it gave way during the night previous to the appearance of the swelling. Both Dr. Foulis and I carefully examined the entire track of the urethra with a probe, and nothing like a false passage could be found, except a small and superficial laceration of the mucous membrane about two inches from the meatus, and which might have been produced by the point of a catheter. Even if this were so, it could not account for the extravasation into the perinæum and scrotum. We found that the stricture itself had been quite exactly and thoroughly divided in the operation, and altogether in front of the deep perineal fascia. Most likely, therefore, the aperture by which the urine escaped was very small, and was cut through by my operation wound; for we could not find it at all on the keenest search. Of course it was from the beginning an unfavourable case, one in which any operation was most likely to prove unfortunate; but we could not avoid the operation performed, which gave the man his only chance of escape. Indeed, it was not of the extravasation nor of the operation that the patient died, but of that dreadful disease which seems to attack with special frequency and virulence cases of perineal section. Nevertheless, in cases of impassable stricture, and certainly in those complicated with extravasation of urine, I do not know of any method of operating preferable to the one we are now considering; yet, in the hospital, I must confess that I have met with rather a high mortality in such cases. It appears that in the last ten years I have performed this operation in the Royal Infirmary thirteen times, and have lost three patients. But it must be remembered that these were almost all very bad cases—some of them brought in with extravasation of such duration that sloughing had already occurred in the penis and scrotum. In conclusion, the great lesson to be learned from this part of our clinical study is to beware of delay in these cases. I have never myself been obliged to puncture the bladder in any way; but if the catheter cannot be got in—say by the ordinary attendant—it would be better to draw off the urine from the bladder by puncturing with the aspirator above the pubis than to allow the man by continual straining to run the risks I have been describing. Of course, when a surgeon is called in it will be his duty to use the catheter at once, and, in all but a few very peculiar cases, he will do so with success, especially if no false passages have been previously made in the urethra.

LIVER ABSCESS AND ANTISEPTIC PARACENTESIS.

By SIR J. FAYRER, M.D., F.R.S.

(Concluded from p. 675.)

CASE 6.—In 1866, when at Agra, I saw a young officer in camp, who after considerable exposure to heat and fatigue during hot days and cold nights, was suffering from what was thought to be pneumonia of the right lung. On examination it appeared to me that he was suffering from pneumonia, but that it was due to liver abscess which had formed insidiously, and made its way into the right lung. I did not see him again for three weeks, when he came to Calcutta. He was fearfully emaciated and hectic, with a very rapid pulse and diarrhœa. He was expectorating large quantities of pus, by which the right lung seemed to be completely overwhelmed. He appeared to be rapidly sinking, and was in an extreme state of prostration. A few days later he was put on board a steamer, in the hope, though it seemed a feeble one, that change of climate and sea air might do him good. On arrival at Galle he was so low that it was decided to land him. A telegram, describing his condition, was sent to his friends. I heard nothing more of him for four or five months, when he came to report his return to India. They had put him on board another steamer, and he had gone to Singapore. Soon after landing at Galle he began to revive a little; the expectoration diminished, and feeling stronger, was determined to try the sea air again; he embarked, soon improved, and became strong enough to walk about. He rapidly regained strength, even in the tepid climate of the Straits, and when he returned to Calcutta was apparently well, and I believe soon resumed his duties. I saw him again a few years ago, stout and well; he told me that his life had been accepted at the usual Indian rates by an insurance office.

In this case there was probably only one abscess, although a very large one. I never saw anyone apparently so near death recover. His lung apparently regained its normal condition, and had not suffered permanently from the suppuration in which it had been involved.

Of course such a termination could not generally be expected in so severe a case; I relate it to show that even where a very large abscess has opened into the lung, recovery is possible.

CASE 7 is the case of a native of India in whom I punctured an abscess between the ribs behind the axillary line, and gave exit to the contents of a very large abscess. On seeing him again after some days, with his medical adviser, I found a large sloughing opening and a considerable portion of one or two ribs necrosed; repair, however, seemed to be progressing, and the condition, barring the aperture in his side and the diseased ribs, rather better than it had been. When I saw him next it was on the steps of the hospital, where he had come to see some friend, and on inquiring I found that the wound had closed. There was a deep cicatrix over the exfoliated ribs, but otherwise it had healed well. He was stout and in perfect health. I refer to this case as an exceptional one, for I have generally found where the ribs necrose and the opening becomes large from ulceration or sloughing, that the patient succumbs at last to exhaustion, if not to some other complication; and when an abscess points between the ribs, especially towards the back, it is exceedingly prone to cause necrosis.

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CASE 8.—Mr. P——, aged twenty-five, a tall, vigorous young officer of cavalry, came to me on March 19th, 1880. He went to India first in January, 1876, to Bangalore; was quite well for a year. Then got jungle fever, shooting in Annamallay jungles, Mysore. This lasted for three weeks, and he lost two stone of weight. He continued to have recurrences of malarious fever once a week for the next two years, but remained at duty, and occasionally went out shooting. He then went to the Pulni hills, and before and after his return had dysentery, with great pain. This was aggravated by attending riding-school. When convalescent pain in the liver commenced. He became very ill, and says he nearly died from a severe attack of dysentery. He was actively treated, and got much better. In July, 1878, the dysentery had gone, but he had diarrhœa, and for twenty weeks he could hardly walk; had lost three stone. Diarrhœa continued, and with it pain in the side, but he began to regain strength.

He then came home. In the winter of 1878, when at his home in Yorkshire, he began suddenly to spit blood and "thick stuff," especially when he "stooped;" when, as he says, it welled out in quantities, a tumblerful at a time. This went on till August, 1879, yet all the time he seems to have been leading his usual life—riding, even hunting, shooting "one turnip field at a time," as he says. He seems also to have been gaining strength. Still had pain, but less since the blood and matter came away.

On Dec. 2nd, 1879, he returned to Bangalore, feeling pretty well. Cough and expectoration had ceased, but he was weak and knocked up by any physical or mental effort, depressed and irritable. Three days after reaching Bangalore, diarrhœa and pain in the side came on again. Dysenteric symptoms also supervened in January, 1880; got worse at riding-school, and had great pain in the liver.

A Board sent him home again in February, 1880. "He has improved on the voyage, and is now fairly well. Has had no cough since August last; weight twelve stone; looks in good condition; conjunctiva rather yellow; complexion rather florid; hepatic dulness increased posteriorly, not in front; no sign of thickening of colon; no enlargement of spleen; respiration not so good on right as on left side, but expansion normal; urine contains lithates at times, no albumen; tongue clean; temperature and pulse normal; bowels rather confined; eats well, but is easily tired; has resigned his commission. He has evidently been the subject of liver abscess, which has opened through his lung."

CASE 9.—Captain S. C——, aged thirty-seven years and six months, of abstemious habits. Service in India sixteen years and four months: in Bombay presidency—Poona, Surat, Rajpoora, Ahmedabad, Deesa, Ahmednugger, Sholapore, Baroda, Satara. In Goojerat had fever and cholera, the only sickness since infancy, up to present liver attack. Came home in 1863 with very severe Goojerat fever; the attack was most persistent; "lost his hair, and nails, and epidermis." Returned in 1865 quite well; has had no return of fever since.

July, 1875.—At Satara, Bombay, suffered pain in back and side, with some nausea and fever. Disease yielded to treatment in a few weeks.

July, 1876.—Again attacked with above symptoms in intensified form, with rigors and night sweatings. The frequency of the attacks increased until March, 1877, when he was quite prostrated, and confined to bed.

April 9th, 1877.—An unusually sharp attack, accompanied by severe rigors and some fever, leaving him in an unconscious state.

21st. — Left for Bombay. Suffered severely from the journey.

May 7th.—Put on board a steam-ship for England.

27th.—During the night, while at the watercloset, he experienced severe rigors and passed large quantities of blood and matter, became insensible, and was carried to his bed.

June 5th. — From last severe attack on May 27th his health appeared much improved. On this date, at Southampton, he experienced another, though perhaps a little less severe attack; passed much matter and blood.

As soon as able he left for London, and put himself under Dr. Murchison's care, who greatly interested himself in the case until his death.

He could not account for this disease. Is of abstemious habits, never taking spirits or wine between meals. Is married, of active habits, and very fond of field sports, which fully occupied his leisure.

CASE 10.—Surgeon E. S. R——, B.M.S. Service in India fourteen months and seven days—Calcutta, five months; Meerut, seven months; Jumrood, Kohat, Thull, the remainder. Had scarlatina as a boy; nothing else, except a fortnight's intermittent fever at Jumrood, before the liver became affected. On the 7th of November, 1878, while at Kohat, felt pain in the right shoulder. On Nov. 8th he started for Thull with pain in the shoulder and hepatic region. On arrival there he was suffering from acute hepatitis; he remained under treatment in the camp until Dec. 4th; then returned to Kohat, when the liver was enlarged, especially upwards, with tenderness on pressure. The temperature in the evening was from 102° to 103°; morning 100°. Did not feel much pain in the liver, except in the middle of December for a few days. On Dec. 31st, having been ordered to England, he left Kohat, and got to Peshawur on Jan. 1st, 1879. Left Peshawur for Rawul Pindi on Jan. 1st, and arrived there on the morning of the 2nd. That same evening, about 9 o'clock, while in bed, there was a rush of matter into the mouth, from an abscess in the liver, which had opened into the right lung. There was no previous warning of this, and he did not feel any pain, only extreme weakness. About a pint of pus was discharged that night, and also the next; but after the first two nights pus was not discharged in any quantity. Started from Bombay on Jan. 20th, and reached England on Feb. 17th. Pus continued to be discharged for the whole of this period, and up to three weeks after his arrival. About a month after the cessation of the discharge of pus, bile in considerable quantity was discharged into the right lung. This went on for about ten days. After that he rapidly improved, and about the end of the first week in May he first got out of bed, and was able to sit up. Convalescence then proceeded rapidly without any relapse. Appeared before the Board on Tuesday, March 23rd, 1880, apparently well; but not allowed to return to India yet.

CASE 11.—*A case of abscess of the liver, following dysentery, discharging itself through the right lung; recovery; patient invalided to Europe; return to India; supposed return of abscess, and second return to Europe.*—A. B——, aged thirty-three, a surgeon in the Indian service, who had previously been in good health, was attacked with acute dysentery in July, 1875, which yielded to change of air, and five weeks after, owing to exposure to wet, sun, and fatigue, symptoms—which terminated after fourteen days in the discharge of an hepatic abscess—made their appearance. For the first few days, lassitude, anorexia, and nausea were alone noticed, followed soon after by pain over the hepatic region. The pain, at first present during movement, and with a deep inspiration, soon became permanent and of a severe burning character, though not materially affected by pressure, and was associated later on with pain in the right shoulder, with the advent of which the temperature ran up from 102° to 103° in the morning and 104° in the evening, probably being coincident and due to the spread of the disease towards the diaphragm and the occurrence of pneumonia. For five or six days before the discharge of the abscess, the sense of collapse and suffocation, attended with orthopnœa, became intense, and a pustular eruption appeared, each pustule ranging in size from a pea to half a pea. The only physical signs noted were dulness on percussion and crepitation. There could not have been much liver enlargement, as the disease was only detected on the discharge of the abscess, the symptoms having been put down to pneumonia. There was not much jaundice; bowels confined, and stools of ochre colour.

Aconite was given early. It produced copious diaphoresis, but failed to reduce the temperature or give relief.

An abscess burst during the night, and about one pint of thick, flocculent, puriform fluid was coughed up at one gulp. It continued to discharge during a few days, but all the symptoms gradually disappeared, and the patient left India after about two months for Europe. He did well till he arrived at Suez, when, owing to the cold land-winds in the month of December, he was attacked with liver congestion and pleuritis, which put his life in jeopardy for six weeks. He remained in Europe one year, during which time he had six attacks of congestion; the "catch" in the side hardly ever left him. He returned to India in indifferent health, and, after several minor attacks, he finally broke down after a year and four months, and was invalided from the effects of what his medical attendant believed to be an abscess, which either became absorbed, or passed away by the bowel. The patient himself considers this to have only been a prolonged and severe attack of hepatic congestion, or

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inflammation, without suppuration. It is right to say that the medical man held a different view, and it may have passed through the bowel unnoticed, as there was diarrhœa at the time.

He returned to Europe, and is now, after two years in this country, fairly well. But the "catch" in the side returns with each attack of congestion, and remains for some time. There is always a heavy, uneasy feeling about the liver, which is increased to actual pain after much fatigue. This, with nausea in the morning, bad appetite, a cracked tongue and inability to work, still remain.

As to treatment generally. In the outset it is that of acute congestion, in the hope of preventing suppuration. Leeches on the side or anus occasionally may be beneficial. Where the symptoms are acute, the pain great, and the fever high, free purgation by saline aperients; occasional mercurials; chloride of ammonium or ipecacuanha; hot fomentations over the liver; rest and a light, unstimulating diet are required so long as the acute symptoms continue, before suppuration has taken place. It is needless to say that the mercurials are not used with the intention of producing ptyalism. When there is reason to believe that matter has formed, although the physical signs of it may not be clear, attention should be directed carefully to the evacuations, especially if there be diarrhœa, as the abscess may open into the bowel. I think this is the probable explanation of recovery in some cases where it has been thought that the abscess had either never really formed or that it had undergone absorption. When opening occurs through the lung or stomach the symptoms are unmistakable.

When abscess has formed the object is to favour its evacuation, to support the strength, and to allay irritation. When sufficiently near the surface to justify puncture, it should be opened antiseptically. Much has been written and said about exploring for liver abscess, and in certain cases, where doubt exists, I think the proceeding is justifiable, using a small cannula and aspirator, when there is enlargement, tenderness on pressure, which causes nausea and disturbance of the heart's action, such as palpitation, or sickness, especially if there have been any chills, increase of temperature, or sweats. In the event of matter being detected at a considerable depth, it may in some cases be aspirated, but it may happen that, on account of its thickness and the presence of flakes of lymph, pus will not pass through the small cannula, and no satisfactory result is obtained; but if there be any marked probability of its presence, a large cannula may be used and left in after if pus is found, the most careful antiseptic precautions being observed in the subsequent dressings. Whenever the matter lies moderately near the surface, even though a certain amount of liver tissue intervene, I am inclined to think that a free incision, as in Mr. W.'s case, is best —hæmorrhage, should it occur, soon ceases, and there is much better prospect of a free drain afterwards. A large cannula may in some cases be preferable; indeed I think it would signify little which were selected, provided antiseptic precautions be carefully observed and the exit be free. In the event of exploration detecting matter deep seated, but under much liver substance, I would prefer the cannula to the knife—such as I show you, used with the aspirator, though great care should be taken not to exhaust too rapidly, or with too great force, for fear of injuring the liver tissue surrounding the cavity of the abscess and causing hæmorrhage. The treatment after the opening of an abscess is just that which is described in Dr. Anderson's case. Support the strength, and do all to obviate any decomposition in the cavity, or extension of the mischief.

My friend and colleague, Professor W. S. Palmer of Calcutta, makes the following remarks on the subject of puncture. His large experience renders them interesting:—

"You have asked me to give a brief account of the results of treatment by puncture in cases of doubtful liver abscess which came under my treatment during the period of six years, in which I had medical charge of an average of about seventy patients in the European General Hospital, Calcutta.

"Passing over cases of undoubted liver-abscess, there was still a residuum of patients presenting doubtful symptoms, in whom neither unsymmetrical enlargement nor superficial tumescence, &c., could be detected. Such patients presented symptoms varying in every degree; at the one extreme cases of general cachexia, with irregular slight febrile attacks, would exhibit symptoms as frequently attributable to deranged stomach, or bowels, or lungs only, as to the liver itself; while at the other, slight general enlargement of the organ would be found associated with that peculiar form of 'tenderness' in which pressure over the organ produced an indescribable sensation, inducing either faintness, hurried respiration, palpitation, or nausea with retching, or all of these at once.

"In all this large class of cases it was my custom to plunge a long trocar and cannula, of small diameter, into any or all parts of the liver, through a valvular opening, examining on the spot the small quantity of extracted matter for pus globules.

"It was only in very exceptional cases that any signs of pus could be detected. When it was so detected the puncture was generally followed by slight inflammatory action at the seat of puncture, which probably ended in adhesion of the organ to the parietes, and so facilitated the future opening of the abscess. When, on the other hand, no pus was found, a good deal of anxiety was felt in the earlier cases lest the puncture should be followed by any evil results. Such moments of anxiety soon, however, ceased to recur, for it very rarely happened that the patient did not express himself, the next day, as feeling very much relieved; and in no case do I remember any bad consequences resulting from such punctures. The relief was frequently only temporary, in which case a second, a third, or a fourth puncture was made at intervals of eight or ten days. In some, however, one puncture sufficed to cure."

As to the period when an abscess should be opened, it is whenever the symptoms give assurance that matter has formed, and that the operative proceedings necessary to get at it are not themselves so dangerous as to be prohibitory.

The points at which it may be opened are in the epigastrium, anywhere in the right hypochondrium, either in front or behind; between the costal cartilages, or ribs. Puncture below the ribs is to be preferred if possible, but it is not always so; and, as in Mr. W——'s case, it is necessary to perforate between them.

The dangers of mischief to the pleura or lung, and of necrosis of the ribs, are the causes of anxiety in operating through the thorax, but they may never occur. In any case the opening of a liver abscess is a critical proceeding, but it should be resorted to whenever there is a reasonable prospect of getting at the matter, for it is very desirable to anticipate spontaneous opening by any of the channels that nature may select, as all are dangerous; when into the peritoneum, pleura, or pericardium it is of necessity almost always fatal, while even into the lung, stomach, or bowel, the danger is often great, and though followed by temporary amelioration, may end in exhaustive disease or purulent contamination of the whole system.

The antiseptic system seems to improve the prospects of success from surgical interference, and it is especially on this account that I have submitted the subject for your consideration.

THE DISEASES OF THE EYE OCCURRING IN CONNEXION WITH PREGNANCY.

BY HENRY POWER, M.B. LOND., F.R.C.S. ENG.,
SENIOR OPHTHALMIC SURGEON AND LECTURER ON OPHTHALMIC SURGERY AT ST. BARTHOLOMEW'S HOSPITAL.

WHEN we reflect on the great and manifold changes that are induced in all the organs of the body by pregnancy, it cannot be a matter of surprise that in some instances the effects of this general disturbance should be felt in the organs of sense, and therefore especially in the eyes, which respond so readily to any disorder of the vascular or of the nervous system. Yet, upon the whole, such ophthalmic affections do not appear to be very numerous, since they form the subject of no special treatise, and are only incidentally referred to either in works on obstetric medicine or in those devoted to ophthalmic surgery. Probably, unless the symptoms are unusually prominent, they are in many cases either not complained of by the patient, or if complaints of failure of vision be made, they are referred by the practitioner in attendance to general indisposition, or to disorder of the digestive organs, and especially of the liver; and

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it is only when serious impairment of sight exists that the opinion and advice of the ophthalmic surgeon are requested.

It is difficult to obtain any statistics in regard to the proportion of ophthalmic diseases in pregnancy, and still less of their precise nature by one who is qualified to judge. The most reliable that I have met with are those by Winckel,[1] who had the opportunity of studying the diseases of the eye in a large lying-in hospital, and who states that he found the proportion of cases to be five in three hundred and nineteen, or a percentage proportion of one in fifty-six. It is quite possible that many of the cases which apply for relief are not directly connected with pregnancy, the affection being merely coincident with, but not caused by, that state. Thus Hirschberg, in reply to a letter of mine, mentions a case in which a young woman in the seventh month of pregnancy complained of failure of vision, which she believed to be dependent upon her condition, but the real cause of which was a cysticercus in the retina; and such cases show the extreme value to the practitioner of a knowledge of the use of the ophthalmoscope, and of the ophthalmoscopic appearances of the healthy and of the diseased eye, in enabling him to form a correct diagnosis, and thus to avoid unnecessarily active treatment on the one hand, and to overlook well-marked pathological conditions on the other.

As a preliminary to the consideration of the ophthalmic diseases associated with pregnancy, it will be expedient to refer very briefly to the physiological changes which by the best authorities are held to accompany pregnancy, and we shall then be in a position to refer some at least of the affections of the eye during this period to their true causes. In the first place, it seems to be now generally admitted that there is a considerable increase in the absolute quantity of blood contained in the system which must indeed be required to fill the largely augmented volume of the uterine sinuses, unless other organs are to be reduced to a state of comparative anæmia. For Gassner[2] has observed an increase in the total weight of the body during the last three months of pregnancy quite apart from any existing enlargement of the uterus and its contents; and in this increase there can be little doubt the blood, as one of the most important of the tissues, participates. So, again, Gscheidlen[3] and Spiegelberg state expressly that in bitches the quantity of blood is augmented during the second half of pregnancy, and they entertain no doubt that the same holds good in regard to the woman. But whilst the absolute quantity of blood is augmented, it is undoubtedly poorer in solids. The white corpuscles indeed increase in number, but this is far more than compensated for by a diminution in the number of the red corpuscles and in the quantity of albumen and salts.

In a work that has just been published—the "Chimie Pathologique" of M. Quinquand (p. 239)—it is stated as a fact that the hæmoglobin of the blood always undergoes destruction during pregnancy, though the extent to which this deterioration proceeds varies with the accidental conditions that may be present. It would hence appear that so far from a state of hyperæmia existing, as was formerly believed, the pregnant woman is almost always in one sense anæmic. The increase in the number of the white corpuscles accounts for the larger proportion of fibrin long ago noticed by Andral and Gavarret; and as this fibrin is not very rapidly coagulable the corpuscles have time to fall through the plasma, and a buffy coat is consequently not uncommon in blood drawn during the later months of pregnancy; hence the idea at one time entertained that the blood at this period resembles inflammatory blood, whereas really a state of serous plethora exists. The increase in the number of the white corpuscles may with some reason be attributed to the enlarged glands belonging to the lymphatic system that are usually found in the pelvic and lumbar regions.

The deficiency in the hæmoglobin, albumen, and salts is, of course, referable to the demands made upon the blood of the mother by the growth and development of her own uterus, and of the tissues and organs of the fœtus. When the powers of nutrition are sufficiently active to enable the woman to digest, absorb, and assimilate an increased amount of food, no disorder of the system at large may be observed; but if either the supply of food be insufficient, or the assimilating powers be defective, the blood becomes more watery, and chlorosis, or some allied condition affecting the whole body, may be established, or some particular organ may become the seat of disease. Such states may, however, not only arise from some defect of the digestive and assimilating apparatus, but from disease of the circulatory system, and especially of the heart. Under ordinary circumstances the introduction of the placentary circulation, as a new element in the systemic circulation, between the uterine arteries and veins, together with the augmented mass of the blood, necessitates an increase in the work of the heart. In a healthy woman this organ responds to the call by increasing in volume and weight, the left ventricle in particular presenting an increase in the thickness of its walls; but where the age or want of vigour of the woman prevents this response from being made, numerous and well-known troubles of the circulation follow, as palpitation, œdema, and varices of the lower extremities, attacks of faintness and general debility, and exhaustion.

But apart from the conditions of the digestive and vascular systems, all writers on gynæcology notice the powerful influence exerted by pregnancy on the nervous system, indicated by its increased excitability or susceptibility to external impressions. The mind is often depressed and anxious, sleep is disturbed, hysterical and neuralgic affections of the most diverse kinds are very common, the organs of sense being frequently implicated. It is unnecessary that I should do more than just hint at the influence that the enlargement of the uterus exerts upon the function of respiration, notwithstanding that the demand for oxygen and for the elimination of carbonic acid gas is so largely increased; and to the great importance that attaches to the due performance of all the other excretory functions, defect of which, there is good reason to believe, is one of the most potent agents in the etiology of disease in general, and in particular of disease occurring at this period.

From an examination of the various cases that have fallen under my notice I am inclined to classify the diseases of the eye that occur in connexion with pregnancy under the heads of—

1. Affections depending on general anæmia and exhaustion.
2. Affections consequent on some special lesion of the nervous system.
3. Affections depending upon, or rather associated with, albuminuria.

There can be, I think, no doubt that pregnancy has a tendency to produce, or, at least, to intensify, albuminuria, and it is difficult to refer albuminuria to disease either of the vascular or nervous systems.

Amongst the diseases of the eye occurring in pregnancy, and attributable to exhaustion, I have had several opportunities of seeing ulcers of the cornea. These may either arise from some slight injury or spontaneously. They are often central—that is to say, they occupy that portion of the cornea which is most remote from the vessels containing red blood. They are slow in their progress, and are not usually dangerous, but by producing more or less pain causing lachrymation and impairing vision, they naturally occasion much inconvenience, and require treatment. They are usually observed in delicate and weakly women, and the appropriate treatment may be summed up in two words—rest and tonics. The rest of the eye may be secured by the instillation of a two- or four-grain solution of atropine or of eserine, and the application of a pad of cotton-wool and a bandage; and the best tonic is quinine, one or two grains of which may be given in a glass of good sherry two or three times a day.

During lactation in women who are greatly exhausted, a very formidable inflammation of the cornea is apt to occur as a result of slight injury. I have seen several instances of it. The account generally given has been that in caressing the infant the eye has been scratched by its nail. Considerable pain and lachrymation with inability to open, or rather with spasmodic closure of the eyelids, are experienced. These symptoms increase for a day or two, and if the eye be examined at this period it will be seen that there is a linear ulcer, the margins of which are hazy, and that there is a considerable amount of conjunctivitis, and very frequently some chemosis, the swollen and semi-transparent œdematous conjunctiva occasionally protruding between the lids. At this period the eye, though in a dangerous state, may still be saved by rest, hot fomentations, good food, stimulants in moderate quantity, and quinine. But if the case has been neglected, or if it has been treated, as is too often the case, with rather strong solutions of nitrate of silver, the haziness of the cornea, instead of being limited

[1] Berichte und Studien aus dem König. Sächs. Entbindungs-Institute in Dresden, 1876. B. II., p. 15.
[2] Monatsber. f. Geburts. B. xix., 1862, p. 1.
[3] Gscheidlen, Archiv. f. Gynæcol. B. iv., 1872, p. 112.

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to the margins of the wound, becomes generally diffused, owing to the escape or accumulation of white corpuscles between its laminæ, and a yellow patch named *onyx* appears. The irritation of the little wound causes proliferation and detachment of the cells lining the inner surface of the cornea, and the escape of leucocytes into the anterior chamber, where, gravitating to the bottom of the aqueous humour, they form an *hypopyon*. Even yet, under careful and judicious treatment, and under favourable circumstances, recovery may take place, though a leucoma or white spot indicating the position of the damaged part of the cornea usually remains, and is irremediable. The next stage, if the disease progresses, is sloughing of the cornea. The whole thickness of this membrane becomes infiltrated with pus, the epithelium covering its surface becomes detached, it yields to the intra-ocular pressure, gives way at some point, allowing the escape of the aqueous and possibly of the lens, after which the chemosis and redness of the conjunctiva gradually subside, and the eye remains in an atrophied state. The symptoms of the later stages resemble very closely those, with which most practitioners are familiar, of the purulent ophthalmia of children. Pain is not a very conspicuous feature, but if present must be relieved by poppy fomentations, the application of belladonna, and the administration of opium, considerable doses of which are well borne. Operative procedures are rarely necessary, but if the tension of the globe be increased, paracentesis of the cornea may be performed with the view of allowing the escape of the pus in the anterior chamber, and between the layers of the cornea.

Another condition which I have noticed to occur frequently in pregnancy as a result of exhaustion, and which has been described by Mr. Hutchinson in a late number of the Ophthalmic Hospital Reports, is impairment of the power of accommodation, which is due to defective power of the ciliary muscle. It occurs in women whose eyes are perfectly healthy or emmetropic, but much more frequently and to a far greater degree in those who are hypermetropic, or long-sighted, especially if the hypermetropia be not sufficient to have led the patient to obtain the relief afforded by glasses. The patient complains that whilst her vision was, previously to her pregnancy, thoroughly good, she has lately experienced pain, redness, and lachrymation on attempting to sew or to read. Many women during the later months of pregnancy spend much time in preparing a variety of small garments, the sewing of which is examined with very critical eyes, and the neatness and precision of which are regarded as a duty. To give this up not only robs the patient of a pleasant occupation, but gives her leisure to reflect upon the various minor complaints of common occurrence at this period, which again depresses her spirits; and thus an affection trifling in itself may become the source of much trouble. To render the nature of this affection intelligible, it is requisite to refer briefly to the rudiments of our knowledge of the phenomena of refraction in the eye. In looking at a distant object, the rays proceeding from which may be regarded as almost parallel, no effort is required by the healthy eye. The eye is so constructed that, when at rest, parallel rays are naturally brought to a focus on the retina. But the rays from a near object are not parallel, they are divergent; and divergent to an extent proportionate to the nearness of the object to the eye. They would therefore, if the eye remained at rest, only be brought to a focus behind the retina. In order to bring such divergent rays to a focus, the method adopted in the human eye is to render the lens thicker, and this is effected, in a way I need not discuss, by the ciliary muscle. If the muscle, or rather, if the nervous centres, be deficient in power, then instead of the act of accommodation being reflex, or at least from long practice secondarily automatic, it becomes a voluntary one; an effort of the will is required to supplement the deficient power, and this soon tires, and the symptoms complained of by the patient are then experienced. It is easy to understand why the hypermetropic woman is especially liable to suffer from this affection. In hypermetropia the eye is originally by construction flatter than the normal eye. Hence an exertion of the ciliary muscle is required to focus even the parallel rays proceeding from remote objects; whilst in looking at near objects, as in reading or working, the patient has not only to exert that amount of accommodation which is performed by the healthy eye, but has to make the additional exertion required to compensate for the degree of flattening to which his eye is subject.

The treatment of this condition should be directed to the improvement of the general health of the patient by air, exercise, and tonics. Amongst the latter, small doses of strychnia deserve mention as being of special value. In cases of hypermetropia the adaptation of proper glasses is essential, and will, as a rule, at once remove all the symptoms complained of. Even in emmetropic persons there would be, I conceive, no harm in allowing the use of a pair of spectacles of feeble power, sufficient only to supply the nervo-muscular power that is defective, and to enable the patient to work or read. They might be discarded after recovery from confinement.

The following is an example of this condition. On October 28th, 1879, a woman came to me at Chatham complaining of the symptoms characterising asthenopia. She was twenty-seven years old; had been married five years, and had three children; the eldest was four years old, the second two and a half, and the third fifteen months. She suckled the first two for eleven months each, and had no trouble with her eyes; but the last child was still at the breast, and for some weeks past she had been unable to work or read without pain, redness, and watering of the eyes. The eyes were emmetropic or normal on ophthalmoscopic examination, and the fundus was healthy. She was directed to wean the child; moderate doses of strychnia and iron were ordered; and in a few weeks her symptoms had almost entirely disappeared.

(To be continued.)

ON MEDICAL CERTIFICATES OF INSANITY.

BY T. N. BRUSHFIELD, M.D.,
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(Continued from p. 679.)

Change in the higher emotions (speech).—Any alteration in the general emotional state of the patient should be recorded. Dr. Bucknill is of opinion that all forms of intellectual insanity are preceded by disturbance of the emotions. As a marked symptom of insanity, changed affections are exceedingly common. Often the object most loved when in health is hated most under mental impairment. Here is an example:—"She also tells me she would like to kill her husband, whom she calls a beast." These alterations are rarely mentioned in certificates, but they should be, as their value as symptoms is as great as any other that can be adduced.

Other abnormalities (speech).—This should include all other departures from the normal condition of the individual that may not have been referred to under the previous headings. The mode in which speech is uttered,—whether continuously, as in mania; slow and sometimes stuttering, in confirmed epilepsy; muttering, in dementia, &c. The tone being low in melancholia; often in monosyllables only, instead of sentences. The style being completely altered—such as swearing and the use of disgusting and obscene language, especially in cases of hysterical insanity, and associated, as it generally is, with amenorrhœa. Whatever the nature of the change it ought to be noted.

Conduct.—As a rule, the symptoms gathered from the conversation of the patient are confined to the medical man's own personal portion of the certificates,—the facts indicating insanity observed by himself. On the contrary, the majority of alterations noticed in the conduct, being "facts communicated by others," appear under the second heading. None the less important, however, are they on this account, as I endeavoured to point out in the early part of this paper. Some medical men do not avail themselves of this kind of information, and in omitting to do so I believe they make a great mistake. Like conversation, the conduct in insanity generally presents a striking contrast with the previous sane state. Cases occur where there is an entire absence of delusion or of serious impairment of the intellectual powers, whereas the demeanour and habits have undergone a marked change. These cases are said to be the subjects of moral or emotional insanity. In a case of this kind it becomes the imperative duty of the medical man to record *all* the facts he can learn showing or indicating any departure from the ordinary habits and conduct of the in-

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dividual. In disorder of the intellect the presence of delusion is a proof of the disease; whereas in emotional disorder there is no such single well-marked symptom, and the only thing left for the certifier to do, is to accumulate all the facts he can, whether of a personal or of a hearsay character. These are the cases that not unfrequently appear in the law courts, when the medical witnesses too often find that their opinions differ *in toto* from those entertained by the lawyers.

A peculiar case of this kind is detailed in the following interesting certificate:—*Facts personal.* "I was obliged to be called up in the night (or early morning) to examine him, as he will not leave his bedroom all day, but is up cooking and eating almost all night; then sleeps during the day. I found him eating, but immediately I entered he commenced going in and out of his room, mumbling, refusing to finish his meal. He would not speak or answer any question, but carried a great many things into his room for the day, pacing the premises with quantities of food, eating more like a beast that had just been fed than anything human." *Facts hearsay.* "I had heard of his peculiar and dangerous ways for some years. He continually threatens his aged father, especially if not supplied with large pieces of meat; sometimes they have been obliged to give him a whole breast of mutton, which he keeps occasionally till it is bad, but he eats it just the same. He generally washes naked in the garden, and always persists in washing his own clothes. Also I have heard from many (including a policeman) of his raving and violence at night, and am quite of opinion that it is dangerous to have him at large."

Danger to others.—The certificate should contain a full account of any threat of or attempted violence, whether exhibited towards one particular individual, or of general turbulence and violence towards any one in the proximity of the patient. This latter condition is of common occurrence in acute epileptic mania. Insane persons who believe themselves to have been wronged, or who fancy themselves to be the objects of persecution, or who have auditory hallucinations, are all prone to attack the person whom they believe to be the author of the ills complained of. Of the dangerous impulsive violence of the confirmed masturbator I have already given a good example. Who could doubt that the man whose insane jealousy is described in the following certificate could be deemed otherwise than as disposed to acts of extreme violence towards his wife?—*Facts personal.* "Repeated accusations of infidelity on the part of his wife, even of incest against his son. Entertaining suspicions against every male person coming to the house — representing imaginary marks of men's footsteps on the premises, even of the clambering of feet on the wall below the windows to gain entrance for the purpose of illicit connexion with his wife."

Danger to self.—Of this symptom there are two kinds.

1. The patient having no suicidal motive, yet imperils his own life by various acts, regardless of consequences, and which would probably result fatally if unchecked. These acts are generally termed suicidal in certificates of insanity, but the difference between the two is a very wide one. The most common of these is refusal of food from various causes—e. g., from complete indifference, from the idea that it is poisoned, from the belief that it has been obtained by depriving others of theirs, &c. In one instance the patient who had persistently refused to partake of any food, at length gave as her reason, and uttered in very indignant tones:—"How do you expect me to swallow when I've got no throat?" One application of the stomach-pump acted physically in filling her stomach with food, and morally by assisting to remove her erroneous impression, so that the instrument was not required to be used a second time. The following instance of a female who had dismembered her left hand at the wrist joint belonged to this class, although in the certificate she was reported to be suicidal:—*Facts personal.* "She had an idea that she had hoarded up treasures, in consequence of which she gave an old coin to the parish poor-box, and came to me thinking it was wrong, and wanted medicine to get it back again." On this being sent back to be strengthened the following was added, "this being a delusion." *Facts hearsay.* By her sister, also her husband:—"To-day, 26th March, cut her left hand off because she thought it was Scripturally wrong, and also cut a cat's head off." The only reason for believing her to be suicidal was that of the act of dismembering, but her motive for doing this was a non-suicidal one, and it is in part alluded to in the facts communicated by her husband and sister. On her admission into the asylum the keynote of her motive was soon made apparent. She had recently lost a child, and after grieving over it for some time she became the subject of auditory hallucinations. She was constantly hearing voices speaking to her, many of them strange, but that of her lost child she perfectly recognised—in addition, she heard a number of peculiar sounds. She asserted, as her reason for cutting off her hand, that she had been told to do so by the voices, and that further it said in the Bible, "it was better to lose the left hand or right eye than be cast into hell." The Scriptural quotation was evidently the source of the primary suggestion of the act to the mind. It will be noticed that the personal facts related in the certificate in no way allude to the overt act, or to the causes which led to it.

2. The object of the patient being to commit self-destruction, I would urge upon all medical practitioners the necessity of regarding all cases of melancholia as having a suicidal tendency, whether or not there have been threats or attempts indicating it;—the depressing nature of the symptoms, if it does not manifest itself at first, always tends to develop it. The medical man should make the relatives understand this, especially if they are averse to sending the patient away from home to be treated. "Every case of melancholia should be looked upon as having a suicidal tendency."[1] "The first thing you are to remember is, that every patient of this kind—(i.e., the subject of melancholia) is to be looked upon as suicidal."[2] The mode of attempt varies considerably; some will take advantage of any occasion that presents itself. In the annual report of the Brookwood Asylum for 1868 I mentioned a marked case of this kind: "The patient first threw himself under the wheels of a cab, and was run over and most severely bruised; he then sat down on a fire; next he jumped from a three-storey window; he tried to strangle himself with a sheet; he swallowed a bottleful of soap and opium liniment; finally, after his removal to the workhouse, he inflicted a severe wound in his throat, and in this condition he was received into the asylum." He recovered. Others, again, will select one particular form. A patient of my own swam across a canal on purpose to commit suicide by placing his head on a rail in front of a passing train. Full details of any attempts at self-destruction should appear in the certificate. Patients will frequently deny having this tendency, and yet take the first opportunity of committing suicide. Any personal or hearsay facts at all bearing upon this important point should be detailed in the certificate. The following are some illustrative extracts:—*Facts personal.* "The patient appears in great mental distress, and is under the delusion that she has greatly neglected and injured her children. She wishes to destroy herself in consequence of this neglect." *Facts hearsay.* "That the patient has twice attempted suicide by strangulation within twenty-four hours."—*Facts personal.* "Melancholy views about religion; thinks he has committed sins which I have reason to know are only imaginary," &c. *Facts hearsay.* "Has repeatedly threatened to drown himself."—*Facts personal.* "Is silent, reserved, inert, and takes little or no notice of passing events.....Tells me he has strong inclinations to self-destruction. Takes most despondent views of his religious condition." *Facts hearsay.* "By his wife that he has twice attempted to make suicidal attempts, and that he has very restless nights."—"Her expression of intense agony of mind tending to acts of suicide"—a somewhat incomplete and illogical certificate. The case was one of acute suicidal melancholia, and well deserved an extended description of the symptoms.

Cases occasionally occur where danger to the patient may ensue from some act he has committed, which may not have been done for the express purpose of self-destruction, although the patient may have had a suicidal tendency. In the following example it was at first doubted whether the remarkable act of dismembering himself was or was not done with suicidal intent, but the patient subsequently admitted that it was done for the express purpose of making away with himself, otherwise the nature of the act led me at first to believe otherwise:—"He has lately complained of 'cloudiness of thought,' and feared he should lose his mind; loss of memory; has been without cause excited, singing and dancing at times, then soon depressed and melancholy; feared all his affairs and business were going wrong, and that no one

[1] Dr. Millar, Hints on Insanity, 2nd edit., p. 25.
[2] Dr. Blandford, Insanity and its Treatment, p. 191.

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would employ him. Tells me he feels every now and then a confusion in the head which makes him unable to know what he is doing. Has cut off the penis with scissors while left alone for five minutes, and can give no reason for doing so."

Where a patient has threatened or attempted to commit any act causing danger to himself or to others, the certifier should endeavour to obtain from him a relation of what has been done by him, and the motive for doing it. The answers given frequently afford ample evidence of the existence of insanity.

Change in the higher emotions (action).—Any change of this kind would naturally be mentioned in connexion with the emotional alterations observed in the conversation. Such, for example, as the indifference a man exhibits towards his family, his domestic and business affairs, his personal condition, character, and comfort, so often observable in the insane, and affording such a striking contrast with his former state. Facts of this kind are exceedingly useful to the medical officers of this asylum, if noted in the certificate, as they undoubtedly should be. Some of these changes are almost pathognomonic of the form of insanity; for instance, the extravagant character of the purchases effected, and the lavish outlay of money, as contrasted with a totally different state of things in health, so often noticed in general paralysis.

Propensities.—Their condition, if abnormal, is of especial importance to record at length, more particularly in all cases of moral (frequently immoral) insanity. Sometimes there is marked change, at other times it partakes more of an exaggeration of the previous natural condition, and the development of puberty in the weak-minded and the viciously disposed is generally an anxious time for those related to them, as there is a great risk of the imperfectly-controlled sexual feelings leading them into mischief and trouble, and medical men are occasionally called upon to certify to such cases, who up to that period had been tolerated at home.

Masturbation is a frequent cause of insanity, and is often an accompaniment of epileptic mania. It is rarely alluded to in certificates. The following contains the whole of the facts related by the medical man in a case of this description:—"Is very strange in his appearance and manner, and cannot give any account of himself. He is totally unfit to take care of himself." This was a well-marked and typical case of masturbation, the demeanour, expression, dull and averted eyes, low tone of conversation, general monosyllabic answers, and occasional outbursts of impulsive violence, were all characteristic. Indecency in manner and gesture, dirty, destructive, and mischievous habits, should all be mentioned. The propensity to steal, so common in the early stages of general paralysis, should always be alluded to if present. The medical man must always bear in mind that all propensities that are apt to bring discredit on the patient or the family may not be brought under his notice, and may even be scrupulously concealed from him. Hence the greater reason for making very full inquiry into all these matters.

Last of all to notice is the habit of intemperance. While this is undoubtedly a fertile cause, it must also be borne in mind that such habits are sometimes the *consequence* of insanity, acquired or inherited; this is especially the case with the disease termed dipsomania, and in this it will be necessary for the medical man to investigate the entire history of the patient—the symptoms are very different to those cases of insanity caused by ordinary intemperance. In an instance of this kind, where there was strong hereditary predisposition, two uncles and the patient's mother having been insane, the following formed a portion of the certificate: "I have no doubt that, independently of drink, he is of unsound mind. He fancies that he is being robbed, and that people follow him about." The existence of delusion is not necessary to, or usually coincident with, dipsomania, but in this instance it materially strengthened the medical man's testimony.

General demeanour.—The general bearing of the patient should always be mentioned, such as the state of inertness or quietude, or the opposite condition of restlessness and excitement, and whether continued or intermittent. Some patients jump about, others have great rapidity of movement. Wandering from home without apparent purpose, or in consequence of a delusion, as, for instance, in the case of one of my own patients, who walked from Brighton to London to escape from fancied persecution—are all points of too great consequence to be omitted in certificates.

Other abnormalities of conduct, not noticed under preceding headings, such as the character of the handwriting, which undergoes such great modifications and alteration in general paralysis. Collecting and hoarding rubbish in the same disease should be always mentioned, as they are generally coincident with, and corroborative of, delusions of grandeur.

(To be continued.)

WOUND TREATMENT.

BY LEWIS W. MARSHALL, M.D.,
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THIS question having led to much writing and discussion recently, I am induced to add to what has already been stated, a few remarks, the outcome of a somewhat varied experience in wounds and their management.

Commencing with water-dressing and no dressing, passing to the hyposulphites and Lister's method in its earlier years, returning to a simple cleansing-dressing of some antiseptic solution, and finally ending with Lister in its entirety,—from this experience I have endeavoured to formulate some system by which my cases may yield as good results as may be expected in the present state of surgical knowledge.

Mr. J. Holmes in a paper some years ago, the date and periodical I do not recollect, summed up a communication upon this subject by giving us a "trinity of healing graces," much preferable, in my opinion, to those more recently suggested by Mr. Sampson Gamgee ("rest, position, and pressure"), because more comprehensive; they were "rest, cleanliness, and drainage." I believe that by a firm conviction and by a complete recognition of the importance of each factor, and by due attention to the details necessary under each heading, can we alone hope to obtain that success we all aim at. This was the feeling left upon my mind at the time I read the paper referred to, and I felt that the writer had pointed out the line to take in future surgical work. I have endeavoured since so to govern my actions that I should not attach undue importance to either one to the detriment of the other two.

Rest and cleanliness, I find, we can secure best by the same process—Lister's method. Much has been said against its adoption, but those who have fairly and impartially worked for a sufficient time the principles laid down by Mr. Lister to enable them to become educated to the system, cannot fail to see the efficacy of its action. Whether the germ theory be true or not, as a matter of fact, the knowledge is forced upon me that wounds do better by this method than by those I have used or seen applied by others. The numerous objections urged against Mr. Lister's principles include cost and trouble incurred. Neither, however, in my opinion, is sufficient to prevent its use when its efficacy is established. As to cost, the experimental year (1876) in the General Hospital in this town, where I was then house-surgeon, led to no appreciable increase in the drug account. This much can be said, even if we dare not assert that it led to an actual saving after all sources of possible error had been removed.

When the rudiments are acquired, and the individual educated in its working, I doubt if the sum total of time expended over any single case is in excess of that which would be given up to it under other forms of dressing. This I state, having myself gone through the steps requisite for obtaining a knowledge of the process, and carried it out there and in my practice here since the date of its introduction into the General Hospital. That it is a disadvantage, or that harm is likely to accrue from the wounds being hidden from sight, I fail to see, the thermometer giving us early enough evidence of anything calculated to retard the healing process; at any rate, the balance is in favour of the rest and cleanliness insured by its use. Providing the importance of all the "graces" be recognised, a lower temperature is recorded than is usually the case under open methods of treatment. This opinion is based upon the year's experience, before referred to, set apart by the staff to test the value of Lister's system.

What has been said in connexion with the use of carbolic gauze and spray I am inclined to state, but based upon

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much more limited experience, of thymol. The gauze is less harsh, and therefore more comfortable to the patient, and its antiseptic properties do not appear to be less than is the case when carbolic acid is the active agent. It is certainly less an irritant than this latter product. I have noticed that if a dressing of, say a week's standing, is removed, the discharge is greenish in colour. What the change is due to I am not aware, and it does not affect the healing process. All cases in which I have used this kind of application have done well. (I append a special instance.)

By the use of antiseptic surgery in its entirety we gain effectually the first of our "graces"—*rest*,—because of the lasting nature of the dressing, it being a not uncommon thing to allow an amputation or other major operation to run a whole week after the first dressing without interference of any kind. By the pressure, gentle but effectual, given by the gauze dressing, we secure an additional power of some value in maintaining the surfaces in apposition, and limiting, if not preventing, the muscular tremor so common after operations, such as amputations or excisions, leading to unnecessary suffering to the patient and protracted healing. I might mention here perhaps the value of Child and Hinds' bed-lift, especially in children's work. By its aid a patient can be lifted to perform defecation, &c., without any disturbance of the stump, or in cases of excision of hip with little or no suffering. It is also a great assistance in attending to the back, &c., when bedsores are present or threatened. Much harm is often done inadvertently by nurses in raising patients for necessary purposes, but by the use of the lift the surgeon is sure of safety from this source of disturbance.

If freedom from fetor, with very often only a discharge of lymph, or at the most a healthy, inodorous pus, may be considered evidence of "cleanliness," this is also gained by the same measures.

When antiseptic surgery is not adopted, and in wounds of a foul and sloughy nature, terebine has proved of great service. The sponge-dressing of Mr. Jordan seems also to be worthy of more notice. Drainage, and of the three perhaps I may say this is of chief importance, as by a failure to recognise its claims all hope of any good result must be abandoned. The relief of primary tension, a fruitful source of evil, by obtaining a free escape of serum, the first product we have to deal with after any surgical injury, cannot be insisted upon too thoroughly, as too often that which might have been a rapidly-healing process is rendered tardy, if not unsatisfactory, in other ways. The means for gaining this end are position and special apparatus. It is my custom to raise all stumps for a few hours (six or more) into a position calculated to lessen oozing, and at the end of this time to remove all pillows, allowing the limb to choose its own posture, providing it rests upon the same plane as the trunk. By these means drainage is facilitated and the flaps are kept more accurately apposed to one another. A position such as this, not raised or depressed, is, in my judgment, preferable, because more comfortable to the patient and less likely to interfere with drainage or lead to hæmorrhage, as might be the case if the stump were depressed.

Metal tubing, horsehair, and catgut are the special means we should, I think, employ, each having special advantages over the other in various conditions. The caoutchouc is now out of date and cannot claim to be a rival to either of those mentioned, on account of the deleterious products introduced with it, rendering discharges fetid and leading to an inevitable rise in temperature. Often have I pointed out this circumstance, which Mr. Chiene was the first to write upon, and on which account he substituted for it the catgut drain. In addition to the above objection, if used in a sinus the channel does not long remain patent, the sides of the tube collapse and become flattened by the steady pressure of the walls. Metal tubing is extremely useful, and is especially adapted to those conditions where no counter-opening exists and long-continued discharge is expected: for instance, in large abscess cavities or sinuses leading to bone. I also find it of good service in glandular abscess of the neck, so common in children. If an early opening be made and the finer tubing employed, little or no scarring remains. Hair drainage, originally suggested by Mr. Joseph White, of Nottingham, follows next; and from a very large experience of its use both in my own practice at the Children's Hospital and in cases under my immediate observation whilst an official at the General Hospital, I am prepared to state that it cannot be improved upon. From the fact of its unchangeable nature, ready adaptability, ease of reduction in size, together with the absence of pain from frequent removal for cleansing purposes—needed by the tubes employed—and from its durability, it is placed far before any other form of drainage in use by surgeons. By capillarity fluids are removed with freedom.[1] This experience was gained in Molliere's practice at Lyons. If the healing process be a rapid one, hair is no hindrance to it; and if prolonged, we secure a satisfactory exit for the products entailed by this delayed union. A practical hint may here be given, that all the hairs chosen for a particular drain should be of the same length, otherwise one, shorter than the remainder, may be left in the wound, leading to annoyance to the surgeon and unnecessary suffering to the patient. The catgut-drain is of service when rapid union may be confidently expected, but often fails from early absorption when we require it most. It also proves valuable if introduced between the sutures at one or more dependent points. This course I adopt at the first dressing, which in an amputation of the thigh would probably be done on the second or third day, being requisite somewhat earlier than the future ones on account of oozing after operation. Moreover, at the time it is difficult in this class of operation to select which will be the most dependent point, if, on account of rest being perfect, the stump be allowed to choose its own posture, as before advised. The introduction of these accessory drains is certainly a great safeguard.

The means used for arresting hæmorrhage are calculated to affect union materially. With catgut and torsion, why surgeons adhere to the silk ligature (Gamgee) I am at a loss to know. After the substitution of the two former for the latter in the General Hospital, secondary hæmorrhage, previously no uncommon occurrence, became a rare event. Acupressure may prove serviceable under very exceptional circumstances. For sutures, wire, alternating with horsehair, when traction is too great for the latter alone, will give us more help and less damage than silk. Horsehair, if it can be used alone, leads to less discomfort and irritation than either wire or silk, there being no need to interfere with hair sutures until the healing is completed. Catgut as a suture, from being so readily absorbed, is insecure, and has no advantage over horsehair.

From these remarks it will be gathered that Lister's method is, in my opinion, more beneficial than any other system, and that the practice in Nottingham is decidedly in favour of its adoption, may be inferred from the fact that after the determination of the surgical staff at the General Hospital to give it a fair trial for one year, the verdict was unanimous that its continuance was desirable. I know I am correct in saying that the surgical records during that year and since compare favourably in every way with those previously published. Septic disease has been practically abolished where before it was too common. Although this evidence is not entirely to be put to the credit of antiseptic surgery, on account of vast improvement in ward management and general hygiene, with complete remodelling of the drainage taking place at or about the time of its introduction, still it led to the abolition of those diseases which had been reduced to a minimum by the general improvements. In an old hospital, very imperfect in structure, where free ventilation with comfort to the patient can with difficulty be obtained, and the cubic space small according to modern requirements (1536 feet per bed), this alteration may be considered highly satisfactory.

That, under certain conditions with simple dressings, which insure chemical cleanliness, free escape of discharge, and rest, good results may be obtained, I do not doubt; but if the preference be given to any one system I should select Mr. Lister's, because it enables us to gain most easily and effectually that required of us by our general principles embodied in the "trinity," and does not call for undue expenditure either of time or money.[2]

I would, in conclusion, again point out that perhaps of all things in connexion with treatment of wounds relief of primary tension is of first importance. Tension and pus too often stand directly in relation to one another as cause and effect. Insure the absence of the former, and the latter will be less frequently met with in the healing process. I add to

[1] Vide "Etude sur le Drainage capillaire par des Crins," par Charles McRae, M.D.

[2] As before stated, it is rather by a recognition of the importance of all three factors we shall gain the success we desire, than by pinning our faith to any special method which, whilst yielding all we seek for under one heading, fails to give what we require under each of the others.

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this a case occurring in my practice lately illustrative of what I have herein stated.

A. S——, aged ten years, admitted July 23rd, with a sarcomatous tumour at the lower end of the fibula. Amputation by Stokes' modification of Gritti was done on the afternoon of August 23rd, the patella being secured to the end of the femur after removal of cartilage by two wire sutures passed through the periosteum. A long anterior flap, containing the patella, was made, and a shorter posterior one. No undue bleeding occurred; two vessels, popliteal and another, were tied with gut and several branches twisted. A horsehair drain was passed beneath the femur between it and the lower flap, and brought out at the upper end of incision on either side. Wire and horsehair sutures alternating brought the flaps together, the former being about an inch apart, and the latter midway between them. Thymol spray was used, and thymol gauze-dressing lightly applied. The temperature rose the morning after operation to 103° F., and was probably accounted for by the drain from its situation acting imperfectly; the position of the stump was altered at once, being laid on the same plane as the trunk, a small pad being placed beneath the thigh to prevent pressure on the line of incision behind. These measures led to a fall of temperature the same night. On August 25th the temperature in the morning was 100°. General condition good. Dressed for the first time, on account of oozing having penetrated to the surface; edges apparently united; on the outer and lower side, at the most dependent point, a probe was carefully passed to separate the edges, and a few strands of catgut pushed in. There has been no discharge beyond serous oozing. Bowels open naturally. From this date to August 30th the temperature varied from 99° in the morning to 100° in the evening. On August 30th the wound was dressed for the second time, a very small quantity of lymph being the only discharge noticeable; no odour, tenderness, or redness; hair-drain partially removed. Between Aug. 30th and Sept. 6th temperature remained in the morning at normal, never exceeding 99° in the evening. Dressed for the third time on Sept. 6th. All the drain but two or three hairs removed. No pus. Two wire sutures taken out; layers of gauze reduced; discharge the same in character. Temperature rose the same evening to 100°, due to handling and removing of drain; fell, however, next morning to normal, and remained so. On the 13th the wound was dressed for the fourth time, the few remaining hairs removed. All the edges firmly united. Patella appears to be fixed.

This is an account of the last dressing up to the present time, but there is no doubt as to the complete success of the case, and the principles supported in this paper are sufficiently illustrated by this brief record. The alteration in position in this case was delayed in consequence of my not having given special directions to the nurse to take that course before my morning visit.

Note.—By a judicious use of gauze, and by recharging, the expenditure can be reduced considerably. It is not commonly the practice, I think, to employ the same lotions for very many cases; this can be done with safety, although perhaps to the ignorant observer it is not a very cleanly procedure. The "hat-lining" will also serve for numerous dressings. The recharging more than compensates for the cost of carriage of gauze to Edinburgh for this purpose.

ON

VERSION, FORCEPS, AND THE EXPECTANT PLAN IN THE TREATMENT OF CONTRACTED PELVIS.

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(Concluded from page 680.)

IT is obvious from the foregoing description that version and extraction in contracted pelvis expose the child to perils of no insignificant character. Among the lesions which have been observed as a result of the extreme traction force necessary to bring the head rapidly through the narrow brim, are fracture of the clavicle, fracture of the humerus in difficult arm deliveries, lacerations of the sterno-cleido-mastoid muscles, rupture through the substance of a vertebra, extravasations of blood into the cavities of the head and trunk, separation of the condyle from the occiput, and of the squamous portion of the temporal from the parietal bones, fractures and depressions of the skull, and rupture of the sinuses of the dura mater.[1] To be sure, many of these accidents are not inevitably fatal, but they do not by any means furnish the chief sources of danger. These result partly from the respiratory efforts which are always excited by delay in extracting the after-coming head, and partly from the depressing influence exercised upon the fœtal heart by pressure brought to bear upon the base of the brain.[2]

Having thus made out with great care a full bill of particulars embracing all the acknowledged drawbacks to the performance of version in narrow pelvis, we have next to consider how far these associated evils tend to invalidate the claim of version to be regarded as *facile princeps* among conservative measures of treatment. The following records of the individual experience of competent operators will help us to solve this question. Kormann[3] turned in nine cases of contracted pelvis. Seven children were born living, and two died. All the mothers recovered. Löwenhardt[4] turned in twenty cases of contracted pelvis. Seventeen children were delivered alive, and three died. Only children that outlived the first week were counted in the successful cases. The mothers recovered. Goodell[5] reports eleven cases. Seven children were alive at birth, and four were stillborn, but of the latter one was delivered through a pelvis measuring only two inches and a half conjugate diameter, and in one the case was complicated by eclampsia. The mothers recovered. Now, not to go beyond these forty cases, we obtain as the result of version thirty-one living infants, without the sacrifice of a single mother. A number of the women were delivered by version of living children in whose previous labours craniotomy had been found necessary. Löwenhardt placed in contrast his own experience with the forceps in narrowed pelvis presenting degrees of contraction corresponding to those in which he had resorted to version. Of forty-five deliveries sixteen children were born dead and five died shortly after birth. Of the mothers three died, while twenty-one suffered from puerperal affections of greater or less severity.

Now, if the foregoing testimony represented the entire truth, there would be no good reason for discussing other plans of treatment. They, in fact, show only how far special training and experience will enable an operator to overcome difficulties by dexterity and address. In the first case reported by Dr. Goodell the child was still-born. In commenting upon the cause of death, Dr. Goodell states frankly, "Much force was needed to extract the head, but it was not made as promptly and efficiently as I have since learned to make it."

Another side of the question has been presented by Borinski,[6] who, at the instigation of Professor Spiegelberg, collected the statistics of version in contracted pelvis from the Breslau Clinic, between the years 1865–1872. In all there were ninety-three cases. Thirty-four children were saved and fifty-nine were delivered dead, or died soon after birth. Fifteen mothers lost their lives. This seemingly disastrous showing is capable, however, to a certain degree of explanation. Thus twenty of the fifty-nine children born still died before version was attempted. In nine of the cases the transverse as well as the conjugate diameter was materially diminished. Of the children delivered through these flattened, generally contracted pelves, only one, and that a very small one, was extracted alive. Still there were fifty-eight cases of version in ordinary flattened pelvis, with the result that just one-half of the children were born dead. In only three of the fifteen mothers who died was the fatal result apparently connected with the operation. In the others, death was due to spontaneous rupture of the uterus, placenta prævia, and nephritis, version having been resorted to because of these complications. A considerable

[1] C. Ruge, Verletzungen des Kindes durch Extraction bei Becken lage Zeitschrift f. Geb., Bd. i., s. 68.

[2] Dohrn, Ueber Pulslosigkeit des Kindes Während Extraction an den Füssen. Arch. f. Gyn., Bd. vi., s. 385.

[3] Arch. f. Gyn., Bd. vii., s. 13.

[4] Wendung und Extraction das dominiren de Verfahren bei Becken Enge. Arch. f. Gyn., Bd. vii., s. 421.

[5] Trans. of the International Med. Congress, Phila., 1876, p. 777.

[6] Zur Lehre von der Wendung auf die Füsse bei Engem Becken. Arch. f. Gyn., Bd. iv., s. 226.

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allowance should be made, too, in the cases from the Breslau Clinic, from the fact that the great part of them took place in the out-department of the hospital, where they were under the charge of midwives, who rarely send for timely aid except in the presence of dangerous complications. In eighteen instances the operation was performed on account of prolapsus of the cord, and in eighteen instances because of some maternal affection.

In presenting this less favourable side of version in contracted pelvis, it is well incidentally to place in juxtaposition the result of the high forceps operation as given by Dr. Harold Williams in a recent number of the *American Journal of Obstetrics* (January, 1879). Williams collected 119 cases where the forceps were applied to the head above the brim, reported since 1858. Of the mothers nearly 40 per cent., and of the children over 60 per cent. perished. The mechanical objections to the use of forceps at the brim are obvious. When the head is moulded to the contracted pelvis by the natural forces, the head passes the conjugate with its long diameter in the transverse diameter of the pelvis, with the two fontanelles on nearly the same level, and with the sagittal suture looking towards the sacrum. The posterior parietal bone rotates around the promontory, the latter producing a furrow which runs either along the coronal suture, or, at first, in front of the parietal boss, and later, as flexure occurs, forward towards the frontal bone. The bi-lateral compression of the head is compensated for, in part, by a lengthening in the fronto-occipital and partly in a vertical direction. Forceps applied in the transverse or oblique diameter of the pelvis prevents this latter compensation from taking place. They increase the width of the head, and thus add to the difficulty of passing the conjugate. Often they disturb further the normal head mechanism by causing premature flexion and rotation to take place. In each of these ways they augment the difficulties of delivery, and render necessary the employment of an increased amount of traction force. With forceps applied directly to the sides of the child's head I have no experience, but Dr. Goodell, who has clearly pointed out the objections to this method in contracted pelvis, has shown that they inevitably produce flexion, and cause the large bi-parietal diameter to pass through the narrow conjugate. So long as the head does not engage at the brim there is no rivalry between version and forceps. The latter should be placed under the ban as hardly less dangerous than the Cæsarean section.

Now, let us suppose that after rupture of the membranes it is decided to resort to neither forceps nor version, but to adopt an expectant course, until circumstances arise which shall render active interference necessary. It is certain that a very considerable portion of labours in contracted pelvis terminate spontaneously. Winckel[7] reports 23 cases in the Dresden Maternity in 1873, and 12 cases in 1874 and 1875. Of the 35 cases, two mothers and three children died. Osterloh[8] reported 139 cases from the Leipsic Maternity between the years 1863–1872 inclusive. There were 105 cases where the pelvis measured from three to three and a half inches. Of 106 children seven died, of the mothers four died. In 34 cases where the pelvis measured over three and a half inches, two children died. All the mothers recovered. There were, however, 42 cases in all of puerperal disease terminating in recovery. Borinski reports from the Breslau Clinic 233 spontaneous deliveries in contracted pelvis, with 192 living children. There were ten maternal deaths, but four were from non-puerperal intercurrent affections. Thus in three large Maternity Hospitals there were in cases of contracted pelvis 407 spontaneous deliveries, with the loss of fifty-three children, and, from puerperal diseases, of twelve mothers—the latter representing very nearly the usual mortality in lying-in hospitals. Even in a pelvis measuring less than three inches, now and then the spontaneous delivery of a small living child takes place.

If we examine these results we find that under favourable circumstances, in all but the extreme forms of pelvic contraction, nature will do her own work with the least expense of infant life and with a relatively small maternal mortality. On the other hand, the long-continued pressure upon the parturient canal, incident to the moulding and adaptation of the head to the narrow pelvis, yields a large contingent of inflammatory affections, which complicate the puerperal period and protract the convalescence. By favourable circumstances I mean a presentation and position of the child's head suited to the form of the pelvis, and a sufficient degree of uterine activity. Rectification of a faulty position of the head after the rupture of the membranes is always a matter of difficult accomplishment. In case, therefore, the brow presents, or the head engages with an excessive degree of lateral obliquity (sagittal suture looking forward towards the pubis, or backward above the promontory), in place of wasting time in futile efforts at correcting the malposition, version should be promptly performed. In prolapse of the cord, which occurs in about six per cent. of the cases, the indication would clearly be version rather than replacement. In eclampsia and face presentations most operators would preferably resort to version.

Thus we have finally the field of controversy between version and other plans of treatment narrowed down to cases in which, after rupture of the membranes, the head remains above the brim; but the conditions are such that nature is capable of overcoming the mechanical difficulties of delivery, providing that the labour pains are sufficiently energetic. There is always an element of chance in this last condition which, however, is an essential one. If the pains are weak and powerless, it may be possible, even hours after rupture of the membranes, when the head has not become fixed, to still accomplish version. More frequently, however, as the head but incompletely fills the lower segment of the uterus, the waters escape, the uterus retracts upon the fœtus, the cervix becomes œdematous and tender, and after a time the temperature and pulse rise, betokening the presence of danger. Sometimes the retraction of the uterus ends in the withdrawal of the cervix over the child's head, and in the failure of the latter to descend into the pelvis the vagina is drawn upward, and subjected to a perilous degree of tension. It is easy to see that under such circumstances the time for version is past, and craniotomy is called for. Because, therefore, where labour is left in contracted pelvis to the spontaneous efforts of nature, in a certain proportion of cases, the insufficiency of the labour pains leads to the necessity of sacrificing the child, there will always be operators who, confident in their own skill, will prefer to turn soon after the rupture of the membranes, that they may keep in their own hands the control of the delivery. The bulk of professional men will, on the contrary, so long as spontaneous delivery is probable, prefer to wait, even though by so doing they may eventually find themselves obliged to fall back upon the perforator and the crotchet.

When the delivery of the child is left to the contraction of the uterus, reinforced by the expiratory muscles, the physician should assume the *rôle* of a watchful spectator. Safety to the mother and the child requires that the time of the passage of the head through the bony canal should not be too prolonged. So long as the head descends steadily, however slow the progress may be, in case no complications demand speedy extraction, the physician should await the results of uterine activity. Should the pains grow weak and inefficient they may be stimulated by the uterine douche, the introduction of the catheter into the uterus, and by small doses of ergot, or the viscum album, provided the inertia is not the result of pathological changes in the uterine tissue.

When the advance of the head ceases, either from failure of the pains, or, as in justo-minor pelvis, from the growing resistance of the pelvic outlet, the rule should be to relieve the soft parts of the mother as speedily as possible from the pressure of the child's head. Pressure too long continued ends in œdematous swelling, softening of the tissues, arrest of circulation, necrosis, and gangrene. When the integrity of the lower segment of the uterus has been impaired to any considerable extent, perforation should be resorted to, and the child sacrificed to the interests of the mother. If, on the contrary, the changes are insignificant, and the mechanical difficulties not insuperable by the use of forceps, it may be possible to save the life of both mother and child. But to avoid the first-named cruel alternative the forceps should be applied as soon as the requisite conditions for their employment are reached.

Of course, as forceps are solely to save fœtal life in case the feeble heart-action of the child gives warning of impending asphyxia, the more the interests of the mother are to be alone consulted.

In estimating the mechanical difficulties to be overcome by the forceps, it is necessary to determine how far engagement has taken place. Litzmann[9] recommends, by careful

[7] Berichte und Studien, 1874–1876.

[8] Einige Beiträge zu den Spontan Verlœufenden Geburten bei Engem Becken, Bd. iv., s. 520.

[9] Ueber die Behandlung der Geburt bei Engem Becken. Sammlung Klin. Vorträge, s. 715 et seq.

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internal examination, combined with external palpation, that the physician ascertain both the size of the segment of the cranium below the brim and how much of the head remains to undergo compression before it can enter the pelvis. In ordinary flattened pelves, Litzmann found that in three-fourths of all the cases the pains alone sufficed to overcome the resistance of the brim. When the head had so far descended that the sagittal suture had passed from three- to four-fifths of an inch below the promontory, and the boss of the anterior parietal bone could be felt with ease behind the symphysis pubis, extraction with the forceps was a task of no great difficulty, even if before their application flexion had not begun to take place.

In generally contracted flattened pelvis it is desirable that the head should be transverse and well flexed, with the posterior parietal bone at least three-fifths of an inch below the promontory. With the forehead and occiput resting upon the side walls of the pelvis, the sagittal suture near the promontory, and an ear felt behind the symphysis pubis, the prospects of forceps operations are extremely dubious.

In justo-minor pelvis of moderate extent (conjugate three and a half inches) the failure of the pains, which forms the necessity for forceps, is rather the result of the paralysing effect of the pressure of the bony canal upon the entire circumference of the cervix than of the absolute degree of pelvic contraction. The head descends in a state of complete flexion with the large fontanelle at the pelvic brim. If, as the head advances, the small fontanelle moves from the median line, and the large fontanelle becomes accessible to the finger, it is likely that the pelvis widens towards the outlet. If the forceps serve only to bring the fontanelle down still deeper, and to increase the declivity of the sagittal suture, the opposite condition obtains,[10] which may frustrate the delivery.

In flattened pelvis the forceps should be applied as nearly as possible to the fronto-occipital diameter of the head, as the latter needs to descend in the transverse diameter of the pelvis. When applied obliquely they tend to cause premature rotation, which increases the difficulties of extraction. In justo-minor pelvis the direction of the blades is of less importance, as the head often descends spontaneously in an oblique diameter. Success in high forceps operations depends upon the degree of accuracy with which the tractions are made in the axis of the pelvis. With the long curved forceps it is especially difficult to fulfil this requirement at the superior strait. Even when the directions to draw vertically downward are faithfully carried out, a considerable portion of the force is expended in the pressure of the forceps upon the soft tissues lying between them and the anterior pelvic wall. In careless hands this pressure is capable of inflicting a great deal of injury, particularly where the blades of the forceps are passed within an imperfectly dilated cervix, and where they project somewhat beyond the child's head. Various devices have been invented to correct this defective working of the instrument. Pajot recommends placing the left hand upon the lock to make pressure backward, while with the right hand tractions are made downward and somewhat forward. I have generally succeeded by exerting a small amount only of force at each traction, watching at the same time with great care the direction of the blades in the pelvis. This method is pretty safe, and in the end generally successful, but often requires a very considerable outlay of time and patience. A pair of straight forceps, as recommended by Dr. J. E. Taylor, will often enable one to draw more directly in the axis of the brim, and will succeed where the curved forceps have had to be abandoned. Of late I have been in the habit of using the Tarnier forceps in high operations, and am able to give them my cordial approval. The blades always swing in the transverse diameter of the pelvis, while the traction force is exerted as nearly as possible upon the centre of the child's head. A few trials will convince the most prejudiced opponent of the Tarnier forceps that they will, at the superior strait, bring the head to the floor of the pelvis in much less time, and with a less expenditure of force, than can be accomplished by other methods.

The dangers from forceps in contracted pelvis are due, not so much to the pressure they make directly upon the child's head and the pelvic walls, as to the compensatory bulging of the head in its transverse diameter. When the head is fixed at the brim, and forceps are applied to the forehead and occiput, it is evident that the only change of form that can take place is in a vertical direction. Safety in delivery requires that there should be no sudden augmentation of the bilateral pressure, which would necessarily deepen the furrows made by the promontory upon the posterior lying parietal bone, and imperil the integrity of the maternal tissues confined at the conjugate between the promontory and the pelvis. Until, therefore, the head has passed the narrow strait, tractions should be made with moderate force, and with short periods of intermittence. After the head has once descended to the floor of the pelvis the forceps should be removed, and the head be allowed to rotate into the conjugate. Then forceps of any pattern may be adjusted to the sides of the head should further aid be required to complete delivery.

So far we have considered cases in which the cervix was sufficiently if not completely dilated before rupture of the membranes. If, as is very common, the membranes rupture prematurely, the difficulties and risks to both mother and child are greatly increased. With rupture comes, as we have already seen, escape of the amniotic fluid, retraction of the uterus, and interference in the utero-placental circulation. With an undilated os externum the cervix is stretched by the head, and its thinned tissues are subjected to pressure from the symphysis and promontory. Delay leads to arrest of circulation and necrosis at the points of pressure, but here version and forceps are alike impracticable. This leaves as the only alternatives, perforation and the Cæsarean section. Timely aid, therefore, in such cases should be extended before a dangerous condition is reached. My first preference just after rupture is the Barnes' dilator, which not only serves to expand the cervix, but when employed promptly helps to prevent the escape of the amniotic fluid. Next to the Barnes' dilator, and of special utility when the waters have already escaped, I would place the long narrow-bladed forceps of Dr. Taylor, for introduction through the undilated os. With these the head can be grasped, and when made to descend and then allowed to recede in alternation, oftentimes the rounded cranial surface will efficiently act as a dilating body, and secure such a degree of expansion as will pave the way for the safe adoption of other methods of delivery.

[10] Op. cit., s. 718.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

UNIVERSITY COLLEGE HOSPITAL.

THROAT DEPARTMENT.

(Cases under the care of Dr. POORE.)

Epithelioma of the Upper End of the Œsophagus.—R. S——, a charwoman, aged sixty, first attended on March 1st, 1877. She was much emaciated, and stated that since Christmas she had had a difficulty in swallowing which had gradually increased. Attempts at swallowing produced fits of coughing. There was some pain between the shoulders. She had spat blood on two or three occasions. She had miscarried three times, one child alive and delicate, one stillborn. On examination the epithelium of the tongue was patchy, thick in places and thin in others, and the pharynx was slightly congested. There was decided prominence of the larynx, and slight and doubtful enlargement of glands at angle of jaw. The larynx appeared healthy when examined by the laryngoscope, but between the arytenoid cartilages and the pharyngeal wall muco-pus was seen exuding. On passing the finger into the pharynx an obstruction was felt at the upper part of the œsophagus, and a speck of blood was found on the tip of the finger on withdrawal. The examination caused the patient to cough, and she expectorated some blood and a small fleshy particle which, when examined under the microscope, revealed nests of epithelial cells quite characteristic of epithelial cancer. The patient was advised to become an in-patient, but on her

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declining to do so she was ordered a morphia linctus to ease the discomfort of the throat, carbolic-acid lozenges to counteract the fetor, and cod-liver oil in large doses. After a time she ceased to attend.

Remarks.—The interest of the case consists in the certainty of the diagnosis at the first visit by means of the microscope. The appearance of the tongue and the history of the miscarriage rather pointed towards syphilis, but the discovery of the structure of epithelioma in the expectorated particle left no doubt as to the true nature of the case.

Tumour, as big as a hazel-nut, growing from the Left Ventricular Band.—W. W——, aged forty-eight, a workhouse master, was sent into the hospital on the 18th July, 1878, suffering from hoarseness and dyspnœa. He had been a healthy man, with the exception of an attack of gonorrhœa. His wife had miscarried three times, but there was no direct evidence of syphilis. The patient stated that he had been liable for some time to a relaxed sore-throat, that he became hoarse somewhat suddenly about a year ago, and that during the last month his symptoms had very much intensified. On July 25th he was seen by Dr. Poore, and subjected to a laryngoscopic examination. The dyspnœa was increased when the patient extended his neck for the purpose of laryngoscopy, so that the examination was not easy, and had to be performed with all possible quickness. A tumour was distinctly visible on the left side of the larynx at its anterior part, and situated, as was thought, below the left vocal cord; the left cord being apparently stretched over it like a shining band. The breathing was stridulous during both inspiration and expiration, and on applying the hand over the thyroid cartilage a distinct vibration could be felt during both respiratory acts, especially on the left side. There was a considerable amount of tenacious glairy sputa. All the extraordinary muscles of inspiration were used, and there was some swelling of the feet. There was no prostration, and no cyanotic tint of face.

He was placed on large doses of iodide of potassium, on the chance that the tumour might be of syphilitic origin; but no improvement having taken place in two days, it was decided that an operation was necessary. In consultation with Mr. Marshall it was decided that no attempt to remove the tumour *per vias naturales* would prove successful. The base appeared to be nearly as thick as the growth itself, and the inability of the patient to submit to more than a momentary laryngoscopic examination, together with the fact that the tumour completely closed the forepart of the glottis, would have rendered the passing of an écraseur over the growth impossible; and any attempt to do so was not thought either desirable or justifiable. It was considered, therefore, that thyrotomy would be the proper operation; and it was resolved that tracheotomy should be first performed, that the thyrotomy should be done subsequently after the lapse of some days, so as to give the patient time to recover from the shock of the first operation, and to allow of the second operation being performed with greater deliberation.

Tracheotomy was performed with all possible skill by Mr. Bond, the house-surgeon, but the patient never rallied afterwards, and died in a few hours.

On post-mortem examination the mucous membrane of the larynx was found to be considerably injected, especially at the upper and left part. Attached to the left ventricular band at its forepart was a smooth, lobed, hard growth as big as a hazel-nut, and with a broad base. It was of a pinkish colour, and marked on its upper surface by a white streak. This appearance had led to the idea of its being situated below the cord. A microscopical examination by Mr. Boyd, the surgical registrar, showed the growth to consist principally of bloodvessels with small round nucleated cells between them, and some few spindle-shaped cells.

A Cockle-shell in the Trachea.—T. M——, aged eight, was sent to the Throat Department for examination by Mr. Godlee, by whom he had been admitted into the hospital, with a view to operation. It appeared that on the 4th of July the boy was playing in the Regent's-park, when a small cockle-shell, which he had picked off the path and placed in his mouth, accidentally slipped into his windpipe. The boy was suffering from some dyspnœa, with slight recession of the thorax during inspiration; both inspiration and expiration were accompanied by bronchitic râles, audible all over the chest. The boy pointed to the trachea as the seat of his trouble, and pressure on a spot about one inch above the sternal notch caused him pain. He was troubled occasionally by fits of spasmodic coughing. He was a timid, fidgety lad, and by no means a good subject for laryngoscopic observation. On July 10th, after much trouble, a momentary glance of the larynx was obtained, and a white body was seen below the vocal cords. On the following morning a further examination was made, and a white body was distinctly visible on the anterior wall of the trachea, about an inch below the vocal cords. While endeavouring to demonstrate the presence of this foreign body to one of the students who was present, the patient was seized with a very violent attack of coughing, and coughed up a small cockle-shell nearly as big as a threepenny piece. The shell was perfect, with sharp edges, and had apparently got fixed in the mucous folds of the trachea. The shell had been in the trachea just a week. After coughing up the shell all symptoms disappeared, and the patient left the hospital on the following day quite well.

LAMBETH INFIRMARY.

IMPACTION OF FOREIGN BODY IN PHARYNX OF A CHILD; REMOVAL; RECOVERY.

(Under the care of Dr. HAMERTON.)

G. C——, aged one month, who was under treatment for congenital syphilis, was suddenly seized at about 2.15 A.M. on the morning of July 1st, 1879, with a violent attack of coughing. The night nurse, on taking the child up, noticed that the feeding-bottle which it had been sucking was without the teat and ivory or bone ring which usually surrounded it. She at once sent for Dr. Hamerton, saying the child was dying. He found the child livid and gasping for breath. On introducing his finger into the pharynx, he could feel the thickened ring of india-rubber which joins on to the wooden connecting-piece. He endeavoured to hook it up with his finger-nail, but it was too firmly fixed. He therefore caught hold of it with a long pair of forceps, but they slipped each time. The child's breathing was, however, freer each time traction was made upon the foreign body. It was then seized with a pair of vulsellum forceps, but they tore through the india-rubber. As the child showed symptoms of imminent suffocation, tracheotomy was about to be performed, when the child gave a slight gasp. One more attempt was made to remove the obstruction, and this time with success. The child then gave some deep gasps, and by means of artificial respiration and galvanism it slowly recovered. At 3.40 A.M. it was quite well and crying lustily. The cause of the great obstruction to respiration was the flat bony plate or ring of the teat being sucked down tightly over the chink of glottis during inspiration and swallowing. In attempting to remove the body, the india-rubber part was almost entirely drawn through the plate.

This case suggests the necessity for some improvements in the manufacture of these bottles, whereby the tendency to this accident may be avoided.

GLASGOW EYE INFIRMARY.

CASE OF CONICAL CORNEA; TREPHINING; VISION IMPROVED.

(Under the care of Mr. J. CRAWFORD RENTON).

J. C——, aged twenty-eight, female, complained of dimness of vision of two years' duration, the dimness being worst in left eye. She saw No. 20 Jaeger with the left eye, and No. 2 with right. The left cornea was distinctly conical; the right was only slightly so. On Jan. 25th, 1878, she was ordered eserine in solution and arsenical solution internally.

On March 8th vision in the left was reduced to counting fingers. Under chloroform the cornea was trephined by the medium-sized instrument recommended by Mr. Bowman. The circular portion of cornea was removed from apex of cone. Slight adhesion of iris to corneal wound took place, and on the 30th there was considerable sclerotic congestion, with pain on pressure, in the ciliary region. The eserine was continued, and the patient went home.

On July 5th the pain had subsided, but there was still congestion, and undue sensitiveness to light. The iris being adherent at the upper and lower aspects to the corneal wound, Mr. Renton, with Dr. Reid's approval, divided, with De Wecker's scissors, the lower adhesion; in so doing the lens was injured, and it was accordingly removed.

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On Aug. 2nd, after a sharp attack of cyclitis, the eye improved, and the patient was dismissed.

On Oct. 16th the upper adhesion of iris was divided, and on the 25th the eye was quiet, and looked better in every respect than it had hitherto. The iris was entirely free from the wound, and the patient returned to the hospital on March 22nd, 1879, when an iridectomy to the lower aspect of the cornea was performed, with the result of so improving vision that, aided by a concave lens, she saw No. 8 Jaeger.

On May 1st the vision continued as good vision as at last note.

On Feb. 20th, 1880, vision was again noted and found to be as good as a year ago. The conical condition of the right cornea had not increased.

EUROPEAN GENERAL HOSPITAL, BOMBAY.

OVARIOTOMY; RECOVERY.

(Under the care of Surgeon-Major J. PINKERTON.)

M. R——, aged twenty-seven, a prostitute, resident in Bombay two years, born in Odessa in Russia, was admitted on July 10th, 1879, complaining of pain in the hypogastric region. There was a slight menstrual discharge, which she thought was brought on by a blow. She never was pregnant. The menses had often been deficient lately. The abdomen was prominent and had the appearance of pregnancy. The woman frequently vomited, and had nausea in the mornings. The discharge ceased in three days, and she left the hospital, but returned again on Aug. 6th, complaining of pain in the hypogastric region and in both temples.

On admission she was a fine healthy-looking woman. The tumour, even and quite movable, extended from the pubes to a little above the umbilicus, and occupied the median line—not more to one side than the other, but, if anything, more attached to the right iliac fossa than the left. The sound entered the uterus two inches and a half with a little difficulty, owing to the os tincæ being small; the uterus moved with the tumour, and it fluctuated. For some days after the introduction of the sound there was a slight discharge of blood. The presence of an ovarian tumour adhering to the uterus was diagnosed.

As the tumour was still small and caused little inconvenience, the patient was advised to wait; but she insisted on Dr. Pinkerton operating before he left Bombay for Europe on three months' privilege leave. He consented to operate after consulting with his colleague, Dr. Hatch.

The bowels having been opened on the 17th August, by a seidlitz powder, the rectum was cleared out by an enema at 5.30 next morning and the operation begun at 7.30. Before making the incision the abdomen was washed with a lotion of carbolic acid, and the patient brought under the influence of chloroform. During the operation the antiseptic spray was kept up. The incision through the skin was about 5½ inches long in the median line, and through the peritoneum about 4⅛ inches. There was a good deal of subcutaneous fat. The tumour was globular, free on all sides except below, where it was closely adherent to the fundus of the uterus and right broad ligament. It was a monocyst, and contained about thirty-four ounces of reddish-brown fluid. After emptying the cyst, it was pulled out as far as possible by Dr. Temperley, and held so while Dr. Pinkerton applied the clamp and fixed it at the lower angle of the incision. Dr. Arnott, on examining the adhesions, agreed with Dr. Pinkerton that it would be too dangerous to interfere with them. There was a little fluid in the pelvis, which was very gently sponged out, but no attempt was made to sponge out every drop of it; indeed, the sponge was very little used. No vessels required to be tied, but Dr. Arnott twisted several during the operation. The external wound was brought together by eight sutures, four deep and four shallow—the deep were silver and went through all the tissues of the wall of the abdomen except the peritoneum, the four shallow sutures only went through the skin and were placed between the deep ones; two were of catgut and two of silk; the latter were placed near the clamp, where there was a considerable strain. A whipcord ligature was applied just above the clamp, and the stump transfixed by two long needles, to guard against slipping. The cyst was cut off about an inch above the clamp, and dressed with lint soaked in carbolic acid lotion, covered with oiled-silk, carded-oakum, and a broad bandage over all.

Immediately after the operation a suppository of two grains of opium was administered, and as the pulse was small an ounce of brandy was ordered, but she did not take it all. At noon fifteen minims of tincture of opium were given. During the day she occasionally retched, and about 5 P.M. vomited once. In the evening the pulse was still somewhat small, but she felt comfortable except when retching, and then she had a dragging pain in right iliac fossa.

On the 19th she had had no vomiting, but occasional retching during the night, anorexia, temperature normal, less pain. Vomited once during the day, but had hardly any retching; by evening the pain was referred to epigastrium and wound. Pulse 82; urine drawn off. Slept occasionally during the day. Ordered a draught of morphia at bedtime. The diet to consist of chicken soup, milk, beef-tea, and ice. Temperature 99° F. at 8 P.M.

Aug. 20th.—Slept fairly well during the night, but vomited five times after taking milk, which she disliked. Tongue thinly coated, whitish. The woman looked more cheerful and said she felt better. During the night she was troubled with griping pains and flatulence. The dressing was removed, and the wound above clamp had united by first intention, without a drop of pus, the stump softening. A dressing of carbolised oil was applied in the same manner as the first dressing. A morphia draught to be taken at 10 P.M.

21st.—Slept well; took food better; no nausea or vomiting. About five A.M. she had a feeling of chilliness, and temperature was 100·4°, and pulse 102, but not full. To have three ounces of port wine daily. Temperature rose to 101·6° at noon, but was normal at 8 P.M.

22nd.—Temperature at 6 A.M. 100·6°. The dressing was removed; no pus; wound looked well. Again dressed as before, and ordered one grain of sulphate of quinia, eight grains of salicine in mucilage of acacia every three or four hours until temperature should fall. A sleeping draught at bedtime.

Dr. Pinkerton having left for England on the 22nd, the case passed under the care of Dr. Hatch, the second surgeon of the European General Hospital.

23rd.—Slept well. There was no vomiting; temperature 98·6° to 99·8°. A bloody discharge escaped from vagina. There was some pain of a twisting or screwing kind. A soap-and-water enema moved bowels twice. Evening temperature 98°.

On the 24th, the sutures and clamp were removed. The wound above clamp was healed, but an opening existed below at right side of stump, but there was no discharge from it. Discharge from vagina bright coloured blood, but less in quantity.

Up to 30th the record may be expressed by the words "doing well;" on that day she had a dose of castor oil, and a portion of the stump was removed. In the evening it was noted she was restless and had some pain, caused by one of the needles, which was removed. She was restless till midnight. On the 31st the second needle and whipcord ligature came away from the pedicle, which was black and softening. There was a considerable gap or hollow where the pedicle was retracted, and where the edges of the incision were kept apart by the stump. Gradually this part of the wound healed by granulation, and patient made a perfect recovery without a bad symptom. She was discharged on the 21st October, and proceeded to Cairo, in Egypt, to join her aunt, having given up her immoral life.

Remarks.—It is believed that ovariotomy had never been performed in Bombay on a European, though ovarian tumour is by no means rare—indeed, several cases have come under observation in the last three years at this hospital, but no one was bold enough to be the first to submit to operation. The patients' question was, "Has any other European ever been operated on for ovarian tumour?" and receiving a reply in the negative, there was always a distinct refusal to submit to ovariotomy. Under such circumstances it was most fortunate that this patient was young, strong, and otherwise healthy.

Before operating, the minutest care in regard to cleanliness, ventilation, &c., was taken; the operating room and the small room in which the patient was to be placed were thoroughly disinfected by the carbolic steam apparatus and by charcoal fires; all the instruments to be used were placed in a solution of carbolic acid and water, and, as

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far as possible, Lister's antiseptic method was adopted before, during, and after the operation. In short, everything was done that could be thought of to insure a successful result. One successful case might lead to others, but one failure might deter other sufferers for an indefinite time. It was remarked that the genius and eloquence of a Nélaton were required to overcome the aversion of French surgeons to the operation of ovariotomy after the unsuccessful cases had occurred on its first introduction into France; here it was required to overcome the aversion of the patients, and a success was the only way to obtain that object. On the part of surgeons in Bombay there was no aversion, as they have frequently operated on native women, and with very fair success. Dr. Gollay, a native graduate, has operated several times successfully on natives of Western India, and a surgeon of the Bombay medical service recently performed the operation on a native of Bombay; but these cases had not given much confidence to European women.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Congenital Malformation of Spinal Column, Bony Thorax, and Left Scapular Arch.—Compound Fracture of Femur twenty years after Excision of the Knee.

THE ordinary meeting of this Society was held on the 27th ult.; J. E. Erichsen, Esq., F.R.S., President, in the chair. Two papers were read, the first being a most elaborate and complete contribution to teratology by Messrs. Willett and Walsham, consisting of an account of the dissection of a case of extreme skeletal deformity. The paper raised several questions bearing on morphology. The second paper contained an account of a case where compound fracture of the femur had occurred twenty years after excision of the knee. Bony union had taken place at the seat of excision, and the line of fracture passed transversely one inch above this spot. The paper was by Mr. Gant.

The following is an abstract of the paper entitled "An account of the Dissection of the parts removed after death from the body of a Woman the subject of Congenital Malformation of the Spinal Column, Bony Thorax, and Left Scapular Arch, with remarks on the probable nature of the Defects in Development producing the Deformities;" by ALFRED WILLETT, F.R.C.S., and WM. JOHNSON WALSHAM, F.R.C.S. The subjoined particulars are given of the woman from whom the specimen of deformed thorax was taken:—1. The curvature of the spine had existed since birth. 2. She was a woman of average height, and until uncovered did not present any noticeable deformity. 3. She had given birth to a healthy child. 4. Her mother had a curvature of the spine. 5. When undergoing physical examination of the chest, an immobility of the scapula had attracted attention, and on this account was referred to Mr. Willett. 6. The immobility of the scapula was found to be due to its union through the medium of a broad bridge of bone with the lower cervical vertebræ. 7. Extremely wide intercostal spaces were noticed, the impulse of the heart's apex being widely diffused and abnormally distinct, as if transmitted through attenuated structures. 8. She was the subject of mitral disease, and died of cardiac dropsy in her thirty-first year. The portion of the spinal column preserved deviates from the natural condition (*a*) in that not only has it lost the posterior convexity, but it has if anything a slight anterior curve; and (*b*) there is a sharp lateral curve with the convexity to the left in the upper dorsal region corresponding to the absence of the right half of the third dorsal vertebra; (*c*) there is a longer and slighter compensatory curve in the lower dorsal region; (*d*) four and a half of the dorsal vertebræ are missing. The distortion of the thorax corresponds generally to the altered line of the spine. There are five ribs missing on the right and four on the left side of the chest. The intercostal spaces are abnormally wide. The sternum lies obliquely across the middle line, pointing in its long axis forwards and from right to left; its upper end is only three-quarters of an inch from the spine, its lower end three inches, instead of two and nine respectively. The cavity of the thorax is diminished in all its diameters, especially in the antero-posterior in the middle line; whilst this measurement is markedly less on the right side than on the left. The abnormal shape of the thorax in transverse section is well seen in the diagrams made by the aid of Dr. Gee's cyrtometer. The left clavicle deviates notably from the normal; its general direction from the sternum is upwards, forwards, and outwards. It has also a single posterior curve throughout its entire length. The left scapula presents a most remarkable deformity. There is a broad bridge of bone extending from the middle third of the posterior border of this bone, backwards and upwards, to the lamina and spinous process of the sixth cervical vertebra. The transverse axis of the scapula is elongated, whilst the vertical is shortened, and the bone appears rotated forwards, so that the glenoid cavity looks nearly directly forwards, whilst the plane of it is nearly an inch in front of the left sterno-clavicular articulation. The upper border and spine, instead of being directed nearly horizontally outwards from the base, slope downwards and forwards as well as outwards. The absence of the right half of what appears to be the third dorsal vertebra is the cause of the curvature of the spine. The absence of half a vertebra has generally been ascribed to defects in the process of ossification. The authors think the absence is due to changes occurring at an earlier period of development—probably at the time of the primary segmentation of the mesoblastic elements into the protovertebræ. The bridge-like portion of bone connecting the spine with the scapula is the chief feature of interest in this specimen. The authors suggest several theories to account for its presence. They classify them under three heads according as they are based upon one or other of the following hypotheses—1st. That the bone was formed in connexion with the vertebræ and afterwards became anchylosed to the scapula. 2nd. That it was originally a scapular element, and secondarily became fused with the spine. 3rd. That it was formed independently both of the spine and the scapula. On the first hypothesis the bone may be—(*a*) An outgrowth of the spinous process or of its epiphysis. (*b*) An over-development of one of the lateral backward projecting processes, called hyperapophyses, developed near the extremity of the spinous process. On the second hypothesis it may be—(*c*) An overgrowth of the epiphysis, which exists at the posterior border of the scapula; in other words, a supra-scapular bone—the scapular arch, consequently an example of a reversion to a lower type—viz., that of the skate or the frog tribe. On the third hypothesis it may be (*d*) an ossification of one of the inter-muscular planes of connective tissue stretching between the spine and the scapula. (*e*) A rudimentary scapula, explainable on the theory that the embryo was originally cleft, and that by atrophy and by fusion with the other half one half had disappeared, with the exception of the scapula, which remains as the bridge of bone. The authors at some length discuss the arguments for and against these various theories; that which supposes the bone a supra-scapula they consider the most probable.—The PRESIDENT invited the attention of those interested in teratology to this account of a remarkable and unique case of malformation, most abundantly illustrated by the authors.—Dr. E. GRESWELL said that the specimen was highly interesting from its bearing upon the early development of the vertebral column and ribs, especially of the protovertebræ. It was known that double centra occurred in the cranial vertebræ; and Professor Humphry had pointed out facts in favour of the spinal centra being likewise developed from the centres. This view was perhaps borne out by the paper that had been read. It might be expected that the fusion of these two centra should take place at an earlier period among the higher than the lower vertebrates. The additional element to the scapula was probably a supra-scapula, and possibly a supra-clavicula; and the view taken, that this was an instance of "reversion," was probably correct. In Sorex, in Insectivora, such reversion obtained in the presence of the distal end of the coracoid, which only elsewhere existed in mammalia in the Monotremata. The gap filled by "reversion" in that instance was greater than that in the case related.—Mr. WILLETT desired to express his sense of the manner in which the details of the paper had been mainly worked out by Mr. Walsham.

A paper was read on "Compound Fracture of the Femur,

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twenty years after Excision of the Knee-joint, for disease, the line of fracture being transversely one inch above the bony union," by FREDERICK J. GANT, F.R.C.S., of which the following is an abstract:—In considering excision of the knee-joint, for disease, as an operation having in view the preservation of a useful limb, that result could only be attained by complete synostosis or bony union of the femur and tibia; and as a similar result may be produced by osseous anchylosis, from the natural cure of the disease, this is the true ground for comparison in estimating the result of excision. The comparative merits of bony union and ossific anchylosis must have regard to the functional utility of the limb, for the twofold purpose of support and progression; taking into account also the relative duration of the processes of cure, and the risk to life. The author adverts to the process of natural cure in joint-disease from all these points of consideration. On the other hand, the practical importance is urged of entirely dissociating joint-excision from amputation of a limb, as alternative procedures; and the conditions are specified under which either operation becomes justifiable in the career of joint-disease, having reference principally to the constitutional health of the patient, requisite to undergo the different periods of recovery after operation. The history of the case to which the paper relates is narrated; its chief features being that a woman, aged thirty-three, admitted into the Royal Free Hospital, September 12th, 1859, had chronic synovitis of the right knee-joint, arising from injury; the duration of the disease was six years; ulceration of the articular cartilages had ensued with caries of the adjoining portions of bone, and malposition of the leg backwards towards the buttock, thus rendering the limb functionally useless. The constitutional condition, however, was not that of advanced hectic, but one of nervous exhaustion. Excision of the joint resulted in firm osseous union, in the unusually short period of two months. A thoroughly useful limb continued for twenty years, during which period the woman often walked several miles a day, without any artificial help. She then fell downstairs, and snapped the femur, the bone breaking one inch above the union, and rendering the integument open to the extent of some inches across. From the shock of this severe compound fracture, and the collapse due to rather copious hæmorrhage, although without injury to the popliteal artery, the patient never rallied after her admission to the hospital on this occasion. Section shows complete synostosis of the femur and tibia, and that the bones are fused together, the line of junction being imperceptible. It resisted the extreme violence, aided by the leverage of the leg, which broke the femur across just above the union. Whether anchylosis would have withstood the same amount of force, may well be doubted. Thus the cure resulting from surgical interference in joint disease may prove more effectual than that produced by nature, and the limb be rendered far more safely serviceable.—Mr. HOLMES said the two questions raised by the paper were, first, as to the comparison between excision and amputation, and, secondly, as to the definite results of excision of the knee. Mr. Gant seemed to have abandoned the old line of argument in favour of excision, that adopted by Sir W. Fergusson—viz., as an alternative for amputation—and to have made a comparison between excision and natural cure, so that he would reserve the operation for cases in which natural cure was not practicable. It would seem as if the practice of excision of the knee had fallen into a desuetude, which it does not deserve; it was far less practised now than it used to be ten or fifteen years ago. It was forgotten that the operation was originated as a substitute for amputation, especially in early life. He lately saw a man whose knee-joint, when a child, he (Mr. Holmes) had excised twenty years ago. Although there was, of course, much shortening, the limb was quite firm, and the man had walked thirty miles a day on it. In Mr. Gant's case the excision was performed as a substitute for amputation; for, had the joint been left alone, there would have been great exhaustion, &c., following prolonged suppuration, and amputation might subsequently have been called for.—Mr. GANT, in reply, agreed that the original view of Fergusson was to make excision of the knee an alternative for amputation, and he himself (Mr. Gant) used to hold this view. But he had changed his opinion, and now tried to consider the probable issue of a case, if left to itself, before resorting to excision, which he would not delay too long, lest amputation became the only procedure possible.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Dupuytren's Contraction of Fingers.—Liver Abscess and Antiseptic Precautions.

AT the meeting on April 19th, F. J. Gant, Esq., President, in the chair,—

Mr. WILLIAM ADAMS exhibited a number of casts of Contracted Fingers. Many were due to contraction of the palmar fascia and its digital prolongations. Such were cured by multiple subcutaneous divisions of the fascia and immediate extension. Mr. Adams regarded it as usually commencing in chronic gouty inflammation and thickening of the fascia. These cases were compared with the cast of a case of finger contraction, following lacerated wound of the wrist, and depending on contraction of the tendons. He also showed a cast of a remarkable case in which the little finger was severely contracted by a web of skin extending from the point of the finger to its base.—The PRESIDENT referred to the case of a gentleman, aged eighty, who had suffered from contraction in both hands. Mr. Gant had remedied this in the right hand by tenotomy and extension.—Mr. SPENCER WATSON asked for evidence of a gouty origin of the disease, and alluded to Mr. Hutchinson's observations of the concurrence of thickening of the sclerotic (and glaucoma) with Dupuytren's contraction.—Dr. FOTHERGILL had frequently noted these contractions in gouty subjects, and almost invariably found them symmetrical.—Mr. OWEN alluded to a case of this disease in a gentleman, aged thirty, in which the middle finger of the right hand was contracted, and where he had operated by dividing the fascial band, applying a splint and gradual extension.—Dr. GILBART SMITH, referring to Mr. Adams' remark as to the rare occurrence of the disease amongst women, said he had lately seen a lady with both hands affected by these contractions. He also knew of an instance where three brothers, all of them gouty, suffered in this manner.—Mr. ADAMS replied.

Sir J. FAYRER read a paper on Liver Abscess and Antiseptic Paracentesis (THE LANCET, pp. 633, 673, 707). In the discussion which followed, Professor LISTER expressed his personal gratification at the decided testimony borne by the author to the value of strict antiseptic management of hepatic abscess. The most striking feature in the first case was the profuse but temporary hæmorrhage that followed the incision into the liver substance. Professor Lister said it was this disease that first led him to think of the steam spray for antiseptic treatment; an Indian surgeon of large experience having pointed out the difficulty of preserving the caoutchouc bellows for producing the spray in the climate of India.—Dr. J. K. FOWLER referred to a case of hepatic abscess under Dr. Bradbury's care at Addenbrooke's Hospital, believed to have been due to the presence of round worms in the common bile duct. Recovery followed immediately upon aspiration. He strongly urged the use of large trocars in exploration.—Dr. NORMAN CHEVERS said the objections to small trocars in evacuating liver abscess had been confirmed by the rather large experience of the aspirator. He thought the syringe shown by Sir J. Fayrer admirably adapted for the purpose. Dr. Chevers alluded to the difficulties in diagnosis of these abscesses, especially when complicated with right basic pneumonia, or where there is a large central abscess, not pointing in any direction.—Mr. CULLIMORE, who had himself suffered from liver abscess following dysentery five years ago, said that ipecacuanha was not well borne when hepatic disease was present. The persistently high temperature afforded a means of diagnosis between abscess and simple congestion of the liver. The greater prevalence of the disease in Madras was, in some measure at least, due to the number of soldiers invalided from Burmah and other parts.—Dr. MAIR confirmed the author's statement as to the comparatively greater frequency of hepatic disease in Madras than in the other Presidencies of Bengal and Bombay. He attributed this to the prolonged high temperature, to the prevalence of malaria, and to the causes mentioned by the last speaker. Referring to the insidious progress of hepatic abscess, Dr. Mair pointed out the importance of prophylactic measures when the liver is in the condition of acute, subacute, or chronic congestion, and suggested for the latter a combination of chloride of ammonium with nitro-muriatic acid and ipecacuanha, together with the

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local application of strong iodine paint.—Sir J. FAYRER, in reply, said he would not recommend the use of small trocars in tapping these abscesses, but preferred a large cannula where the abscess was deeply seated. When it was nearer the surface he preferred a free incision, with antiseptic precautions, of course.

OBSTETRICAL SOCIETY OF LONDON.

ON April 7th—Dr. W. S. Playfair, President, in the chair—Dr. BANTOCK showed a large Uterine Polypus, weighing one pound three ounces in its fresh state, removed from a woman, aged fifty-one, by the écraseur. Symptoms had existed six years, but the tumour had only been discovered three weeks before, on the occurrence of retention of urine.

Dr. GALABIN showed twelve large Calculi and about fifty small ones, which he had removed by vaginal lithotomy from the bladder of a woman, aged sixty-one, with the assistance of Mr. W. F. R. Lane. They were of lithic acid, and weighed eight and three-quarter ounces, the largest measuring 1½ by 1¼ in. by 1 inch. Both uterus and bladder were prolapsed completely outside the body, and had not been returned for ten years. Symptoms referable to the bladder had only existed six months. The patient was crippled, and the thighs almost anchylosed, from rheumatoid arthritis. The wound was closed at once by silkworm-gut sutures, the procident mass returned, and kept up by an elastic ring. At the end of ten days union was perfect. The stones had evidently been prevented from escaping as usual, while small, owing to the position of the bladder, with its orifice uppermost.—Dr. ROPER mentioned a case in which he had removed calculi by dilating the urethra, and asked why Dr. Galabin had chosen lithotomy?—Dr. AVELING thought that lithotomy was the preferable operation in such a case, and said that the risk of hæmorrhage might be avoided if the sutures were carried through the mucous lining of the bladder. He had seen two cases in which the urethra had been completely destroyed by dragging calculi through it.—Dr. R. BARNES said that dilatation of the urethra or lithotrity was most suitable for small or moderate-sized calculi, lithotomy for a case like the present.—Mr. DORAN had removed a calculus half an inch in its narrowest diameter from the bladder of a girl, aged nine, by dilating the urethra. But when calculi were numerous he considered lithotomy preferable.—Dr. ROGERS believed that Dr. Galabin had taken the best and wisest course. He had met with a case in which a large calculus was encrusted on a hairpin. This was crushed and brought away through the urethra without much mischief following.—Dr. GALABIN had chosen lithotomy on account of the number and size of the stones, and the great amount of inflammation present. His experience was that, if the urethra were dilated much beyond the size of the index finger, more or less incontinence of urine was apt to remain permanently. No disturbance had followed the operation, but the patient was relieved immediately from her suffering.

Dr. ROPER showed an Ovum expelled entire, together with a large clot. This occurred seventy-four days after marriage, but the ovum appeared to be older than this. Twenty-six days before marriage the patient had had phlegmasia dolens, and he thought that the clot might have been the cause of the death of the ovum and of the phlebitis at the same time.

Dr. GORDON showed, for Dr. Murphy of Sunderland, a Double Monster, consisting of two female children united by the front of thorax and upper part of abdomen. The first head was delivered by forceps, body of first child extracted by hooking fingers over breech, the feet and body of second, and finally second head. Both were born alive and breathed for a few minutes.

Dr. GORDON related a case of Removal of Fibrous Outgrowth from the Fundus Uteri, with recovery. The patient, aged thirty, was under the care of Mr. Alfred Cooper. She suffered from great difficulty of micturition and defecation, and such depression of spirits that life had become a burden. For the last five years the menstrual flow had become diminished in quantity and clotted, still lasting an entire week. A hard nodular tumour was found, reaching almost as high as the umbilicus, movable separately from the uterus. The anterior wall of the uterus appeared also to be in a fibroid condition. The probe extended 2¾ in. The patient being very anxious for an operation, the author sanctioned it, having warned her that considerable risk would be incurred thereby, and that cure of the symptoms was not certain. Mr. Spencer Wells concurred in this opinion, and performed the operation on December 10th, under carbolic spray. The pedicle of the fibroid tumour, attached to the right posterior angle of the uterus, was fixed by a temporary clamp. On drawing up the clamp to transfix the pedicle the strain was so great that the pedicle tore away from the uterus, which receded into the abdomen. So little hæmorrhage, however, occurred that no means to arrest it were found necessary. The patient recovered without adverse symptoms. All her troubles and low spirits had disappeared since the operation.

Mr. KNOWSLEY THORNTON raised the question of the Removal of Uterine Fibroids by Laparotomy. He not only regarded the removal of uterine fibroids by abdominal section as justifiable in certain cases, but believed that the future of these operations would be in no way second to that of ovariotomy. The objections to operating by laparotomy for fibroids were—(1) less fatality of fibroids when left alone, as compared with ovarian tumours; (2) the greater frequency of their relief or cure by medical, expectant, or milder surgical treatment; (3) the greater danger of the operations for their removal as compared with ovariotomy. He pointed out how often dangerous operations were undertaken for the relief of deformity, and that operations of convenience were now much more safe and justifiable, thanks to Professor Lister's method. The following proposition was advanced for discussion:—Is it justifiable to make an exploratory operation with perfect antiseptic precautions in any case of fibroid tumour of the uterus, which has resisted medical treatment, and which is either endangering life or preventing the subject of it from fulfilling the ordinary duties of her sex and position? The great difficulty lies in the present uncertainty of the diagnosis between the varieties of uterine fibroids. Complete records of two cases were then given, the first a complete hysterectomy, with removal of both ovaries; the second, removal of sessile fibroids and one ovary without opening the uterine cavity. Both patients recovered without fever and without any untoward symptom. Three classes of cases were defined, each having a different amount of difficulty and risk. The author thought that th term hysterotomy should be given up, and that of hysterec tomy adopted, but limited to the complete cases, in which the whole of the supra-vaginal part of the uterus was removed.—Dr. BANTOCK related two cases in which he had removed fibroid tumours. In the first a small tumour weighing two pounds was removed with a part of the uterus. The pedicle formed by the uterine body was ligatured and dropped. Death occurred from septicæmia, due to slight bleeding from the stump, with the establishment of an open canal through the cervix. In the second, an external fibroid weighing twelve pounds was removed, and the pedicle kept external. The patient did well.—Mr. DORAN said that in the fatal case mentioned by Dr. Bantock he had found a deep circular ulcer in the cervical canal corresponding to the ligature. He had examined also a fatal case under Mr. Thornton's care, in which the pedicle of a large fibroid outgrowth had been secured by the clamp. A slough had extended from the stump to the uterus.—The PRESIDENT believed that the operation had a great future before it, but his experience would not induce him to agree with the statement in Dr. Godson's paper, that it was not more dangerous than ovariotomy. Moreover, a patient with ovarian tumour rarely lived if left to herself; a person with fibroid rarely died.—Dr. MATTHEWS DUNCAN thought it demonstrated that the operation had a place in legitimate surgery. With increased knowledge of the natural history of fibroids he believed that the use of the operation would be extended beyond what many timid men at present imagined. Such tumours were liable to dangerous diseases and degenerations, liable to induce peritonitis, liable even to induce cancer, especially of the peritoneum. The paramount danger arose from the bleeding which accompanied them and produced a fatal result, he believed, more frequently than was generally supposed.—Dr. HEYWOOD SMITH criticised Mr. Thornton's use of the word laparotomy to designate abdominal section in the median line, since the word λαπαρον meant the flank. If a word were wanted to supersede gastrotomy, cœliotomy, from κοιλια, might do. He thought that in dealing with the pedicle a method might be devised of closing

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the cervical canal with sutures.—Dr. FANCOURT BARNES remarked that the word λαπαρη signified the soft part of the body between the ribs and the hips.—Dr. GRAILY HEWITT related a case in which a fibroid tumour, thought at the time to be ovarian, caused so much ascites and peritoneal irritation as to threaten speedy death. The tumour was successfully removed. — Dr. CHAMPNEYS said that the liability of fibroid tumours to tear, as happened in one of the described cases, showed that there was some risk in the legitimate proceeding of lifting impacted fibroids out of the pelvis.—Mr. THORNTON, in reply, deprecated the fastening of the pedicle up to the abdominal wall as a dangerous practice. He would remind the President that many ovariotomies were incomparably more difficult than the removal of a pedunculated subperitoneal fibroid. He had now operated for uterine tumours twelve times; in ten cases the operations were completed, in two they were not. Four of the former died and one of the latter. In three complete hysterectomies with removal of both ovaries he had one death. One hysterectomy with removal of one ovary, death from hæmorrhage. In three removals of fibrous cystic tumours all recovered.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

AT the meeting on April 21st, W. A. N. Cattlin, F.R.C.S., President, in the chair—

Mr. CHRISTOPHER HEATH showed a patient (a woman), aged forty-four, who had been under his care for cystic disease of the lower jaw in University College Hospital in 1875 as bearing upon the case he was about to relate. Mr. Heath then narrated a "Thirty-five Years' History of a Maxillary Tumour." The patient, aged sixty-seven, when he first came under his notice in 1877, was a healthy country gentleman, who said that as long as he could remember there had been some enlargement of the right side of the lower jaw. In 1845 this enlargement increased very rapidly, and in 1847 Sir Wm. Fergusson removed a tumour of the right side, sawing through the ramus horizontally and the body of the jaw close to the right canine tooth. The tumour was apparently of a fibroid character, having a large cyst developed in it. He continued in good health for fifteen years, and then noticed the formation of a cyst in the incisor region, which had frequently been tapped by Sir Wm. Fergusson. In July, 1877, Mr. Heath found cystic disease of the left side of the body of the jaw extending to the molar region, and operated by extracting all the teeth, opening up the cysts freely, and clearing out some solid growth with the gouge. From this the patient made a good recovery, with considerable consolidation of the bone, but in the November following one cyst was found to have developed anew in the incisor region, and this was treated in a similar manner. A year later a fresh development of cysts had taken place, and the operation was repeated with a good result, so that in February, 1879, the jaw was completely consolidated, and the patient was advised to have some artificial teeth fitted. In November, 1879, the patient reappeared with a large solid tumour, involving the left side of the body of the jaw, which, noticed first in June, had grown rapidly of late, and now involved the skin for an area of a square inch. On December 2nd Mr. Heath removed the tumour by sawing through the bone immediately in front of the left masseter, and also removed a piece of infiltrated skin from the left of the median line. The wound was brought together with hare-lip pins and sutures, and only one artery (facial) was ligatured. The patient made a good recovery, took food with a spoon, and was able to talk intelligibly after the first week, although deprived now of the entire body of the jaw. The lower end of the wound being left open afforded a thorough drain for discharge. The patient returned early in February, when the skin near the wound was found to be increasingly infiltrated, and a tumour of the size of an orange was found beneath the right deltoid. He had strained the right arm in getting into a hip-bath, but was quite clear that the humerus had not been struck. The tumour was painful, but the bone was sound, the head moving with the shaft. A week later the patient was found to have a tumour in the pelvis, pressing upon the rectum, and springing from the interior of the right innominate bone. From this time he gradually lost strength, and died at the end of March. The second tumour was pronounced by Mr. Doran to be a round-celled sarcoma, and the same growth was found in the piece of skin which was removed. The earlier tumour appeared to be a fibroid or a spindle-celled sarcoma. No post-mortem examination of the internal growths could be obtained. Mr. Heath remarked upon the great interest of the case, and its important bearing on the treatment of cystic disease of the lower jaw. Hitherto cystic disease of the lower jaw had been regarded as a local ailment, and the treatment by clearing out the cysts, and crushing in their walls, had given good results. In this case more than thirty years had elapsed between the formation of the two growths, and in the interval cystic disease had been largely developed. Mr. Heath then alluded to the female patient he had previously shown, who had been under his care for the last five years, and in whom he had twice operated by breaking down the cysts with good results; but in whom there was now considerable thickening of the jaw, but no distinct tumour.—The PRESIDENT said the case just described by Mr. Heath was, he thought, an example of specific disease. There were three distinct cysts and considerable deposit of solid matter, and its malignant character was shown and proved by metastasis to the pelvis. With the exception of dentigerous cysts, the most common form of disease of the lower jaw was a single cyst which expanded the walls and produced absorption. Such growths were generally innocent.—Mr. S. CARTWRIGHT was inclined to think that cystic tumours more often had their origin in the teeth than was generally supposed, the peculiar connexion of the teeth with the jaw favouring this hypothesis. In many cases the cysts were probably congenital, and formed in connexion with the primitive sac of the tooth. —Mr. HAMILTON CARTWRIGHT said that the character of the tumour Mr. Heath had just described was evidently not of the odontomatous or dentigerous kind. He believed that such growths were of dental origin, subacute, not acute, inflammation of the root being the first origin of the evil.

Mr. NAPIER brought forward the models of an Irregularity in the Position of the Right Upper Central Incisor in a child aged six and a half years, and asked the opinion of the Fellows respecting the advisability of torsion at so early an age.

Dr. M'OSCAR showed the casts of a case of Epulis, which was virtually cured after a few weeks' treatment by electrolysis, although continued occasionally for months. The case has remained as a cure.

Reviews and Notices of Books.

Manual of the Principles and Practice of Operative Surgery. By STEPHEN SMITH, A.M., M.D., Surgeon to Bellevue and St. Vincent Hospitals, New York. London: Trübner and Co. 1880.

THERE is more in this book than its title would lead us to think, for not content with describing the operations of surgery, Dr. Smith describes briefly the anatomy of each part, and the symptoms of the diseases and injuries the various operations are intended to relieve. As all this has been done in a small octavo volume of less than 700 pages, it is of necessity that brevity should have been everywhere practised. We wish Dr. Smith had been satisfied to limit himself to a description of the details of operations and surgical manipulations. He has been unable to discuss diagnosis, and his descriptions of operations lack some of those smaller details that would make them of greater value. For a surgeon who is already a practised operator they are full enough, but for him also they are for the most part superfluous, while in many cases an inexperienced surgeon would not be able to rely solely upon these descriptions. What the surgeon who consults works on operative surgery requires is to learn exactly what operation or method of treatment the author has himself found to be best, and he wants to have given to him not merely the main outlines of the operation, but the little details and precautions which by practical experience have been shown to be of importance. A

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work on operative surgery, more than all others, needs to bear the stamp of the author's individuality. For the most part the descriptions have seemed to us to be accurate, but we have met with a few statements and recommendations that have surprised us. Thus we find "inflammatory fever" spoken of as resulting "from the local production of heat through textural changes by which the temperature of the entire mass of the blood is gradually elevated." The most superficial consideration of well-known facts will at once show this statement to be entirely inaccurate, and we are sorry to see that this old error has still so much vitality. As it has not yet completely disappeared from English manuals of surgery, we must not look upon it as a peculiarity in American teaching. But the few failings in the work do not neutralize its many real and obvious excellences; it is intelligible, concise, and impartial, and, on the whole, accurate.

Notes on Physiology. By HENRY ASHBY, M.D. London: Longmans. 1880.

FEW things look more easy, but few are more difficult, to write than a good summary of physiology. So many points are obscure, so many uncertain and still under discussion, that it requires the hand of a master to pick out what is known and really practically useful from the vast mass of facts and theories which constitute the physiology of the present day. The little work before us aims at giving such an outline of the subject of which it treats as shall enable a student not only to pass an ordinary examination like that of the College of Surgeons, but shall be of some service in the practice of after years. It is important that such a work should not only be free from errors, but present the salient points in such form as shall fix them in the memory of the student. In both these respects we think Dr. Ashby has succeeded. Having been himself a lecturer on physiology, he has the experience which is requisite to give a correct statement of facts, and, on the other hand, the limits to which he has confined himself has compelled him to give the briefest expression to those facts consistent with clearness. We venture to say that a student who shall not only thoroughly know, but fully understand, this work, supplementing it with such a work as Johnston's "Chemistry of Common Life," and an elementary treatise on histology, will compass all that would be required of him by the examiners of the college, and will have acquired knowledge that would be extremely useful to him what professional path soever he chose to pursue.

Rest and Pain: A Course of Lectures on the Influence of Mechanical and Physiological Rest in the Treatment of Accidents and Surgical Diseases, and the Diagnostic Value of Pain. By the late JOHN HILTON, F.R.S., F.R.C.S. Edited by W. H. A. JACOBSON, B.A., M.B., F.R.C.S., Assistant-Surgeon to Guy's Hospital. Third Edition. George Bell and Sons. 1880.

WE are very glad to see that a third edition of this work has been called for. We know of no work in the English language from which a practitioner or student will gain more help of life-long value than from this. Much of its teaching was common property when the lectures were first delivered, much is found in our text-books and embodied in the practice and teaching of all our hospitals, but none the less is it to be wished that every practitioner and every advanced student should be familiar with Hilton's classical work. It is of double value, for while the mere facts recorded and suggestions for treatment are of use, the clear way in which the close connexion between anatomical and pathological peculiarities are traced out is perhaps more valuable still; its mental training is in every way good. Those of our readers who have not dipped into this treasury have a rare treat in store for them. This edition is an almost exact reprint of the last.

OUR LIBRARY TABLE.

The Journal of Mental Science. April. — The original articles, although five in number, occupy a very small bulk in the current number of this journal—only 40 pages out of 160. Dr. R. Lawson discusses the epilepsy of Othello, showing the accurate observation which Shakspeare's description proves; Dr. Chapman compares some statistics which he has obtained from various asylums on the comparative mortality of different classes of patients; Dr. Bevan Lewis contributes an account of some experiments, to which we have already called attention, on the physiological action of alcohol; Dr. Geoghegan discusses the chemical constitution of cerebrine; Dr. Thurnam endeavours to find a connexion between the state of the pupils and the state of the mind in general paralysis, and believes that the facts warrant the opinion that there is a centre in the right hemisphere on which depends exaltation of ideas. The "Clinical Notes of Cases" are of considerable interest. The "Occasional Note" is devoted to the discussion of the question of abolition of private asylums. Of the Reviews the most important is an able notice of Calderwood's "Relation of Mind and Brain," evidently from the pen of a well-known physician who is pre-eminently qualified to deal with the subject.

Le Cerveau, sa Topographie Anatomique. Par le Dr. C. MOREL, Professeur d'Histologie à Nancy. Paris: Berger-Levrault et Baillière. 1880.—This work consists of seventeen plates, each containing a wood-cut figure. Brief letter-press descriptions are added. The figures represent a brain hardened in nitric acid and dried. The first three plates are of the outer, inner, and lower surfaces; then follow the same figures divided into lobes and lobules, then the same with the fissures and convolutions marked, and then the outer surface with Ferrier's centres indicated, and, lastly, a vertical transverse section through the hemisphere. The figures, from photographs, are very beautifully cut, and may be referred to with advantage by those familiar with cerebral anatomy, but we would caution learners against depending upon them exclusively. The brain chosen is not typical, since both the ascending parietal and ascending frontal convolution are represented as cut across by fissures. Moreover, the convolutions indicated are not quite those currently distinguished; the inferior parietal lobule is made to extend back to the longitudinal fissure, behind the parieto-occipital fissure. The greatest inaccuracy, however, is in the representation of the cortical centres, which appear as if inserted from a written description, and differ very much from the diagrams of Ferrier. In almost every case the centre marked does not occupy more than one-fifth of the area which ought to be indicated.

The Fallacies of Popular Clinical Medicine. By Professor JAMES G. WRIGHT, M.D. New York: Putnam. 1880.—This is a trenchant and wholesome attack upon a system of clinical education based on lectures merely, without securing the student a practical acquaintance with the features of disease. The author appears to us to assume rather too much that our systems of medical education are purely theoretical. This we take leave to say is not the case, and we cannot go with him in styling the system he condemns as the "popular" one. We agree with him that the only sound knowledge is that derived from personal observation and practical work, and nothing could be better than to enforce this in an introductory lecture. But in doing so it was hardly necessary to hold up to scorn a state of affairs which, at any rate in this country, can hardly be said to exist. Clinical lectures of course do not take the place of bedside study; they never will take this place, they never have been considered as substitutes for it. Still it is impossible to be blind to the fact that examination tests are often so framed as to fail to discriminate between the candidate whose knowledge has been gained from direct per-

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sonal observation, and the one who has merely been filled with the knowledge afforded him by books and lectures. In drawing with so bold a hand the distinction between these two kinds of knowledge, the author has our best thanks, and one may overlook a little exaggeration in phrase and thought, having regard to the good object he has in view. The pamphlet is an introductory lecture delivered at the Long Island College Hospital, Brooklyn, N.Y., on Feb. 5th, 1880.

Healthy Life and Healthy Dwellings: a Guide to Personal and Domestic Hygiene. By GEORGE WILSON, M.A., M.D., C.M. (Edin.), Medical Officer of Health for Mid-Warwickshire Sanitary District. Fcap. 8vo, pp. 302. London: J. and A. Churchill.—This is a sound work by a very competent writer on matters in which the public have of late displayed an unwonted interest. The work will take a permanent position among the popular treatises on the subjects with which it deals.

A Manual of Scientific Terms, Pronouncing, Etymological, and Explanatory; chiefly comprising terms in Botany, Natural History, Anatomy, and Veterinary Science. Designed for the use of Junior Medical Students, &c. By Rev. JAMES STORMONTH. Small 8vo, pp. 488. Edinburgh: Maclachlan and Stewart. 1879.—In typography and handiness, this work leaves nothing to be desired. The same also may be said of the etymology and the indications for pronunciation. The "explanation" of the medical terms needs, however, some revision.

Small-pox and Vaccination, being a portion of the Twenty-third Annual Report of the Vestry of St. Mary, Newington, 1878-79. By WILLIAM TIFFIN ILIFF, M.D. Lond., Medical Officer of Health. 8vo, pp. 28. London: G. Morrish, Camberwell-road.—This is a reprint of Dr. Iliff's excellent observations on this subject in his annual report for 1878-79. We had occasion to notice these observations at the time of their publication, and we are glad to have them now in a separate form. We commend the pamphlet to all who take an interest in the subject, and especially to those who have suffered themselves to be disturbed by recent discussions concerning it.

Indian Notes. By F. R. HOGG, M.D., Surgeon-Major, Author of "Health and Ailments of European Families in India." Small 8vo, pp. 240. London: J. and A. Churchill.—Dr. Hogg has here jotted down a series of notes, derived from his large experience, on the voyage out, travelling in India, Upper India, stations, the hills, mineral waters, and herbs and simples. He gives his notes simply as notes, and hence gets together a great amount of useful information in small compass. To a traveller new to India and the voyage out, the book is likely to prove very useful, and it has the great merit of being handy.

The Elements of Indian Hygiene. By JOHN C. LUCAS, F.R.C.S. Eng., Her Majesty's Indian Service. Small 8vo, pp. 112. London: J. and A. Churchill. 1880.—Mr. Lucas has endeavoured to compress, not unsuccessfully, within the compass of 112 small octavo pages, the elementary principles of Indian hygiene. His style of writing is not always as clear as it might be, but it is not difficult to get at his meaning. The work is addressed "to those of his medical brethren and to others who have studied, investigated, and laboured to improve the sanitary surroundings of the poor in India," but it may justly claim and will probably have a larger circle of readers.

The Weather of 1879 as observed in the Neighbourhood of London, and compared in all respects with that of an average year. By EDWARD MANLEY, F.M.S. London: Bemrose and Sons.—Meteorologists will be glad to have this account of the meteorology of an exceptional year in the neighbourhood of London, from the pen of a competent observer. But why in the last column of the monthly tables are the words "above" and "below" printed, when the signs − and + are so much more easily read?

Analytical Records.

LIME-FRUIT SYRUP.
(RAYNER & CO., 17, FARRINGDON-ROAD, LONDON.)

THIS is not unfairly described on the label as "a real summer luxury." The genuine lime flavour in it cannot be mistaken. Perfectly bright, it forms an excellent summer drink, either with plain or aerated water. It is needless to say that such a drink is very wholesome. It is highly popular with children, for whom, as well as for adults, it is very well suited.

FLUID CONFECTION OF SENNA.
(GEORGE WAUGH & CO., REGENT-STREET, LONDON.)

A useful and trustworthy preparation, greatly superior in point of convenience to the semi-solid mass commonly sold.

GARDY'S CAPSULES OF GABIAN OIL.
(BURGOYNE, BURBIDGES, & CO., LONDON.)

The mineral naphtha of Gabian in France has been suggested as a remedy in chronic catarrh, bronchitis, and other respiratory complaints. The beautifully made capsules in which the oil is now offered will render the trial an easy one.

BURROUGHS' BEEF AND IRON WINE.
(S. M. BURROUGHS & CO., SNOW-HILL, LONDON.)

This is a really valuable preparation, and, as far as we know, a novelty. It contains beef-extract and citrate of iron in solution in wine, and is therefore a very powerful and rapidly acting tonic. Children, as well as adults, take it easily; and as its taste is by no means unpleasant, it can hardly fail to attain great popularity.

MIXTURE OF SCOTCH WHISKIES.
(DOUGLAS & MASON, EDINBURGH.)

This whisky is a good example of the advantage of skilful blending. The sample submitted for our examination was excellent in every respect, and had the smooth taste and delicate flavour so often wanting in Scotch whisky.

PIL. CALCIUM SULPHIDE.
(W. B. WARNER & CO., PHILADELPHIA.)

This valuable and now fashionable remedy is not easy to administer agreeably. These pills contain one grain each of the sulphide, are well prepared, and can be taken easily, without any unpleasant taste. The agents are Messrs. Newbery, of Newgate-street.

AMYLINE, OR PURE UNSCENTED VIOLET POWDER, COMPOSED SIMPLY OF SPECIALLY PREPARED PURE STARCH POWDER.
(T. O. SANDELL, WEST KENSINGTON.)

Certain of the so-called violet powders in use consist, as our readers are aware, of sulphate of lime, which, according to some, is a highly dangerous article for nursery use. It is, in any case, a most undesirable one, and a pure and well-prepared starch is greatly to be preferred.

ADULTERATION IN DUBLIN.—From the report of Dr. Cameron, City analyst for the past year, we learn that 686 articles, comprising milk, butter, tea, spices, &c., were examined during that period. Of these ninety-three were found on analysis to have been adulterated, eighty-five samples of milk having been condemned. The adulterated mustard contained from 30 to 60 per cent. of wheat flour coloured with turmeric, and having in addition a little cayenne pepper; while the cocoa in two samples out of four obtained consisted almost entirely of arrowroot and sugar. Forty-four persons were convicted of selling adulterated food, and fined in sums amounting to £127 15s.

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THE LANCET.

LONDON: SATURDAY, MAY 8, 1880.

IT is the glory of this country that any Government borne into power by the clearly expressed will of the electors immediately commands respect, and a disposition to put a favourable construction upon its motives and its endeavours. After a time it may lose these great advantages by bad policy, or by faulty legislation, or injudicious appointments; but at the outset of a Parliament none of these conditions exist; it is sunshine and the time to make hay. Even the enemies of such a Government so far favour it; and the Conservatives in opposition are not behind their opponents in this grace, so far at least as the kind of questions are concerned in which we are most interested. In these lights, and apart from strictly party considerations, we very favourably regard the change of Government. Whether it was his misfortune or his fault, no Premier ever so signally disappointed the expectation of those of us who have deep vision into the social and sanitary conditions of the people as did Lord BEACONSFIELD. For he himself raised the expectation which he never satisfied. *Sanitas sanitatum, omnia sanitas*, were the words of wonderful wisdom with which he began the campaign. Had he steadily kept them in mind, and embodied them in healthy and vigorous measures, we should not have seen what we have seen within the last few weeks. The health legislation of the late Parliament has been of the feeblest kind. Great epidemics have stalked over the land unchecked; and no effective attempts have been made to curtail the liberty of people carrying plagues about with them, or to quicken the energy of sanitary authorities in using the powers of curtailment they already possess. Foul air, bad water, and injurious drink, and plenty of it, are still in the ascendant, with all their retinue of disease—diarrhœa, consumption, typhoid, glandular degeneration, &c.,—and their secondary following of misery and pauperism. We are quite ready to believe that Lord BEACONSFIELD was drawn away from his good purposes by circumstances which were too much for him. But it will be a terrible misfortune if his successors do not profit by his experience, and do not keep in view, as a primary object of legislation, the making of strong laws that shall diminish the number of those who

> "feel death
> And all the sad variety of pain."

There is everything, so far, in the *personnel* of the Ministry to make us hope for this elevation of *sanitas* into the region of first objects. It contains men who in humbler spheres have done good service in this direction. It is only in humbler spheres that the qualities for creating such legislation can be gained. It would have been easy for the new powers that be to have given great discouragement to the friends of public health. Negatively as well as positively there is much reason to be thankful to Mr. GLADSTONE for the construction of the Ministry generally and of the Cabinet in particular. The appointment of Mr. DODSON to the Presidency of the Local Government Board, with a seat in the Cabinet, is an act upon which we have already commented with the greatest satisfaction. Mr. DODSON'S Parliamentary experience and personal character eminently fit him for the important post assigned to him. It is eminently worthy of Mr. GLADSTONE to have taken the initiative in giving the Local Government Department its proper place. He is, *par excellence*, the statesman who believes in government, both local and central. To give to the Local Government Department a voice in the Cabinet is the very best way to impart dignity to local government and efficiency to central legislation. When it is remembered that the whole of our Public Health Acts are administered by the Local Government Board in connexion with the local sanitary authorities, it will be perceived that this novelty in the Cabinet is one which affords ground for new hope and encouragement to all who are concerned either officially or philanthropically in promoting public health. It is, of course, monstrous that such a minister should have hitherto been shut out of the Cabinet; but it marks a change of the greatest significance that he should now be admitted.

It would be invidious to signalise other individual ministers and to say what may be expected of them from a medical point of view. There are three great directions in which it is in the power of legislation to promote public health. It can deter and discourage drunkenness, it can recognise and apply means for preventing the spread of disease, and it can perfect or greatly improve the machinery by which medical education is given and tested. Under this last head, Parliament can do much by amending the Medical Acts, and it is gratifying to us, in this connexion, to note that the new Vice-President of the Council was in 1871 identified with THE LANCET Bill, which proposed to deal effectively not only with the constitution of the examining bodies, but with that of the General Medical Council. It is not likely that the investigation into the amendments necessary in the Medical Act will suffer in thoroughness under the presidency of Mr. MUNDELLA. The work lies ready to his hand, and can easily be finished in the remaining weeks of the session.

The amendment and development of our Health Acts may safely be left to Mr. DODSON after consultation with the able medical officers of the Board. There is certainly much to be done, and it will take the whole interval between the present and the next session to determine the best way of giving the public health side of the Local Government Board greater efficiency and importance.

The discouragement of drunkenness is an object on which all classes of the community are set, including the very classes who are most demoralised by this vice. It may be safely and strongly asserted that this is one of the questions raised at the election, and upon which it turned. Mr. GLADSTONE is sure to take a statesmanlike view of this question. He will not allow the fact of the opposition of "the trade" to him and his party to influence him to do any injustice to the trade. He has, we fear, a paternal affection for the grocer's licence, which, in our opinion, has done much to promote secret and undetected drinking. Nevertheless, he will not fail to see, and, we hope, to satisfy the

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demand of the people for some legislation that will reduce the gross amount of drink consumed.

THE experiments on the communicability of tuberculosis by inoculation which were made some ten years ago by VILLEMIN, BURDON-SANDERSON, and WILSON FOX, left the question still unsettled. They demonstrated that guinea-pigs might be rendered tubercular by the inoculation of tubercle, but they proved also that the same effect might be produced by the inoculation of materials by which no tuberculous poison could possibly be introduced. They established the possibility of the transmission of tubercle in this way, and rendered it even probable that in the human subject caseating tissues might set up a general tuberculosis, but the results of the experiments were rather opposed to than in favour of the theory that the source of the disease was of a specific character. In this position the question has remained. Lately, however, fresh evidence in support of the view that tuberculosis may be propagated by a specific process of infection has been brought forward by Professor COHNHEIM, who has built upon that evidence a precise theory of the origin of the disease in the human subject. The theory, indeed, compared with the foundation on which it rests, is of disproportionate dimensions. The proof is so inadequate that we might be tempted to cast it aside as one of those hasty generalisations which characterise the brilliant theorist rather than the scientific investigator, were it not that pathology owes so vast a debt to the previous discoveries of COHNHEIM, that his theories, as well as his facts, deserve most careful consideration.

In conjunction with SALOMONSEN, COHNHEIM has obtained some remarkable results by making the eyeball the seat of the inoculation. The experiments were made upon rabbits. A minute fragment of tuberculous material was introduced into the anterior chamber through a linear incision in the cornea. After an incubation period of about three weeks, an eruption of minute nodules appeared upon the iris. These increased in size, and then underwent caseation. In most cases, after a period of some months, there occurred a more or less general formation of tubercles in the lungs, peritoneum, and other organs. This general tuberculisation was found to occur invariably when genuine tuberculous matter had been inoculated; so that COHNHEIM asserts that the inoculation may be employed as a test to ascertain the character of any pathological product. As he points out, such a test, if it can be relied upon, may be a very important pathological criterion, since the morphological characters of a new formation do not in all cases suffice for the determination of its nature, and often leave us in doubt whether the tissue is tubercular, or whether it is of syphilitic origin, or is merely the result of a non-specific inflammatory process. Neither, he observes, the tubercular form, nor the histological characters, neither the occurrence of giant cells, nor caseation, nor all these elements together, are absolutely characteristic. The only certain criterion is, he believes, inoculability.

It is evident that such a test needs to be established upon a wide and certain basis of fact, if it is to be employed as an absolute criterion, from the verdict of which there is no appeal. Although these experiments, taken alone, may seem to furnish such unquestionable evidence, if we take them in conjunction with the very uncertain results obtained by previous observers, we may well hesitate, and ask for confirmatory investigation before we venture to trust to them with the implicit confidence of their author. Employing these results of inoculation as a crucial test, he concludes that we must regard as tubercular many pathological products, the exact nature of which is usually regarded as doubtful—viz., caseous pneumonia, cheesy scrofulous lymphatic glands, as well as the fungating tissue of strumous joints. Other simple tissues, such as that of lupus, were found not to be inoculable. COHNHEIM does not doubt that the bearers of the contagion are parasitic organisms, although he admits that this is at present a proposition beyond certain proof.

In what is scarcely more than a sweeping hypothetical statement, although advanced as a safe generalisation, COHNHEIM applies these conclusions from experiment to explain the origin of tuberculosis in man. It is an "infection-disease," and owes its origin in all cases to the introduction into the organism of a specific virus. This enters the system most commonly through the air, and so the lungs are the first seat of the morbid process, and by extension from them the disease reaches to the pleuræ and the bronchial glands. The early affection of the larynx, in some cases, is due to direct inoculation there. By the sputa the virus is conveyed into the alimentary tract, and thus the intestinal tubercle is developed. In other cases this may be the place at which the poison enters the organism, especially in children, to whom the disease is conveyed by the milk of tubercular cows, and hence arises the form of "tabes mesenterica." The scrofulous inflammations of the mouth and throat, and the caseating enlargement of the cervical glands, may own the same origin. According to WEIGERT, tubercular meningitis may in some cases be due to the migration of the virus from the upper part of the nose (!) The urogenital tuberculosis is to be ascribed to an attempted elimination, the tubercular virus, like other corpuscular elements, passing from the blood into the glomeruli of the kidney. In the cases of primary bone and joint tuberculosis which follow injuries, the poison was probably already in the blood, and is merely extravasated in preponderant quantity at the seat of the traumatic inflammation. In the cases in which there is acute and general formation of tubercles we must assume a saturation of the liquids of the body with the tubercular virus. At the opposite end of the scale are the cases of local tuberculosis, in which the change is limited to a single place. But between the two there is no fundamental difference. The limitation is either the result of the short duration of the disease, or of its tardy extension. The isolated local product is as inoculable as that which is widely diffused. The relation between the two is perhaps similar to that between a chancre and constitutional syphilis. The "phthisical constitution" is a product of the disease, not a predisposition to it. The affected individuals are already the subjects of the disease, for the most part by inheritance. The tubercular virus can pass into the reproductive elements, ovum and spermatozoon, and be present in the newly-born child, although manifesting itself, like the poison of inherited syphilis, perhaps only after many years. It is from the influence of the poison during this latent period that the "phthisical constitution" arises. The so-called "predis-

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position" is really the latent stage of the disease. Between syphilis and tuberculosis we may trace the closest analogy, an analogy which is completed by the demonstration of the specific inoculability of tubercular products.

Such is the latest contribution to medical science from one of the most distinguished of living German pathologists. It cannot but excite a feeling of astonishment in those unaccustomed to late attempts to explain all the facts of almost all diseases according to one dominant theory. It is hardly worth while to mention the obvious objections to it, for many must have occurred to every reader. It is evident, for instance, that one of the first conclusions, that the lungs are affected first because the *materies morbi* enters by the air-passages, does not apply to the cases of inherited tuberculosis in which the lungs only are affected, and whatever determines the affection of the lungs in these probably determines it in all. But it must at the same time be remembered that because a theory is not entirely true, it is not, therefore, entirely false. Tuberculosis may be communicable, and yet not always or often due to the reception of a poison from without. Many clinical facts suggest that phthisis may sometimes be contracted by one individual from another. The theory of COHNHEIM, if partially true, may throw new light on such facts, while his experimental results are of such importance as to demand the attention of pathologists, and the test of renewed experiment.

MRS. PARTINGTON trundling her mop in face of the Atlantic, shriekingly exultant as the tide recedes, and incoherently despondent when it flows, is a type of sanitary legislators and legislation in the present day. Infinite care is given to provide for the removal of evils which ought never to exist, but the smallest attention is devoted to the prevention of their recurrence, or to the making such recurrence impracticable. Partington-like, we seek to stem the flowing tide of mischief by sweeping back the advancing edge, heedless of the ever-acting sources from which the flood arises. True, it may be claimed that the Legislature has not been wholly unmindful of putting a stop to the perpetuation of the sanitary evils which have been handed down from older times, and which lay so heavy a burden upon us at the present day. Has it not sought to put the construction of our houses and their appurtenances on a just sanitary basis, and to give us the power, whether as a community or as individuals, to save ourselves from sanitary negligence and its consequences? This it assuredly has done, but done in such fashion as to aggravate the condemnation which we would urge against it; for in the very doing the Legislature has confessed that it was not unaware of the fundamental defect in its general legislative proceedings in sanitary matters, and that it had sacrificed to the expediency of the moment a question which involved the vital interests of the nation, economically as well as sanitarily. The inadequacy of the existing public-health laws effectually to put a stop to the recurring growth of the conditions which are so productive of unwholesomeness in and about dwellings, stands confessed even where they may apply; but the limitations to their application are so numerous and so grave, that even such advantages as are to be gained from them are largely neutralised by the disadvantages to which they indirectly give rise. An example of these disadvantages now lies before us, given in a cutting from the columns of an unnamed journal, and which has suggested the observations here made.

One of the great manufacturing towns in the North of England has acquired powers for regulating the structure of new buildings. These powers are by no means as complete in detail as they might have been, and should have been (taking example from the previous history of the place), nevertheless they are sufficient to hold in some sort of check that class of business men to whom so much sanitary mischief is owing, and who are known as "jerry-builders." It so happens, however, that on the outskirts of the town, and outside the limits where these structural restrictions can apply, a need for new houses has arisen, and a locality has become available for them. On this unhappy district the "jerry-builders" have pounced, and there has sprung up and is rapidly growing a new town, erected in accordance with the unregulated will of the builders. Anything more deplorable in the present, and bigger with hideous promise of unwholesomeness in the future, it would be difficult to conceive. Built on ground wholly unprepared, often obviously unfit, of the flimsiest structure, and with a startling disregard of the commonest sanitary provisions, the houses are scattered pell-mell, and even before occupation, if the sanitary authority were to do their duty, should be declared unfit for habitation. But practically the sanitary authority is powerless in the matter, unless it is prepared to expend unlimited sums in controlling the nuisances needlessly created by the new buildings in its district, and even then it is doubtful whether its efforts might not be foiled by legal difficulties. Again, the sanitary authority might seek from the Local Government Board powers to subject new buildings to regulations, but to be of use here (as elsewhere), the powers should obviously have been possessed beforehand. As it is, within the past five or six years have grown up in this place, unchecked and uncheckable, in a concentrated form, *all* the evils that sanitary legislation has been, after a fashion, striving to amend since 1848, and there has been imposed upon the district and its ratepayers a permanent incubus of unwholesomeness, and perennial source of heavy expenditure in sanitary rates.

The story is not a solitary one, nor is it uncommon. There is hardly a district in England of which similar stories might not be told; and in no district can the evils arising out of this state be more largely studied than in the environs of London. But there, as a rule, the unrestrained misdoings do not put on the same gross forms as in the provinces, but they are scarcely the less mischievous on that account. Travellers in mining and manufacturing districts, where villages are apt to spring up in the vicinity of new pits and manufactories, will have had occasion to observe, with few exceptions, that these villages faithfully reproduce the sanitary evils which for the past thirty years the kingdom has been striving, after a fashion, to suppress.

Are we so barren of men of legislative capacity that no one is to be found who can take up this matter from its depths, and not merely its surface? Are we condemned to be perpetually striving to arrest the growth of sanitary negligences by cutting off the spray and leaving the root untouched? Is it a necessity of British legislative procedure in sanitary matters that we must dole out such measures as

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we possess for arresting evils in their inchoate state in partial minimised doses? Have we no statesman who can devise a Public Health Act, and induce local authorities willingly to accept one, which, while containing the substance of the present Act, shall also contain provisions which shall give to every sanitary district of the kingdom the power of securing itself from fundamental errors in the construction of new buildings necessarily productive of unwholesome conditions, and, we may add, from modes of conducting any trade within its boundary so as to become a nuisance?

There are certain fundamental sanitary principles, as affecting buildings and nuisances, which ought to be dealt with by general statute, and not by local option. Until this be done, we shall witness the good effects obtained by our efforts in one direction counteracted by the evils determined indirectly by the same efforts in another. Or rather let us say, in view of the stationary mortality of the kingdom, the good we do is masked by what we leave undone. In seeking to stem the tide of sanitary negligence in the kingdom, we have parodied with our legislative mop Mrs. Partington's efforts to stem the Atlantic. Let us hope that with a change of Ministry a change of thought may follow on this grave subject among our statesmen and administrators.

Annotations.

"Ne quid nimis."

UNIVERSITY OF LONDON ELECTION.

WE have no intention of attempting to indicate to the members of Convocation the individual upon whom their choice should fall in the selection of a candidate to represent the University in Parliament. We strongly sympathise, however, with that section of the graduates who think that, other things being equal, or nearly equal, the preference should be given to a member of the University. Among the graduates of the University are numbered a great many men who are in the fore-front of the literary, scientific, and legal professions in this country, and by any one of whom it would be an honour to be represented, and it would seem strange and ungracious to select their own candidate from outside the pale of Convocation while many other constituencies have shown themselves proud to be represented in the House by a London graduate.

Members of the University have complained, and justly, upon the snubbing the University has at times received from the Senate when preference has been given to non-graduates in the filling of official positions in the University itself, and it seems to us that the graduates will make a great mistake if they do not embrace this opportunity of sending to Parliament a man who in some degree owes his eminent position to the training that the University has imposed upon him. The graduates should, in the interests of the University, seize any chance of saying as it were to the nation: "This eminent man, whom we are proud to send to Parliament, as our representative, is a graduate of our own University, and is the product of an institution established within the memory of most, amidst jeers and insults, but which is able to send to the House of Commons a member at least as illustrious and as honoured as any who are sent from the old universities of the country." If this were done the success of the candidate in the House would increase the success of the University, and honours earned by him would reflect a lustre upon those who sent him.

We do not wholly subscribe to the dogma lately propounded by Dr. Lyon Playfair that a University member is to be selected for academical and not political reasons, and that once elected he is not to be disturbed without very grave and exceptional cause. The University constituencies are composed entirely of educated persons who are frequently capable of understanding and looking at political facts with a minimum amount of party bias, and the judgment of these constituencies upon the chief questions of the day ought to be valued and respected by Governments and by the people. A University representative ought to be allowed, we admit, a large amount of political freedom, and provided his votes in Parliament be given honestly as reason and logic dictate, he would be leniently treated by his constituents, who are not less logical and reasonable than himself. When unreasonable votes are given, however, purely for party reasons, and at the dictation of a party chief, or when views are abandoned, not from conviction, but because the holder of them is in a minority (as has been done by the present member for the University of London), then the constituency has a right to speak its mind on the conduct of its representative.

CRUELTY TO WOMEN.

WE have a serious duty to perform; and we cannot shrink from it. The public are, probably, not aware of the cruelty which is being inflicted on a large class of the community by the practice of keeping shop-women standing during the hours of business. In some of the large establishments daily patronised by ladies of fashion the permanent injury done to the young persons engaged is of alarming proportions, and it is time to protest. Young women come up from the country in full health, and are rapidly reduced to a condition which practically condemns them to life-long suffering. So fatuous is the discipline in many of the large houses, that if a girl is seen to lean for a few moments for relief in her weariness she is reprimanded, and if the offence (!) be repeated, dismissed. This cruelty—we can use no milder term—is one which society or, if need be, the law, must put down. We have not adverted to this painful subject until compelled to do so by the most conclusive evidence that the practice of keeping girls standing during business hours is a large factor in the causation of the most distressing diseases. The public will aid our endeavours to put a stop to this evil by interfering as opportunity offers; but an appeal must be made directly to the tradesmen, especially of the large retail drapery establishments in the metropolis. We especially invite communications from firms who are willing at once to provide sitting accommodation for the young women in their employ, for use during the intervals of personal attendance on customers. The names of these firms we will publish in a special list, and by this—and other—methods of enforcing the reform so urgently needed, strive to eliminate at least one of the many remediable causes of disease.

DR. BUZZARD ON CERVICAL PARAPLEGIA.

IN a very valuable paper in *Brain* for April, Dr. Buzzard considers several varieties of cervical paraplegia. He relates four cases, each well deserving careful attention, whether from a scientific or a practical standpoint. In the first case, a patient aged thirty-five, there was, as the necropsy showed, hypertrophic cervical pachymeningitis, with transverse myelitis; the symptoms were incomplete paralysis of the arms and legs, with pseudo-neuralgic pains and wasting of muscles. A point of particular interest in this case was that it occurred in a syphilitic subject; death occurred by cerebral softening, consequent upon thrombosis of the basilar artery, and this vessel presented the well-known appearance of syphilitic endo-arteritis. Under specific treatment the patient had improved remarkably, for a time, in the state of

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his limbs. The evidence on which the hypertrophic pachymeningitis was attributed to syphilis is worthy of attention. Dr. Buzzard thinks that disease of spinal arteries like that of the basilar is the road by which the pathological change in question was produced. A vessel near the central canal was found by Dr. Sankey, who examined the specimens microscopically, to contain an ante-mortem clot. The vessels of the white and grey matter generally had their walls covered by new cells, so that their structure in places was quite obscure. In a second case stiffness and aching of the right arm was followed three months afterwards by loss of power in the left arm and leg, atrophy of the interossei muscles of the left hand, and some anæsthesia of the right arm. No distortion of the spinal column was observable, but there was some tenderness when the fourth cervical spine was pressed. Recovery took place with some spastic rigidity of left limbs, under treatment by rest. A strong phthisical history in this case pointed to strumous disease of the cervical spine as the probable cause of the paraplegia. A very similar condition of spastic rigidity of limbs remained in the third case Dr. Buzzard relates. It was that of a youth who, in diving, struck his head against the bed of a river, and immediately lost completely the power of all four limbs. He gradually recovered from what was probably "a broken neck." The fourth case was one of Pott's disease about the third cervical vertebra, causing loss of power in all four extremities, rigid lateral flexion of the head, and paralysis of the diaphragm. Recovery of power to a very great extent occurred after an attack of double pneumonia, which for some time seemed likely to prove fatal. In these three cases the spastic rigidity and excessive tendon-reflex consequent on secondary degenerations of the cord were well marked.

This paper is a very important contribution to our knowledge of diseases of the spinal cord.

NETLEY HOSPITAL.

WE regretted to see in the *Gazette* of the 4th inst. the appointment of a commandant to Netley Hospital in succession to Colonel Stewart. We had hoped that advantage would be taken of the removal of that officer to command a brigade in Madras to get rid of the anomaly of a discharge depôt for time-expired men within the precincts of a hospital for invalids. But this, it seems, is not to be done. It would perhaps be too much to expect H.R.H. the Field Marshal Commanding-in-Chief to sacrifice any patronage, however trifling, even in the interests and for the comfort and welfare of our invalid soldiers. We have repeatedly called attention to the evils attendant upon having a number of idle men, not always of the most temperate habits or exemplary conduct, hanging about the hospital, and the unnecessary expense incurred in keeping up in connexion with it a military staff. This might easily be remedied by forwarding the time-expired men, on arrival in England, to the Brigade Depôts of their respective corps, or, in the few instances in which this could not be done, to Aldershot, where they would be under strict military discipline, and where suitable employment could be found for them till their period of service was terminated and their discharge documents completed. In addition to the benefit to the invalids by such a course, a saving of upwards of a thousand a year would be effected. We commend the matter to the consideration of Mr. Childers, and trust he may see his way to get rid of this abuse before the next Army Estimates are brought forward. The circumstances which called for the appointment of a Military Commandant in the first instance no longer exist, the Warrant of 1st September, 1877, having conferred on the senior medical officer the command of the hospital staff and of all invalids and soldiers in or attached to the hospital, and made him responsible for everything connected with the establishment. We are at a loss to understand on what plea an expensive military staff can still be kept there, and why an invalid hospital should be converted into, or at least have attached to it, a depôt for the discharge of time-expired soldiers.

PROFESSOR LISTER AT THE BRISTOL MEDICAL SCHOOL.

THE annual public distribution of prizes in connexion with the Bristol Medical School took place on Monday, May 3rd. Professor Lister, F.R.S., presided. The report of the Faculty contained the record of the removal of the Medical School from the premises in the Old Park, which it had occupied since the year 1834, and which had long proved inadequate to the increased wants of the school, and its establishment in the new buildings erected for it by the Council of University College, Bristol, with which institution the school is affiliated. During the past session the first course of lectures in connexion with the chair of hygiene and public health had been delivered by Dr. David Davies, medical officer of health to the city of Bristol. After the reading of the list of names of students of the school who had been successful before the various examining bodies, the prizes and certificates of honour were presented by Professor Lister, who then, in the course of a most able and interesting address, spoke of the many advantages incidental to the existence of a medical school in such an important provincial centre as Bristol, and gave the students much sound practical advice on the mode in which their studies should be pursued. At the close of his address a most enthusiastic vote of thanks was accorded to Professor Lister.

Prior to the distribution of prizes Professor Lister was entertained at luncheon by the staff of the Bristol Royal Infirmary, and afterwards gave a demonstration before an assemblage of about two hundred medical men and students on the method of application of his antiseptic system, choosing as a subject for illustration a case of deep cervical abscess. On the following day he gave a similar demonstration in the operating theatre of the Bristol General Hospital before a crowded audience, selecting on this occasion a case of abscess connected with disease of the hip-joint in a child. Everywhere Professor Lister was received with an enthusiasm and cordiality which must have been most gratifying to him, as indicating the progress amongst the members of the medical profession of a belief in the principle which he has so much at heart.

CHIAN TURPENTINE IN CANCER.

THE prospect of a remedy for a disease hitherto deemed incurable, in the majority of cases, has very naturally created wide-spread interest amongst the public and the profession. The new treatment is on its trial, with the best wishes of every humane person. Care must be taken not to excite false hopes, and so to conduct the investigation that the conclusions arrived at shall commend themselves for scientific exactness and freedom from prejudice. In the first place, it is manifestly important that the nature of the cases treated be placed beyond doubt. Many cancers are unmistakable through their whole course, whereas the character of others is open to question. Every therapeutic inquiry presupposes accuracy of diagnosis. In the next place, unless those who administer Chian turpentine employ the same agent it will be useless to test their imperative results. Herein lies a very great difficulty. Some of our leading authorities on materia medica are very sceptical as to the source and characteristics of Chian turpentine, and Professor John Clay of Birmingham, who has introduced the agent as a new treatment for cancer (THE LANCET, March 27th, 1880, p. 477), thus expressed himself in our last issue:—"As the purity of the drug is an essential

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condition of successful treatment, I cannot hold myself responsible for the validity of many of the trials which are now being made, nor can I admit that they constitute a fair test of the new method of curing cancer." This protest is a warning that, unless great care is exercised, the experiments on foot will lead to endless discussions instead of precise conclusions. What are Mr. Clay's tests for the purity of Chian turpentine? It is very important to know the characters and sources of the drug which he has employed thoughout his investigations, and our columns are freely at his disposal for any information he may furnish on the point, which should be settled at the very threshold of the research.

NERVE-CENTRES IN LEPROSY.

S. TSCHIRIEW of St. Petersburg describes the condition of the spinal cord in a case of leprosy, in the last issue of the *Archives de Physiologie*. He mentions that the observations of Danielssen and Boeck in 1848, as to rarefaction of the ganglionic cells of the grey matter, with altered consistency and volume of the cord, have not hitherto been verified, nor received the attention they merited. His new contribution rests upon the examination of the spinal cord and the skin of the finger from a leper under the care of Dr. Hillairet at St. Louis Hospital (Paris) in 1875. No clinical details are given, save that the patient, who belonged to a rich Creole family of Mauritius, had for many years suffered from the disease. There were no notable naked-eye changes in the viscera or in the spinal cord. The microscope revealed the following alterations:—In the cervical region the left posterior cornu was slightly thinner than the right; the central canal was full of small lymphoid cells, and its walls similarly infiltrated; whilst scattered through the grey and white substance were numerous elongated nuclei. In the middle part of the cervical region there were some small hæmorrhages in the left posterior cornu, with thickening and cellular infiltration of the lymphatic sheaths. But there appeared to be fewer capillaries and small vessels than usual in the grey matter. In fact, whilst the anterior cornua were for the most part unchanged, the posterior cornua showed notable diminution in size and in number of their nerve-cells. The grey matter in these regions appeared more opaque and granular than normal, and did not stain readily. In addition to these changes there were in the dorsal and lumbar regions similar atrophic changes in the cells of Clarke's vesicular column. The anterior nerve-roots were natural, and the posterior nerve-roots showed only slight thickening of their lamellar sheaths. The changes in the skin of the parts examined consisted in thinning of the epidermis, and an infiltration of the dermis and subdermal connective with small lymphoid cells, especially around the bloodvessels, the arteries showing marked thickening of their inner coats. Some of the nerve-fibres were replaced by bundles of connective tissue surrounded by cellular infiltration. Although the examination does not strike us as being very complete, it is worthy of note, owing to the paucity of facts at present observed with regard to the state of the spinal cord in leprosy. The author remarks upon the integrity of the anterior cornua as according with the unaltered state of the muscles. The change in the posterior nerve-cells appeared to be simply an atrophic degeneration. He raises the question whether the lesion of the nerve-cells is primary, or whether it depends upon other lesions involving the supposed centres regulating nutrition. An interesting point was the coincidence of the localisation of the morbid process in the posterior cornua in a case of anæsthetic leprosy, with the peripheral nerve-changes described. The change in the cornua was not necessarily accompanied by lesions of the nerve-roots; but further inquiry might profitably be directed to the spinal ganglia and nerve-trunks in the endeavour to ascertain whether there is any change in these structures proportionate to the extent and degree of anæsthesia observed during life.

MISS LONSDALE AND GUY'S HOSPITAL.

IF in writing the extraordinary article on "The Present Crisis at Guy's Hospital," published in the April number of the *Nineteenth Century*, Miss Lonsdale merely wished a little brief notoriety, she has probably succeeded beyond her most sanguine expectations; but if, on the other hand, she intended rather to facilitate the working of the obnoxious nursing innovations, her efforts have not been quite so successful. The current issues of the *Nineteenth Century* and the *Contemporaay Review* contain an aggregate of no less than four replies to Miss Lonsdale's fantastic charges. In the former periodical appear the answers of Sir William Gull, Dr. Habershon, and Mr. Alfred J. Henriques; and in the latter, that of Dr. Moxon. It may be a question whether or not the marshaling such a force to combat the phantom which Miss Lonsdale's lively fancy had called up be not extravagantly disproportionate; but it is perhaps just as well that the truth should be distinctly and plainly told. Though Dr. Moxon's reply is upon the whole the smartest, and, in a literary sense, the cleverest, the replies of Sir William Gull and Dr. Habershon are, both from the professional and the outsider's points of view, the most convincing and conclusive. Sir William Gull characterises Miss Lonsdale's proposition—that a medical man is no more necessarily a judge of the details of nursing than a nurse is acquainted with the properties of certain drugs—as preposterous and absurd, adding, "Every medical man, if not the public in general, will feel this to be so." Dr. Habershon states calmly and precisely the chief objections to the "new system" of nursing introduced into Guy's Hospital, as compared with the old, and points out some of the risks and dangers to which patients may be exposed through the officious and self-confident ignorance of the new order of sisters. On the whole, Miss Lonsdale's exaggerations and misstatements have done more to damage the cause she undertook to defend than its worst enemies could have wished.

MEDICAL PRACTITIONERS IN FRANCE.

IT has frequently been pointed out that the proportion of medical practitioners to population in England and Wales has declined in recent years; and Dr. Bertillon in an article on France, contributed to the "Dictionnaire Encyclopédique des Sciences Médicales," calls attention to a similar decline across the Channel. In 1846 there were in France fifty-one medical practitioners to each hundred thousand of the population; in 1866 this proportion had declined to forty-eight, and in 1876 it had further declined to forty. It is pointed out that the decline of practitioners was confined to the class called "officiers de santé," whereas the proportion of fully qualified practitioners in 1876 was almost identical with that which prevailed thirty years before. In comparing the supply of medical practitioners in France and England, Dr. Bertillon notes that while in France there are but 40 to each 100,000, the proportion is equal to 66 in the United Kingdom. According to the last issue there were 22,516 names on our Medical Register on the 1st of January last, equal to 65·2 per 100,000 of the estimated population of the United Kingdom at the middle of the present year. It is evident, therefore, that the English population is far more liberally supplied with medical practitioners than in France; and whereas in the United Kingdom there is a medical practitioner to each 1532 persons, in France the proportion is but one practitioner to each 2500. Dr. Bertillon attributes this advantage, in the way of greater facilities for obtaining medical assistance enjoyed by the English popula-

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tion, to the law which in England permits the medical practitioner to dispense his own medicines. The French law, on the other hand, which Dr. Bertillon describes as "tracassière et pédante," is that medicine and pharmacy shall be kept perfectly distinct. In rural and sparsely populated districts there can be no doubt that the present law in France is not only fraught with great inconvenience to the public, but probably operates in the way Dr. Bertillon suggests, and keeps down the number of practitioners, and thus deprives the population of that ready access to medical advice which is so generally enjoyed in England. Dr. Bertillon's article contains a table showing the proportional distribution of medical practitioners among the eighty-seven departments of France. In 100,000 of the population there are only 13·6, 14·4, and 17·6 medical practitioners respectively in Morbihan, Haute-Loire, and Finisterre, while it ranged upwards in the other departments to 77·3 in Corsica, 81·5 in Alpes-Maritimes, and 87·8 in Gers. These figures signify that whereas there is but one doctor to 7500 people in Morbihan, there is one to each 1150 in Gers. The small proportion of medical practitioners in the Breton department is attributed to the fact that much of the medical practice is in the hands of the priests. Dr. Bertillon appears to have experienced a considerable difficulty in ascertaining the correct number of medical practitioners in France, and we regret to say there is almost an equal difficulty in obtaining similar information with regard to the United Kingdom. On Jan. 1st, 1878, the number of medical practitioners on the Register of the United Kingdom was 22,841; it was 22,564 and 22,516 successively at the beginning of 1879 and 1880. We have good reason to believe that this decline in the number of practitioners is more apparent than real. The registrar of the Medical Council has been endeavouring during the last year or two to correct the Register by removing thereform the names of deceased practitioners of whose death no official intimation has been received. If the Register could be once thoroughly corrected it would soon become a source of valuable information on the vital statistics of the profession, for which purpose it is now comparatively valueless. We, at any rate, decline to believe that there has been an actual decrease in the number of medical practitioners in the United Kingdom during the past three years.

THE INDIAN VACCINATION BILL.

THE Punjab Hindoo Association had this Bill again under consideration at their meeting on the 6th March, Dr. S. W. Leitner, the President, in the chair. The proceedings were founded chiefly upon the speech of the promoter of the Bill, the Honourable Syad Ahmed Khan, when, in the meeting of the Supreme Legislative Council of February 28th, 1880, he moved that the Bill should be referred to a Select Committee—a speech which has already been commented on in THE LANCET. The Punjab Association in a former meeting had deprecated compulsory vaccination and the putting of a new sanitary primer written by the Sanitary Commissioner with the Government of India (a work which does not appear as yet to have reached this country) into the hands of schoolboys and of half-educated people for the information it contains as to the source from which vaccine lymph is obtained. They maintained, and still maintain, that in the Punjab at least Hindoos are, as a rule, unacquainted with this source, and that the knowledge of the lymph being derived from the *cow* would, on religious grounds, be fatal to the practice of vaccination among them, as the use of such lymph, or to abet its use, would be to commit, or cause to be committed, a ceremonial impurity. Syad Ahmed Khan sought to traverse the argument of the Association in his speech of February 28th, and urged that the source of vaccine lymph was well known among Hindoos, and that in consequence Dr. Cunningham's primer could not exercise the baneful influence upon the practice of vaccination among Hindoos that the Association averred would follow its issue. Among other matters in support of this argument, it was mentioned that the name by which vaccination had been known in India since its introduction, and as distinguishing the operation from inoculation, was *gau thau sitla*, literally translated "cow-udder small-pox." But to this the Association answer that the Hindoos of the Punjab indisputably did not understand what *gau thau sitla* meant, and were unaware that vaccination had anything to do with the cow. The Association passed a resolution, to be submitted to the Select Committee of the Supreme Government to which the Bill is referred, reiterating their objections to the compulsory clauses, and the circulation of the passages relating to vaccination in Dr. Cunningham's primer; expressing also their regret that attention had not been given to procuring vaccine lymph from the buffalo (which would not affect religious susceptibilities), and not from the cow.

REMOVAL OF A LARGE INTERSTITIAL UTERINE FIBROID.

DR. GAILLARD THOMAS of New York records, in the current number of the *American Journal of Medical Sciences*, a case of successful removal of a large intramural fibroid tumour of the uterus. After pointing out that subperitoneal and submucous fibroids can now be efficiently dealt with by the surgery of the present day, he relates the case "not as an isolated and desultory example of a remarkable operation, but as an illustration of a system which, by its efficiency and simplicity when applied to appropriate cases, will in the future, I trust, accomplish a great deal of good where at present very little effort at surgical relief is ever made." The case was that of a woman, thirty-six years of age, married fourteen years, with one child twelve years old. From April until December, 1879, when she came under care, she had been subject to profuse menorrhagia, and was in a very weak and anæmic condition. The uterus was much enlarged, the fundus extending to a point midway between the umbilicus and ensiform cartilage. The cervical canal was distended, and the posterior uterine wall, including the cervix, was immensely hypertrophied out of all proportion to the anterior. After consultation, and in view of the large and rapidly-increasing size of the tumour, and the comparatively healthy condition of the subject, the operation was performed on Jan. 5th, 1880. Sims's largest speculum was introduced, and a portion of the depending posterior uterine wall cut out by means of a pair of long-handled scissors. Some free bleeding ensued, but was disregarded, and it ceased as the operation was proceeded with. A strong tenaculum being fixed in the posterior lip of the wound in the uterine wall, the opening was enlarged by the finger, and a strong large grooved-director passed, upon which the uterine wall was incised over the tumour high up into the uterine cavity. The tumour coming freely into view, it was fixed by vulsellum forceps, and detached from its bed by means of the "spoon-saw" for about an inch and a half all round. The growth was then removed piecemeal by scissors and the spoon-saw, and finally the remaining third was removed *en masse* by the latter instrument. The operation lasted eighty minutes. Save after the first incision, there was almost no hæmorrhage, and the patient bore it exceedingly well. The large cavity left was syringed out with strongly-carbolised water, and stuffed with carbolised cotton. The patient made an uninterrupted recovery. The tumour —a typical myo-fibroma—weighed 2 lb. Dr. Thomas states that during the past ten years he has removed many large submucous tumours, but only once before one of truly interstitial character; that weighed 8 oz., and was removed by the

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same procedure, except that it did not require dismemberment by the scissors.

FARR TESTIMONIAL FUND.

WE this week give prominence in our advertising columns to an appeal for co-operation in securing the success of a testimonial, to mark the general appreciation of the value of the long public service of Dr. William Farr, C.B., F.R.S. The claims of Dr. Farr to public gratitude for his invaluable assistance rendered to the cause of public health and sanitary progress, are not solely, or even perhaps mainly, based on purely medical grounds. It is eminently satisfactory, however, to find the medical profession so worthily and so influentially represented in the General Committee, which has charged itself with the pleasant duty of doing honour to Dr. Farr, whose name will ever be inseparably connected with health-progress in England. We hope, and confidently anticipate, that the efforts of the committee will be attended with a continuance of the success which is indicated by the constitution of the Committee and by the first list of subscriptions.

TRICHINOSIS AND TRICHINOSIS.

DR. SPENCER COBBOLD, in a very brief letter to *The Times* of the 3rd inst., relative to Mr. W. H. Power's report to the Local Government Board on an outbreak of fever that proved to be trichinosis, on board the reformatory ship *Cornwall*, writes: "I wish to state that there is not in the said report a particle of evidence that the outbreak in question had anything to do with trichinosis." He then proceeds to observe that the report, nevertheless, is "both interesting and valuable—more so, probably, than if the outbreak had really been due to trichinosis, since it not merely points to the existence of wandering rhabditiform larval parasites as a possible cause of dangerous febrile symptoms, but also as showing that we ought rather to look to an indifferent water-supply than to diseased meat as the primary cause of the outbreak."

What Dr. Cobbold apparently wishes to state is, that in his opinion the nematode parasite discovered by Mr. Power in the fatal case of illness on board the *Cornwall* was not the trichina spiralis with which the profession is tolerably familiar, and to which Mr. Power's conclusions seem to point, but some other seemingly unknown form of nematode parasite, for the source of which, as it affects man, we should look to an indifferent water-supply. Dr. Cobbold's opinion upon a question of helminthology will properly carry great weight, but something more than even his opinion, its absoluteness notwithstanding, will be needed before it can be received that the parasite figured by Mr. Power is not trichina spiralis. Mr. Power himself hesitates, from the microscopical character of the parasite alone, to affirm that it is so, but the tendency of the evidence to be derived from the outbreak of illness is to this conclusion.

Dr. Cobbold's statement that "we ought rather to look to an indifferent water-supply than to diseased meat as the primary cause of the outbreak," will excite amazement in the face of the evidence advanced by Mr. Power. The water-supply of the *Cornwall* was and is common to the ship and a considerable population on shore, but the disease was confined to the ship. The succession of the cases admitted of explanation if the cause were assumed to be connected with some article of food consumed on board, but not otherwise, so far as the seemingly exhaustive examination by Mr. Power went. Dr. Cobbold would substitute the vaguest of suggestions for the results of a careful investigation!

Dr. Cobbold is not happier when he touches upon the important question raised by Mr. Power of the possible relation of certain febrile seizures to the wanderings of as yet undetected and undetermined parasites. Mr. Power's suggestions are already bearing fruit in the meetings of the Pathological Society; Dr. Cobbold's observations simply go to raise an undefined but disquieting if not alarming spectre in the columns of a daily paper! As between "trichinosis" and the existence of hitherto unsuspected "wandering rhabditiform parasites," we apprehend that the public will not be apt to consider the latter as the more consolatory phrase, particularly when they come to know that their effects upon the human system may be quite as correctly described as, and actually constitute, a "trichinosis." When Dr. Cobbold writes that there is not "a particle of evidence" to show that the outbreak on board the *Cornwall* was "trichinosis," he merely means trichinosis of a particular sort, and at present we have only the bare statement of his opinion, unsupported by "a particle of evidence," in confirmation of it.

INSPECTION OF THE ARMY HOSPITAL CORPS AT ALDERSHOT.

THE detachment of the Army Hospital Corps at present undergoing a course of instruction in ambulance and stretcher drill at Aldershot was inspected on Monday last by Sir William Muir, K.C.B., Director-General of the Army Medical Department, who, *ex officio*, commands the corps. The parade was formed up under Surgeon-Major Sandford Moore, and, in addition to the Army Hospital Corps detachment, a class of thirty-five of the young medical officers who have recently passed out from Netley, and who have finished their drill, were also present. On the arrival of Sir William Muir, who was accompanied by Surgeon-General William Munro, C.B., Brigade-Surgeon H. Reade, V.C., and Captain Pringle, A.H.C., the class was put through the manœuvres pertaining to ambulance and stretcher drill, and acquitted themselves to the satisfaction of the inspecting officer. Different medical officers were called out from the ranks and tested their knowledge of company and stretcher drill. After the inspection Sir William Muir and his staff were entertained at luncheon in the medical officers' mess.

TORBAY HOSPITAL.

THE recurring quarrels between the lay authorities and the medical officers of the various hospitals and dispensaries throughout the kingdom threaten to become an "emphatic nuisance." Scarcely a week passes without a fresh squabble. Torquay is the scene of one of the latest of unseemly conflicts. The members of the weekly board of the Torbay Hospital have so managed their affairs that not only has the resident surgeon resigned, but two of the honorary surgeons have withdrawn from the institution; and all, as far as we can make out, because the lay authorities would persist in the belief that they and their matron knew more than the doctors about the medical management and treatment of the patients within the hospital. This is carrying out with a vengeance Miss Lonsdale's doctrine, that medical men do not understand nursing!

CONGENITAL ABSENCE OF PATELLA.

DR. J. F. HARTIGAN, of America, recently attended a coloured female infant for a very rare deformity of the knee. The right lower limb was perfectly normal, but the left knee was flexed forwards, or over-extended, so that the front of the leg formed an acute angle with the front of the thigh; the sole of the foot was directed upwards, and the toes pointed to the groin. The leg could be brought into a straight line with the thigh, but not flexed in the usual way; then with gentle pressure, or under the influence of the child's will, the malposition was reassumed; but, contrary to what has been found in some similar cases, it was

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not at once strongly jerked forwards. The femur, tibia, and fibula appeared to be quite sound, but there was no trace of the patella to be felt anywhere, and the extensor tendon could not be recognised under the skin. The treatment adopted was to retain the limb in the straight position, and gradually flex it; and this has been attended with great success, the child being now able to run about and bend the joint backwards to the usual extent.

NERVE-GRAFTING.

Dr. J. GLUCK, of Bucharest, lately brought before the ninth congress of the German Society of Surgery at Berlin some interesting results of experiments in nerve-grafting. He cut out a portion of the sciatic nerve of a fowl, and then removed a similar portion of the same nerve from the leg of a rabbit, and placed this in the leg of the fowl, uniting the two ends by sutures. The nerve united, and the paralysis caused, of course, by the excision of the piece of nerve was recovered from. He repeated the experiment, and exhibited the successful results, showing the fowls with full restoration of power. He was led to these experiments by the result of a case of nerve suture. Paralysis of the median had resulted from extensive destruction of the tissue of the arm by gangrene. Dr. Gluck cut down on the radial nerve and found that part of the nerve was destroyed. He united the two ends by sutures, and the man regained the power of motion, which he had entirely lost. Of course, the experiments in nerve-grafting in animals do not warrant the expectation that a similar result could be obtained in the case of the human subject. It is well known that the union and regeneration of nerves occur with greater facility in the case of the lower animals than in man.

MEDICAL SOCIETY OF LONDON.

THE annual conversazione of this Society was held at the Society's House on Monday last; there was a large attendance of the Fellows and visitors. The oration was delivered by Dr. W. H. Broadbent, the subject being, "The Pulse, and some of its Indications." The President proposed a vote of thanks to the author, which was carried by acclamation, and he was requested to publish the oration *in extenso*. During the evening a selection of music was performed.

SURGEON TO THE NEW VICEROY OF INDIA.

SURGEON-MAJOR JOHN ANDERSON, Army Medical Department, has been appointed by the Marquis of Ripon surgeon on his personal staff as Governor-General of India. Mr. Anderson served for many years in India in the Royal Horse Artillery, and has lately been doing duty at the Royal Military College, Sandhurst.

IN the despatch of Lieut.-General Sir F. S. Roberts, published in the *Gazette* of May 4th, occur the following passages:—"In the late officiating Deputy Surgeon-General J. H. Porter, A.M.D., I found an administrator of high capacity and experience. By his lamented death Her Majesty's service has lost a most distinguished officer. . . . The arrangements at the British and Native Field Hospitals, superintended by Surgeon-Major S. B. Roe, A.M.D., and Surgeon W. Coates, I.M.D., respectively, were all I could wish."

THREE successful cases of ovariotomy, performed respectively by Drs. Pilcher, Cayley, and Charles, of Calcutta, are reported in the *Calcutta Medical News*. Antiseptic precautions were adopted in each instance. These cases are stated to be the first of their kind in the Indian city which had terminated favourably.

MRS. DEEBLE, Superintendent of Nurses, together with six of the Sisters, who were sent to do duty in the military hospitals during the recent campaigns in South Africa, landed at Southampton, and returned to Netley on Wednesday, the 5th inst. Mrs. Deeble suffered from a severe attack of typho-malarial fever in the Transvaal, but has greatly improved in health during the voyage from the Cape of Good Hope to England.

AT the Leeds County Court, on the 30th ult., before Mr. Serjeant Tyndal Atkinson, judge, Mr. C. H. Harral, M.R.C.S., sought to recover from William Robinson, who had been a patient of his, 8*s*. 6*d*. for medical attendance. After hearing evidence on both sides, his Honour held that, as the plaintiff had only qualified as a surgeon, he could not recover for medical attendance. Other claims of a similar character were thereupon withdrawn.

WE regret to record the death of Surgeon R. H. Robinson, of the Madras Medical Service. Dr. Robinson entered the service in 1877, and at the time of his decease was in medical charge of the 39th Regiment Madras Native Infantry, which has been engaged in quelling the Rumpa rebellion. The cause of his death was malarial fever, contracted in the feverish locality in which the regiment was stationed.

THE Council of the Society of Arts have, we learn, decided to summon a public Conference to consider the question of supplying London with pure water. The date for the Conference has been fixed for Monday, the 24th of May, and succeeding days. The arrangements for the Conference are now being considered by a committee, and full announcements are to be made as early as possible.

AT a duly convened meeting of the Governors of the National Orthopædic Hospital, held on the 28th ult., it was resolved that the name and title be altered to the "National Hospital for the Deformed," for the treatment of distortions of the spine and all malformations of the human frame; it being considered that this title and description more palpably define the objects and practice of this charity.

THE Council of the Association of Poor-law Medical Officers will best serve the interests of the body of practitioners they claim to champion by restraining their impetuous zeal for a while, at least, until the new President of the Local Government Board has had time to formulate his policy, before they invade his sanctum with any petition of rights or privileges.

THE Legislature of Connecticut has recently passed an Act authorising the State Board of Health to prepare rules and regulations for the examination of railway *employés* in regard to colour-blindness.

THE appointment to the chair of Natural Philosophy in the University of Aberdeen, vacant by the death of Professor David Thomson, is, we understand, to take place on the 13th inst.

DR. MICHAEL FOSTER, F.R.S., Prælector on Physiology, Trinity College, Cambridge, has had conferred on him the honorary title of LL.D. of the Glasgow University.

THE officers of the Army Medical Department at Netley have issued invitations for a ball to be given on the 24th inst. in honour of Her Majesty's birthday.

MR. THOMAS GUTTERIDGE, the well-known lithotomist, died suddenly of apoplexy last Monday, at his residence, Calthorpe-road, Edgbaston, Birmingham.

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Local Government Department
IN ITS
PUBLIC-HEALTH AND POOR-LAW MEDICAL RELATIONS.

IN our last issue, we called attention to the important concession made by admitting the President of the Local Government Board to a seat in the innermost council of state—the Cabinet; and showed how this arrangement must practically make the care of local interests an integral part of public policy, and substantially create a Ministry of Health. The multitudinous and hitherto unmanageable business centred under the authority of the President of the Local Government Board consists mainly in the supervision of the local application of the Public Health Acts by sanitary authorities, and the control of the Poor-law system throughout the country. Two large services, or *corps* of medical officers, acknowledge the President of the Local Government Board as their chief; namely, the medical officers of health and the medical officers of Poor-law districts and workhouses, of certain large asylums for imbeciles, the deaf, and the dumb, and special hospitals for infectious or contagious diseases. In all some *six thousand five hundred* members of our profession are engaged in scientific work carried out under the authority of the Department whose head is now a Cabinet minister.

The health of a nation must be the first condition of its real prosperity; and it was simply monstrous to leave the Minister responsible for the preservation of public health out of the Cabinet. While this member of the Government was excluded from the inner council the health interests of the people were necessarily subordinated to other considerations, and could not under the best of circumstances obtain more than a second-hand representation. How disastrous such an arrangement may prove, and how the occasional authority of the Privy Council in matters whereof it has no official cognisance, and in which, therefore, it is incompetent to meddle, is likely to operate mischievously, was made abundantly evident during the recent alarm of plague. It is not taking an unduly grave view of the situation to affirm that if, unhappily, a serious epidemic of this disease had visited the country, or should even now visit it, the sole measures of protection upon which we can depend may at the last moment be rendered of non-effect by the action of the Privy Council subordinating the public health administration of the country and checkmating the action of the Local Government Board, as the central public health authority, by the powers it exercises under the quarantine law. The policy of exclusion by quarantine has signally failed. That vexatious and futile artifice was tersely satirised by Mark Twain in the narrative of his experiences at Bellaggio: "They must keep epidemics away somehow or other, and fumigation is cheaper than soap. They must either wash themselves or fumigate other people. Some of the lower classes had rather die than wash, but the fumigation of strangers causes them no pangs." To rely on any measure of exclusion—even if one could be devised which would keep off disease—is so manifestly short-sighted and fatuous a policy, that we cannot believe it will again be seriously mentioned in any deliberation of State. The President of the Local Government Board is the responsible minister charged with the duty of making the ordinary conditions of life throughout the country so healthful, and providing every district with the means of isolating cases and stamping out epidemic disease in such efficiency, that even the plague shall have been deprived of its terrors. By concentrating the whole sanitary authority in his own hands, as the position the President now holds will enable him to do, many difficulties will be removed and much embarrassment avoided.

Another most important consequence of the change which has been effected will be the recognition of the Statistical Department of the Registrar-General's Office as a recording branch of the central establishment of the Local Government Board. In truth this department has no other intelligible status, and none can reasonably or safely be conceded to it. The returns collected by the Registrar-General are simply the vital statistics of the country, and stand in inseparable relation with the public health. It has long been an anomaly that these returns should be made to an independent department which has been compelled to retain a medical officer specially to inform the Registrar what the figures collected by his agents may chance to mean. It is not in the least degree surprising that, being taken out of their connexion, and treated as the data for independent inferences—by an authority having no official knowledge of the health of the country and no facts whereby to test or interpret the figures submitted to him—they should have been made the bases of wondrous and misleading deductions. Had it not happened that an exceptionally able and clear-sighted medical man stood at the elbow, so to say, of the Registrar-General, and saved him from the worst of possible errors, the consequences might have been disastrous to the public health. As it is, many a great opportunity has been lost, and urgent reforms have been abandoned or postponed under the influence of false inferences derived from figures which were not facts. All this may be amended now that the President of the Local Government Board is so placed as to be able to set aside any objections which may be opposed to the consolidation and harmonious reconstruction of his department of the administration, as a whole.

The duty of medical officers serving under the Local Government Board, whether as officers of health or in the Poor-law districts, will be from this crisis more clearly defined than heretofore. With a view to aid their endeavours as far as possible, and to offer the Health and Poor-law services a special means of making their difficulties known, and their interests apparent, to the profession and the public, we have this day created a distinct department in THE LANCET comprehending all that concerns the "Local Government Board in its Public-health and Poor-law Medical Relations." Communications on the subjects thus classed together will be specially considered, and we hope, with the co-operation of the large body of practitioners who are engaged in these branches of work, to keep our readers of all classes—together with those statesmen who may regard THE LANCET as the organ of the medical profession, and this special department as the organ of the Local Government Board-medical services—fully informed both as to the progress of preventive medicine, and the spirit and enterprise of that important section of the medical profession by whose agency the science of health is to be applied.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Doncaster Rural and other Combined Districts.—This new combination includes the rural sanitary districts of Doncaster, Goole, Selby, and Tadcaster, and the urban sanitary districts of Goole, Selby, and Tickhill. Dr. Mitchell Wilson only entered upon the duties of medical officer of health for the combination in September last, yet he has prepared and presented to each of the authorities a statistical report on the health of the district under its control for the past year, together with much information derived from a personal inspection of the respective districts. He has endeavoured, not unsuccessfully, to give a short statement of the present condition of each district, rather than a complete history of its sanitary progress throughout the year. He has specially noted the state of the water supply in the several districts, wisely judging that it would be more beneficial to deal with a definite subject requiring attention. Beginning thus energetically, we shall look with interest for Dr. Wilson's future reports.

Workington (population 7968).—Dr. John Ward has to report the introduction of "a beautiful supply" of water from Crummock into the town from the 1st August last, and even in the short period of the four months following he thinks he can discover the beneficial effects upon the health of the population from the substitution of the purer fluid for the water previously at command. There was an excess of mortality among infants and children during the year, which Dr. Ward is disposed to assign largely to the effect of an impure house-atmosphere. He enlarges most instructively upon this subject in its relation to particular diseases, and his observations can scarcely fail of stimulating the action of his sanitary authority to remove the evils he describes.

Bishop Stortford Urban and Rural Sanitary Districts.—Dr. W. Ogle reports, as regards the urban sanitary district (population 6250) for 1879 a death-rate as low as 12·3, and of this he observes, that the low mortality "is not an isolated

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occurrence, but has been repeated now for three successive years, so that there is fair reason to believe that it is not due to mere accidental fluctuations, but to distinct improvement in the general sanitary condition of the town." There was entire absence of fatal diarrhœa during the year, this being the third year of almost complete immunity from this "dirt-engendered" disease; but, on the other hand, although the town had nearly, if not altogether, been free from typhoid fever for several years, five deaths from that disease occurred in 1879. Typhoid appears to have been formerly very prevalent in Bishop Stortford, but as the sewerage and the ventilation of the sewers were improved, a public water supply introduced, and a better system of removal of filth inaugurated, both typhoid and diarrhœa declined, and the town seemed to acquire immunity from these diseases. The occurrence of five deaths from typhoid in 1879 was a matter, therefore, calling for serious consideration. Dr. Ogle attributes the reappearance of fatal typhoid to the use of water from wells still resorted to, and he objects to the closure of wells liable to pollution being made to rest upon the results of chemical analysis. He records a case in which the water of a well undoubtedly concerned in spreading typhoid was submitted to competent analysts at two separate times, and in each instance pronounced fit for consumption, although the composition of the samples differed widely. An examination of the well disclosed leakage into it from a drain which carried slop-water from the house in which the first case of fever of the particular outbreak occurred. The Bishop Stortford rural district (population 15,806) presents the anomaly of having had a higher mortality (17·2 per 1000 population) during the year than the urban district. What happened in 1879 in this respect happened also in each of the two previous years. In his report on this district, Dr. Ogle relates some instructive examples of the dissemination of typhoid fever by servant-girls sent home when sickening from the disease, and he shows how in these cases the spread of the disease might have been prevented had the sanitary authority been possessed of means by which the first (the imported) case could have been isolated. Referring to the fact of the rarity with which typhoid spreads in a well-to-do house, and the frequency with which it spreads in poor cottages, he has the following remarks:—"The explanation of this, as I take it, is to be found in the fact that in the well-to-do house there are the necessary appliances for cleanliness and a preference for it, whereas in the poor cottage both of these are habitually absent. In the one a clean watercloset; in the other a foul and rarely-emptied privy, giving off to all that use it the emanations from the infected matter thrown into it. In the one an unstinted supply of fair water, and abundance of vessels of all kinds; in the other a scanty supply of more or less impure water, to be fetched often from a considerable distance, and such a lack of utensils, that one cannot avoid the horrible suspicion that not rarely the same vessel that carries refuse out of the house, including the sick-room, serves also at times to carry water into it." He notes the anomaly in this district of the guardians erecting a large oven for disinfecting purposes, *not* the sanitary authority.

Hanley Urban Sanitary District (population, 1871, 39,976, area 1790 acres).—Dr. J. Swift Walker reports for 1879 the highest mortality (25·97 per 1000 population) that had occurred in this borough since 1875. This unusual mortality appears to have been determined by a fatal epidemic of measles during the year. The following is suggestive. A few years ago the Town Council purchased some whitewash brushes, and lent them to persons requiring their houses to be whitewashed, at a cost of one penny per brush lent. The brushes first purchased becoming worn out, a new set was purchased at the beginning of the past year, at a cost of £36. The amount realised by lending during the year was £21, and it is calculated that 3694 houses had been cleansed and whitewashed, so largely had the poorer classes availed themselves of the help thus offered by the sanitary authority.

Barnsley Rural Sanitary Authority.—Dr. Michael Thomas Sadler's report for this district is of much interest for the light it throws upon the sanitary administration of a district characterised by numerous mining villages. Notwithstanding the uphill work of a medical officer of health in such a district, it is obvious, that ground is being gained against long-standing evils. The report gives illustration of the valuable action which may be obtained by parochial committees. It is gratifying to find in this district, in part or wholly, a system of scavenging, including the scavenging of night soil, in force provided by the sanitary authority. Although the medical officer of health had to complain of imperfect performance of the duty by the contractor last year, this had been rectified at the time of the report. The fact of a rural sanitary authority undertaking the scavenging of its district in part or wholly is an important fact. Until this be done more generally it is unlikely that the filth nuisance, which constitutes so considerable a sanitary evil in rural districts, can be effectively dealt with. The death-rate of the district in 1879 was 18·18 per 1000 of the population, the lowest recorded since its formation six years ago; the birth-rate 49·97, nearly 14 per 1000 higher than that usual for England and Wales generally.

Bingham Rural Sanitary District.—Mr. T. Poyntz Wright reports for 1879 a birth-rate of 30·07 per 1000 population, and a death-rate of 18·07. He comments, very justly, upon the want of more hearty co-operation on the part of the public with sanitary authorities, and the impediment to sanitary progress arising from this source.

Hertford Rural Sanitary District.—Dr. Wm. Ogle reports a death-rate of 15·3 per 1000 population for this district in 1879, a rate it would appear somewhat higher than that of the two preceding years. The excess was chiefly marked in the first quarter of the year, and was then largely due to diseases caused by the prolonged and excessive cold of the quarter, aggravated by the bad housing of the labouring population. There appear to be a considerable proportion of cottages in this district which, from their dampness and generally ruinous state, are unfit for habitation, yet to shut them up would add to another grievous evil in the district—namely, overcrowding. The question is one of great complexity and difficulty. Dr. Ogle has the following remarks on another aspect of it:—"Doubtless the objection may be made that the question of decency is outside sanitary administration. With that view I cannot altogether agree. But at any rate the question of space is a strictly sanitary one. Now, the Authority have long accepted 240 cubic feet as the minimum allowance of sleeping-room space for an individual. Scarcely ever, however, do I make an inspection without finding case after case in which this minimum is not attained, and the deficiency often is very great. Here are a few instances of recent occurrence. In one bedroom were eight occupants, having 160 cubic feet a piece. In three adjoining cottages slept twenty-four persons, the average bed-room space being 176 cubic feet to each. In another were ten persons, with 102 cubic feet apiece; in another, nine persons, with 158 cubic feet apiece; in another, ten persons, with 138 cubic feet apiece; and so on in parish after parish. Of the evils that result to health from deficient space one very sad instance occurred during the year. A poor woman suffered from a chronic disease, accompanied by a most fetid discharge. In the small and overcrowded tenement in which she lived a child died from diarrhœa, and the medical man stated that its death was in great part due to the foul atmosphere to which it had been exposed."

Saltley Urban Sanitary District. (Estimated population 5100.)—Mr. Cresswell reports a death-rate in this district of 17·84 per 1000 of the population during 1879, as compared with 19 per 1000 in 1878, and 18·9 per 1000 in 1877. He states that the nuisance so generally encountered in connexion with ashpits, in consequence of the accumulation of their contents, has been effectually remedied by the action of the Board in undertaking their emptying at systematic and frequent intervals.

Watford Urban Sanitary District. (Estimated population 10,000; area 530 acres.)—Dr. Alfred Thomas Brett reports an estimated death-rate of 21·3 per 1000 during 1879. He quotes an instructive instance of a case of typhus received, before the nature of the disease was detected, into the tramp ward at the workhouse. The man who attended to the ward, the head porter, who often visited it, and the head nurse at the Lower Infirmary, to which the case was removed, all caught the disease, and one of the four died.

Small-pox prevalence and fatality in London have steadily increased in recent weeks, and it is more than a year since the Metropolitan Asylum Hospitals and the Small-pox Hospital at Highgate have contained so many patients as they did on Saturday last. The remarkable immunity from small-pox enjoyed by all the largest English towns since the beginning of last year renders the continuous prevalence of the disease in London all the more remarkable. During the last year 458 deaths from small-pox were recorded within the metropolis, while but three (one each in Birmingham, Nottingham, and Manchester) occurred in nineteen of the

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largest provincial towns, having an aggregate population somewhat exceeding that of London. This continued and fatal prevalence of small-pox in London points to grave defects in the administration of vaccination in the metropolis which have never yet been properly investigated. At a recent meeting of the Hackney Board of Works it was decided to institute a house-to-house visitation, with a view to discovering all cases of neglect of vaccination. If this visitation were systematically and generally carried out, and were to include an inspection of the vaccination-marks of all children in elementary schools, it would probably exercise a powerful influence on the long-continued epidemic prevalence of small-pox in London.

We are glad to find that Sir Alfred Power, K.C.B., retains in his retirement that interest in the question of the domestic scavenging of towns, as exemplified in the Rochdale "pail and ash-tub system," which he manifested when Vice-President of the Local Government Board, Ireland. In a pamphlet which he has just published he gives the results of certain experiments made in Ireland, at his instigation, to test the value of the Rochdale poudrette as a fertiliser in comparison with other artificial manures, and which tend to show that the money value of the poudrette as estimated by the Corporation of Rochdale—namely, £6 10*s.* per ton—is fully justified. He briefly reviews the circumstances which give value to the "pail and ash-tub" system of scavenging, referring to the detailed reports by the inspectors of the Local Government Board, England, and of his son, Mr. Wm. Addison Power, one of the inspectors of the Local Government Board, Ireland, on the subject, and he sums up by stating that "in his opinion, *quantum valeat*, the Rochdale system is the best which, so far, has been devised for the Domestic Scavenging of Towns." Sir Alfred Power has done much to promote a just appreciation of the value of the pail-system in dealing with the refuse of towns; and we welcome this pamphlet not only as a contribution to our better knowledge of the subject, but as an indication that he will continue to give his assistance in helping forward its development.

A curious application was made to the petty sessions at Chelmsford, on the 23rd ult., by the Sanitary Authority of the town, for the admission of their medical officer of health to the gaol for the purpose of carrying out the duty required from him by the Local Government Board of visiting and making inquiry in any place where he has information of the outbreak of infectious disease. The application was refused, and seems to have been made under a misapprehension by the Sanitary Authority. Under the old Order of the Local Government Board as to the duties of a medical officer of health the misapprehension could have been understood, but scarcely under the new, which qualifies the restriction as to inquiry and reporting upon outbreaks of infectious disease by the important sentence "in case he is not satisfied that due precautions have been taken." As there is a responsible medical officer attached to every gaol, it is not easy to perceive what necessity there should be for the interference of the medical officer of health within its walls, unless his assistance was required by the gaol authorities. As to the danger of dissemination of the disease outside the walls of the gaol by officers not living within them, the same argument would apply to every private house whatever in which infectious disease occurs.

The Sanitary Authority at Bournemouth is contemplating building an infectious disease hospital. The Commissioners of the town have addressed a memorial to the Inspector of the Local Government Board, who held an inquiry as to the fitness of the site selected for the hospital, protesting against its erection. Their arguments are to the effect that to suppose that so salubrious a locality as Bournemouth will ever need such a hospital is an insult to the town, but the real argument rests on the statement that "the prosperity of those who are engaged in the mercantile pursuits of the place must greatly depend on its character for salubrity, which would be unreasonably impeached by the fact of the existence of, and, therefore, presumed necessity for, a hospital for infectious disorders in the place, especially as the site of the proposed hospital would make it visible to persons coming hither by the South-Western Railway." Let the objectors take comfort to themselves. Visitors to health-resorts are beginning to learn that the existence of an infectious disease hospital is an additional guarantee of *their* safety there. They are beginning to understand that it is important evidence of the sanitary authority doing what within it lies for the protection and welfare of the people of its district and of visitors from infectious maladies.

The Court of Common Council will proceed at their meeting, on Thursday, May 13th, to the election of a medical officer of health for the Port of London, in the place of Mr. Harry Leach, deceased. The Port Sanitary Committee of the Corporation, in accordance with instructions from the Court of Council, have submitted the names of five gentlemen to the Court as eligible for election to the post. The gentlemen thus selected are Dr. B. Browning, medical officer of health for Rotherhithe; Dr. W. Collingridge, of Forest Hill; Dr. F. W. Humphreys, of Trinity-square, E.C.; Dr. J. F. J. Sykes, of Fitzroy-square; and Dr. G. Turner, medical officer of health for Portsmouth.

Several cases of typhoid fever having occurred of late in the fashionable suburbs of Bristol, the medical officer of health of the city, in his report to the sanitary authority, recommends the issue of circulars cautioning the public with reference to the use of contaminated milk, and advising that that article of food should invariably be boiled before being used.

The arrangements at some of the parish relief offices would seem to need revision. For example, at St. George-in-the-East a man affected with small-pox is stated to have been allowed to remain in the small office with some half-dozen other persons for a quarter of an hour. Surely, it would not be difficult to devise means to obviate so probable a risk of infection as is suggested by the above incident.

The Town Council of Salisbury have applied to the Local Government Board for a provisional order to enable them to acquire land for the disposal by utilisation of the town sewage. The question, however, is in suspense in consequence of an objection taken by the Government inspector as to the suitability of the site for the sewage farm.

The Sanitary Committee of the Chelsea Vestry have been charged with the investigation of the cause of several cases of diphtheria in the district. Doubts have been thrown on the efficiency of the drainage.

VITAL STATISTICS.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

The Registrar-General has just issued his quarterly return dealing with English vital statistics for the first quarter of this year. The marriage statistics, however, are for the last three months of 1879, when the marriage-rate was lower than in the fourth quarter of any year since civil registration was established in 1837; its depression, moreover, was greater than that which prevailed in the second and third quarters of 1879. The birth-rate in the first three months of this year, influenced by the long-continued depression of the marriage-rate, was also considerably below the average, and was lower than in any corresponding quarter since 1850. The proportion both of emigration and pauperism, in sympathy with the continued commercial depression, showed a further considerable increase. Notwithstanding the severely cold weather that prevailed, the general rate of mortality was below the average, although the death-rate in London was above the average. Measles, scarlet fever, and whooping-cough showed local epidemic prevalence; the zymotic fatality was, however, comparatively small. The death-rate from fever showed a marked further decline, and, except in London and Bath, the fatal cases of small-pox were exceptionally few. The winter of 1879-80 in length and severity differed but slightly from that of 1878-9. During the four months ending February last there were 65 frosty days, with an average of 6·7 degrees of frost per day. In the corresponding period of 1878-9 the thermometer fell below freezing point on 64 days, which showed an average of 5·1 degrees of frost. The cold of last winter, although more intense than that of 1878-9, was considerably less fatal in its effect upon public health. The annual death-rate last quarter did not exceed 22·9 per 1000, and was 1·9 below the average rate in the corresponding periods of the 41 years, 1838-78. The death-rate among males was equal to 24·1, while it did not exceed 21·9 among females. In the several English counties the death-rate ranged upwards from 16·9 in Westmoreland, to 25·3 in Cumberland, 25·6 in Lancaster, and 25·9 in Nottingham. The rate in the principal urban population of England and

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Wales was 24·2, whereas in the rural population it was only 21·0. In the twenty large English towns, including London, the death-rate averaged 25·5; in the several towns, however, it ranged from 18·7 in Brighton, and 19·8 both in Portsmouth and Wolverhampton, to 27·6 in Manchester, 28·7 in Nottingham, and 31·1 in Plymouth. Measles showed epidemic prevalence in each of the three last-mentioned towns. Infant mortality exceeded, while the death-rate at all other ages was below the average. Whooping-cough was the most fatal zymotic disease last quarter, and caused an annual death-rate of 0·77 per 1000 in England and Wales; in London the rate was equal to 2·14, in Salford 2·55, in Ipswich 2·34, and in Rochester and Chatham 2·58. The death-rate from scarlet fever was slightly below the average, although it showed a marked excess in Northumberland, Westmoreland, and Durham. The fatality of the disease was, moreover, excessive in Norwich, Sunderland, Wigan, and Swansea, as well as in many other smaller town districts. The marked decline in the fatal prevalence of enteric or typhoid fever continues to afford satisfactory evidence of improving sanitary conditions. Small-pox caused 197 deaths in England and Wales last quarter, of which 126 occurred in London, 51 in Bath, and but 20 in the rest of England and Wales. Small-pox prevalence showed a steady increase in London during the quarter. Considering the severity of the winter, the return for last quarter may be pronounced satisfactory, especially as it shows a decline of zymotic fatality. Local outbreaks of these diseases, however, causing exceptional mortality, testify to the existence of insanitary conditions favourable to the fatal prevalence of these diseases.

HEALTH OF LARGE ENGLISH TOWNS.

The death-rates in our large towns continue to decline. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5323 births and 3015 deaths were registered last week. The births exceeded by 138, whereas the deaths were 260 below the average weekly numbers during 1879. The deaths showed a further decline of 47 from the numbers returned in recent weeks, and were equal to an annual rate of 21·0 per 1000, against 22·7 and 21·3 in the two preceding weeks. During the past four weeks of the current quarter the death-rate in these towns has averaged only 21·9 per 1000, against 25·8 and 26·2 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 14·1 in Brighton, 14·4 in Wolverhampton, 15·6 in Portsmouth, and 17·0 in Sunderland. The rates in the other towns ranged upwards to 25·8 in Oldham, 26·1 in Manchester, 27·9 in Nottingham, 28·1 in Liverpool, and again the highest rate, 36·2, in the borough of Plymouth. The high death-rate in Plymouth continues to be due to the exceptional fatality of measles.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 449 and 455 in the two preceding weeks, further declined to 415 last week; they included 138 from whooping-cough, 93 from measles, and 77 from scarlet fever. The annual death-rate from these seven diseases averaged 2·9 per 1000 in the twenty towns, and ranged from 0·7 and 1·1 in Wolverhampton and Leeds, to 3·9 both in Salford and Nottingham, and 16·0 in Plymouth. Measles showed the largest proportional fatality in Plymouth and caused 20 deaths within the borough, making no less than 251 that have been recorded since the middle of November last. The deaths from scarlet fever were somewhat more numerous in Nottingham and Newcastle-upon-Tyne. Five more deaths were referred to fever (principally enteric) in Sheffield. Small-pox caused 18 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had slowly increased from 167 to 187 in the four previous weeks, further rose to 196 on Saturday last; 49 new cases of small-pox were admitted to these hospitals during last week, against 44 and 48 in the two preceding weeks. The Highgate Small-pox Hospital contained 21 patients on Saturday last, showing a slight decline from the number returned at the end of the previous week.

The fatality of lung diseases continues to decline. The deaths referred to the diseases of the respiratory organs in London, which had declined from 395 to 294 in the four previous weeks, further declined to 260 last week, and were 80 below the corrected weekly average; 153 resulted from bronchitis, and 73 from pneumonia. The annual death-rate from diseases of this class did not exceed 3·7 per 1000 in London last week; the rate from the same diseases in Liverpool was 7·9 per 1000.

THE EXHIBITION OF THE ROYAL ACADEMY OF ARTS.

WERE it our part to do more than briefly notice such works of art as, from various circumstances, present points of peculiar interest to the medical profession, we should find in the present Exhibition a field for criticism which would be wellnigh inexhaustible. But as it is, our task is a more than usually light one. The place of honour from a medical point of view must naturally be given to "A Visit to Æsculapius," by Mr. E. J. Poynter, in which the painter has found a motive for a work of great beauty. The God of Healing, seated in a classic grove, receives the visit of Venus, who has wounded her foot with a bramble. The nude figures of the goddess and her attendants are exquisitely portrayed. The painting, to our mind, is a great advance upon that of last year, and we are glad to see that it has been purchased by the Council of the Royal Academy under the terms of the Chantrey bequest. Near this picture is the portrait of Dr. W. B. Carpenter, C.B., presented to the University of London by members of the Senate and graduates on the occasion of Dr. Carpenter's resignation of the office of Registrar. The work, which is by John Collier, is highly satisfactory. Equal praise must be given to the portrait by Yeames, of Mr. Thomas Turner, the late treasurer of Guy's, presented by the Governors and Medical Staff for the court-room of the hospital. Another portrait of interest is that of Mr. Holden, President of the Royal College of Surgeons, of which it is sufficient to say that it is by Millais, and therefore full of individuality and character. Mr. W. J. B. Carter exhibits a charming portrait of a girl. The painter is a son of Mr. Brudenell Carter, and the present is, we believe, the first portrait which he has exhibited in the Royal Academy. The work is full of promise, the life and animation in the head being especially noticeable. We gladly welcome Mr. Carter to the ranks of portrait painters. A scene from the French Revolution, styled "Parted," by Mr. Claude Calthrop (a brother of Dr. Calthrop, of Highbury), presents an interesting episode of the most dramatic time in European history.

Mr. Seymour Haden contributes six studies in dry point, which, so far as we could see—for they are not hung as the works of such a master deserve to be—are all, in different ways, interesting examples of a process which tests the confidence of the artist's hand more than any other. We would gladly have been able to examine more minutely, too, another frame, in which Mr. Haden has included some studies on zinc of a novel character. The intention is to suggest mezzotinting from nature, with or without preparatory etching. The upper drawing—a view of Harlech—is done at one sitting with the ordinary scraper. This effort to obtain mezzotint effects rapidly, so as to be applicable to out-door work, is very important, and we shall watch Mr. Haden's progress in the study with much interest. Mr. Propert presents three etchings, of which the most important, "Breakers," is a remarkably vigorous and truthful study of a noble sea.

SANITATION IN INDIA.

AMONG the Parliamentary Blue Books recently issued is a "Statement exhibiting the Moral and Material Progress and Condition of India during the year 1877–8." This is a continuation of the series presented pursuant to Act of Parliament, and contains much interesting information regarding our Indian Dependencies, in a very condensed form, arranged under fifteen different heads. Of these, two are of special professional interest—the 10th, "Public Health and Sanitation," and the 15th, which includes the "Health of the British and Native Troops" and "Army

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Sanitation." Although the first of these contains much relating to the general health of the population, the registration in India is so obviously defective, and, indeed, is admitted to be so incorrect, that it would be useless to enter into any details founded upon the returns. The deaths from cholera and small-pox in some of the districts are stated; but as the numbers of the population are not given these figures are useless for any purpose of comparison. Both diseases, however, appear to have been less prevalent in 1877–8 than in the preceding year. The number of deaths from small-pox is so great as completely to justify the complaints made of the neglect of vaccination. The reports from the various Divisions show clearly how much the success and extension of vaccination depend upon the zeal, energy, and tact of the medical officers.

Under the 10th Section the medical schools are included. The report made of those in Bengal and the Central Provinces is, we regret to say, unfavourable. In the Punjaub the number of students is increasing, and the condition of these schools in Madras and Bombay was satisfactory.

That portion of Section 15 which relates to the health of the army brings out the remarkable fact that in 1877 the rate of mortality of the British troops was lower than that of the Native—a result which cannot but be gratifying to those who have fought the battle for the improvement of the sanitary condition of the army. During the year the death-rate of the British soldiers in Bengal was 11·64, and of the Native 13·4 per 1000; in Madras, British troops 16·83, Native 15·3; and in Bombay 12·09 and 13·1. In Madras alone the ratio of deaths was higher among the Europeans, but for the whole of India the average mortality was lowest among them. To those who remember the frightfully high rate which prevailed in the European army of the East India Company, the results shown above must be very satisfactory. We are not sanguine that the rates can be kept so low for a series of years, as experience has shown that outbreaks of cholera and fever periodically occur which raise the average—and 1877 appears to have been remarkably exempt from both;—but even in such an event it will be found scarcely to exceed one-fourth—to be certainly less than one-third of the rate which prevailed in former times. We must, however, be careful not to attribute all this reduction to improved sanitation. Two other very important factors have been at work—the younger age of the men serving, and the shorter period of residence in India. The rapid increase of mortality with the advance of age in tropical climates pointed to the great benefit, in the reduction of the death-rate, to be derived from the employment of younger men, and the advantage to be gained by diminishing the period of continuous residence in such a climate was also very obvious. How much of the reduction of the death-rate has been due to these two important changes, and how much to improved sanitary conditions, it is impossible to decide, but the combined result is most satisfactory. We can hardly go so far as the Army Sanitary Commission in their opinion, that "if drink were abolished, and the men's diet and under-clothing were brought into closer relation to the necessities of the country, neither the sanitary nor the medical officer would have much to concern himself about, as far, at least, as regards fatal disease." That every inducement to temperance should be held out to the soldier, and that every care should be taken to clothe him suitably, we most cordially admit, but that such measures would be sufficient to prevent epidemics of cholera or malarious fever is more than doubtful. The great and important results which have attended the care bestowed upon the health of the soldier are sufficient to justify the expense which has been incurred, and to stimulate to further exertions in the same direction; but we fear that to hold out vain and illusory hopes will not tend to promote a wise course of improvement, and can only end in disappointment.

HEALTH OF DUBLIN.—During the March quarter the births registered in the Dublin district amounted to 2650, or 33·7 per 1000; and the deaths to 3165, or 40·2 per 1000. The principal causes of death were as follows:—Bronchitis, 581 deaths; phthisis, 341; convulsions (children), 276; diseases of the heart and organs of circulation, 132; scarlatina, 129; whooping-cough, 113; pneumonia, 107; measles, 90; fever, 83; small-pox, 61; paralysis, 49; cancer, 45; while 48 deaths were due to accident or negligence, 3 were homicidal, and an equal number suicidal.

URTICARIA PIGMENTOSA.[1]

BY JOHN CAVAFY, M.D., F.R.C.P.,
ASSISTANT-PHYSICIAN AND PHYSICIAN TO THE SKIN DEPARTMENT, ST. GEORGE'S HOSPITAL.

THE following case of this rare affection is now under my care:—

Alfred P——, aged fifteen months, was first brought to me at St. George's Hospital, on Jan. 8th, 1880, in the following condition:—The whole skin, with the exception of the palms and soles, is more or less thickly covered with pigmented patches, whose colour varies from bright-red, with a tinge of yellow, to orange and pale buff, a few being of a duller brownish-red tint. The variation in colour is due to different degrees of hyperæmia. The patches are largest and most numerous on the back and chest, fewer, but still of large size, on the abdomen, buttocks, upper and lower extremities, and smallest on the neck, sides of the face, and temples. There are two or three large ones on the left side of the scalp over the occipital and parietal bones. They are all rounded or irregularly oval in outline, and the larger ones (some of which are from three to four inches in their longest diameter) appear to have arisen from confluence. On the neck they are more elongated than elsewhere, very slightly prominent, and more or less parallel to the transverse folds of the skin. They are everywhere surrounded and separated by large tracts of healthy skin. The patches are barely, if at all, raised above the surface, and perfectly smooth, but perhaps a trifle coarser in texture than the unaffected skin. On pinching them up the skin appears of normal thickness, there being no sign of infiltration. Pressure causes the red colour (hyperæmia) to disappear, the pale-buff tint remaining unaltered. On two of the patches over the left shoulder there are small greyish-white, sharply-defined wheals, and linear wheals are readily produced by scratching the hyperæmic patches, but with more difficulty on those which are simply pigmented.

The child is of fair complexion, robust, and in perfect health apart from the affection of the skin. During the three months for which it has been under observation, the patches appear to have become on the whole less hyperæmic, without other appreciable change. The hyperæmia, however, is very variable; a patch which is bright red on one occasion may be pale buff on the next, and again red, either wholly or in part, on a subsequent visit. When the child cries or struggles, the redness is much increased.

The boy was born at the full time after a normal pregnancy and labour, and has had no illness with the exception of jaundice, which appeared soon after birth, and continued for a month. The mother states that the conjunctivæ were yellow, but the urine was pale and the stools of normal colour; it is therefore very probable that there was no true jaundice, but only the yellow discoloration of the skin which so frequently occurs in new-born infants.

The present eruption began on the back when the child was a fortnight old, as red flat patches on which "blisters" formed, and rapidly spread over the body until it reached its present development. The "blisters" appear to have been wheals as a general rule, but on one or two occasions vesicles or small bullæ were noticed, discharging a colourless fluid, and drying up into thin crusts; they were no doubt purely accidental. The wheals were always of short duration, lasting a few hours, and by no means constant in appearance, long intervals frequently elapsing without any; they have always been most common around the waist and neck, where the skin is most rubbed by the clothes. There has apparently been no itching throughout, except when the skin has been rubbed, as after washing; the mother has never noticed the child scratch at other times, nor has it done so on the numerous occasions when I have examined it.

Both parents are quite healthy; there have been no miscarriages, and no sign of syphilis in either. There is one other child, a healthy girl, aged three years, who has never had any skin affection.

This case is an example of a skin disease which has recently attracted much attention from its rarity and other

[1] A paper read, and patient shown, to the Harveian Society, April 1st, 1880.

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peculiarities, and of which I have found ten cases recorded. The earliest occurred at the Skin Hospital, Blackfriars, and is reported by Mr. Nettleship (*Brit. Med. Journal*, vol. ii., 1869, p. 323), under the title "Chronic Urticaria leaving Brown Stains -nearly two years' duration." The disease seems then to have been overlooked or neglected till December, 1874, when cases were communicated to the Clinical Society by Mr. Morrant Baker (one case) and the late Dr. Tilbury Fox (three cases). Three more have since been brought before the same Society—two by Dr. Barlow, and one by Dr. Sangster. One was published last year (*Med. Times and Gazette*, vol. i., 1879, p. 116) by Dr. Goodhart, and in the *Archives of Dermatology*, vol. v., 1879, p. 26, there is a full account by Dr. Morrow of a case which first came under his observation in 1876. In addition to the case I have brought before the Society, I am acquainted with two others, as yet unpublished—one shown to the Hunterian Society on February 25th, 1880, by Dr. Stephen Mackenzie, and one under the care of Dr. Pye-Smith. They both present the same general characters.

There can, I think, be no doubt that the disease is a form of urticaria, if we are to take the presence of wheals, and especially factitious wheals, as pathognomonic. They have been noted in all the cases with the exception of those of the late Dr. Tilbury Fox, who does not mention them. Factitious urticaria, however, was not found by Dr. Goodhart, and in my own case wheals can hardly be said to form a prominent feature, being often absent for long periods. In other respects all the cases are very similar, being characterised by early onset (from ten days or earlier to six months after birth); by hyperæmia and pigmentation, with or without papular and nodular swelling; by good general health; and especially by long duration. Pruritus is nearly constant, but not invariable, being absent in two of Dr. Tilbury Fox's cases, only slight and occasional in Mr. Morrant Baker's, and only present in my own after mechanical irritation.

The disease does not appear to be connected with any diathesis, the large majority of the children and their parents being healthy; one case only (the first of Dr. Barlow's) came of a tubercular family. In Mr. Morrant Baker's case death occurred at the age of three years from empyema, but no tubercle was found post mortem. The affected skin in this case was examined by Dr. Thin, who came to the conclusion that the disease was allied to lupus. It is hardly possible to imagine anything more unlike lupus clinically; apart from the striking dissimilarity in course and aspect, none of the cases have ulcerated, or left scars after involution. Again, the disease is certainly most unlike xanthelasma, to which Dr. Tilbury Fox thought it was related. Its closest allies seem to be urticaria and erythema multiforme (especially the varieties E. tuberculatum and E. urticans), from which it chiefly differs in chronicity, and the entire absence of febrile or other disturbance of the general health. The name erythema permanens, proposed by Mr. Morrant Baker, will cover most of its characters, two of the most striking being expressed by Dr. Sangster's name, urticaria pigmentosa. Between erythema and urticaria, however, there are so many transitional forms, that the nomenclature of any one member of the group is a matter rather of convenience than importance.

With regard to causation there is not much to be said. Mr. Jonathan Hutchinson believes that the affection has its origin in the irritation caused by the bites of insects, fleas or bugs. This is not easy to prove; it has not been noticed by any observer, and, if it were common, it is difficult to account for the absence of punctures, scratch-marks, and small blood-scabs at any period of the cases; moreover scratching, when present, seems to have *followed*, not *preceded* the eruption. Jaundice, which is often accompanied by itching, is very doubtful as an antecedent. It is said to have occurred in Dr. Sangster's case before the child was a week old, and to have lasted a fortnight. The colour of the urine and fæces, however, is not stated, and I think it probable that (as in my own case) true jaundice was wanting. The characteristic eruption, moreover, did not appear until the child was two months old. The absence of jaundice has been specially noted in most of the other cases.

MEATH HOSPITAL, DUBLIN.—The prizes for the Winter Session 1879-80 have been awarded to the following:—Senior Surgical Prize: A. H. Murray. Junior Surgical Prize: John Melluis. First Medical Prize: E. E. Lennan. Second Medical Prize: Austin Cockle.

Correspondence.

"Audi alteram partem."

REPRESENTATION OF THE UNIVERSITY OF LONDON.

To the Editor of THE LANCET.

SIR,—Will you allow me to state why so many London University graduates of all shades of political opinion have promised to support Sir John Lubbock, in his candidature for their representation, and have passed by others who are members of the institution. The reason is because science, and therefore medicine, has such a small utterance in the House of Commons, whilst law has more than a hundred mouthpieces. Sir John Lubbock's devotion to science is well-known, and scientific medicine is therefore safe in his hands, as several Parliamentary debates have shown. To a medical man, therefore, *cæteris paribus*, the superior merits of Sir John Lubbock over the Master of the Rolls are obvious.

But, then, it is urged that our member should be a graduate of the University, and much weight is attached to the proposition that he will thereby bring to the House all the advantages of an intimate acquaintance with its principles and its interests. Now, in reference to these qualifications, it must be remembered that Sir John Lubbock has been more than a dozen years an active member of the Senate, and therefore in a position, than which none could be better, to give him a thorough knowledge of the whole working of the University.

If it, nevertheless, be affirmed that the University ought to be represented by one of its own graduates, such a proposition seems to be founded mostly on sentiment, for it must be remembered that the University of London, not being a centre of learning, fails to have that binding influence on its members as do the older universities. The graduates know nothing of one another, and the late election has clearly shown that a very large number of them are not imbued with the principles on which the foundation of the institution was laid. The want of common interest, too, has often been shown by the antagonism exerted between the different faculties. I think it not surprising, therefore, that medical graduates of various political opinions should sacrifice a mere sentiment for the sake of having so renowned a man as Sir John Lubbock to represent them as a scientific body.

I am, Sir, your obedient servant,

May 4th, 1880. SAMUEL WILKS.

To the Editor of THE LANCET.

SIR,—May a Conservative member of Convocation be allowed, on non-political grounds, to offer a remark upon the letter of Mr. Fowler, who was chairman of Mr. Charles's committee during the recent contest, and addressed to one of the secretaries of Sir George Jessel's committee? This letter has been issued as a circular to the Conservative graduates. The effect of it will probably be that some Conservatives may be induced to support Sir George Jessel in the belief that he is, in the opinion of the active members of their party, the most acceptable candidate. It should be understood that the Conservatives have taken no collective action in the present contest. Mr. Fowler has no authority to speak on their behalf. A very large proportion of the Conservative members of Convocation are graduates in medicine and science. Many, perhaps most of them, think there are lawyers enough in the House already; that we are lawyer-ridden enough; whilst the members fitted to represent science might be counted on one's fingers. Accordingly, lacking a Conservative candidate, their sympathies incline largely in favour of the claim of Sir John Lubbock, our Vice-Chancellor, who would carry into the House those qualities which enlist the confidence of the scientific world, and render him the most fitting representative of an academical constituency.

M.D. LOND.

May 5th, 1880.

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TUMOURS OF THE CEREBELLUM.

To the Editor of THE LANCET.

SIR, — A paper by Dr. Stephen Mackenzie on the Diagnosis of Tumours of the Cerebellum, which has just appeared in your columns, contains, besides much which is useful and interesting, so many statements which are at variance with the conclusions hitherto arrived at with regard to this subject, that I cannot allow them to pass unchallenged. There is still so much confusion in our knowledge of intracranial tumours that a rigid criticism of the cases brought forward, and the opinions based thereon, seems imperatively required, and this must be my excuse for the following observations :—

I would say, then, that to my thinking not one of the three cases on which Dr. Mackenzie's paper is based can be utilised for the diagnosis of tumours of the cerebellum, since two of them are incomplete, and in the third extensive lesions existed at the same time in other structures.

In the first case, which is described as one of myxomatous glioma of the cerebellum, neither the pons and medulla, nor the spinal cord appear to have been examined; yet this should have been done, seeing that the symptoms which were present during life point strongly to disease in those parts. The retraction of the head and the tetanic seizures, which led Dr. Mackenzie to diagnose without hesitation tumour of the cerebellum, I should have referred to an irritative lesion of the medulla or the upper portion of the cord. *Tumour of the cerebellum alone never causes either of the symptoms mentioned by Dr. Mackenzie as appertaining to it.* In order to prove this assertion, I could mention a considerable number of well-observed cases, but will content myself with referring to those recorded by Ebstein ("Osteoma of the Cerebellum," in *Virchow's Archiv*, vol. xlix., p. 145), by Ferber ("Glio-sarcoma," in "Beiträge zur Symptomatologie," &c., Marburg, 1875), and by Bull ("Sarcoma," in *Philadelphia Med. Times*, May 15th, 1875).

The second of Dr. Mackenzie's cases, which is described as one of "solitary tubercle," is not one of disease localised in the cerebellum; for from his own description of the post-mortem changes, it appears that there was likewise a large tubercular mass in the left lateral ventricle, "projecting into it from about the situation of the corpus striatum." The condition of the pons is not mentioned, but the medulla was "so much flattened as to be almost riband-like." This case cannot therefore teach us anything about tumours of the cerebellum, as it clashes with *the first principle of localisation in cerebral disease*—viz., *that the lesion from the occurrence of which diagnostic conclusions are to be drawn must be limited in extent, and not affect important neighbouring structures, either by pressure or otherwise.*

In the third case, which was likewise one of tubercle, the condition of the pons, medulla, and cord does not appear to have been examined; only the "nerves of the medulla" are stated to have been healthy. Tubercle, however, is apt to be diffused, and may be suspected in the pons and medulla where convulsive or epileptiform seizures have taken place during life. Interesting as Dr. Mackenzie's cases, no doubt, are, as examples of intracranial tumours, they must, for the reasons I have just given, be looked upon as quite unsuited for serving as guides for the diagnosis of cerebellar disease.

I now proceed to notice the clinical remarks in Dr. Mackenzie's paper, and cannot help expressing my surprise that he should not have laid more stress upon the circumstance that *tumour of the cerebellum may exist without causing any symptoms at all.* Yet this is one of the best attested facts in cerebral localisation. Indeed, a whole cerebellar hemisphere may be diseased, and yet there may not be a single morbid sign to draw attention to such a condition. Symptoms appear to occur only when the *middle lobe* is affected, while disease in the lateral lobes is often impossible to recognise on this account.

Amongst the chief symptoms of cerebellar tumour, Dr. Mackenzie mentions :—

1. *The reeling gait;* and this constitutes unquestionably the most important sign of the disease. I cannot, however, agree with him in saying that it differs entirely from the walk in locomotor ataxy. The walk in the two affections is generally very similar, and in some cases it is impossible to draw a distinction. In connexion with this it is important to know that cerebellar ataxy is almost invariably confined to the legs and the body, and does not affect the movements of the arms and hands, even in cases where the legs are so unsteady that the patient cannot make a single step without falling. Such a state of things is exceptional in posterior spinal sclerosis, and therefore furnishes valuable indications.

2. *Tonic convulsions* are, according to Dr. Mackenzie, of the greatest importance as distinctive of cerebellar disease; indeed, he sees the strongest reason for believing that tetanus is an affection of the cerebellum! This statement I must absolutely contradict. On analysing the cases in which tumours occurred in the cerebellum *only*, it is found that any form of motor irritation, whether it be tremor, clonic or tonic convulsion, did either not occur at all, or that, if it existed, it could be traced to more or less severe pressure by the tumour on the pons and medulla. In direct opposition to Dr. Mackenzie, I therefore maintain that tonic convulsions and other signs of motor irritation speak *against* rather than *for* disease localised in the cerebellum.

3. Dr. Mackenzie states that *movements of the eyeballs* are frequently connected with cerebellar tumours; but cases recorded by other observers show that such movements do not occur in disease of the cerebellum itself, but only in irritative lesions of the crura cerebelli ad pontem.

4. *Enlargement of the head*, which Dr. Mackenzie considers a sign of the greatest value for cerebellar tumours, appears to me to be quite devoid of importance. It does not occur in adults who are subject to such tumours, and is seen in children in a variety of other intracranial diseases. It therefore cannot teach us anything at all definite about the cerebellum.

Singularly enough, one of the commonest symptoms of cerebellar tumour, and one which ranks in importance next to the reeling gait, has been quite overlooked by Dr. Mackenzie: I mean a peculiar form of vertigo. It is distinguished from vertigo dependent upon other cerebral lesions by being extremely severe, and sometimes permanent; and that it is not the consequence of the cerebellar ataxy, is shown by the fact that it occurs in some cases before a reeling gait is noticed, and also while the patient is in the recumbent position. It is, however, always more marked when he sits up in bed or attempts to walk. It gets worse on closing the eyes, and better by supporting the patient. The sensation experienced is either one as if all external things were moving and spinning round, or as if the body itself were constantly on the move. As vertigo occurs likewise in disease of the semicircular canals, a stomacho læso, &c., it is on that account no reliable sign of a cerebellar tumour if present alone; but when it is observed simultaneously with cerebellar ataxy, it becomes of the utmost importance, more especially as it is characteristic of tumour, and does not occur with atrophy, hæmorrhage, softening, and other diseases of the cerebellum. All other symptoms which are sometimes ascribed to cerebellar tumour, such as vomiting, occipital headache, optic neuritis, &c., are unreliable; the only safe guides for our diagnosis of these cases being cerebellar ataxy and cerebellar vertigo.

I am, Sir, your obedient servant,

JULIUS ALTHAUS, M.D.

Bryanston-street, Marble-arch, April 17th, 1880.

MR. BADCOCK'S EXPERIMENTS ON THE VARIOLISATION OF KINE.

To the Editor of THE LANCET.

SIR,—While admitting the general cogency of Mr. Richardson's letter on this subject, I can only regard his allusions to the analogy of the vegetable world as showing his failure to apprehend the grave difficulties presented to the biologist by the facts with which he deals. It would, no doubt, be surprising if, by a careful selection of soil, we succeeded in producing cucumber from radish, but not so the raising of a plant differing as widely from radish as a case of vaccinia from one of small-pox. With our new plant, however, we might safely predict the reappearance of the parent features on reverting to the original conditions of production; and that Mr. Badcock's vaccine lymph should behave otherwise is one of those facts which seem to stand isolated and incredible to all but eye-witnesses until analogies have been discovered linking them with the world of personal experience. "The fact is," as Mr. Richardson remarks, "vaccine is a disease *sui generis*," and, being so, I fail to see that the history of its derivation from small-pox

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throws any light whatever on the problem. Why does vaccination prevent the small-pox? or confirms in any degree the value of Jenner's discovery, or places the protective power of vaccine on any surer basis. The facts of such derivation and such prevention seem equally wonderful, and not mutually explanatory.

Mr. Richardson's letter establishes the value of Mr. Badcock's stock of lymph, which he preferred to all others, but affords no proof that that discovered by Jenner remained unimpaired, "after passing through the constitutions of 2500 persons," for since the publication in your columns in the summer of 1872 of a paper by the late Dr. J. B. Barbour (then Medical Superintendent of the Stockwell Fever Hospital, temporarily devoted to small-pox), proving the worthlessness of lymph taken from revaccinations, I cannot accept as conclusive on this point the production of a good vesicle, but consider that reliance can only be placed on the evidence derivable, decade after decade, from carefully-compiled statistics, such as have been hitherto non-existent. To the importance of Dr. Barbour's paper you, Sir, directed attention in a special article; and as I, in my capacity of assistant medical officer, gleaned most of the facts on which his argument was founded, I think it right, in referring to it, to say how thoroughly, in my opinion, these facts bore out his conclusions.

I am, Sir, yours truly,
WILLIAM M'LAURIN, M.B., C.M. Glas.

Islington, April 11th, 1880.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—I am somewhat surprised that Professor Clay's communication in THE LANCET of March 27th, "On the Treatment of Cancer of the Female Generative Organs" by Chian turpentine, has evoked no reply; and in the absence of remarks from any abler pen than mine, I feel constrained to draw the attention of your readers to what I consider very serious inconsistencies in the professor's report of his cases.

Case 1 is described as "scirrhous cancer of the cervix and body of the uterus. The uterus was so extensively destroyed by the cancerous ulceration that its cavity readily admitted three fingers. On the fourth day of treatment the os was quite contracted, and would now scarcely admit the finger."

It would be interesting to know how this marvellous contraction was brought about in four days, especially as Professor Clay thinks that the remedy acts by "dissolving all the cancer cells, leaving the vessels to become subsequently atrophied." Surely, if this is the supposed action of the drug, we should expect, as a first consequence of the treatment, that the cancerous ulcerated cavity would be enlarged, not contracted. In such extensive cancerous ulceration as is described in this case, we naturally assume an invasion by the disease of at least the fibro-myomatous elements of the cervix, which tissues we fairly assume to have atrophied and disappeared. Yet we are expected to believe that they still exist, and exist in full vigour; and, what is more incredible, we are asked to believe that in the marvellously short period of four days they cause the os to contract, so that it will scarcely admit the finger, where, only those four short days before, three fingers were readily inserted.

In the second case "the os and cervix were enlarged from carcinoma (?) to the size of a hen's egg. The os was dilated, and the cavity of the cervix was filled with epithelial (?) growths, which bled freely on examination. Sacral pain was very severe, and hæmorrhage had been continuous for six weeks."

On the seventh day of treatment there was "increased white discharge, the os was patulous, and its surface was studded with flabby shot-like eminences." In the absence of any report of such important symptoms as hardness of the enlarged cervix; fixation, which would surely have been present if the cervix had reached the size of a hen's egg; and fetid watery discharge (of which no mention is made in any of the four cases), I am led to conclude that this case was one of granular disease, with some hyperplasia of the cervix, especially when we read that on the seventh day there was increased white discharge, with flabby shot-like eminences.

The terms in which the report of the fourth case is concluded I consider most unsatisfactory; thus: "Under this treatment the woman very rapidly improved, the pains entirely ceased, and the parts became much reduced in size and more movable. The patient felt quite well. She is very active, cheerful, and happy, and may be pronounced convalescent."

No mention is made of the appearance of the parts after the cancerous mass had disappeared.

Unless complete cicatrisation had taken place I should not consider the patient convalescent; but we are left in the dark on this as on many other points in these cases of alleged cures of alleged cases of cancer.

In an all-important subject as the present, I venture to assert that those cases which are reported as cases of cancer will not bear the scrutiny of pathology; and if cases of cancer they were, the most important clinical features of cancer of the uterus have been omitted.

I am, Sir, yours faithfully,
Bath. F. K. GREEN, F.R.C.S.

To the Editor of THE LANCET.

SIR,—In your issue of the 1st inst. is a letter from Dr. Rich. F. Battye on the Treatment of Cancer by Chian Turpentine. Either from some defect in my own understanding, or from a slight want of perspicuity in the writer, a good part of this communication is with some little difficulty and doubt comprehended by me. This much, however, I think I can make out: Firstly, that Dr. Battye wishes people to draw the inference that it is the silica of the Chian turpentine that does the good. Secondly, he recommends Strasburg turpentine as a substitute for Chian turpentine, on account of the large proportion of silica it contains, and as being more procurable.

As regards the first, I would only say that as Chian turpentine, according to Professor Rodgers' analysis, only contains about three-fourths of a grain of silica in a hundred grains of turpentine, to suppose that it were the active ingredient would require an amount of faith, not to say credulity, in the therapeutic efficacy of silica which, Dr. Battye's article on silica to the contrary notwithstanding, I should say, is possessed by no one but himself.

As regards the second, that if Dr. Battye had carefully read Professor Clay's communication (*vide* LANCET, March 27th, p. 479) he would have seen that he says—"The oil of turpentine, if it produces any effect on cancer, is inadmissible on account of the speedy production of its specific effects even when administered in small doses. The same remark applies, with less force, to the Venice and Strasburg turpentines; in my hands they have not produced the same beneficial effects on cancerous growths as Chian turpentine has done."

I therefore sincerely hope that no one will be deluded by Dr. Battye's representations into giving Strasburg instead of Chian turpentine. *A priori* it would appear to me improbable that Strasburg turpentine, grown in the centre of the continent of Europe, in latitude 47°, should be therapeutically substitutible for Chian turpentine, grown in an island in the centre of the Mediterranean, in latitude 35°.

Believe me, Sir, yours obediently,
Blackpool, May 5th, 1880. WM. HARDMAN.

AXILLARY BROMIDROSIS OF LONG STANDING CURED BY THE APPLICATION OF OLEATE OF MERCURY.

To the Editor of THE LANCET.

SIR,—In the early months of last year, through the medium of THE LANCET, I asked if some of your readers would kindly suggest some remedy for this distressing complaint, and I was favoured with replies containing various suggestions as to treatment, some of which had already been tried, while others remained to be carried out, but all eventually with a negative result. Thinking that perhaps those gentlemen who so kindly replied would like to hear the sequel of the case, I venture to publish its history.

C. M., aged twenty, tall, well made, of fair complexion, and with an excellent family history, came under my care in October, 1878. For two years prior to seeing him he had suffered from profuse sweating in both axillæ, always fetid,

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but more so towards evening. The secretion is so abundant that after the slightest exertion it penetrates through to his coat, while the remaining parts of the body are barely, if at all, damp. Examination with a strong lens does not show any unusual appearance of the skin, nor does the microscope detect any abnormality in the hair of the parts. The odour is that of oleic acid intensified, and can easily be detected at some yards from the patient. He has tried all sorts of deodorizers and perfumes, paid a visit to more than one specialist, has tried all sorts of nostrums, and finally is getting quite hopeless of obtaining even partial relief. Starting with the theory that my patient's digestive system must be faulty somewhere, although I could not point to a single symptom that indicated anything wrong, I prescribed the mineral acids in bitter infusions, next I tried alkalies, then German waters, and lastly Fowler's solution of arsenic. Combined with this internal treatment I applied locally carbolic acid in glycerine, extract of belladonna, tannin dissolved in spirits of wine, tincture of iodine, until the skin got sore, and finding all these remedies of no use I looked up Hebra. From him I learned that if I applied an ointment composed of emp. plumbi, dissolved in oil, according to certain directions, I should, like that experienced dermatologist, find that remedy "invariably successful;" but, like many other infallible nostrums, it proved useless. Just then, when the patient had been nearly twelve months under continuous treatment, I was using some 10 per cent. oleate of mercury solution for the cure of ringworm, and, as a last resource, I determined to give it a trial. After carefully sponging the parts with absolute alcohol, for the purpose of removing the moisture, I painted them with the oleate, and this I continued every night for a week until considerable irritation of the surface was produced. It was then discontinued, and I am happy to say that since that time (now nearly six months), although there still remains a considerable amount of perspiration on exertion, there is no smell whatever attending it, and the patient considers himself cured. Which is the curative agent, the oleic acid or the mercury? Probably both, the oleic acid by its penetrating properties reached the sebaceous glands, carrying with it the mercury, which then exerted its alterative properties.

Your obedient servant,

New Cross. WILLIAM BULL, F.R.C.S.

MEDICAL EDUCATION.

To the Editor of THE LANCET.

SIR,—As a Liberal ministry is now in power it is reasonable to suppose that home legislation will occupy a large share of its attention during the forthcoming session of Parliament. The medical profession ought to well consider the working of all Acts relating to itself, and to agree upon the reforms needed in each case—for reforms there will certainly be, either with or without the general sanction of its members.

From a student's standpoint, I believe nothing more urgently demands reform than the present system of medical education. It throws unwarrantable difficulties in the way of the medical student without adequately assisting him in the acquisition of a knowledge of his future profession; it leads to a great waste of his time; and lastly, it is unnecessarily expensive. To venture even to doubt the value of lectures as a means of education will appear in the eyes of some to be almost sacrilegious. I may, however, honestly say that I cannot at the present time recall a single fact of which I have obtained a knowledge from this source, and yet I am proud to have been included amongst the classes of some of the ablest professors of our day. In making this statement I do not wish to cast a word of disparagement against the lecturers themselves, whose discourses were mostly models of perspicuity and eloquence. My experience in this respect may be singular, but I fancy that it is a common one. In my student days I regarded the time occupied in a compulsory attendance upon hospital lectures as so many good working hours wasted, and I still so regard it. Routine lectures were instituted when text-books and periodicals were scarce, expensive, and inaccurate. Then doubtlessly they had their use; but *nous avons changé tout cela*, and with this reform the necessity for their existence has ceased. Again, the exacting requirements of hospital attendance scarcely fulfil the purpose usually assigned them—namely, to act as a practical introduction to clinical work. Anyone can estimate the value of this system by attaching himself for an hour to the peripatetic *queue* of any popular member of the staff of a large hospital as he makes his circuit of the wards. A few specially favoured students may possibly hear and appreciate the observations and so forth of the great professional luminary, but to the great majority of his followers the whole procession is a farce as far as educational work is concerned: and it mostly degenerates into a conversational lounge. The system which persists in treating young men as boys, irresponsible beings, who are to be made to learn their profession "willy nilly," cannot be an enduring one. When we send a young man into the world we accredit him with sufficient *nous* to know his own interests, until we find him unworthy of our trust. The profession, if not already shielded from the results of misplaced confidence in ingenuous youth, would be speedily so protected by increasing the scope, the frequency, and the thoroughness (not necessarily the difficulty) of the present pass examinations. If the present system of medical education was replaced by a private tutorial system, supplemented of course by facilities for real work in our great hospitals, the medical student would assuredly gain in self-reliance, in professional acquirements, and in a pecuniary sense by a diminution of the hospital fees.

I am, Sir, yours obediently,

Brighton, April 29th, 1880. W. A. HOLLIS.

NEW MODE OF PERFORMING THE OPERATION OF EXCISION OF THE KNEE-JOINT.

To the Editor of THE LANCET.

SIR,—Mr. G. A. Wright, in your issue of April 17th, refers to the unsatisfactory result which, in a considerable proportion of cases, follows excision of the knee-joint, and suggests what he believes to be a new mode of performing the operation. I fully agree with him in his preliminary remark, and I should be very sorry to see once more the operation as freely adopted as it was a few years ago.

The operation he recommends is not new, although original on his part; and, considering the inconvenience and loss of power which arise from the division of the extensor tendon, and the absolute needlessness of this division, I am surprised that the idea of leaving it has not more generally suggested itself to operating surgeons.

On August 29th, 1876, I read, before the East Kent district of the South-Eastern Branch, a paper, entitled "On Excision of the Knee-joint, together with the Description of a New Mode of Performing the Operation." In this paper I reported eight cases, four of which were by the new method; seven made complete recoveries, and could walk or run about with strong, useful limbs, and perfectly-healed wounds. Those operated on by the new method got well quicker, and obtained earlier and freer movement than the others. Photographs were shown of the successful cases. The following is extracted from the minutes of the meeting:—

"Mr. Treves then described a new mode of operating, and which he considered might fairly be called his own. The object of the operation was to leave the tissues in front of the joint uninjured, to preserve the natural covering of the joint, and to keep intact the extensor tendon with its attachments. In the first place, he makes a crescentic incision about three inches in length on each side of the joint, the lowest point being thoroughly dependent for the exit of pus or serum; he then divides the lateral ligaments and reflects the tissues till synovial cavity is well opened, then passes a wide director behind the joint in front of posterior ligament, and with a narrow bistoury divides the crucial ligaments and any adhesions; he then inserts a metal retractor in front of the bones to secure the tissues from injury whilst the bones are sawn, which he performs with a Butcher's saw from behind (introducing the blade of the saw, and connecting it with the frame afterwards); he leaves the patella if healthy, or if the cartilage be ulcerated saws off a slice. He considers the advantages of the operation to be many:—1. Improvement in the appearance of the limb. 2. Greatly increased power of extension. 3. Extensor tendon being left intact in front and posterior ligament behind, the bones are not so loose, and the tibia is less

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likely to get displaced. 4. The operation partakes somewhat of the character of a subcutaneous one, and the bones consequently unite more kindly and readily. 5. The operation after a little practice is an easy one."

I have quoted the minutes exactly as they were entered by the secretary at the time, and the paper was, I believe, afterwards published, but I have forgotten the date.

One objection I have heard made to this operation is that the operator is unable to see and judge of the condition of the sawn surfaces; a little consideration will show that the skin taken off is on its sawn surface an exact counterpart of the surface left behind, and I have found that by well washing this I could form a far better idea of the condition of the bones than by a rough look at the bleeding surfaces. Langenbeck preserved the extensor tendon by turning the bones out at the side. I have tried this operation, but found it rough and clumsy, involving considerable violence to the soft parts.

The cause of failure in excision of the knee is that sufficient immobility is not maintained between the sawn surfaces, and the chief feature in securing success is not the mode of operating, but the dressing. I published an article on this subject in THE LANCET, 1871. I shall be happy to lend Mr. Wright the photographs if he would like to see them, but the tissues having been left in front, the deformity is so imperceptible that they will be liable to convey the doubt whether they are photographs of excisions at all.

I am, Sir, your obedient servant,

WM. KNIGHT TREVES, F.R.C.S.

Margate, April 20th, 1880.

COMPLETE RETROVERSION OF THE GRAVID UTERUS IN FOURTH MONTH, CAUSING PARALYSIS OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—The following case, which lately occurred in my practice, may be deemed worthy of publication:—

I was summoned on Tuesday, Dec. 2nd, 1879, to Mrs. R——. She had been suffering for some days from pain in the abdomen and back. The bowels, habitually confined, had not been relieved since the previous Saturday. Sickness occurred for the first time that morning, and continued to the time of visit. Urine passed with difficulty and in small quantities, after frequent efforts. Countenance anxious; tongue moist and slightly furred; pulse 80; temperature normal. She was still suckling her fourth child, aged fourteen months. The catamenia, which appeared regularly during lactation, had been absent since the end of August, and she thought she was again pregnant. The abdomen was enlarged and contained a tumour reaching above the umbilicus, having, at first impression, the characteristics of the gravid uterus at the ninth month.

On making a vaginal examination I could not at first discern the position of the uterus, the lower portion of the pelvic cavity being occupied by a large collection of fæces in the rectum. After the administration of a simple enema, I was enabled to discover that the uterus, which was enlarged to about the third month, was completely retroverted—the fundus being situated posteriorly beneath the promontory of the sacrum, pressing upon the rectum and the cervix, forwards and upwards, towards the neck of the bladder. I immediately proceeded to empty the bladder, and having with difficulty, owing to the pressure of the cervix, introduced a soft india-rubber catheter (a gum elastic failing to pass), removed seven and a half pints of turbid urine, with immediate relief to the urgent symptoms. My efforts to replace the uterus failed completely, and I left her, having ordered a simple aperient and light farinaceous food.

On visiting her the following day I found her in much the same condition, no action of the bowels or relief from the bladder. She had slept well, and was free from pain; appetite good; tongue moist and clean; pulse 72. I again took away about four pints of clear urine, and administered an enema with slight effect. Attempts to alter the position of the uterus were again unsuccessful.

On Dec. 4th there had been very scanty action of the bowels since the previous visit, and she had passed about half a pint of urine, but the bladder was full, and the catheter again brought away about three pints. She was free from pain or sickness, had slept well, and enjoyed her food. The cervix was somewhat lower, and not now pressing on the urethra, showing that retention was due to paralysis from the previous distension. I ordered her a mixture containing nux vomica, and again fruitlessly endeavoured to alter the displacement.

Her condition had not much changed on the 5th. There had been a slight alvine discharge, and about four ounces of urine passed. The catheter was again introduced, displacement still existing. To continue medicine, and have a dose of castor oil.

On the 6th she felt much better. The oil had acted freely. The bladder had been twice relieved, and contained, on introduction of catheter, only a pint. The uterus was in the same position, resisting all efforts at replacement. To continue the medicine.

Urine and fæces passed freely on the 7th, and no further unpleasant symptoms appeared. Uterus unchanged.

Violent bearing-down pains commenced on the 8th, continuing at short intervals during the whole day. Bowels moved, and urine passed abundantly. The efforts to reduce the uterus were futile. A grain of opium every fourth hour was ordered.

The pain continued on the following day, but without any dilatation of the os, and the patient had symptoms of exhaustion, showing the necessity of immediate action. I determined therefore to produce abortion by passing a bougie into the uterus, and rupturing the membranes; but before proceeding to do so I resolved to make a final attempt at reduction, and with that object, got her in the semi-prone position across the bed. With two fingers of the left hand in the rectum, I drew the fundus downwards and to the left, and, with a finger of the other hand in the vagina, I pressed the cervix upwards and to the right, with the object of bringing the uterus into the oblique diameter of the pelvis. After pressure exerted in that way for a few minutes, the uterus suddenly slipped out of its position in the hollow of the sacrum. I ordered her to keep persistently in the prone position, and to continue the opium.

On the 10th, I found the patient as I had left her on the previous day. The pain ceased immediately on reduction of the displacement, and had not returned—urine constantly passing from her in the bed—bladder empty. I now introduced a large Hodge's pessary. The opium to be continued.

Symptoms of cystitis, with acid urine, tinged with blood, supervened on the 11th. To have an alkaline mixture, in addition to the opium, and a dose of castor oil at night. The next day she had improved in every respect; the urine was clear, and passed without pain or straining, bowels well moved; and on the 13th she was extremely free from pain or discomfort, and said she felt quite well. The opium was discontinued, and the pessary was ordered to be retained until quickening ensued, after which it was removed.

I am, Sir, your obedient servant,

Horncastle, 1880. JOHN HADDEN, M.D.

TREATMENT OF RHEUMATISM.

To the Editor of THE LANCET.

SIR,—I trust you will kindly allow me to make a few remarks, in answer to the letter of Dr. Prideaux, published in your issue of the 10th April.

With regard to there being no fatal cases under the use of salicylic acid, I can refer to several in THE LANCET during the last six months, one fatal on the sixth day. Dr. Sinclair, whose communication I noticed in your paper, was certainly not enamoured with salicylic acid, when tried on his own person.

The tendency of late years has been to treat diseases on rational principles, whereas if only one remedy is to be used in each disease, the practice of medicine would be reduced to mere empiricism. That system can only be pursued when testing the efficacy of any particular drug.

My experience of iodide of potassium in acute rheumatism is that it is a safe and certain remedy, if given in large doses, and as the pain of rheumatism is caused by the deposit of lymph in the tissues attacked, it can be speedily removed by the action of this drug on the absorbents. I usually also give opium at night to procure sleep, and apply mustard at the commencement, particularly in acute articular rheumatism, and have seen many cases cured by its use alone at the outset, without taking any medicine.

I have frequently cured acute rheumatism in the wrists

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and elbows in my own person by applying a few leeches, and without medicine. The pain ceased in twenty-four hours, and I could use the limbs on the second day.

An average of eighteen days for the cure of rheumatism (if acute) I consider by no means a favourable result (*vide* Dr. Prideaux's letter).

What called forth my remarks was that I had long felt surprise that iodide of potassium had fallen into disuse in England for rheumatism. Counter-irritation can scarcely be considered a barbarous remedy, as mankind all over the world have experienced its benefits, and at the present time it is practised in some shape all over the habitable globe.

I am, Sir, your obedient servant,

Fulbeck, April 12th, 1880. GEORGE K. BARTON, M.D.

NEW STEAM ANTISEPTIC SPRAY PRODUCER.

To the Editor of THE LANCET.

SIR,—The accompanying illustration represents a new form of inexpensive steam antiseptic spray producer, invented by Mr. Benham, connected with this hospital, and by whose name the apparatus is known. It is composed wholly of metal, and is provided with an excellent safety-valve, and a glass gauge for ascertaining the contents of the boiler. The handle is also of a very convenient form, and can be held for a considerable time without tiring the hand. The apparatus is constructed to produce an uninterrupted spray for upwards of an hour and a half.

Having already effected numerous successful operations on the antiseptic method with the aid of these sprays, I am able to recommend them to the profession with every confidence. They are both inexpensive and portable, and are well-adapted for operations or dressings for hospital and private practice. Their low price should place them within the reach of every country practitioner. They are manufactured by C. Wright and Co., New Bond-street, London.

I am, Sir, yours obediently,

JAMES ROUSE, F.R.C.S. Eng.

St. George's Hospital, April 20th, 1880.

DISLOCATION OF THE ASTRAGALUS.

To the Editor of THE LANCET.

SIR,—In your issue of April 17th a case of the above-named accident is reported by Mr. Gore, of Bath. The following notes may be acceptable :—

On the afternoon of June 13th, 1879, J. W——, a young man aged about twenty-six, a plumber, while working on the roof of a hall slipped over the parapet, and having hung by his hands till he was exhausted, fell to the ground, a distance of nearly thirty feet. He was taken up unconscious, and after a time was brought home to Doncaster. I saw him about six o'clock the same evening. I found the following injuries :—The right tibia and fibula were broken across about six inches from the lower end. There was a small wound at the seat of injury, from which blood freely oozed; the left foot was greatly distorted, and resembled a severe case of talipes varus. There was a great projection on the outer side of the front of the foot, over which the skin was very tightly stretched; and a cavity could be distinctly felt between the os calcis and the bones of the leg. The astragalus was dislocated forwards and outwards, and the pain which he suffered from it was far more intense than from the fracture of the other leg.

Dr. Sykes having kindly administered chloroform I proceeded as follows :—The left knee being held firm, I extended the foot as much as possible, at the same time pressing it well backwards, so as to expose the upper surface of the os calcis. With a little manipulation I got the astragalus back on to it with an audible snap. Still keeping up the extension I got the foot back into its place entire. With this method there was not much difficulty in effecting reduction. I then put up the fracture of the right leg. The case did very well. There has since been no stiffness of the left foot.

I have not met with any mention of this method of reduction of dislocation of the astragalus, and the ease with which it was effected was not the least noticeable part of the case.

I am, Sir, yours, &c.,

F. ROYSTON FAIRBANK, M.D.

Hall-gate, Doncaster, April, 1880.

AMALGAMATED FRIENDLY SOCIETIES; THEIR USE AND ABUSE.

To the Editor of THE LANCET.

SIR,—Having held the appointment—such as it is—of surgeon to a medical institute for several years, allow me, as Manse Headrigg would say, to "lift up my testimony" against the *abuse* of the same as practised very extensively in the town where I chance to reside.

The duties are, of course, most laborious, and frequently the calls are unseasonable and peremptory; moreover, a great many of the members are in such a position pecuniarily that they ought to feel ashamed to pay their medical attendant the beggarly fees they do.

Ex. gratia. One of my institute patients has an income of certainly not less than seven hundred per annum, and he, poor fellow, pays one shilling a quarter for attendance and medicines for his family, a shilling a quarter for his wife, and the same amount for himself, making a noble doctor's bill of twelve shillings per an., all told!

Now, this case is by no means an exceptional one, and fully convinces me practically that to all such bodies "Friendly Societies" is quite a misnomer. The friendship is *far too one-sided*, and unless proper restrictions are made and enforced, it simply means benefiting one class of men at the expense of another, or "robbing Peter to pay Paul." I am, Sir, yours, &c.,

May 5th, 1880. A MEDICAL VICTIM.

P.S.—Having struck on this rock myself, I would earnestly warn all young medical men from being lured into connexion with amalgamated Friendly Societies as a stepping-stone to practice; they are very two-edged affairs, and by touching pitch we are apt to get defiled.

RELIGIOUS LIBERTY AND KING'S COLLEGE.

To the Editor of THE LANCET.

SIR,—Dr. Sandwith's letter ought not to be the last word upon this subject so long as it is matter of common knowledge that the religious test at King's College is only of partial application. The profession and the world have a right to ask upon what principle and by whose authority some of the medical staff have not been called upon to sign a declaration that they are members of the English Church while others apparently are so called upon. This is only one more instance of the suicidal policy pursued by the Council of King's College. It has before the present occasion lost them the services of some of the most distinguished members of the profession. Persistence in it will most certainly afford them many more opportunities of exhibiting those Christian virtues peculiar to their institution, and of turning again their tingling cheeks to the hand of the smiter. It is said that the successful candidate for the post of ophthalmic surgeon was the only applicant. The lesson is an easy one, and if the Council of King's College cannot learn it, so much the worse for them and King's College, which on many grounds is becoming a bye-word and a reproach among the hospitals of England.—I am, Sir, yours, &c.,

QUÆ NON RELIGIO?

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EDINBURGH.

CASES of hydrophobia are not at all common north of the Tweed; however, of late a few have been reported, chiefly from the west coast of Scotland. The latest occurred in the person of a strong healthy man, from the village of Alexandria, who was admitted to the Royal Infirmary, Glasgow, on Monday, April 19th. He stated that he had been bitten by a dog in the month of December last. He did not appear to suffer particularly, but presented the characteristic well-marked spasms on attempting to drink any fluids. This condition continued till Thursday night (22nd April), when the patient's state resembled that of a person with delirium tremens. On Friday morning he died. What renders the case more interesting is that in January a man hailing from the same town, and who had been bitten about the same time, came into the hospital and died of hydrophobia. The treatment adopted in these cases consisted mainly in the hypodermic injection of pilocarpine.

In the annual report of the Royal Infirmary one is struck by the very great number of osteotomies that have been performed. These have been chiefly carried out by Dr. Macewen, who has now done the operation more than two hundred times. The mortality may be regarded as *nil*, since the deaths (about three in number) were due purely to extraneous causes. Dr. Macewen, when operating, makes use of his own special method, employing a wedge-shaped chisel; removes no bone, and remedies all the angular deformities which are met with in any patient, whether due to knock-knee or rickets, at one "sitting," so to speak. Rigid Listerian precautions are adopted, and but one dressing, that at the time of the operation, is usually required.

Dr. Hector Cameron has removed from the elbow-joint of a patient five loose cartilages.

It is stated that the present hospital accommodation in Glasgow is not sufficient to meet the demand, and that before long it will be necessary to enlarge the existing infirmaries and to throw open more wards.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Licentiates of the College on April 29th:—

Robert Greenoak Bailey, Public Dispensary, Leeds.
Richard Atherstone Billiald, Kington, Herefordshire.
Henry Howard Bovill, James-street, Buckingham-gate.
Erasmus Bush, New Thornton Heath, Croydon.
Herbert Paton Butler, Lambeth Infirmary.
Wayland Charles Chaffey, Cedars-road.
Samuel Macmillan Challinor, Bolton.
Wm. Thomas Marston Clark, Cross Deep, Twickenham.
Thomas Vincent Dickinson, Sloane-street.
Alfred Napier Godby Gibbs, Clifton, Bristol.
John Hartley, Middlesex Hospital.
Sydney Haviland Henty, Camden-road.
Henry Hine, Nottingham.
Edward Wilmot Holland, York-road.
John Robert Kemp, Richmond, Surrey.
William Henry Pepler, St. Bartholomew's Hospital.
Charles Joseph Plummer, Wilton-terrace.
Beaven Neave Rake, Guy's Hospital.
Charles Renner, M.D. Würzburg, Harley-street.
Henry Robert Spackman, Percy-circus.
F. Coney Stevenson, M.B. Toronto, Castletown, Isle of Man.
William Henry Wheeler, King Edward's-road.
Henry George Gastrill Wilkins, Ealing.
W. Daniel Campbell Williams, Gower-street.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at Meetings of the Board of Examiners on April 29th and 30th and May 3rd and 4th:—

William D. Halliburton, John E. Penn, F. G. Penrose, H. Downes, Edward A. Dingley, George V. Perez, A. J. Stiles, H. P. Birch, W. V. Shone, and Francis A. Stokes, University College; St. John O. Rands, Maurice P. Jones, Alfred Searle, Arthur T. F. Brown, George H. Graham, Charles E. Beebe, R. W. Brogden, G. Kendall, Thomas Carr, W. T. F. Davies, S. Worthington, and A. E. C. Woodhouse, Guy's Hospital; Hugh Rayner, Arthur R. Rackham, Fredk. Stroyan, F. J. Paley, T. G. C. Evans, Stanley S. Howland, Bruce J. Slater, Arthur J. Williams, Frank Broadbent, A. H. Roberts, H. W. Hunt, A. Maude, E. R. Williams, E. W. Roughton, E. Wilcox, Geo. H. Vos, James R. Payne, W. Overend, and A. Shadwell, St. Bartholomew's Hospital; Hugh St. D. Griffiths, R. P. N. Samuel, R. N. Fenner, Edwin C. Tatam, Herbert W. S. Verity, W. F. Lace, C. J. W. Tatham, E. B. Townsend, and Robt. H. Russell, King's College; Chas. H. Wise, Westminster Hospital; E. C. Maynard and Francis E. Marston, St. Thomas's Hospital; W. R. Tytheridge, Henry U. Bromley, R. H. S. Spicer, P. P. Whitcombe, and Henry S. Turner, St. Mary's Hospital; Geo. Locke, Charing-cross Hospital; E. Corner, Edinburgh and King's College; R. E. Rouse, St. Thomas's Hospital; G. H. Fink, University College.

Of the 154 candidates examined during the past and present week, 43 failed to satisfy the Board of Examiners, and were referred for three, and 3 candidates for six, months' further anatomical and physiological study.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on April 29th:—

Bejauji Pestouji, Bombay.
William Rees Williams, Cambridge-street.

At the Preliminary Examination in Arts held at the Hall on April 23rd and 24th, the following gentleman was amongst the candidates who passed in the second class:—

George Saunders Clarke.

UNIVERSITY OF ST. ANDREWS.—The following gentlemen, having passed the required examinations, had the degree of Doctor of Medicine conferred upon them on April 29th:—

F. Henry Alderson, M.R.C.S., L.S.A., L.M., Hammersmith.
John Bride, M.R.C.S., L.S.A., Wilmslow, Cheshire.
J. Hunt Condon, M.R.C.S.L., L.M., Cawnpore, India.
Richd. Thos. Lyons, M.R.C.S., Rue St. Honoré, Paris.
J. Dixon Mann, L.K.Q.C.P.I., M.R.C.S., Manchester.
Harry May, L.R.C.P.L., M.R.C.S., L.S.A., Ware, Herts.
James Murray, L.K.Q.C.P.I., M.R.C.S., London.
Robt. Easey Threadgale, L.R.C.P. Ed., L.F.P.S.G., L.S.A., Upper Norwood.
John Charles Whishaw, M.R.C.S.L., Earl's-court.
Richard Wood, L.R.C.P.L. & Ed., M.R.C.S., L.S.A., Bromsgrove.

UNIVERSITY OF ABERDEEN.—The following candidates received degrees in Medicine and Surgery on the 30th ult.:—

DEGREE OF M.D.

James Allan, M.B., C.M., New Wandsworth, London.
Algernon Dutton Brenchley, M.B., C.M., Camberwell.
William Pord Edgelow, M.B., C.M., Torquay.
Heber Dowling Ellis, M.B., C.M., Eastbourne.
William Henry, M.B., C.M., Dunfermline.
John MacMunn, M.B., C.M., Long Eaton.
Adam Frederic John Mickle, M.B., C.M., Grantham.
Robert Milne, M.B., C.M., Cluny.
Leonard Rudd, M.B., C.M., Upper Norwood.
William John Ritchie Simpson, M.B., C.M., Dover.
Francis William Smith, M.B., C.M., Westbury.
William Abraham Walker, M.B., C.M., Chesterfield.
William Robert White, M.B., C.M., Southampton.
William Herbert Wilkinson, M.B., C.M., Aberdeen.
Julius J. Eardley Wilmott, M.B., C.M., Weston-super-Mare.

DEGREE OF M.B.

James Aymer, Laurencekirk.
William Beddie, M.A., Strichen.
Harry Arthur Benham, Bristol.
Alexander Boswell, London.
William Hampden Brodie, Aberdeen.
Algernon Aaron Cohen, Clarence River, New South Wales.
William Deans, Kintore.
Alexander Downie Diack, Aberdeen.
* John Durno, M.A., Fyvie.
James Grant Fleming, Grantown.
John Glaister, Wooler, Northumberland.
George Henry Harvey, Colchester.
* Fife Jamieson, M.A., Aberdeen.
* Joshua Law Kerr, Crawshawbooth, Manchester.
Herman, John Liebstein, Highbury, London.
Adam Corbet Lyon, Peterculter
Coll Reginald Macdonald, Argyleshire.
† Alexander Milne, M.A., Mintlaw.
Satish Chandra Mukhopadhyáy, Calcutta.
Alexander Augustus William P. Murison, Macduff.
Arthur Lodge Patch, Madras.
Peter Rough, M.A., Daviot.
Thomas Alexander Sellar, Lhanbryd, Morayshire.
Robert Soutar, Kirriemuir.
Alexander James Struthers, Aberdeen.
Charles Henry Welford, Sunderland.
Percy Roberts Wilde, Weston-super-Mare.
Christopher St. John Wright, Priors Marston.

DEGREE OF C.M.

James Aymer.
William Beddie.
Harry Arthur Benham.
Wm. Hampden Brodie.
William Deans.
Alex. Downie Diack.
* John Durno.
Jas. Grant Fleming.
John Glaister.
Geo. Henry Harvey.
* Fife Jamieson.
* Joshua Law Kerr.
Herman John Liebstein.
Adam Corbet Lyon.
Coll Reginald Macdonald.
† Alexander Milne.
Satish C. Mukhopadhyay.
Alex. A. W. P. Murison.
Arthur Lodge Patch.
Peter Rough.
Thos. Alex. Sellar.
Robert Soutar.
Alex. James Struthers.
Chas. Henry Welford.
Percy Roberts Wilde.
Christopher St. John Wright.

* Honourable Distinction.
† Highest Academical Honours.

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At the same time the following gentlemen were certified as having passed all the examinations, but did not graduate :—

William Carnegie Brown. | Alfred Ireland.

After the capping, Principal Pirie, in the name of the Senatus, presented Mr. Duncan Jas. Reid with the Shepherd Memorial Prize.

SURGEON W. CONGREVE SANDYS has been appointed to the *Hecla*.

THE salary of Dr. Edward Fitzgerald, medical officer of Mallow Workhouse, has been increased by £20 a year.

WE understand that Dr. Robert McDonnell, F.R.S., will succeed the late Mr. Stapleton as visiting-surgeon to the Jervis-street Hospital, Dublin.

A. W. REID, M.A., M.B., of Arnold, Basford Union, Notts., has received the Government Extra Grants for successful vaccination in his district—£18 17s. (second time).

THE corner-stone of a new infirmary at Bolton was laid on the 1st inst. The number of beds provided will be 75. The sum of £32,600 has been paid or promised towards the erection and endowment of the building.

DR. J. EMERSON REYNOLDS, Professor of Chemistry in the University of Dublin, has been recommended by the Council of the Royal Society for election as a Fellow in consequence of his discoveries in chemical science.

WILLIAM LE GROS DENZILOE, M.D., has been placed on the Commission of the Peace for the borough of Bridport; Samuel Gourley, M.D., for the county of Durham, John William Teale, F.R.C.S. Eng., for the borough of Scarborough; and Arthur Edward Turnour, M.D., for the county of Denbigh.

BATH MINERAL WATER HOSPITAL.—The annual court of governors of this institution was held on the 1st inst., at the hospital, Major Allen, the president, in the chair. The report showed that during the past year 854 patients had been admitted, being more than any former year; that the daily average in the hospital was 124, and the stay 52 days. The cost of each occupied bed had been £40 0s. 7d., including all the expenses of the hospital. The financial condition of the institution was reported to be satisfactory, there remaining a balance in hand of £13,230.

THE VENTNOR CONSUMPTION HOSPITAL.—On the 30th ult. the biennial dinner was held at Willis's Rooms, in aid of this hospital, which was founded in 1868 by Dr. Hassall. There was an influential company of ladies and gentlemen. In proposing the principal toast of the evening the chairman, Lord Rosebery, referred to the distinctive features of this hospital. Last year the mortality was reduced to only 2½ per cent., by restricting the admission of cases to those to whom benefit would accrue by treatment while in the incipient stage of consumption. The maintenance of the institution costs nearly £7000 a year, and only £1000 was invested. During the evening subscriptions, &c., including a donation of fifty guineas from the chairman, were announced by the secretary, Mr. Ernest Morgan.

LYING-IN HOSPITAL, NEWCASTLE-ON-TYNE.—At the annual meeting of this charity, held last month, the report of the medical officers showed that 38 cases had been attended in the institution itself and 464 cases at their own houses, and with the most gratifying result that no death had occurred in the 522 cases. It is little more than a year ago since the committee decided to abolish entirely the practice of midwives in connexion with the hospital, and place all cases under the care of the visiting surgeons, or of such senior students of the Newcastle College of Medicine as the surgeons might appoint to act under their own personal supervision. It has also been the effort of the committee only to admit *into* the hospital such patients as were actually destitute and in need of charity, so as to avoid the overcrowding of a building which is somewhat antiquated and not quite in accordance with the more modern views of the hospital accommodation necessary for parturient women. We may congratulate the subscribers that by these medical and hygienic means not only has the charity become more popular among the poor, and the number of cases nearly doubled, but also the dangers of child-bed among their patients have been considerably reduced.

THE ROYAL COLLEGE OF VETERINARY SURGEONS.—The annual meeting of the College was held on Monday in the Freemasons' Hall, Principal Williams in the chair. The report stated that on the passing of the supplemental charter granted by Her Majesty's Government in August last 124 persons had availed themselves of the opportunity offered, and had received the diploma of the Royal College of Veterinary Surgeons. It had been suggested that steps should now be taken by the College to obtain an Act of Parliament for the protection of the title of veterinary surgeon or other titles conferred by them or empowered by royal charter. The report was adopted.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—On last Tuesday the following examiners were elected for the ensuing year:—For Letters Testimonial and Fellowship: Henry Gray Croly, William Fraser, Benjamin G. MacDowel, Edward Stamer O'Grady, B. Wills Richardson, Edward Stoker, Robert Swan, William Thomson. For Diploma in Midwifery: John J. Cranny, Henry Croly, William Smyly. Examiners in General Education: Frank James Dawys, Michael Joseph Malone, Robert Morton. All the outgoing examiners were re-elected, and in addition Mr. Cranny, who has been elected in the vacancy caused by the retirement of Mr. Kirkpatrick, who as a Fellow of the College of Physicians in Ireland was ineligible for re-election.

BEQUESTS TO MEDICAL CHARITIES.—Mr. Thomas Wrigley of Timberhurst bequeathed £10,000 each to the Owens College, Manchester, the Bury Dispensary and Hospital, the General Hospital and Dispensary for Sick Children at Pendlebury, Manchester, and the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties at Lancaster. Sir Isaac Morley of Beechfield, Doncaster, bequeathed 100 guineas to the Doncaster Infirmary, and 19 guineas each to the Sick Society and the Lying-in Society at Doncaster. The Goldsmiths' Company have given £100 to the Westminster Hospital. Mr. William H. Poynder has given £100 to the Charing-cross Hospital. The Buckinghamshire General Infirmary has received £100 from the Royal Charity Fund upon the recommendation of Lord Beaconsfield. The Norfolk and Norwich Hospital has received £100 under the will of Mr. James Chapman, and £100 under that of Mrs. Anne Woodhouse. Lord Overstone has given 50 guineas, and Messrs. Drummond £25, to the Charing-cross Hospital.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ATKINSON, R., B.A., F.R.C.S., has been appointed Junior Assistant Medical Officer at the Worcester County and City Lunatic Asylum.

BLACKER, E. J. L., M.D., M.R.C.S.E., has been appointed Medical Officer to the B District of the Thrapston Union.

BLACKMAN, J. G., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Portsea District of the Portsea Island Union.

BOSTOCK, A. S., M.R.C.S.E., L.S.A.L., has been appointed Honorary Medical Officer to the West Sussex, East Hants, and Chichester General Infirmary and Dispensary.

BOYD, P. C., L.R.C.P., L.R.C.S.E., &c., has been elected Assistant Medical Officer to the Bethnal-green Workhouse and Infirmary, vice Johnson, resigned.

BUCKELL, E. H., L.R.C.P.L., M.R.C.S.E., has been appointed Honorary Medical Officer to the West Sussex, East Hants, and Chichester General Infirmary and Dispensary.

CHAFFEY, W. C., M.R.C.S.E., L.R.C.P., has been appointed House-Surgeon to the Victoria Hospital for Children, vice Tarleton.

CHISHOLM, W., M.D., L.R.C.S.Ed., has been appointed Medical Officer to the Harworth District of the Darlington Union.

CURTIS, J. G., F.R.C.S.I., has been appointed Surgeon to the Cork South Infirmary and County Hospital.

DAVIES, J. W., L.R.C.P.I., has been appointed Medical Officer of the Clun District of the Clun Union.

DE WOLFE, G. H. H., M.D., has been appointed Honorary Physician to the Sheffield Public Hospital for Diseases of the Skin.

HARTLE, Mr. C. H., has been appointed, temporarily, Assistant Medical Officer at the Infirmary of the Greenwich Union, vice Boyd.

HEBB, R. G., M.D., has been appointed Pathologist and Curator to the Museum of the Westminster Hospital, vice J. K. Fowler, M.B.

LAWTON, J. W., M.R.C.S.E., has been appointed House-Surgeon to the London Hospital, vice J. G. Clark, whose appointment has expired.

MACAULAY, J. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Ninth District of the Honiton Union.

MACKINTOSH, A., M.D., L.F.P.S.G., has been reappointed Medical Officer of Health for the Chesterfield Union, for three years. £5 5s. per annum.

MICHEL, H. S., M.R.C.S.E., L.S.A.L., has been appointed to the Second or Whitford District of the Holywell Union.

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NEILL, C., M.D., has been appointed a Honorary Physician to the Ryde Dispensary.
NICHOLSON, W., M.D., C.M., has been reappointed Medical Officer for the Central District of the Greenwich Union.
NORTH, J., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer for the Llangorse District of the Brecknock Union.
OLIVER, J., M.B., has been appointed Resident Physician to the Queen's Hospital, Birmingham.
PETTINGER, G. W., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Stretford Urban Sanitary District. £50 per annum.
POLLARD, W., F.R.C.S., has been appointed Honorary Consulting Surgeon to the Torbay Hospital, Torquay.
PRICE, A., M.R.C.S.E., L.S.A.L., has been appointed Surgeon to the Royal South London Dispensary, vice Dukes, resigned.
RYERSON, G. S., M.D., has been appointed Lecturer on Ophthalmology in Trinity Medical School, Toronto, Canada.
SKAIFE, F., L.R.C.P.Ed., has been appointed Honorary Medical Officer to the West Sussex, East Hants, and Chichester General Infirmary and Dispensary.
SMYTH, S., M.R.C.S.E., has been appointed House-Surgeon to the Westminster Hospital, vice G. H. Butler, M.R.C.S.E., resigned.
SPENCER, H. E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed to the Second District of the York Union.
STRANG, W. J., M.B., has been appointed Resident Medical Officer to the Newcastle-on-Tyne Dispensary, vice J. A. Monteith, M.B., resigned.
SWALE, H., M.R.C.S.E., has been appointed Resident Medical Officer to the French Hospital, vice G. D. Maddick, M.R.C.S.E., resigned.
TANNER, W. K., M.D., F.R.C.S.I., has been appointed Consulting Surgeon to the Cork South Infirmary and County Hospital.
TAYLOR, Mr. G., has been appointed Junior House-Surgeon to the General Hospital, Cheltenham, vice Mr. W. Shaw, resigned.
VON BEVERHONDT, W. T. H., M.R.C.S.E., has been appointed Medical Officer to the Sutton-upon-Derwent District of the Pocklington Union.
WHITLEY, F. G. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for St. Agnes District of the Truro Union.
WILLIAMS, J., F.R.C.S.E., L.S.A.L., has been reappointed Medical Officer for the Merthyr Cynog District of the Brecknock Union.
WOMERSLEY, J. K., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Bungay District of the Wangford Union, vice E. B. Adams, M.R.C.S.E., deceased.

Births, Marriages, and Deaths.

BIRTHS.

CHESSALL.—On the 22nd ult., at Horley, the wife of William Chessall, M.D., of a son.
COGHILL.—On the 30th ult., at St. Catherine's House, Ventnor, Isle of Wight, the wife of P. G. Sinclair Coghill, M.D., F.R.C.P.Ed., of a son.
HEWLETT.—On the 5th inst., the wife of John C. Hewlett, of The Ferns, Hornsey, Middlesex, and Cree Church-lane, London, of a daughter.
LEONARD.—On the 27th ult., at Loraine-road, London, N., the wife of H. J. Leonard, M.B., of a son.
MCDONALD.—On February 26th, at Hamilton, Tasmania, the wife of Wallis McDonald, M.R.C.S.E., of a daughter.
RUTHERFORD.—On the 25th ult., at 60, Church-street, Shipley, near Leeds, the wife of John James Rutherford, L.R.C.P.Ed. &c., of a daughter.
SANDERSON.—On the 4th inst., at Fairfield, Penrith, Lily, wife of Thomas Drummond Sanderson, M.B., F.R.C.S.E., of a daughter.
SETON.—On the 27th ult., at Thurloe-place, S.W., the wife of D. Elphinstone Seton, M.D., of a son.

MARRIAGES.

BARCLAY—MOUNT.—On the 1st inst., at St. Michael and All Angels', North Kensington, William Mackenzie Barclay, M.D., of Grantown, Inverness-shire, to Winifred Maud, fourth daughter of George Mount, Esq., of Wellington-road, St. John's-wood.
DUNCAN—GALT.—On the 29th ult., at St. Andrew's Church, Southport, by the Rev. Thomas Eagar, M.A., Rector of Ashton-under-Lyne (uncle of the bride), assisted by the Rev. Prebendary Crass, M.A., Vicar of St. Andrew's, James Duncan, M.B., of Ashton-under-Lyne, to Maria, younger daughter of the late John Galt, F.R.C.S.E.
EBERLE—HOBSON.—On the 1st inst., by licence, at Hornby Church, near Bedale, Yorks, John James Eberle, Physician, of the Medical College, Easingwold, Yorks, to Lucy Elizabeth, elder daughter of Joseph Hobson, of the same town.
LORD—SKINNER.—On the 28th ult., at St. Peter's, Eaton-square, Frederick Lord, L.R.C.P.Ed., L.R.C.S.Ed., to Eliza (Lily), youngest daughter of the late Henry Skinner, of Tiverton, Devon.

DEATHS.

CASKIE.—On the 30th ult., at Stewarton, Ayrshire, John Caskie, Surgeon, aged 83.
DENNEHY.—On the 27th ult., at Clonmel, co. Tipperary, Cornelius Dennehy, L.A.H.D., aged 67.
FOSTER.—On the 26th ult., at Eastlake-road, Brixton, John Frederick Foster, M.D., F.R.C.S., late of Hartley Wintney, Hants, and Guernsey, in his 71st year.
MABERLY.—On the 23rd ult., at his residence, Minford-gardens, West Kensington-park, William Henry Maberly, M.D., F.R.C.S., aged 27, deeply regretted.
MCCLOSKEY.—On the 27th ult., at Strabane, co. Tyrone, Joseph R. McCloskey, M.D.

.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

ARROWSMITH, J. W., Bristol.
Bristol Royal Infirmary Reports. Edited by Dr. W. H. Spencer & Mr. J. G. Smith.

BAILLIÈRE ET FILS, Paris.
Du Traitement de la Pneumonie Aiguë. Par le Dr. V. Hanot.
Les Pneumonies Chroniques. Par le Dr. J. Regimbeau.
Des Troubles Oculaires dans les Maladies de l'Encéphale. Par le Dr. A. Robin.
Des Paralysies dans les Maladies Aiguës. Par le Dr. L. Landouzy.
Accidents de la Lithiasie Biliare. Par le Dr. A. Mosse.
Recherches Cliniques et Expérimentales sur le Bruit Moulin. Par le Dr. P. Reynier.
Des Divers Modes de Terminaison des Grossesses Extra-Utérines. Par le Dr. B. Deschamps.
Des Gangrènes Spontanées. Par le Dr. E. Rondot.
Des Sueurs Morbides. Par M. L. Bouveret.

BAILLIÈRE, TINDALL, & COX, London.
How to Feed an Infant. By Dr. Benson Baker.

BOGUE, DAVID, London.
Tracheotomy in Laryngeal Diphtheria. By R. W. Parker.

HODDER & STOUGHTON, London.
The Human Body and its Functions. By Dr. H. S. Paterson.

LIPPINCOTT, J. B., & Co.
Surgery in the Pennsylvanian Hospital. By Dr. T. G. Morton and Dr. W. Hunt.

LONGMANS, GREEN, & Co., London.
Heat a Mode of Motion. By John Tyndall, F.R.S.
Dr. Rigby's Letters from France &c. in 1789. Edited by his Daughter, Lady Eastlake.
Six Lectures on the History of German Thought. By Karl Hillebrand.
Climate and Medical Topography of British India. By Dr. F. N. Macnamara.

MACMILLAN & Co., London.
Nature Series: Degeneration. By Dr. E. Ray Lancaster.
The Care of the Insane and their Legal Control. By Dr. J. C. Bucknill.
A Handbook to the Public Picture Galleries of Europe. By Kate Thompson.

MORRIS, J., Paternoster-row.
The New Nation. By J. Morris. Five vols.

PUTNAM'S SONS, New York.
Lectures on the Human Eye. By Dr. Adolf Alt.

STANFORD, E., Charing-cross.
The Cobham Journals. With Introduction &c. by Eleanor A. Ormerod, F.M.S.

TAYLOR & FRANCIS, London.
The London University Calendar for 1880.

THE NEW SYDENHAM SOCIETY, London.
On Diseases of the Skin. By F. Hebra, M.D., and M. Kaposi, M.D. Translated and Edited by Waren Tay, F.R.C.S.
Atlas of Illustrations of Pathology. Fasc. II.
Lexicon of Medicine and the Allied Sciences. Part III.

TRÜBNER & Co., London.
The Pathology and Treatment of Venereal Diseases. By Dr. F. J. Bumstead. Fourth Edition. Revised by Dr. R. W. Taylor.
Rocky Mountain Health Resorts. By Dr. C. Denison.
Carlsbad and its Natural Healing Agents. By Dr. J. Kraus.

Aspiration of the Knee-joint. By Dr. H. O. Marcy.—Annual Report of the Veterinary Department of the Privy Council Office for 1879.—The Monthly Homœopathic Review.—Sunday Magazine for May.—Good Words for May.—Deutsches Archiv für Klinische Medicin.—La Crónica Médica.—Revue des Sciences Médicales. (Masson, Paris.)—Domestic Scavenging in Towns by the Pail and Ashtub Systems, as in use at Rochdale. By Sir A. Power, K.C.B. (T. Richards.)—Report of the Local Government Board.—Journal of Anatomy and Physiology. Vol. XIV. (Macmillan.)—American Journal of the Medical Sciences. (H. C. Lea's Son & Co.)—An Improved Method of Treating Depressed Fractures of the Nasal Bones. By Dr. L. D. Mason.—Bristol, Past and Present. (Arrowsmith, Bristol.)—The Pathology of Starvation. By Surgeon-Major Curran.—Inhalation of Oxygen in Disease. By E. L. Armbrecht. (Armbrecht & Co.)—Small-pox and Vaccination. By Dr. W. T. Iliff.—Dextral Valvular Disease of the Heart. By Dr. A. Morison. (Maclachlan & Stewart.)—Vierteljahresschrift für Dermatologie und Syphilis.—Monthly Review of Dental Surgery.—To Oberammergau and Back. By E. McQ. Gray.—The Medicine and Surgery of Homer. By Dr. H. Dunbar.—Archiv für Augenheilkunde. Annals of the Anatomical and Surgical Society of Brooklyn.—Boston University Year-book.—Sixth Report of the West Kent Sanitary District. (Knight & Co.)—Ethylization. By Dr. R. J. Levis.—The Problems of Insanity. By Dr. G. M. Beard.—Medical Students' Register.—The Magazine of Art, Part XXV.—The Family Physician, Part IV. (Cassell & Co.)—Brain, Part IX. (Macmillan.)—Neurological Contributions. By Dr. W. Hammond. (Putnam's Sons.)—Popular Science Monthly. (Appleton & Co.)—The Bar, Solicitors, and the Public. By J. P. Godfrey. (Evison & Bridge.)—Fraser's Magazine for May. (Longmans.)—Time for May.—Social Notes.—Monthly Review of Dental Surgery.—Transactions of the Odontological Society.—The Churchman for May.—Archives of Laryngology. (Putnam's Sons, New York.)—Alcohol, its Functions and Place. By Dr. T. R. Fraser. (Douglas, Edinburgh.)—Healthy Homes. By Dr. W. Newman. (Jenkinson, Stamford.)—English Poor Law. Charity and Poor Law. By J. J. Coulton.

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, May 6th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Apl. 30	30·48	N.E.	48	45	91	59	39	..	Cloudy
May 1	30·32	N.E.	46	43	94	65	38	..	Fine
,, 2	29·85	S.E.	56	50	98	65	33	..	Hazy
,, 3	29·74	N.E.	45	43	82	66	37	..	Overcast
,, 4	29·97	N.E.	50	47	83	56	42	0·08	Cloudy
,, 5	30·03	N.E.	47	45	..	51	44	..	Cloudy
,, 6	30·03	N.E.	44	48	84	54	43	..	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

ANTI-VACCINATORS IN BRIGHTON.

ONE of the guardians of the Brighton Union, an anti-vaccinator, visited the public vaccination station in High-street a few days ago during the time when vaccinations were in progress, and is alleged to have conducted himself there in a manner offensive to the public vaccinator. The Board of Guardians, on complaint of the public vaccinator, took up the question at their next meeting, and, in a resolution unanimously carried, warmly censured their colleague for his conduct.

Medicus.—We think the claim unreasonable.

LODGMENT OF FOREIGN BODIES IN THE INTERIOR OF THE EYE.

To the Editor of THE LANCET.

SIR,—A reference in THE LANCET of April 3rd to a case published by Mr. Chisolm, of Boston, in which a foreign body had remained lodged in the eye for twenty-three years, and also the letter of Dr. Jacob in your issue of April 24th, induce me to mention two cases recorded by myself in the Royal London Ophthalmic Hospital Reports, vol. ix., part iii.

In one of these cases a piece of steel, becoming encapsuled in the interior of an eye, remained imbedded in the ciliary processes for twenty-nine years without producing sympathetic irritation in its fellow, but for the last nine years was at intervals the seat of excruciating pain, and was chiefly for this reason enucleated.

The other case, and, as far as I know, a unique one, was where a piece of metal was imbedded in the retina close to the optic disc, and from the first was distinctly visible with the ophthalmoscope, and yet permitted perfect vision. Eighteen months after the accident, when the patient was last seen, he was unconscious of any difference in the visual powers of the two organs, and read J. 1 fluently. An engraving appears in the Royal Ophthalmic Hospital Reports, depicting the situation of the piece of metal. I am, Sir, yours faithfully,

SIMEON SNELL,
Ophthalmic Surgeon to the Sheffield General
Sheffield, April, 1880. Infirmary.

To the Editor of THE LANCET.

SIR,—In your issue of April 24th, Dr. Jacob records a case of a foreign body remaining in the eye for nineteen years. On the 10th of this month I removed from the ball of the left eye a thorn, measuring five-eighths of an inch in length. The patient was an old man, who had six years ago received a blow in the eye from a thorn-bush. He was treated at the time for the consequent inflammation, and since then has been suffering much pain in the temple, with total loss of vision. He is now quite free from pain, and seems likely to recover in a slight degree some sight. I am, Sir, yours faithfully,

Enniskillen, April 27th, 1880. J. S. GUNNING, L.R.C.P., &c.

COMPULSORY REGISTRATION OF INFECTIOUS DISEASES.

THE Public Health Committee of the Corporation of Dublin, in reply to a suggestion made to them recently, as to the compulsory registration of infectious diseases, that the head of the family be the informant, have adopted the following resolution:—"The Committee approve and recognise the necessity of an efficient system of registration of infectious diseases, and will be prepared to support any effort to secure the same, but pronounce no opinion at present as to the particular method best adapted to secure the desired result."

G. C. P.—Dr. E. B. Shuldham has published a work on the subject.

WHOOPING-COUGH: THE DISEASE DUE TO A FUNGOUS GROWTH; REMEDIES.

To the Editor of THE LANCET.

SIR,—As there seems to be an unusually large number of cases of whooping-cough among children in and around London, there is likely to be a revived discussion as to the efficacy of the different modes of treatment. A most interesting addition to the discovery of Dr. Letzerich, of Germany, has been made by an eminent scientific investigator in America, Dr. Henry A. Mott, Ph.D., &c., of New York. Dr. Letzerich began his investigations in 1871, and by microscopic examination of the mucus whooped up during the first or catarrhal stage, he discovered the presence of small, elliptically-shaped, brownish-red fungous spores, some of which had germinated and produced mycelium. Dr. Letzerich made a number of experiments on rabbits to prove the truth of his theory, introducing the fungous spores into the trachea of young rabbits by tracheotomy. In a short time they recovered from the operation, and then were affected with a cough exactly like whooping-cough. Their expectorations were the same as those of children, and, when killed, their lungs were found to contain fungus.

Dr. Mott, as an independent investigator, has already established a reputation second to none in the United States, and his study of the causes of whooping-cough cannot fail to be of great value. He found the fungous spores discovered by Letzerich, but not of the brownish-red colour. The ripe spores of whooping-cough differ from those of diphtheria in not being circular, and in not showing any finger-like protuberances. The growth of the mycelium in the masses of phlegm goes on very rapidly, and the threads acquire considerable length, especially when the disease is at its height. The expectorated mucus is also very thick at this stage, and on drying becomes of a glassy appearance, although very tenacious. In the latter stages there is a quantity of mycelium, and a rapid formation of spores takes place. If the fresh spores are treated with iodine and concentrated sulphuric acid, the colour of the mycelium becomes a beautiful blue; while the spores, normally white, then become brown.

As a remedy for whooping-cough, Dr. Mott strongly recommends the use of quinine. He does not profess to be the first to employ it, but he is probably the first to apply it as a direct consequence of the fungoid character of the disease. It should be taken in the powder form, and allowed to dissolve on the tongue; but, as children may find it difficult to do this on account of the bitterness of the drug, Dr. Mott recommends dissolving it in sugar-and-water, and giving the mixture by the spoonful. The best time to give it is just after a coughing spell, and before going to sleep at night. The size of the dose depends upon the age of the patient and the severity of the attack. To a grown person from three to five grains may be given, and allowed to dissolve on the tongue. To a child from two to five grains may be dissolved in two ounces of sugar-and-water, and one teaspoonful given at a time. Quinine administered in capsules or in sugar-coated pills would be of no use whatever. Your obedient servant,

Herne-hill-road, Brixton, April, 1880. J. L. STICKNEY.

Mr. John Jackson.—The Collegial-triennial prize has not been awarded for twenty-two years past—viz., 1858, when Mr. George Harley obtained it. It has been awarded to the following members of the College only, all of whom are deceased:—Mr. Swan in 1822 and 1825, Mr. Williams in 1840, Mr. H. Coote in 1843, Mr. Gray in 1846, and with a special honorarium the same year to Mr. A. Poland.

Mrs. Haycroft had better make known her want by means of an advertisement.

SOCIAL SCIENCE IN AUSTRALIA.

THE programme of the Health Section of the Social Science Congress lately held in Melbourne included the following subjects:—

1. The construction and ventilation of houses, hospitals, schools, factories, public buildings, theatres, churches, prisons, &c., in relation to health. 2. The disposal of noxious gases in mines and manufactories. 3. Drainage: of the soil of town-sites; of dwellings, and of buildings of all kinds. 4. Water: collection and storage; construction of wells, tanks, and reservoirs; the prevention of the pollution of rivers, streams, &c.; the filtration, purification, and distribution of water. 5. Cleanliness: the removal and disposal of filth, night-soil, and all kinds of refuse. 6. Food and drink: including the use and abuse of stimulants; adulteration, &c. 7. Contagious diseases: the prevention of their origin and their spread; disinfection; isolation; contagious diseases hospitals; disinfecting establishments for clothing, bedding, &c.; disinfecting vehicles; quarantine. 8. The registration of disease. 9. Poisons: in food and drink, clothing gases, wall-papers, &c. 10. Recreation. 11. The keeping and killing of animals for food.

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DIETETICS.

PROFESSOR M'KENDRICK, of Glasgow, is giving a popular course of lectures on Food, Digestion, and Nutrition in Inverness. It may be useful to cite the professor's estimate of the daily quantity and kind of nutriment required by a healthy man. The lecturer pointed out that the typical diet was 4½ oz. albuminates, 3 oz. fat, 14 starch, and 1 salts—altogether about 23 oz. of dry food, with from 70 to 80 oz. of water. A man who performed hard work—say a labouring man—required 6 oz. albuminates, 4 oz. fat, 17 starch, 1·3 salts—altogether about 28 oz. of dry food, with from 70 to 90 oz. of water.

Sacul would do wisely to put himself in direct communication with the Secretary to the Commissioners in Lunacy.

Mr. W. Longtry might consult Tilbury Fox's work on Skin Diseases.

"BONE-SETTING" AT THE CLINICAL SOCIETY OF LONDON.

To the Editor of THE LANCET.

SIR,—"A countryman, aged fifty, dislocated his shoulder. The dislocation was at once reduced, and the arm bandaged to the side. Nine weeks afterwards he came to London for advice. It was found that the limb was so stiff that he could not move the elbow more than two or three inches in any direction, and any movement, whether on his part or during examination, produced great suffering."

This case, with other three somewhat similar, formed a text for a very interesting debate at the meeting of the Clinical Society of London on the 9th ultimo, introduced and led by Mr. Howard Marsh, who showed how successfully such cases may be treated, the joint set at liberty, and the pain arrested, by placing the patient under an anæsthetic, and then putting the joint in a series of short jerks through all its natural range of movement, numerous adhesions around the joint being felt to give way.

Mr. Marsh and the subsequent speakers referred to the frequency with which such cases fall into the hands of "bone-setters," and it would almost seem that the chief object sought in the debate was to prove to country surgeons that their metropolitan brethren understand, and can cure, such conditions of the joints if only they are sent up to them; indeed the President is reported to have said exactly this.

Now, with all due respect to these heads of our profession, I humbly submit that there is another and most practical and important lesson deducible from such cases, and one wholly and entirely left out of consideration in the discussion referred to, and that is (prevention being better than cure), How may such stiffness of joints following their luxation be prevented? The writer of this letter has reason to fear that there has been, and is a serious defect in the written and oral teaching of our schools in this respect. It is generally taught, and commonly practised, that after reduction of a luxation the limb must be kept firmly fixed and at rest with splints and bandages for two or three weeks. Now, if this *only* be done, a stiff joint must result; for seeing that laceration of the synovial membrane, rupture of the capsular ligament, stretching or tearing of other ligaments, *must* take place when a joint is dislocated, and effusion of blood and its fibrine *probably* does, what is more likely to happen, if the limb is fixed in one position, than that the fibrous tissue around the joint should be so consolidated, so shortened, and so agglomerated as to prevent motion of the joint when it is attempted in a few weeks' time? Observing that such results happened often, and made much work for the bone-setters, the present writer early adopted the theory and practice which he has for upwards of a quarter of a century diligently taught his pupils—viz., that the *reduction* of a dislocation is almost the least important part of its treatment; the *immediate, daily,* and *free* employment of passive motion, to the full extent of its normal capabilities, being as necessary to a successful restoration of the joint as the reduction. Of course, after each exercise of the joint it is placed at rest, with strict limitation of its movements until the next day, when the passive exercise is repeated. The result has in every instance fully justified the practice, and the writer has been often surprised to observe the small amount of pain attending the manipulations when begun early, and conducted gently and carefully. The question still remains, how far this practice is warrantable in cases of fracture near to or into a joint, and of fracture with dislocation. Of course displacement of the fragments is most carefully to be avoided; but, inflammation being absent, it would seem better to secure the integrity of the joint by early and gentle movement than to spend all our thought and care on a union which, after all, nature is almost sure to effect if but a reasonable amount of rest and adaptation of the fragments be maintained.

Your obedient servant,

Rugeley, May, 1880. D. H. MONCKTON, M.D., F.R.C.S.

ECZEMA.

To the Editor of THE LANCET.

SIR,—In reply to your correspondent "M.R.C.S.," in your last impression, permit me to state that within the last twelve months two cases such as he describes have come under my observation, and both have yielded to the following treatment, although they had previously proved intractable:—First, the affected part was painted over with pure carbolic acid; as soon as this became dry, collodion was similarly applied. This was repeated every fifth day. At the same time solution of arsenic was administered three times daily.

Yours faithfully,

Liverpool, May, 1880. W. H. LAMBART, M.D.

HERPES CIRCINATUS.

MR. H. E. CAUTY, Surgeon to St. George's Hospital for Diseases of the Skin, Liverpool, writes as follows:—

Several articles have lately appeared in your columns in reference to herpes. Without entering into the question as to whether the symptoms and appearances described amounted in some of the cases to more than eczema, the following case may perhaps merit, from its rarity, record in your pages. The varieties of herpes which depend on the locality attacked are numerous. I had some time ago a case of zoster, in which the whole mucous surface of the mouth, tongue, fauces, &c., as far as could be seen, was so thickly studded with vesicles that an ordinary pin's-head could not have been placed on a free spot; but the varieties which take a definite form are very rare. The ordinary term of herpes circinatus is merely vesicular ringworm, in which the vesicle is accidental, very transparent, irregular in size and shape, not accompanied or surmounting a swollen inflamed base, nor producing any bleeding when ruptured.

A. L——, aged twenty-six, married, had six children, and now six months pregnant, presented herself at the hospital, complaining of a rash on her arms. On looking at these forearms, solitary patches, the size of a shilling, are noticed surrounding a varied extent of red, inflamed skin, and separated from this inflammation by a border of broken segments of circles of herpetic eruption, with inflamed, swollen base, and a vesicle more or less perfect on the swelling. Some of the solitary patches are just one vesicle; others are a perfect circle, the size of a shilling, whilst one just exceeds a florin in size. Some of the vesicles have been broken and scratched, and there are several points where there has been bleeding. The patient has had a similar attack twice before in the same locality, and when not pregnant. She describes the spread of the eruption as always beginning from a point or centre, and then spreading from the circumference quite evenly until the patches coalesce to form the gyrate border. She has had the present eruption six weeks. There is very little on the back of the left forearm; none on the right. The whole extent covered on the left arm is about three inches square, extending more nearly to the wrist than on the right; but on this latter there is one large patch beautifully defined, extending 5 in. by 3 in., the centre being pale, gradually deepening in colour as the edges are approached. The vesicles contain opalescent or semi-purulent lymph, varying from nearly clear to waxy yellow. General health fair; countenance pallid; pulse 78, full; irritation moderate, but at times severe; some burning pain; sleeps badly; bowels regular; urine plentiful and clear. She was ordered to dust the parts with a powder of starch, zinc, and lycopodium, and to take some acetate of ammonia and potash. At the end of a fortnight the large patch was clear; but the burning pain still continuing severe in some of the smaller rings, a lotion of sulphate of zinc and gum was directed to be kept continually applied. In another fortnight she was well, the whole attack having lasted a little more than ten weeks, the previous attacks never having lasted more than one week.

I merely wish this case to be recorded. It is too rare to draw any inferences as to a neurotic theory or the reverse; nor was there anything special in the treatment, nor, except in the entire absence of any constitutional disturbance, anything remarkable in the general features.

Practising Physician.—Bergeron, we believe, has advocated the use of hydrofluoric acid, evaporated in the proportion of a grammas to each cubic metre of air in the sick-room, and thus inhaled by the diphtheritic patient.

Dr. J. H. Cameron.—We think our correspondent acted rightly, and see nothing in the course he took that should give offence. Mr. F. and and W. B. G. if fully explained.

Mr. D. G. Formerly.—We do not know.

SUPRA-PUBIC PUNCTURE OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—My attention has just been drawn to Mr. Teevan's letter in THE LANCET for April 17th, in which the recommendation supra-pubic puncture for impassable obstruction are preferable to tapping per rectum or aspiration. For a brief but complete vindication of this operation, and my own originality in adopting it, allow me to refer your readers to a paper on the subject in the *British Medical Journal* for Jan. 17th, 1879. I cannot understand how it is that the operation has been so little known or practised. It is just barely mentioned in "Druitt," and I never yet came across the surgeon who practised it; yet, as Mr. Teevan says, it is the best—perhaps the only—means of affording relief in a large number of cases. It can be performed in a moment by any surgeon, and gives complete and permanent relief until the natural passage is restored. Tapping by the rectum has many objections, and is not always practicable; whilst aspirators are not always at hand or in order, and both tapping per rectum and aspiration are only temporary expedients, needing perhaps frequent repetition. As a matter of fact, I have never seen any bad consequences from tapping above the pubes, even when preliminary incision of integument has been practised—a proceeding, however, which is quite unnecessary, and might be objectionable. I have no doubt that Mr. Teevan's advocacy of this simple but efficient means of rescuing a patient class of cases from an otherwise speedily fatal ending will receive the attention and success it deserves.

Yours &c.,

WM. J. MARSH, M.R.C.S., &c.

Bethnal-green Infirmary, Cambridge-heath, May 1st, 1880.

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MEDICAL CHARITY.

THE abuse of gratuitous medical treatment at hospitals and dispensaries is just now engaging the serious attention of our cousins across the Atlantic. Several of the Medical Societies have told off Committees to report on the matter, and it may be hoped the result of their labours will serve to throw light on the best way of meeting the evil not only in the States, but elsewhere.

Mr. R. Harrison's paper will be inserted in an early number.

CARBOLIC ACID IN TYPHOID FEVER.

To the Editor of THE LANCET.

SIR,—As, according to the old Scotch proverb, "Every little makes a mickle," I take the liberty of contributing my small quota of experience as regards the value of carbolic acid in enteric fever.

During last year, while working in Carlisle as medical officer to the Fever Hospital, I employed this remedy in some fifteen cases of enteric and in six cases of typhus. Like your correspondent Mr. Giles, I found it quite ineffectual in cutting short the course of the fever in either of these diseases. The *rationale* of its employment by me in typhus, and partly also in enteric, was as a specific; the theoretical basis being that if in these diseases there be active contagia in the circulation, then the introduction of an antiseptic which is known to pass through the kidneys unchanged might be expected to destroy such contagia, and so bring the disease-process to a stop. In this, however, the theory was not sustained.

In enteric fever, however, the employment of carbolic acid was indicated for another purpose as well—viz., to act as a local application to the ulcers of the bowel. Whether it fulfilled this indication or not it is difficult to say; but at any rate none of the cases to which it was employed suffered from any severe abdominal complication. But if it did not cut short the duration of the disease, I found that both in enteric and in typhus the temperature was, at least apparently, lessened by the use of carbolic acid. For experimental purposes in nearly all my cases I allowed a day or two of non-interference to alternate with a few days of carbolic-acid treatment, and in all I found that during the latter the temperature was reduced, and especially the evening temperature, while during the period of non-interference it rose again. My cases were all in the comparatively young, from fourteen to twenty-five years of age, and I gave, as a rule, from two to three grains of the acid every four hours. Occasionally during the administration of the acid the temperature, which had fallen, commenced to rise again, but gave way once more to an increased dose. In none of my cases, however, was I satisfied that the reduction in temperature was solely due to the remedy. The alternations in temperature are so irregular in many wholly untreated (medicinally) cases of enteric that the suspicion was always present that the coincidence of reduced temperature and carbolic acid administration might be, after all, merely fortuitous.

I regret that I am unable to give particulars of any of my cases, my notes and temperature-charts being at home; but, even if I had them here, my cases were too few in number to be really of much value. From what I have seen of the carbolic-acid treatment of fever, however, I think it is worth extended trial, perhaps with increased doses.

I remain, Sir, yours faithfully,

Vienna, April, 1880. TOM HUNT, M.B.

Army.—1. Not at present.—2. No.—3. In August; the exact date will be notified in our columns.—4. Yes, with moderate care and prudence.

Dr. Octavius Sturges.—Yes.

W. M. W.—Glen's Public Health Laws.

EFFECT OF PODOPHYLLIN ON TASTE.

To the Editor of THE LANCET.

SIR,—I have frequently remarked the singular effect of podophyllin on the sense of taste when exhibited in small, repeated doses. Patients have told me that they could not distinguish one food from another during the treatment; and last week a gentleman, for whom I had prescribed it in doses of one-thirtieth of a grain three times daily, returned to me, after three doses had been taken, with his tongue and neighbouring glands greatly swollen, profuse salivation, and entire loss of taste. A larger or purgative dose of this drug has not produced these results.

Will any of your readers kindly inform me if they have noted similar results from the use of podophyllin?

I am, Sir, yours faithfully,

Albert-street, Regent's-park, April 26th, 1880. LOUIS LEWIS, M.D.

THE RIGHT OF SURGEONS TO RECOVER IN MEDICAL CASES.

To the Editor of THE LANCET.

SIR,—The other day, in the Leeds County Court, a surgeon sued a patient for medical attendance, with the result of being nonsuited by the Judge on the ground of insufficient qualification. From this decision it appears that some of the brightest ornaments of our profession, including Sir James Paget, Erasmus Wilson, and others, are legally incompetent to discharge the duties, if so disposed, of a wide and important field of practice. Besides, in actions of this kind, who is to decide between what is strictly medical and surgical? For although I presume a surgeon might not recover fees in a case of typhus, his claim in one of eczema would be universally admitted.—Yours faithfully,

Leeds, May 4th, 1880. CLARENCE FOSTER, M.R.C.S.

Mr. W. H. Bull.—We are not aware of any pamphlet or article upon the subject of Carbolic Acid Poisoning; but several isolated cases have been recorded of late years in various journals. We may refer our correspondent, for example, to THE LANCET for 1868, 1869, 1871, 1873 1875, 1876 (vol. ii., p. 871), 1878 (vol. ii., p. 511), for details of cases.

Gyas.—Consult a practitioner.

NOTE ON THE TREATMENT OF SUPPURATING BUBO.

To the Editor of THE LANCET.

SIR,—The method of treating chronic patellar bursitis by Dr. Austin, of Tongue, as published in a number of the LANCET, induces me to make a note on the treatment of suppurating bubo by a similar method.

It is the usual practice, I believe, to treat a suppurating bubo, resulting from a primary venereal sore, by making a free incision along the long axis of the gland. Some surgeons even recommend a crucial incision. This mode of emptying the gland cannot be recommended, as far as my experience goes, in the case of patients suffering from certain cachexiæ, such, for instance, as that peculiar to residents in malarious districts. In Upper Sindh, for example, where the constitutions of patients are more or less saturated with malaria, and further debilitated by exposure to the extremes of heat and cold of this climate, it is observed that in certain seasons the most trivial wounds require a protracted course of treatment, the *vis medicatrix naturæ* being considerably below par. It would necessarily follow that the treatment of bubo by incision should, if possible, be avoided in these instances, and a less severe method of treatment be adopted to gain the same end. With this object in view, I have been in the practice of treating suppurating buboes by passing a horsehair drain (composed of about a dozen or so of horsehairs) by means of an ordinary curved suture needle, in the same way as you would a seton, in the long axis of the gland, tying the ends loosely together, and covering the opened points through which the matter drains with a piece of lint soaked in carbolic oil. By moving the loop every morning the bubo is gradually emptied, and at the end of three or four days the horsehair drain is removed, and slight pressure applied by means of a pledget of lint and a bandage. Horsehair, on account of its non-absorbing and non-irritating qualities, is to be preferred to almost anything else, the object in view being that it should act merely as a drain, and in no wise like a seton. By this method of treatment, combined with the usual internal remedies, an incision and subsequent cicatrix are avoided, and (what is of more consequence) a rapid recovery insured.

Your obedient servant,

M. L. BARTHOLOMEUSZ, M.B.,
Surgeon, 2nd Sindh Horse.

Quetta.

Veritas.—The issue of the General Order relative to civil administrative appointments has so altered the conditions affecting the Indian Medical Department that we do not consider it necessary or advisable to publish our correspondent's letter.

Mr. Russell Steele.—We are not aware.

THE LOCAL TREATMENT OP ERYSIPELAS.

To the Editor of THE LANCET.

SIR,—In treating erysipelas locally, most cases derive little benefit from Velpeau's or Higginbotham's applications. I wish, therefore, to bring under the notice of your readers a method which I have seen produce excellent results. It consists in painting the surface over with tincture of the perchloride of iron, at the same time that the metal is administered internally. It invariably arrests the progress of the inflammation, and if applied early will abbreviate its course. Sustaining treatment is demanded in the usual way, and a careful application of the tincture twice a day for a few days must be observed. Under this routine I have witnessed the worst cases terminate favourably. I have no doubt but the inutility of most other preparations has been now fully recognised, and any serviceable remedy must be a desideratum.

In conclusion, I beg to disclaim any originality in the adoption of this plan, but merely to inform your junior readers, who, like myself, may not have seen mention made of it in the text-books.

Yours truly,

Salford, Manchester, April, 1880. P. J. LENIHAN, L.R.C.S.I., &c.

*** This method is, of course, a revival of an old procedure, rather than a novel suggestion; but it is worthy of attention.—ED. L.

ERRATA.—In the pass-list of the Royal College of Physicians, published in our last issue, the address following the name of Cornelius B. Fox, M.D., should have been "Ilfracombe," not "Chelmsford."—In the Edinburgh College of Physicians and the Glasgow Faculty of Physicians and Surgeons' list, the name "M. H. Guest" should read "A. H. Guest."

Bristol Mercury, Northampton Daily Reporter, Indian Medical Gazette, Calcutta Medical News, Australian Medical Journal, Boston Medical and Surgical Journal, Deutsche-Amerikanische Apotheker-Zeitung, San Francisco Western Lancet, El Jurado Médico-Farmacéutico, Pharmaceutical Journal, Watford Observer, Edinburgh Courant, La Crónica Médica, Guy's Hospital Gazette, Morning Chronicle, Echo, Analyst, Education, Rotherham Advertiser, Scotsman, Essex Herald Il Morgagni Giornale, &c. &c., have been received.

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COMMUNICATIONS, LETTERS, &c., have been received from—Dr. S. Wilks, London; Mr. G. Lawson, London; Mr. S. Gamgee; Dr. Althaus, London; Mr. Reade, Gundle; Mr. Phillips, Plymouth; Dr. R. Biggs, Galway; Mr. Wesley, London; Mr. Heppel; Dr. Constable, Donington; Mr. Barnard; Mr. R. H. Walker, St. Leonard's-on-Sea; Mr. Blore, Canterbury; Mr. F. Goedecker; Mr. Piper, Chester; Mr. H. E. Platt, Wellingborough; Mr. Chaplin, Uckfield; Dr. Marcy; Dr. Monckton; Mr. S. M. Crosthwaite, Faversham; Mr. Allen, Cambridge; Dr. Day; Dr. MacCormac, Ballynahinch; Mr. Gregory, Bristol; Mr. A. Swann, Batley; Mr. Grattan, Cork; Dr. Byrom Bramwell; Mr. Callum, Tadcaster; Mr. H. Vincent; Mr. T. Hammond, Halifax; Dr. Lambart, Liverpool; Dr. Poggi, Audiem; Mr. Langtry; Dr. Nagle, New York; Mr. Logiman, Rock Ferry; Dr. Reynolds, Louisville; Mr. J. Jones, London; Mr. Calder, Liverpool; Mr. C. Foster, Leeds; Mr. Godrich, London; Dr. May, Tottenham; Mrs. E. Jack; Dr. Taaffe, Brighton; Mr. Lodor; Mr. A. H. Guest; Mr. Leeming, Kendal; Mr. Sherlock, Powick; Mr. Tyrer, Mansfield; Mr. H. Phillips; Mr. Milman, London; Mr. H. T. Wood; Mr. Jackson, Sheffield; Mr. Young, Chilton Polden; Dr. Ponikło, Cracow; Dr. Wicks, Newcastle-on-Tyne; Mr. Marsh, London; Dr. Hooper; Dr. L. W. Marshall, Nottingham; Mr. Brigant, Winchester; Mr. Harris, London; Dr. O. Sturges, London; Mrs. Sach; Lieut.-Col. Forester; Mr. Brewin, Richmond; Dr. Kennedy, London; Mr. G. Fennell; Mr. J. Sibree, Stroud; Mr. Anderson, St. Andrews; Dr. C. B. Fox, Ilfracombe; Dr. Miller, Perth; Mr. Rowe, Tonbridge; Mr. C. M'Dowall, Fifeshire; Mr. Bourke, Parkgate; Mr. Sweeting, Peterborough; Mr. Northcott, Ealing; Rev. T. J. Berwick, Buntingford; Dr. Hollis, Brighton; Messrs. Cadbury Brothers, Birmingham; Mr. Healy, Newtown; Dr. Mumby, Ryde; Mr. Appleton, Highgate; Mr. Radford, Ben Rhydding; Mr. Hughes, Ombersley; Mr. Blair, Alnwick; Messrs. Mottershead and Co., Manchester; Mr. R. Canning; Dr. Ben. Watson; Professor M'Kendrick, Glasgow; Mr. Admond; Dr. J. Rogers, London; Mr. F. M. Robertson; Mr. J. Hardie, Manchester; Mr. Cullimore; Mr. Paramore; Mr. Colnaghi; Mr. Goodsall; Mr. Brightmgall; Rev. Mr. Gubbins, Blessington; Quæ nen Religio; The Assistant-Secretary to the Government of Bengal; Inquirer; Veritas; A. G. P.; An Old Subscriber; J. B.; G. C. P.; W. M. W.; Senex; Enquirer; Potestate; R. P.; N. M., Shrewsbury; M.R.C.S.; Englishman; Gyas; &c. &c.

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Medical Diary for the ensuing Week.

Monday, May 10.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, May 11.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. R. H. Scott, "On Wind and Weather."
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. C. H. E. Carmichael: "Notes on Prehistoric Discoveries in Central Russia." — Mr. W. D. Gooch: "Notes on the Occurrence of Stone Implements of the Surface Period in South Russia." — Mr. A. Wylie: "Notes on the Western Regions."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Mr. L. Tait: (1) "Third Case of Extrauterine Gestation treated by Abdominal Section." (2) "On Treatment of Pelvic Suppuration by Abdominal Section and Drainage."—Mr. Fred. Eve, "On a Case of Sub-coracoid Dislocation of the Humerus without Laceration of the Capsule, &c."

Wednesday, May 12.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M. — 5 P.M. Mr. F. R. Fisher, "On Club Foot."
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. Chas. Stewart, "On the Histology of Grantia Compressa." — Rev. H. H. Higgins, "On the Plasmodia of Myxomycetes."

Thursday, May 13.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Tyndall, "On Light as a Mode of Motion: Theories of Light and Colours."

Friday, May 14.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—7 P.M. Conversation and Exhibition of Objects.
ROYAL INSTITUTION.—8 P.M. Evening Meeting.—9 P.M. Lord Rayleigh, "On Certain Aspects of Social Democracy in Germany."
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Barwell, "On Section of the Femur above the Small Trochanter for Angular Anchylosis of the Hip." — Dr. Greenhow: (1) "Ten Cases of Rheumatic Fever treated with Salicin." (2) "Fifty Cases of Rheumatic Fever treated with Salicylate of Soda." — Dr. Grailly Hewitt, "On a Case of Acute Hysterical Vomiting of ten months' duration, caused by Displacement of the Uterus."—Mr. Henry Morris, "On two Cases of Disease of the Mastoid Bone, in one of which a severe attack of Herpes of the Face followed Thrombosis of the Jugular Vein."—Dr. Stephen Mackenzie will show a Case of Anterior and Posterior Polio-myelitis following Small-pox.

Saturday, May 15.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor H. Morley, "On the Dramatists before Shakespeare."

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad more than eight days after publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and prepaid as such.

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THE

Lumleian Lectures

ON

THE DIGESTIVE FERMENTS, AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians,

BY WM. ROBERTS, M.D., F.R.C.P., F.R.S.,

PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY; PROFESSOR OF CLINICAL MEDICINE TO THE OWENS COLLEGE.

LECTURE III.—PART III.

NUTRITIVE VALUE OF PEPTONISED FOOD.

AT the outset of this inquiry we are met with the question, Is it certain that the ultimate products of digestion are of equal nutritive value to the mixed transitional products which are produced in succession, and probably absorbed as the food is gradually transformed in the alimentary canal? in other words, are maltose and peptones alone as valuable to the economy as a mixture of these substances with the several dextrines and hemipeptones which are presented to the absorbent surfaces in the course of natural digestion?

With regard to the products of starch-digestion, no direct experiments have been made on the nutritive value of maltose, and we can do little more than conjecture that the intermediate dextrines have a usefulness of their own. That they are absorbed seems proved (as might have been expected from their known diffusibility), for they have been detected in the blood, and especially in the blood of the portal vein.

With regard to peptones, we have more information. It was naturally assumed by the earlier observers who identified peptone as the chief ultimate product of digestion that this was the form under which proteids were taken up by the absorbents, and introduced into the blood for the nutrition of the tissues. But some ten years ago doubts were cast on this conclusion. It was alleged by Brücke and Voit that the nutrition of the tissues was maintained not by peptone, which was unfitted for this purpose, but by soluble albumen, which was absorbed in the undigested state from the *primæ viæ*, and that the office of peptone was a subordinate one, resembling that of gelatin, and consisted in aiding to preserve the tissue-albumen from too rapid destruction. Direct observations on the nutritive value of peptones have, however, shown this paradoxical view to be untenable. As the point is one of importance, I will endeavour to lay before you the proofs which have been already adduced of the food value of peptones, and I will supplement these by some observations by myself.

P. Plosz[1] was the first to put this question to the test of direct experiment. He fed a puppy dog, weighing 1302 grammes, with an artificial compound made of fat and sugar, in imitation of milk, but in which the casein was replaced by artificially-digested fibrine. In the course of eighteen days of this diet the dog grew and increased 501 grammes in weight.

R. Maly[2] performed a similar experiment on a pigeon. He first fed the pigeon for several days on a regulated quantity of wheat until he had ascertained the quantity requisite to keep the bird in a state of nutritive equilibrium, in which it neither gained nor lost weight. He then made an artificial corn from starch, fat, gum, salts, and water, but in which the gluten was replaced by fibrine-peptone, and fed the pigeon with the same quantity of this artificial corn as he had before given of the natural corn. Under this novel diet the bird, after a short apprenticeship, not only maintained its weight, but actually put on flesh. This experiment seemed to show that peptone was even superior to natural gluten as a nutriment.

It was, however, objected to these experiments that they did not rigorously prove that peptone could build up the tissues, inasmuch as the increase of weight might have been due to an excessive accumulation of fat or of water, and that there might have been not an increase, but a decrease, of the structural elements which contained nitrogen.

To meet these objections, Plosz and Gyergyai[3] instituted a third set of experiments on a dog weighing 2753 grammes. He was first brought down by a diet of simple water to a weight of 2531 grammes. He was then fed on a mixture composed of sugar, starch, and fat, and containing, in addition, five per cent. of purified peptone. Of this mixture about 400 grammes were daily administered to the animal for a period of six days. In these six days the dog took in with his food 14·45 grammes of nitrogen, but the total of the nitrogen excreted by the urine and fæces only amounted to 13·46 grammes, so that nearly one gramme of nitrogen had been retained in the body of the animal, which had increased in weight 259 grammes. This experiment went to prove that peptone served to repair the wear and tear of the nitrogenised structural elements, and even contributed something to the increase of weight.

Adamkiewiez[4] by a still more rigorous method, in a laborious series of experiments on a dog, which was fed on a diet wherein the only possible source of nitrogen was peptone prepared from blood-fibrin, arrived at the conclusion that peptone supplied nitrogen to the solid tissues, and that it possessed a nutritive value equal to albumen, or even slightly superior; and that therefore it could not be looked on as a bye-product of digestion, but as the chief resultant of the transformation of proteids in the alimentary canal.

The experiments above cited seem sufficient to settle definitely the question raised by Brücke and Voit, and to establish the nutritive value of peptone as a source of nitrogen to the tissues. It seemed, however, desirable to obtain direct proof of the nutritive value of peptonised milk as compared with the natural article. My observations led me to the conclusion that it was far easier to get a supply of peptonised aliment suitable for invalids by the artificial digestion of milk by pancreatic extract than by any other method. But in so important a matter as the feeding of invalids, inference and conjecture seemed hardly a sufficient basis for actual practice.

The questions I proposed to myself were—(1) Is artificially digested, or peptonised, milk alone sufficient to sustain nutrition? and (2) is it as efficient in this respect as natural milk? For the purpose of answering these questions I procured four kittens, of the same brood, eight weeks old. Kittens at this age thrive perfectly on an exclusively milk diet. Two of the kittens were fed on natural milk, and the two others on milk previously digested by pancreatic extract. The digestion of the milk in the latter case was carried out to full completion—that is to say, until the milk became greyish and bitter, and no longer gave any precipitate with acetic acid, nor even with nitric acid. The animals were permitted to have as much of their respective foods as they could consume. The experiment was continued for a period of twenty days. The quantity consumed by each pair was as nearly as possible the same. All four continued in perfect health, and took their nutriment greedily. I was surprised to find that the pair fed on peptonised milk showed no repugnance to the bitter taste of their food, but appeared to relish it quite as well as their companions did their natural milk. The following table exhibits the gain in weight at the end of twenty days by each of the four kittens. The weights are given in grammes, and in round numbers.

Diet.	Initial Weight.	Weight at the end of 20 days.	Increase of Weight.	Increase of Weight per cent.
Natural milk ...	No. 1—338	514	176	52
	,, 2—558	838	280	50
Fully peptonised milk	,, 3—403	626	223	55
	,, 4—374	562	188	50

The table shows that the percentage increase of weight was very nearly alike in all four animals. No difference could be perceived in the sleekness of their coats nor in the vivacity of their gambols. The experiment proves that

[1] Pflüger's Archiv f. d. ges. Physiologie, 1874, s. 323. [2] Ibid., s. 585.
[3] Pflüger's Archiv, Bd. x., 1875, s. 536.
[4] Natur und Nahrwerth des Peptons. Berlin, 1877.

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peptonising the milk in no degree spoils its nutritive value. It also shows, as might have been expected, that in healthy animals with abundance of digestive power there is no advantage to be gained from the administration of food in a predigested state. The quantity of food which is taken and absorbed appears to be regulated, not so much by the quantity which can be digested as by the quantity which can be assimilated. This experiment had an interesting sequel. After Nos. 3 and 4 had been fed on *fully* peptonised milk for a period of twenty days, they were fed for a period of ten days on *partially* peptonised milk. By using a less quantity of the pancreatic extract in proportion to the milk, and by allowing the process of artificial digestion to go on for not more than half the time allowed in the previous experiment, only a partial conversion of the casein was effected. As nearly as I could judge by the precipitate caused with acetic acid, the casein was digested to about the extent of one-half. Under these circumstances I certainly expected that Nos. 3 and 4 would gain weight as before, and would continue to thrive as well as Nos. 1 and 2. It might have been anticipated that under these new conditions the proper digestive powers of Nos. 3 and 4 would come into play, and complete with ease the unfinished work of the artificial process. But events did not pass exactly as I anticipated. The annexed table shows the actual results. The weights, as before, are given in grammes.

Diet.	Initial Weight.	Weight on third day.	Weight on fifth day.	Weight on seventh day.	Weight on tenth day.
Natural Milk	No. 15—514	551—gain 37	570—gain 19	593—gain 23	618—gain 25
	,, 2—838	900—gain 62	936—gain 36	993—gain 57	1063—gain 70
Half-peptonised Milk	,, 3—626	693—gain 67	687—loss 6	681—loss 6	693—gain 12
	,, 4—562	645—gain 83	638—loss 7	648—gain 10	683—gain 35

No interval was allowed to elapse between the two sets of experiments, so that the initial weights in the second set are the same as the terminal weights in the first set. The abrupt alteration in the diet of Nos. 3 and 4 produced a marked disturbance in their nutrition. But there was no declension in their general well-being, and they continued to take their modified diet with the same avidity as before. In the first three days Nos. 3 and 4 showed an unusual increase of weight—an increase quite out of proportion to that of their companions. Then came a check; in the next four days they not only showed no gain, but showed even a slight loss of weight. In the last three days they began to gain weight again, and were evidently recovering from the temporary check caused by their change of diet. The explanation of this series of events which has presented itself to my mind is the following, but I by no means wish to lay stress on its accuracy. It seemed as if the enforced rest imposed on the digestive organs for a period of twenty days, during the use of fully predigested food, had temporarily diminished their natural vigour—just in the same way as the disuse of a limb diminishes for a time the strength of its muscles. During this first period, immediately following the change of diet, the unemployed digestive powers were suddenly called upon to resume their wonted activity; but, owing to their enfeeblement from disuse, they were unable to respond to the call with due promptness, and undigested materials accumulated in the intestine. This accumulation accounted for the unusual increase in weight during the first period. During the next period the digestive embarrassment made itself felt, and gave a check to the processes of growth and nutrition, and the animals ceased to grow and gain weight. During the last period the temporary enfeeblement of the digestive organs was passing away, in proportion as renewed exercise was restoring them to their original vigour, and growth and increase of weight again commenced.

Whether this explanation be trustworthy or not, the lesson indicated by it is probably a true one—namely, that, except in extreme cases, when the digestive power is wholly lost or in complete abeyance, it is more advantageous to use a food which has been subjected to partial artificial digestion than a food in which the process has been carried out to completion. If the patient possess any digestive power at all, it is better that that power should be kept in exercise than that it should be permitted to deteriorate still further from total disuse. This is in agreement with the rule we apply in other cases of enfeebled function, according to which we endeavour to combine partial rest with moderate exercise.

JAMES DEWAR, F.R.S., has been reappointed Fullerian Professor of Chemistry at the Royal Institution.

TEWKESBURY RURAL HOSPITAL.—New wards and offices, comprised in a new wing, are about to be added to this building through the liberality of Mrs. Townend, of Puckrup Hall, who has placed £2000 at the disposal of the governors of the hospital for the purpose. The addition will be called the "Townend wing."

Clinical Lecture
ON
THE INFLUENCE OF VARICOCELE ON THE NUTRITION OF THE TESTICLE.

By J. C. OGILVIE WILL, M.D., F.R.S.E.,
SURGEON TO, AND LECTURER ON CLINICAL SURGERY AT, THE ABERDEEN ROYAL INFIRMARY.

GENTLEMEN,—You have heard that in this case the varicocele which had resulted from an injury to the man's left testicle was of great size, and that the nature of the swelling could be diagnosed without even the slightest manipulation of the parts; for the contour of the enlarged veins, and even their blue colour, were both seen through the scrotal walls. You have also learnt, from the clinical record of his case which I read to you, that the testicle of the affected side was so wasted that it had entirely lost the form usually presented by that organ, and that it seemed to be a mere appendage to the diseased veins to which it was attached. The effect of varix of the spermatic veins upon the nutrition of the testicle is a matter of dispute, some writers holding that its presence does not in any way endanger the integrity of the testis, while others aver that the presence of varicocele and the proper performance of the function of the organ in question are incompatible. Under these circumstances it seems unadvisable to speak dogmatically. I shall therefore lay before you some of the opinions advanced by those whose conclusions are, from the positions they occupy, or have occupied, worthy of our careful consideration. The first is that of one of the greatest of British surgeons, Sir James Paget, who in his recent "Essays" states that "there are some to whom, whether through ignorance or misguidance or hypochondriasis, a varicocele is a source of misery and dismay. They look upon it as a forerunner of impotence and of wasting testicles, and I know not what besides. All such fears are groundless. Varicocele is troublesome, because of the sense of weight which sometimes, though far from always, attends it, and which is much increased by long standing or walking. In some cases, too, the dilated veins, like varicose veins in the leg, are apt to become inflamed or very sensitive. But this, I believe, is the widest extent of the harm that a varicocele ever does. I do not believe that it ever produced wasting of a testicle, or impotence, or any such thing." This opinion is satisfactory in one way, at any rate—it is decided enough; but *audi alteram partem* before you rush to a hasty conclusion. Mr. Curling, whose work on "Diseases of the Testicle" holds the first place not only in this country, but elsewhere also, from which the following is a quotation, views matters in a different light. "Varicocele," he writes, "tends

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gradually to impair the nutrition and diminish the secreting powers of the testicle, hence the importance of not neglecting this complaint, though it may produce no painful symptoms. A softening and partial atrophy of the gland, coexisting with varicocele, has come under my notice in numerous instances; indeed, in nearly all the cases in which there was a decided dilatation of the spermatic veins on one side only, the testicle on that side was the smaller of the two." Now, gentlemen, it is utterly impossible to reconcile these two statements, and, mark you, both statements of honest men and accurate observers, and if we go further we find the same discrepancy. Sir Astley Cooper wrote that "varicocele should scarcely receive the title of a disease, for it produces in the greater number of cases no pain, no inconvenience, and no diminution of virile powers," and Professor Humphry of Cambridge has stated that "this affection is rarely productive of any decidedly injurious effect upon the testicle or upon the character of its secretions," while Mr. Barwell, who has had a large experience of such cases, believes that the "testicle from which the varicocele springs is not of much use." Mr. Henry Lee has placed a case upon record in which the testicle had nearly wasted away; and Gosselin reported a case which undoubtedly proves that the testis may waste and that its functions may be destroyed by varicocele. He had a patient the veins of whose left cord were varicose, the testicle of that side being one-third smaller than that of the opposite; an attack of epididymitis supervened on the right side, and on examination of his semen no spermatozoa were found. Mr. Percival Pott met with three cases of varicocele where the testicles were so wasted as to be scarcely perceptible. Mr. Jonathan Hutchinson takes a totally different view of the whole matter, for he has stated that "the generative function being arrested by central nerve disease, the glands which minister to that function waste, the nutritional innervation of the testes and of their vessels is disturbed, the arteries shrink, and the veins dilate." There are, however, several powerful arguments against the acceptance of this view; to one of which I shall now allude, and which seems to me to be of itself sufficient to invalidate the assumption referred to. It is the effect produced by radical treatment of varicocele upon the condition of the testis. Many surgeons have found, and I include myself among the number, that after operation the testicle gets firmer and larger, and that it may ultimately become of normal size. Mr. H. Lee met with two cases in point which seem to be conclusive: for in the one the gland of the affected side had nearly wasted away, and eleven months after operation it was nearly of normal size; in the other the testicle was so pendulous and loose that it hung towards the outside of the left thigh when the patient was recumbent; sometimes after operation the parts had regained their usual appearance. Mr. Barwell not long since published a paper in THE LANCET, in which he stated that in each one of the thirty-two cases where he had operated the testicle of the affected side was flabby and wasted, but "in every case the testicle has begun to resume its size and hardness soon after operation. Those that returned to observation after a year or more were found to have recovered normal condition except one. Two cases I saw after five and after seven years. The former had had, through bad habits, a double varicocele; the testicles, previous to operation, were very small and soft; he was pretty nearly emasculate: now the organs are firm, healthy, and of normal size. The other, seen after seven years, had become the father of two children, stated to be strong and healthy."

The reconciliation of the different views held by those writers of repute is a task which I confess my inability to accomplish. The fact, however, remains that in our present case the varicocele was attended by atrophy of the testicle, and I may tell you that during the past few years I have seen not a few similar cases. One other fact is perhaps worth bringing before you in connexion with my personal experience—viz., that in all the cases where the varicocele has been a large one the history has pointed to a traumatic origin. It is quite possible that this may have been a chance occurrence; but when one finds such great divergences of opinion among writers of note, a point such as this may not be without meaning; for is it not just barely possible that those who support the non-wasting glandular view may have been referring to varicoceles arising from sexual derangements, which are often almost stationary, and very frequently almost innocent of injurious effects so far as the nourishment of the testicle is concerned?

I have dwelt at length on the possible effect of spermatic varix on the nutrition of the testis, as it has a very important bearing on the treatment which should be adopted; for if it be, as some hold, a condition of no moment, and one that is absolutely harmless, all operative measures for its radical cure should be at once consigned to oblivion. But if varicocele is capable of interfering with the due nourishment of so important a structure as the testicle, then we must regard radical treatment from a very different stand-point. From a not inconsiderable experience of such cases I may tell you that I am of opinion that many writers have spoken dogmatically where dogmatism is inadmissible, for although I believe that in the great majority of cases the best mode of treatment that can be prescribed is the establishment of proper sexual relations, yet I feel satisfied that cases do frequently occur for whose relief radical treatment is absolutely called for. You must therefore be guided in great measure by the extent of the disease; and, without drawing any hard and fast line, I would suggest the following conditions as those where you should resort to operative interference after you have given palliative treatment a fair and prolonged trial:—1. If the varicocele be very large, or increasing. 2. If the testicle is atrophied. 3. If acute pain be complained of, as in our present case. 4. If the patient be disqualified from entering the public service. 5. If the stability of his mental faculties be endangered. This last condition is not a mere fanciful one, and is met with oftener than you would expect. But let me not be misunderstood—I would not advise you to operate in those cases unless there be real and well-marked mischief; you must not permit yourselves to be led by the mere desire of a patient, who suffers from slight varicocele, for an operation; but you should explain to him as fully as necessary the comparatively innocuous nature of the affection of which he complains, and tell him that if it should increase, or be attended by any manifest ill effects upon his generative functions, you will be prepared to comply with his wishes at some future time. This expresses my meaning, with the addition of the proviso that I think you may allow yourselves greater latitude in the direction of operation in those cases where the thoughts of the patient are concentrated—often to the exclusion of all others—upon the supposed serious malady from which he is suffering, than in those where the patients are willing to accept your assurance that slight varicocele is an affection of but little significance or importance.

ON A CASE OF HYDROPHOBIA.

BY J. LANGDON DOWN, M.D., F.R.C.P.,
PHYSICIAN TO THE LONDON HOSPITAL.

HYDROPHOBIA is comparatively a very infrequent disease. Although associated with the London Hospital for twenty-seven years, I had never seen a case until the one now reported came under my care. The case is interesting as showing that it could not have arisen from mere emotional excitement, and that the protection of the clothing in the bite has at all events the effect of delaying, if not of preventing, injurious results. Moreover, there is reason to believe that a diagnosis of rabies in the animal that inflicted the wound was correctly made. The patient was a dock labourer, twenty-three years of age; a very robust, unemotional-looking man, but with fair intelligence.

On February 2nd, 1880, the man was playing with his Newfoundland-retriever dog, when the dog bit his thumb and index finger. It bled freely, but no notice was taken of it. It healed, and caused no anxiety until the morning of the 25th April, the day of his admission into the hospital. The dog had also bitten a strange boy in the arm, through the lining of his coat, about five weeks before the patient was bitten, and the wound was cauterised. It often snapped at people, and on the 2nd February the dog bit the brother of the patient through his trousers and stockings; the wound, like that of the patient, was poulticed, but not cauterised. The day after the dog wandered away from home, and was ultimately found by a friend in a deplorable condition, as if ill treated. It was taken to a veterinary

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surgeon, who, suspecting rabies, poisoned it. The dog had previously been noticed to have attacks of spasmodic shortness of breath.

The first indications in the patient were spasms produced by attempting to wash himself, and inability to take his breakfast. He also had "rheumatic" pains in his right arm.

I am indebted for the following notes to my house-physician, Mr. Havens, who most assiduously assisted me in watching and treating the case:—

The patient, Alfred M——, was first seen at 11.30 P.M. on Sunday night in the receiving-room, and was then sitting on the couch, with his body flexed, holding his head downwards, evidently in a state of low despondency with more or less general tremor, and occasional paroxysms of dyspnœa especially when spoken to. His eyes looked bright and excited, and impressed one with a peculiarity that is not often observed. Pupils were dilated a little. Reflex sensibility was very marked, as the mere putting a thermometer into the axilla excited a convulsive seizure and catch of breath, as if something very cold had been applied to the naked body. Heat of body registered 101·4°. He was rational and could answer questions, but with a sense of fear as a spasm was produced by any attempt at speaking or thought of liquids. Before, however, he was led away to the ward, he asked for some water to be put into his hand in order that he might lap it up. This was done, he holding his arm and hand out and head turned away, and then quickly made an attempt to convey the same to his mouth, when a severe spasm seized him, causing him to stand and make a sudden dart forward in a falling attitude, which made me start likewise. At this time he was held steady by two attendants, one on either side, and re-seated again on the couch, the poor fellow beating his chest just over the mid sternum with his hand doubled as if oppressed there. When asked if in any pain he replied that he felt rheumatic pains all up the right arm, pointing from the fingers upwards to the shoulder.

April 25th.—12 o'clock: Patient was again visited a few minutes after being taken to the padded room, and seemed apparently quieter; but the sight or thought of water or milk excited a spasm, with cessation of the respiratory function, accompanied by flushing of the face, lasting about from between half to three-quarters of a minute, and then followed by a long, deep, forcible expiration, which might appear to correspond to the bark or growl of a dog, so frequently supposed to occur in such cases. The draught caused by placing the bed coverings over him sent him into paroxysms of dyspnœa. As seen later on, he was having a succession of minor clonic spasms, increased by any external influence. Could not for a time get him to look at any liquid. His eyes were wild, staring, and wandering; pupils not apparently now much affected. Face flushed, and countenance expressive of excitability and fear. He would every now and then arch his body by turning over on to his back, and raising the chest and striking it with his right hand principally, a spasm occurring at the time. Being questioned, said he felt a tightness over the chest, smiling and speaking good-temperedly. Tongue was thickly covered with white fur, and rather flabby looking.

Commenced the treatment with one-third grain (two minims) of acetate of morphia, hypodermically (ten grains to one and a half drachms of water), although the urine contained about one-sixth part of albumen, with not the slightest effect. This was followed in about half an hour by half a grain of same solution, with still the same result. On persuasion, patient made an effort to drink a little milk, with the usual sequence.

26th.—1 A.M.: The spasms are becoming more frequent and severe, occurring about every two, or less, minutes. Ordered now (1.30 A.M.) half-drachm doses of potassic bromide and chloral hydrate as a draught, with apparently no relief. This was repeated at two o'clock with a little benefit, as far as one could judge. Spinal ice-bag (Dr. Chapman's) and iced water-cap were applied with some amount of comfort, as expressed by patient himself, he saying that he felt more "easy and comfortable."—3 A.M.: Patient not really any better. A drachm of chloral hydrate was alone given, which quieted him, he seeming to doze, and the spasms becoming less frequent and less severe. 5 A.M.: Drank—or I should say was given—some milk, as the above draughts as well as eight ounces of milk previously had to be poured down his throat, whilst patient held open his mouth, and making a great effort to swallow. The night attendant going off duty at six o'clock on the 26th reported patient as better and quieter, his eyes being less wild-looking and face less flushed. —10 A.M.: This morning patient certainly is looking more composed, and talks as if he were quite well, with the exception of slight spasms of the glottis. He expresses himself as "feeling fine." The convulsive attacks are slight as compared with those of last night, a good but varying interval intervenes, quite fifteen to twenty or more minutes. Temperature 100·8°; pulse 100, full and regular; respiration 20. Tongue deeply covered with white fur and protruded in a tremulous fashion, and three small pinkish vesicles about the size of a pin's head were observed on the under surface of the tongue, and might possibly correspond to lyssa.—11 A.M.: The paroxysms of dyspnœa are again returning, so ordered drachm doses each of bromide of potassium and chloral every two hours until some change. —2 P.M.: Patient only had two doses of the chloral and bromide, as it made him "feel silly and confused, he not knowing where he was for a time, and attempting to get up and walk found his legs gave under him."—3.15 P.M.: Patient is looking pulled down; eyes a little sunken and dark around; appears agitated in mind, turning his eyes upon different persons and things; would delay and hesitate in giving one an answer. Remains lying down; spits occasionally in a vessel provided for that purpose; took some milk in a medicine glass with but little difficulty.—9 P.M.: Has dozed for about a quarter of an hour at a time during the latter part of the afternoon. Been tolerably free from the spasms until eight o'clock this evening. Has taken nearly a quart of milk and four or five ounces of beef-tea. Temperature 100·2°; pulse 110; respiration 20. Has just taken some milk, it being poured into his throat from a feeder, without setting up much spasm.—9.30 P.M.: Soon after gave him half-drachm dose of chloral and bromide.

April 27th.—12.50 A.M.: Patient has been quiet since eleven o'clock. Has eaten half a slice of dry bread, and taken four ounces of milk. Spasms occurring about every fifteen minutes, the last, however, being half an hour since. This last note was obtained from the porter in charge. As seen now—one o'clock—he is lying quietly on his right side apparently asleep. Has thrown off the ice-cap. Breathing seems quiet and uninterrupted at the time of making this note. 5.15 A.M.: Patient, who has remained quiet, dozing at intervals from 12.50 to 4.15 A.M., when the spasms were renewed, is now looking in an excited and disturbed condition, with bright staring eyes and flushed face, tells one that he has "done for himself now" by putting his hands into water to have a wash, and, being seized with stoppage of breath, became frightened and called out to the night porter, as he "thought he was going to be suffocated." Now the convulsive attacks were very severe and painful, judging from patient's appearance, who becomes purplish in the face, and throwing himself into contortions. 5.50 A.M.: The attacks somewhat abated in severity, and came on at irregular periods; administered half a drachm dose each of bromide and chloral. Pulse 120, full and bounding. 10 A.M.: Patient still more agitated and wild-looking, passing into a maniacal condition. Has set his mind against the day male attendant, an old but imposing man. Has knocked off the ice-bags, &c. Keeps incessantly spitting up thick viscid mucus all over the room, and saying, "I am going to die in a moment," "They have done for me," "Let me die," "No, I won't yet," and so on many such words. Absolutely refused any liquid or solid. Between 11 and 12 o'clock patient has become more violent, approaching a maniacal outburst; standing up, having delusions, and telling every one to get away from him in a firm tone of voice. On the contrary, he is very docile and agreeable with the medical attendant, shaking hands with him, and saying he is a gentleman every bit of him; other people he railed against. At length he pushed his way out of the padded-room, and had to be taken back by force, he evidently intending to make his escape. After being held and restrained for about fifteen or twenty minutes he became quieter. Before he had this furious delusion chloroform was inhaled with great difficulty, it almost asphyxiating the patient, and was therefore discontinued before he was completely got under. The spitting and vomiting of bile-stained secretion continued through the morning. Will take no nourishment. Is walking about and rambling. 2 P.M.: Patient again visited in padded-room in a maniacal state, with periods of consciousness and self-reasoning. Had strait-

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jacket applied in order to keep him quiet. Before this was done from five to ten drops of nitrite of amyl were tried by way of inhalation, but with no appreciable result. More chloral and bromide tried, but could not be got to remain in stomach, as he vomited it all up again. 6.50 P.M.: Patient is lying on his right side, constantly abusing all around him, and spitting and vomiting bile. Injected now hypodermically three minims (one-third grain) of curara into leg; patient making violent muscular efforts, &c.—7.20 P.M.: The same dose repeated in left thigh. Had an enema of concentrated beef-tea.—7.50 P.M.: Another one-third grain injected, with no apparent effect, patient being very suspicious that it was poison to kill him.—8.20 P.M.: Again, one-third grain injected hypodermically. There was apparently less power in the limbs, as his resistance to the injection was less forcible than on the three previous occasions. The incessant delirium and spitting continue, yet he seems cognisant of what is going on around him; keeps calling out every now and then for his mother and father to come to him, and for them not to leave him. He tries to make his friends believe that he has been badly used and killed. Begins now to take a dislike to and not to know his parents.—8.30 P.M.: Had another enema of beef-tea.—9 P.M.: Repeated curara, one-third grain. Had become much quieter, but could move his limbs a little. 9.50 P.M.: Patient became asphyxiated; artificial respiration performed for twenty minutes, with scarcely any benefit; patient dying, with very suffused eyes and lips and face intensely congested.

Post-mortem, April 28th. — Body well developed; muscles well nourished. Extreme lividity of lips and face. Conjunctivæ extremely suffused, "a bloodshot appearance." Mucous membrane of pharynx extremely venously congested, and the glosso-epiglottidean folds also. Mucous membrane of larynx, trachea, and bronchi extremely congested, and coated with blood sero-mucus. Lungs the colour of Burgundy wine, oozing from the dark vessels black pitchy-looking blood, and a few black masses resembling pulmonary apoplexy, excepting that they did not sink in water. Heart: Pericardium normal; left ventricle firmly contracted; muscle and valves healthy. Liver normal, homogeneous on section, such as seen in cases of rapid death. Spleen venously congested, but not softened, as in cases of acute disease with pyrexia. Kidneys venously congested. Spinal cord: Spinal membranes bright, and free from any signs of acute change; œdema to the extent of serum collected in vertebral canal; a congested appearance of the grey matter, and the white matter of cord bulges on section; is soft and evidently œdematous, much too wet. Brain healthy, but venously congested.

THE DISEASES OF THE EYE OCCURRING IN CONNEXION WITH PREGNANCY.

By HENRY POWER, M.B. LOND., F.R.C.S. ENG.,
SENIOR OPHTHALMIC SURGEON AND LECTURER ON OPHTHALMIC SURGERY AT ST. BARTHOLOMEW'S HOSPITAL.

(Continued from p. 711.)

I do not suppose that pregnancy can have any influence in causing obstruction of the canaliculi, lachrymal sac, or nasal duct; but when either of these conditions is present inflammation of the sac and lachrymal abscess is apt to occur. This is probably attributable to the general debility of the patient, to want of exercise, to the confined bowels from which many women suffer at this time, and perhaps also to being confined for many days together in close, ill-ventilated rooms, which collectively render the patient liable to cold. The treatment, of course, in no respect differs from the ordinary proceedings: in the early stages poultices and leeches locally, and purgatives internally; in the later stages opening the abscess, the passage of a probe through the divided canaliculus, and the administration of quinine, iron, and wine, will accomplish all that can be done.

The following case constitutes, I think, an example of a group, many examples of which have fallen under my care. Mrs. F——, aged thirty, married ten years; has had five children, aged eight, six, four, two, and an infant of eight weeks. Has always had some lachrymation of the left eye, and was under my care some years ago for hypermetropia. A pallid, short woman, pulse frequent and small, lungs affected with tubercle; is much debilitated after her confinements. Is now nursing her baby. Her left eye began to discharge matter a fortnight after her confinement, and the day after she had been out for a short distance. The inflammation increased, and a large abscess formed at the inner canthus of the left eye. She could not sleep at night for the pain, and the whole side of her face became inflamed and erysipelatous. The abscess burst in the third week after its commencement, and she is now very blanched and debilitated, passes restless nights, and has but a very moderate supply of milk for her infant. Quinine and a little wine were ordered for her, but nothing was done for the eye, as the active stage had passed, and it was only thought necessary to tell her that the canaliculus should be slit up at some future period.

I believe, though it is difficult to bring any cases to support the statement, that frequent pregnancies occurring in a woman of somewhat feeble constitution tend to the development of cataract. I have met with several cases where the patient having had many children whilst still comparatively young (say forty), has noticed impairment of vision, becoming worse during each successive pregnancy, and ultimately developing a perfect but soft cataract in one or both eyes. Of course, this may be attributable to other causes, but I have thought I could trace a connexion between the two.

And now in regard to the affections depending on lesion of the nervous system or implicating the nervous apparatus of the eye generally. These may be divided into two groups, the intra- and the extra-ocular: the former affecting the retina or peripheral termination of the optic nerve, and the latter affecting the optic nerves, chiasma tracts, and central ganglia. The former group—that is to say, the affections implicating the retina—are almost limited to cases of albuminuria, though perhaps occasionally hæmorrhages may occur without albumin being recognisable in the urine. My friend M. Galezowski informs me that he has seen cases of hæmorrhagic glaucoma as well as of miliary hæmorrhages unconnected with albuminuria in pregnancy; but these must be very rare; I at least have seen no instances of such diseases. That group of affections that occur in pregnancy which is more or less intimately associated with the appearance of albumen in the urine is one of great interest. Some, though by no means all writers, consider albumin to be of common occurrence in the urine of pregnant women, especially during the last weeks, and this phenomenon is not then to be regarded in so serious a light as it is held to be under ordinary circumstances, but to resemble rather those transitory conditions which are well known to physicians as occurring in convalescence from scarlet fever. In that case it is due probably to the desquamation of the epithelium of the renal tubules, since it disappears as the epithelium is renewed. It is not easy to give a satisfactory explanation of the etiology of its appearance, and various causes have been assigned. Amongst others, it has been attributed to an excess of albumin in the blood, or rather, perhaps, it should be said, to an excess of imperfectly-assimilated albumin; or, secondly, it may result from unusual blood-pressure, which may either affect the system at large or be limited to the renal vessels, in the latter case resulting from the pressure of the enlarging uterus on the renal veins; or, thirdly, it may be due to the pressure of the uterus on the ureters; or, lastly, to inflammatory conditions of the kidney or urinary passages, which may be either primary or secondary. Thus Spiegelberg attributes the presence of albumin in the urine during the later months of pregnancy to catarrh of the lower part of the urinary passages, though still admitting that it may be due to a change in the composition of the blood, and to direct transudation into the tubuli uriniferi. Neither of these explanations is quite satisfactory, though some arguments may be advanced for each. The most rational view to my mind is that the albuminuria is due to congestion of the renal vessels, the consequence of a double duty being imposed upon the kidneys, for they have to eliminate not only the effete materials of the mother, but also those of the child. Now, the activity of all disintegrating changes in young and rapidly-growing tissue is well known, and were oxygen freely supplied to the fœtus, the disintegration would probably be greatly increased. But it must be remembered that it receives its oxygen, so to speak, at second-hand, and the tissues and organs are not

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so completely burned off or reduced to so low a plane as occurs in the healthy adult, and it is to the inability of the kidney to eliminate these products, as well as to the greater demand made upon its secretory activity by the larger amount of effete matters in the blood of the mother, that the congestion of its tissue is owing—a condition that is intensified by the pressure of the uterus, and of the contents of the bowels if any constipation be present, upon the renal veins and ureters. The period at which the albuminuria occurs is in accordance with this view, for it is most commonly observed towards the later months of pregnancy, and it is at the later period of pregnancy that complaints of amblyopia are generally made.[1]

Whatever may be the cause of the albuminuria, it is noticeable that the vision is not necessarily impaired because the urine is albuminous; and, on the other hand, that the physical changes observed in the retina in albuminuria may sometimes be present in pregnant women without albumin being present in the urine, though its absence may perhaps only be temporary; and if the examination of the urine were made sufficiently frequently and carefully, it would probably generally be found. Lastly, considerable lesions of the retina and optic disc may exist without the impairment of vision being so marked as to attract particular attention on the part of the patient.

I need not give in detail the symptoms of albuminuria, for they are well known; but I would observe that, when the eyes are affected, intense headache is or has been present. The vision sometimes fails rapidly—within a day or two; at other times it is slower, and is only noticed in comparing the vision from week to week.

The physical changes observed under the ophthalmoscope are cloudiness of the media, probably from effusion into the vitreous, and those changes in the retina which are characteristic of albuminuric retinitis—engorgement of the veins, optic neuritis, or peripapillary serous infiltration, hæmorrhages, and exudations. The hæmorrhages may be mere round spots, or may present the form of large blotches. The exudations appear as white spots or plaques, often very minute, and arranged radially in considerable numbers around the posterior pole of the eye, and having their seat, according to the recent investigations of Fayer, beneath the fibrous layer of the retina.

The prognosis of hæmorrhages and exudations on or in the retina during pregnancy must depend essentially on their cause. If due to degeneration of the kidney, which has only been intensified by the supervention of pregnancy, puerperal eclampsia and a fatal issue may be anticipated; but if the albuminuria be of a functional character or consequent upon pressure on the ureters, we may with some confidence venture to give a favourable forecast, and to cheer the patient with the promise that all trouble will pass away after delivery. In fact, Litzmann (quoted in Braun) reports a case in which uræmic symptoms occurred in nine successive pregnancies under the severe forms of convulsions and temporary amaurosis, the patient recovering in the intervals. There can be no doubt that pregnant women may recover from conditions of the system accompanied by the symptoms of albuminuric retinitis that would be regarded under ordinary circumstances as of the most serious nature. The following case is particularly interesting in this point of view, because I took a sketch of it at the time, and on writing to the practitioner who originally attended her I have obtained recent information in regard to her condition.

Mrs. C—— was sent to me July, 1875, by Mr. H. Maturin, of Winchfield. She was forty-two years of age, and had had fifteen children, the last one being born six weeks previously to my seeing her. She noticed that her vision failed considerably for about a fortnight before her confinement, objects becoming indistinct, hazy, and distorted. Both eyes were affected. She appears to have paid little attention to her state. Her confinement was attended with severe post-partum hæmorrhage, and her vision became still more impaired. The urine was examined at this period by Mr. Maturin, and was found to be free from albumin. Pain was experienced at the back of the eyes, and some citrate of iron and ammonia was prescribed for her, under which treatment her general condition underwent considerable improvement, though her eyes still remained dim. I saw her on July 16th. Her vision was then reduced to one-fourth of its normal sharpness, the left eye being worse than the right, but she could read small print (No. 2) in a good light. In the earlier period of the dimness she stated that she saw little red spots before her eyes, also that her cotton seemed in black patches and dirty. Her family history was good. Ophthalmoscopic examination showed that the discs were tolerably well defined, but the posterior pole of both eyes presented a stella of white spots around each fovea centralis, a condition that is of common occurrence in ordinary albuminuric retinitis. I gave an unfavourable forecast, but recommended a continuance of the treatment adopted by Mr. Maturin. On writing to him a few days ago he kindly sent the following reply:—

"Oaklands, Winchfield, Feb. 20th, 1880.

"My dear Sir,—In reply to your letter of yesterday, I write to say that Mrs. C—— is still living and in the enjoyment of good health. Her urine did not contain albumen at the time I examined it (whether it may have done so at any time previous to, or immediately after, her confinement I cannot say). For the last four years or more she has worn spectacles, and with the assistance of such her vision is fairly good.—Believe me, yours very truly,

"HENRY MATURIN."

The following is a case of a similar nature:—

Mrs. P——, aged forty-one. I saw this patient, who was under the care of Mr. Beadles of Forest-hill, in December, 1875. In the last weeks of pregnancy she noticed that her vision began to fail rapidly in both eyes. She had been a strong and healthy woman, but had a family of eight children rapidly, the eldest being only eleven years of age. She had been confined at the eighth month one week previously and was in bed. Her legs were swollen, and her urine contained albumin. She had large blotches of blood over the retina, which I could only see dimly with a candle, and with a moderate-sized pupil. The tension of both eyes was normal. Iron was ordered to be taken, and I afterwards heard that she made a good recovery.

On the other hand, I have seen more than one case in which the presence of albuminuric retinitis has proved to be the indication of extremely serious conditions of the system, terminating in the course of a variable period fatally. Such a case is the following:—

Mrs. Y——, aged twenty-eight, came to me three years ago (April 3rd, 1877). She was a well-grown, fair-complexioned, blue-eyed woman, had been married two years, and had given birth to two children in the course of one year. After the birth of the first child (Feb 13th, 1876) her vision was defective for a fortnight, all objects appearing remarkably small, and she was unable to read, but she was always able to distinguish the window-frames. She suckled the child for several months, and whilst suckling it, again became pregnant. The vision improved considerably after her confinement, but in December it again became obscured. I was consulted upon the case by letter from Dr. Rudge, who wrote as follows:—"Mrs. Y—— has lately come under my care. At Christmas she was at about the seventh month of pregnancy. Both pupils were widely dilated, with entire loss of sight. Exposure to the brightest light did not cause the irides to contract, nor did it contract upon the application of Calabar bean. Examination of the urine indicated that the kidneys were acutely congested." Dr. Rudge saw her again at the end of April, and found the appearances of the eyes somewhat improved. "The pupils were less widely dilated, and contracted under the influence of Calabar bean. The urine was still loaded with albumin, and presented a few casts of tubes. She was dropsical, and had some effusion into the interlobular tissue of the lungs. Some improvement took place under the administration of digitalis, acetate and iodide of potassium, with the addition of a few drops of nux vomica." I found on examination that the vision of the right eye was abolished. She could read No. 8 Jäger with the left, and the distant vision was $\frac{1}{6}\frac{6}{6}$. She remarked that everything looked red, and that she had a kind of kaleidoscopic pattern before her eyes; coloured spectra were also present with haloes. The tension of both eyes was normal; pupil of right eye dilated and immovable, of left eye very sluggish; the media were clear. The left disc was whitish, but not quite opaque. There was a little shrivelling or partial atrophy of the choroid on the inner side. Here and there on the fundus was a small hæmorrhagic spot. The veins were dark, of moderate size, the arteries small. The fovea centralis was apparently healthy. The right disc was white, especially at the margin. The vessels small, especially the arteries, which were almost imperceptible. The veins curved sharply over the margin of the disc, showing some cupping of that part. The choroid around the disc was thinned and

[1] Chron. Rec. d'Ophth., 1875, p. 132.

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atrophic, as though optic neuritis had been present. The urine was very pale, and highly albuminous; it presented many cells, but no casts. She was ordered to take some iron and strychnia, and one or two Turkish baths. On April 7th I saw her again; she felt better. The urine was *acid*, albuminous, sp. gr. 1005. She was directed to continue the medicine and to go home. On April 13th, I have a note that vision of left eye is $\frac{1}{40}$, which is a slight improvement. On May 12th Dr. Rudge wrote stating that general improvement had taken place, that the sp. gr. of the urine had risen to 1015, and that it contained but little albumin. The dropsy was less, the catamenia had appeared, and that the vision of the left eye was somewhat clearer. On Oct. 8th, 1877, Dr. Rudge wrote to say that a day or two previously Mrs. Y—— had experienced an attack of hemiplegia of the left side, the opposite side to that of the amaurotic eye. She did not lose consciousness, but there was complete motor paralysis of the left arm and leg, and partial motor paralysis of the left side of the face, the mouth being drawn to the right. There was also diminution of sensibility of the left side. The movements of the right eye were impaired and the pupil more contracted than that of the left side. Mental faculties clear. She died on Oct. 27th, 1877. No autopsy was permitted. She was in the third or fourth month of pregnancy. This is evidently a case of albuminuria intensified by each pregnancy, and showing in a very marked manner the influence which pregnancy exerts over the progress of the disease.

(To be concluded.)

NOTES ON SEDATIVES IN PNEUMONIA.

BY FREDERICK ROBINSON, M.D., F.R.C.P.,
SCOTS GUARDS.

THE administration of opium—its utility in certain cases and stages of pneumonia—is a procedure now recognised in principle and noticed in text-books. Whether it obtains very generally in practice may perhaps be a matter of doubt. At a period not very remote the drug was either prohibited or allowed only in small doses, with the view of preventing mercury or other remedies from passing too quickly through the system. In the army, among the first to call attention to the value of this agent was Sir William Muir, when P.M.O. in Canada, about the year 1861. In a paper with which he inaugurated the opening of a Military Medical Society, that officer dwelt upon two points of importance in the treatment of inflammation of the lungs. One was the benefit derivable from a full opiate when delirium with insomnia supervened in the latter stage of the ailment, and at a time when the organs were recovering their functions. The other was a condemnation of the employment of blisters to aid "resolution" when consolidation lingered.

In North America pneumonia, as might well be supposed, was somewhat frequently met with among soldiers during the winter. Exposure, either on or off duty, with sudden variation of temperature, imprudence as to precautions, indulgence of drink (as regards "topers"), with consequent reckless habits, were factors of acute pulmonic affections in a climate and season otherwise highly favourable to health.[1] Hence medical officers had some experience in this and its kindred malady of pleurisy.

The treatment adopted in the hospital of the Scots Guards was based upon that of Bennett of Edinburgh; but an earlier employment of wine, and also adjuncts either of ammonia or quinine—in very bad cases of both; the ammonia frequently, quinine in full doses at longer intervals, I found in America (as I do now in London) necessary. Yet these measures would have failed repeatedly to tide over the attack were it not for recourse to strong sedatives at a crisis imminently dangerous. It is in cases generally—perhaps I should say invariably—of low type, where both lungs are implicated, and at a stage when the organs are recovering their function satisfactorily, that a fatal issue threatens. Every indication—symptom—may be favourable but one. Insomnia with delirium supervenes, and unless combated by powerful sedatives the patient sinks.

Under circumstances such as I have glanced at, Graves' treatment by opium and tartar emetic in combination came to my remembrance. Full doses of opium (the more stimulant preparation of tincture) I had been accustomed to give, but the time elapsing before satisfactory results were obtained, left recovery trembling in the balance too long, if, indeed (as I have seen when a medical officer did not begin the drug sufficiently early and largely), death did not supervene. The outcome of this change was all that I could hope for. Time was saved, danger materially lessened, and I cannot recall the occurrence of unfavourable symptoms or fatal issue in any uncomplicated case. A calm deep sleep, a pulse reduced in frequency while strengthened in volume, and warm perspirations ensued, just as Graves observed after its administration in certain stages of fever.

With these preliminary remarks I now give a brief summary of a case recently treated in the Regimental Hospital.

A young soldier, aged twenty-three, and of two years' service, was admitted Oct. 31st, 1879. Physique fairly good; habits occasionally somewhat intemperate, but neither the aspect nor antecedents of a "drunkard" were met with. Pyrexia; rigors yesterday; pain, referable to the left breast; dyspnœa; pulse weak and frequent; and evidences generally of much depression of the system. Harsh, exaggerated breath-sound audible at base of the affected lung, before and behind. Temperature 105°. Ordered a saline mixture with excess of carbonate of ammonia; jacket poultice.

On the following day (Nov. 1st) his condition was unfavourable. There was increased prostration of strength, augmented dyspnœa, and severe pain on inspiration below the left nipple. Auscultation showed consolidation of the lower half of the lung, and slight friction-sound at the seat of pain, also deficient breath-sound at the base of right lung; tongue furred and dry; occasional nausea; sputa thin, florid, blood, not tenacious. Temperature 104°. Ordered strong beef-tea; port wine an ounce every third hour; to continue mixture.

Nov. 2nd.—A restless night; dyspnœa increased; consolidation of left lung extended to nearly the whole organ; evidences also of hepatisation of the base of the right lung; tongue dry and red. Pulse 108, very weak; temperature 104°. Sputa ceased. Ordered subcarbonate of ammonia six grains, solution of acetate of ammonia and decoction of bark, each half an ounce, every third hour; also five grains of quinine twice a day.

3rd.—Passed a quiet night, but with little sleep. Dyspnœa lessened, pain in left breast abated. No friction sounds audible there. A little expectoration of thin blood. Pulse less frequent and of better volume. Tongue moist. Diaphoresis. Continue medicines.

4th.—A very disturbed night. No sleep, delirium, and the patient with difficulty kept in bed. In other respects decidedly improved. On auscultation returning crepitation audible in parts of both lungs; dulness less marked. Pulse 100,° of better calibre, and quieter; temperature 101°. Skin acting freely. Pain of side gone. Ordered liquor of opium twenty-five drops at bedtime. Treatment otherwise unchanged. Sixteen ounces of wine daily, a double amount in the evening with warm water.

5th.—Another sleepless night, with constant delirium. There is no flushing of the face, congestion of the eyes or other indications of cerebral congestion. Crepitus redux audible everywhere in the lungs, sputa a little white mucus streaked with blood. Pulse weaker and more frequent. Continue medicine and treatment. Wine increased to eighteen ounces. Tartar emetic a grain dissolved in twelve ounces of warm water. Add four drachms of tincture of opium. Take an ounce at 8 P.M., half an ounce every second hour after. Suspend the medicine after four doses.

6th.—For the greater part of the night very delirious. The orderly found it necessary to sit on the bed to keep the patient down on it. This morning he is quieter and inclined to sleep. The pulse reduced to 80 and of better calibre than yesterday; tongue clean. Breath-sound fully returned,

[1] During a service of three years there, I cannot recall a single case of consumption originating in my regiment when in Canada. The circumstance is noteworthy when the high rate of invaliding, ordinarily resulting from phthisis, in the Guards, is borne in mind. In fact, certain atmospheric conditions—dry, exhilarating air, sunshine, stimulation of vital powers generally, with consequent increased assimilation of nutriment—so strongly and favourably dwelt on of late by physicians with reference to Davos in the Engadine, were all met with at Montreal, and their value and efficacy in phthisical subjects fully recognised.

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except behind the left scapula. Tonic medicines and treatment as before. Ordered the mixture of opium and tartar emetic, with double the quantity of the former (eight drachms of tincture), to be recommenced in the evening.

7th.—Slept soundly through the night after the first dose (an ounce) of the mixture, having been previously quiet in the daytime. This morning his condition in every respect much improved. Delirium quite gone. Pulse 76, of good volume. Expectoration fairly copious, free from discoloration. In fact, the crisis in the case was now over. The patient slept quite well on the next night without a sedative, and convalescence rapidly followed.

This was a case of pneumonia of low type, associated with pleurisy of the left lung—of course, a complication which added much to the danger. The liquid, sanguineous sputa—a valuable indication both as to the character of disease and treatment requisite—led to the employment of stimulation from the outset. This answered well, but although the lungs rapidly recovered their function, the patient would have succumbed to insomnia when, as regards the pneumonia, actually all but convalescent, were it not for sedatives. In this case I thought a single full dose of opium alone would suffice. I was in error, however. It may be said that bromide of potassium would have been equally efficacious—answered the purpose as well. Experience has led me to a different conclusion, and that the lengthened sound repose needed in cases of great exhaustion calls for a less depressant class of sedative. It is in the stimulant preparations of opium, enhanced in such action by the addition of small doses of antimony, that I place confidence. The precise therapeutic action of the two drugs when in combination I apprehend has yet to be arrived at. Graves does not, in his memoir on fever, profess to explain it.

The great value of antimony and opium in typhus I was afforded the opportunity of testing during a violent outbreak of the malady in the spring following the disastrous first winter in the Crimea.[2] I need scarcely add that terrible privation previously, as in the same visitations in Ireland, was the factor. And in London subsequently I have seen cases such as Graves describes, where the patient was all but *in articulo mortis*, with subsultus, a dicrotic pulse—scarcely countable from its frequency, and every precursor of a fatal issue, brought by such treatment speedily to a state of safety.

In some forms of delirium tremens, too, I can confirm Dr. Graves' experience of its efficacy. The views of the late Dr. Stokes, that typhus and typhoid are but modifications—developments—of the same poison, have been much controverted, and are antagonistic to those of physicians generally of the present day—certainly in England. From personal observation at the Dublin Fever Hospitals when quartered in that city, I can recall features of disease which to my mind entitle the observations of that eminently sagacious physician to at least very attentive consideration. As is tolerably well known, "fever," speaking in a broad, generic sense, obtains there always, and to an extent unknown in England.[3] In the wards patients are met with of all ages, old and young, thus proving at least the fallacy of age as a reliable guide to diagnosis of one fever rather than the other. And there are in operation at Dublin—have been for an indefinite period—precisely the insanitary conditions from which enteric disease takes its origin. On the other hand, nothing has been more marked than the improved condition, as regards food and clothing, of the lowest classes—their material prosperity. The same elements for causation of enteric are to be found in most, if not all, of the large cities in Ireland, such as Cork (in a marked degree), Limerick, Clonmel, &c.

In conclusion, I would refer to the valuable paper recently contributed by Sir William Jenner on the treatment of enteric disease. My own experience, doubtless very small in comparison, has not hitherto shown me any ill consequences from the administration, carefully, of opium either in small or tolerably full doses; and I am disposed to look on its administration, particularly when there is reason to believe that ulceration of the intestine exists, as of much importance in helping Nature to a favourable issue.

Claverton-terrace, St. George's-road.

[2] For this suggestion I was indebted to my friend, Deputy Inspector-General Crosse, then of the 11th Hussars.

[3] Among valued friends, leading physicians in Dublin, I can scarcely reckon one who had not passed through the ordeal of what I may safely call "Irish fever."

ON THE TREATMENT OF GLEET AND THE PREVENTION OF STRICTURE BY IRRIGATION OF THE URETHRA.

BY REGINALD HARRISON, F.R.C.S.,
SURGEON TO THE LIVERPOOL ROYAL INFIRMARY.

THERE are very few practitioners who have not at times experienced the greatest difficulty in the cure of gleet, in arresting the small quantity of urethral discharge which persistently, and in spite of all treatment, local and general, remains after the acuteness of a gonorrhœa has abated. Many patients have in despair given up the attempt to obtain a cure, and so have incurred the risk of a stricture as a consequence.

And yet what is all this trouble about? Simply a slight purulent discharge from a chronically inflamed patch in the urethra, which, by reason of its position, presents difficulties in its treatment. A state of affairs which, if it occurred in one of the more accessible spaces in the body, such as the mouth, nose, or larynx, where remedies can be directly and unerringly applied, there would not be the least difficulty in curing.

For the treatment of gleet a great variety of means and appliances have been suggested, including internal remedies by what are called anti-blennorrhagics, which are chiefly remarkable for their very nauseous taste; astringents of all kinds and degrees, applied locally as injections, or in the form of urethral pessaries; potent injections of caustics, which are only to be used by the practitioner himself with a suitable instrument; urethral brushes for the sweeping of the canal with a variety of solutions; insufflators for throwing in powders; contrivances for the application of ointments to the deeper portion of the urethra, portes caustique, and the urethral speculum, or, as it is called, the endoscope,—have all in their turn been brought into play for the purpose of what?—drying up somewhere about two minims per diem of muco-purulent discharge, which, were it not offensive to the sight, would probably be overlooked. Text-books have been in the habit of telling us for some time past that a persistent gleet is a sure forerunner of organic stricture; in fact, that a gleet may be regarded as indicating that a stricture is forming. By a train of reasoning, certainly not of proof, which I am at a loss to understand, the relative positions of gleet and stricture, as parts of a continued inflammatory process, have suddenly become altered. We are now told that pathologically we have been putting the cart before the horse, and that, as a matter of fact, from henceforward we are to understand that a gleet is an intimation to us, not that a stricture *will* form, but that it *has* already done so.

If we admit the truth of this at once, and set aside our old-fashioned dogma about gleet being the inflammatory process that precedes the formation of a stricture, and so agree to alter the relative position of the two, we shall then be prepared to adopt the view that a gleet can only be effectually cured by removing the stricture of which it is merely a symptom. And this latter we are asked to do by the employment of a dilating urethrotome and dilators, the use of which, judging from their size, would at once be misunderstood if they were described as being adapted for the treatment of stricture. Hence they are spoken of as instruments to be used in cases of gleet for the purpose of bringing urethras up to their "individuality," as if there were grounds for believing that in respect to form there was any more "individuality" about a man's urethra than there was about his rectum. I must say that I viewed with positive horror the idea of performing an internal urethrotomy on a man for a gleet on some presumptive evidence that his urethra lacked "individuality." I do not admit the soundness of the reasoning altering the relationship of gleet to stricture, or the practice which it is proposed to base upon it. In several instances which have come under my notice, the performance of internal urethrotomy, as recommended by Dr. Otis, has entirely failed to remove the disease—namely, the gleet for which it was undertaken.[1] True, the "individuality" of the urethra was restored, but "la goutte militaire" remained—

[1] On Stricture of the Urethra, by F. N. Otis, M.D., New York.

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a compromise which the patient, at all events, failed to appreciate. Nor is Dr. Otis's operation free from dangerous as well as disappointing consequences, as I have shown by a published record of Mr. Berkeley Hill's cases referred to elsewhere.[2] If we consider certain conclusions which the examination of gleet and stricture cases, in considerable numbers, enables us to arrive at, I do not think we shall have difficulty in explaining our want of success, or in improving our treatment without resorting to an operation which I have already referred to as being, in my belief, both hazardous and disappointing.

The conclusions I would lay stress upon are these:—1. That the large majority of strictures, excepting those caused by injuries to the urethra, are preceded by more or less chronic gonorrhœa or gleet. 2. That the most frequent seat of stricture corresponds with that of gleet—namely, the subpubic or deeper portion of the urethra.

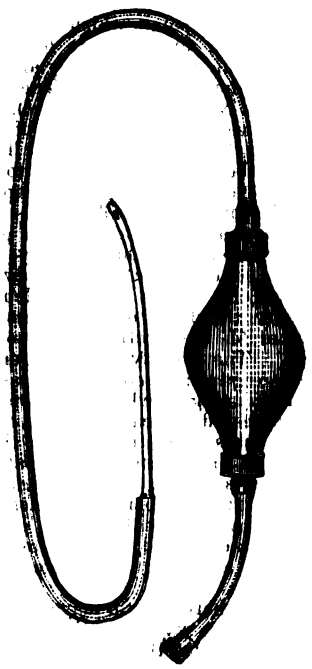
Assuming these conclusions to be true, which I do, not only from my own personal observation but from that of others who have had sufficient opportunities of forming an opinion, it certainly looks as if the persistence of gleet and the formation of stricture were due to the imperfect means hitherto adopted for dealing with the bulbous and membranous portions of the urethra when chronically inflamed; in fact, that the disease escaped treatment altogether. Surely this is more rational than to regard the affection as an incurable one, or to propose to reverse the sequence of pathological events. Why do not women suffer from gleet or from stricture, or do so in such small proportion as not to alter the rule? Simply for the reason that the parts involved are easily to be got at for the purposes of treatment. The endoscope, moreover, has shown that the deeper portion of the urethra is the part affected in gleet, the appearance presented being granular and similar to what is observed in some forms of ophthalmia. Mr. Gould has also clearly demonstrated that this part of the canal, by reason of its position, is favourable to the retention of diseased secretions and other sources of irritation which would be likely to keep up the gleety discharge.[3]

All these observations seem to point to a conclusion that our means for efficiently applying remedies to the sub-pubic urethra are more or less imperfect, and that if we could deal with this part as directly as we do with the anterior third of the canal, the treatment of its disorders would be as successful as that of the other accessible cavities and passages of the body.

If I am correct in my assumption that the urethra at, and posterior to, the bulb (excluding of course the prostate) is the seat of the chronic inflammation we call "gleet," how utterly inert our treatment of it must be by injections as usually and popularly practised.

In the first place, I question whether an injection as used with an ordinary glass syringe ever succeeds in reaching the bulbous or membranous portions of the urethra, and even if it does so, as it may in a few instances when practised by old hands, its contact with the membrane is so brief as to be really useless. The conventional mode of injecting, so far as the deeper portion of the urethra is concerned, is just about as efficacious as a gargle would be if the patient slyly took a mouthful of the fluid prescribed, retained it for something like a minute, and then spat it out, repeating this performance twice or thrice a day. What possible service would this render to an ulcerated throat? If to make up for the briefness of contact between the injected fluid and the diseased surface the former is materially increased in strength, its very astringency, by provoking spasm, renders it intolerable and consequently useless. Do not injections, I ask, so applied prove to be in gleet utterly useless, whatever astringent is selected for the purpose? And, failing injections, or perhaps using them for supposed cleansing purposes, and as forlorn hopes, what else have we to fall back upon? Copaiba, cubebs, and sandal wood, separate or combined, in every variety of form and shape, all more or less nauseous and disgusting. It is astonishing what power of endurance a man will submit his palate and stomach to to get rid of any trouble of this nature. Some of these anti-blennorrhagics, as they are called, prove successful in a certain proportion of cases in medicating the urine (often very obviously so), and thus cure the disease. But what is to be done with the number of persons, not inconsiderable, who are positively made ill by these remedies, and who are also not benefited by injections? These, as a rule, go on trusting to the chapter of accidents, even if coming in the form of a newspaper advertisement, and generally reappear on the scene again after the urethra has been sufficiently indurated, by persisting inflammation, to be treated for a stricture. For by this time, the membrane, being hardened and structurally incapacitated from doing so, has ceased to secrete muco-purulent matter, and an organised stricture is thus substituted. Such is, I believe, the usual sequence of events.

For some time past I have been employing in the treatment of gleet a very thorough irrigation of the urethra throughout its whole length by means of an apparatus which I have had specially constructed for the purpose. So



far the results obtained have been highly satisfactory in speedily curing the gleet and consequently preventing the formation of stricture. In carrying out my views I have taken a hint from what is now done with so much benefit in the case of the nasal passages, a thorough irrigation or washing out of these by a suitable contrivance being substituted for the imperfect medication by syringes, brushes, snuffs, and such-like expedients, which were formerly prescribed with so little advantage. Many of the diseases of the nasal spaces which heretofore were considered most intractable are by the improvements in mechanical contrivances referred to rendered perfectly amenable to treatment. To effect this with the urethra I make use of a small Higginson's syringe and a sufficiently resisting vulcanised india-rubber catheter. I direct the patient twice or thrice a day to douche most thoroughly his urethra by means of these appliances, entirely discarding for the purpose all his notions about the old glass syringe arrangement as being utterly unfitted to cure a gleet. If the patient does not from the first recognise the necessity of submitting his urethra to a complete medicinal washing, his efforts, like his previous ones, will probably be ineffectual.

I direct the patient to denude himself of his nether garments, and, seating himself in a chair with his pelvis inclined forwards to the edge, to introduce the soft catheter and gently pay it into the urethra, having previously anointed it with some vaseline. If the patient finds that he can introduce and retain more easily a stiffer catheter, he may substitute one of the French instruments in the same way, of the required length and size, taking care that the eye is within half an inch or thereabouts of the end. Having done this, he attaches the catheter to the small Higginson's syringe, which is connected with a tumblerful of the fluid to be used, tepid. I generally make use of the sulpho-carbolate of zinc, in the strength of about half a teaspoonful to a pint of water. The patient, steadying the catheter in his urethra with his left hand (not squeezing the meatus around it), slowly compresses the ball of the syringe with his right hand, the vessel containing the fluid to be

[2] THE LANCET, April 8th, 1876. [3] Ibid., December 8th, 1877

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injected being placed by his right side, or attached, as it may be done by a bottle arrangement, to the feeding-pipe of the syringe. In this way the patient is directed to continue using the apparatus until the urethra has been completely washed out; the fluid, after it has circulated between the walls of the urethra and the catheter, escaping through the meatus, where it is received into some convenient receptacle.

I may perhaps have been unnecessarily explicit in referring to all these details; but these being thoroughly carried out, and in a manner very different from the furtive and speedy action which characterises the proceeding as effected with the glass syringe, is essential to success.

There are one or two points which remain to be noted. The catheter should be six inches in length, and be completely passed into the urethra, merely allowing room for the connexion with the syringe-pipe. The catheter should not be larger than a No. 6 (English gauge), so as to allow plenty of room between it and the walls of the urethra, in which the injected fluid can circulate. The eye in the catheter should not be too near the end, or too large, and its edge should be beveled so as not to scrape the urethra. For smoothness in introduction, Tiemann's (of New York) velvet-eyed india-rubber catheters are a great improvement on the English make, where the eye of the instrument is punched out without being beveled. Whilst injecting the fluid its escape may suddenly be stopped for a few seconds; the doing of this forces the fluid into the small lacunæ of the urethra, and so cleanses and medicates them. The quality of astringent in the fluid should not be too great: to cleanse and astringe without paining, or even smarting, is what is required. The operation should be repeated at least twice in the twenty-four hours. The appliances used are so simple, that they can be brought into action in the course of a patient's ordinary bathing arrangements without inconvenience. I mention sulpho-carbolate of zinc as being the most generally appliable and useful astringent for these cases. Sulphate of zinc, borax, acetate of lead, quinine, and carbolic acid, all have their uses, according to circumstances, in these cases.

I have been asked whether harm may not be done by these injections finding their way into the bladder. I do not believe they do so, provided the meatus of the urethra is not compressed for more than the few seconds necessary to distend the urethra and cleanse the lacunæ. When the meatus is not compressed, which is the ordinary position of things whilst the process is going on (provided the catheter is not larger than the size I have specified), the injected fluid far more easily finds its way *out* through the meatus than into the bladder. Besides, if it did go into the bladder, it would do no harm if the strength of the solution is kept within the bounds I have indicated. About six inches is the extent to which the catheter should be passed before the injecting is commenced. If I have any doubt as to whether in a particular case this is sufficiently accurate, I first make a careful examination of the urethra with an ordinary bougie. This will at once indicate by the sensation produced the point or points upon which it is necessary more especially to act. This may possibly require a lengthening or a shortening of the catheter; six inches is the length I generally find to be sufficient. In compressing the syringe the action should be slow and gradual; if it is jerked, the fluid will not escape in the even and regular manner that is required, or the catheter may be forced out.

In addition to its use in curing gleet and preventing stricture, I think the urethral irrigator will prove to be of considerable service in cases of spermatorrhœa, where, as a consequence of all kinds of debauches, the generative apparatus has lost the tone that is necessary to the due performance of its function. It is, however, in the treatment of gleet more especially that I wish to draw attention, not only to the value of the instrument, but to the still greater importance of adopting more thorough means for the efficient application of remedies to the deeper portion of the urethra.[4]

[4] The urethral irrigator has been made for me by Messrs. Symes, Hardman-street, Liverpool.

AT the twenty-eighth anniversary festival of the City Orthopædic Hospital, held last week, the result of the enthusiastic appeal by the Lord Mayor, who presided, was a list of subscriptions amounting to over £500.

ON MEDICAL CERTIFICATES OF INSANITY.

BY T. N. BRUSHFIELD, M.D.,
MEDICAL SUPERINTENDENT, BROOKWOOD ASYLUM, SURREY.

(Continued from p. 713.)

ALTHOUGH not strictly within the objects of this paper, there is one matter so intimately connected with the subject that I cannot help referring to it, on account of its importance to medical men generally, especially as it may be the cause of their being unjustly blamed. On the reception of any patient the asylum medical officer is required by the statute (16 & 17 Vict., cap. 97, sec. 89) to send to the Commissioners in Lunacy within seven clear days a written certificate as to whether from his own personal examination he is of opinion the patient be insane or not; and it occasionally happens he has to certify that the patient has exhibited no symptoms of insanity during the time he has been under his care. As a necessary sequence, some of these cases are discharged, and the certifying medical practitioner may feel annoyed from the idea that doubts have been thrown upon the correctness of the symptoms he had detailed. I know of remarkably few cases where such doubts had been entertained by the asylum medical officer, and it should be distinctly understood he gives no opinion as to the patient being *not insane*—the evidence of the previous symptoms being undoubted,—but he simply records that during the asylum residence no symptoms of insanity have been observed, although diligently sought for. This eventuality may occur in very different classes of cases, as I will now endeavour to point out.

1. Those showing no symptoms of insanity when admitted, but who exhibited evident symptoms when examined by the certifier—a probable occurrence is some form of epileptic and of recurrent mania. The Commissioners in Lunacy exercise a very wise discretion in many of these cases by requiring the asylum medical officer to send an additional certificate of the mental state of the patient at the end of two or more weeks, and before the termination of this period I have on several occasions known the symptoms of insanity to return, and so authorise the detention of the patient. Again, it is not uncommon in some cases of dipsomania, or of insanity produced by ordinary intemperance. The following is a good instance:—*Facts personal.* Has various delusions; one is that "the nurse and other persons here are conspiring to rob and injure her." *Facts hearsay.* "Informed by the police that she was running about the street nearly naked, followed by a lot of boys, and tried to jump into an area." This patient was perfectly rational when brought to the asylum, and showed no trace of delusion. Her case was one of confirmed dipsomania. A shrewd clever woman, and possessing ample means of living, she felt impelled to give way to drinking habits from time to time, and which always brought her into trouble. Fines and imprisonment had not the slightest effect upon her. There was no doubt she was to all intents and purposes insane prior to her admission; there was equally no doubt of her being exactly the reverse of this during her asylum residence. On being discharged she went into another county, and soon got into difficulties again. Some patients who show mental symptoms when admitted become comparatively sane after the administration of a warm bath and a purgative, so much so that if the certifier saw them at that time he would be unable to testify to their insanity.

2. Patients transferred from another asylum, being convalescent at the time. A patient may be adjudicated to a parish in another county, but at the time of transfer to the proper county asylum may have so far improved as to be fairly convalescent, but the medical superintendent who has had the care of the case may be doubtful as to complete restoration, and therefore instead of getting the patient discharged as recovered, he allows the patient to be transferred. The medical superintendent of the asylum so receiving the case may be unable to detect any symptoms that he would be warranted to describe as those of insanity, and so under his direction the patient is discharged as having exhibited no symptoms. Cases of this kind have occurred within my own knowledge.

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3. Patients brought to the asylum in a state of extreme prostration or even in a moribund condition, and dying soon after admission, so that the medical officer of the asylum is unable to pronounce an opinion as to whether the patient was insane or not. Instances of this kind occasionally take place where the patient was in a state of extreme debility, and changed rapidly for the worse during the transit to the asylum, an occurrence more likely to take place when the medical man does not see the patient on the day of removal.

4. Where the symptoms noted and recorded prior to admission do not amount to insanity; for instance, ordinary vicious habits as the normal condition of the individual could not be considered as indicative of mental disease. A case of this kind was recently discharged from the Brookwood Asylum on this account.

5. Patients who have shown no symptoms of insanity either before or after admission. The public are apt to believe this to be of common occurrence, but my own experience points to its rarity. From the opening of the Brookwood Asylum to the present date (March 27th, 1880) 3623 patients have been admitted, yet out of this large number I can only remember two instances of this class. The first was a case of delirium following typhoid fever, and the medical man had evidently made a wrong diagnosis. The second was that of a man who had lost a considerable amount of blood from an accident, and for a few days was evidently the subject of slight anæmic delirium. The medical man who had the care of the patient, and knew the whole of his history, did not consider him insane; the relieving officer of the district thought otherwise, and took him to another medical man, who certified to the insanity, depending, I am afraid, more upon the evidence given by the officer than upon that of his own examination. The patient was perfectly sane on arrival at the asylum and was soon discharged.

I now desire to direct attention to some of the imperfections in the present form of lunacy certificates, and to make some suggestions as to remedying them.

As there are only two points in the statutory portion that require attention, I will allude to them at once.

1st. It appears to me defective in not containing the *name and address* of the relative or friend who directed the examination of the patient to be made (in the case of a pauper, the name of the magistrate would be sufficient). This could be thus easily remedied:—"I, the undersigned, ——, and being in actual practice as ——, hereby certify that I, *by direction (and under the authority) of* ——, on the —— day of —— at —— in the county ——, &c."

2nd. Instead of the sentence "separately from any other medical practitioner," the one formerly in use, "separately visited, and personally examined," would be far preferable, as less likely to mislead the medical men with reference to their joint presence, &c. In the Scotch certificate it runs thus, "Separately from any other medical practitioner, visited and personally examined," a great improvement upon the English form. Both of these points appear to be of minor importance, but the more complete and the less capable of being misunderstood a legal document is the better.

The medical portion is that which requires the most material alteration. The present form of certificate rather appears to encourage medical men to give only just a sufficient number of "facts" to procure the patient's reception into an asylum, and to discourage them from giving a proper medical history. I think the time has arrived when much more than this should be requisite. No medical man should be conscious he has performed his duty properly unless he has investigated the whole of the symptoms manifested by the patient, so that his knowledge of the case be full and complete. He alone has the opportunity of ascertaining the principal facts bearing upon the patient's insanity; and I would strongly urge that a concise history of the case, so far as it can be learned, should be given by him, instead of the limited number of "facts"—and these too frequently of a meagre description—so generally contained in medical certificates. The certificate itself should be so arranged as to facilitate his more extended account of the history and symptoms. Many medical men would be only too thankful for any kind of tabulated form to assist them in giving the desired information. They are usually well acquainted with all the facts, but their difficulty consists partly in a want of knowledge as to which of them it is necessary or desirable to mention, and partly as to their arrangement.

The legal document which authorises the patient's reception and detention in an asylum, and is supposed to assign ample medical reasons for so doing, should be of the most full and comprehensive character, and contain such information as should be known by all persons—medical, official, and legal—who may in any way have to do with the case. No one can say that the form now in use meets such requirements. A large number have now to be returned to be amended, or strengthened, or explained by the writers, owing to the weak and unsatisfactory nature of the medical evidence.

The object of the certificate should be threefold, and this can only be effected by a relation of the whole of the facts bearing upon the case. 1st. To procure the admission of the patient into an asylum. 2nd. To place the medical staff of the asylum in a better position for the treatment. 3rd. To afford the Commissioners in Lunacy the proper means for ascertaining whether a *primâ facie* case of insanity has been made out.[1]

The present certificate, as is well known, is divided into two sections. 1. Facts indicating insanity observed by the medical man himself. 2. Other facts communicated to him by others.

The first of these two is the essential portion, and therefore needs the most consideration. I would recommend this to be divided into two portions, thus:—(*a*) Personal facts observed on the day of examination. (*b*) Personal facts observed at any other period. This would at once meet one of the principal difficulties experienced by the certifier as to any facts being observed on days other than that of the examination, and much valuable information would be recorded, for which at present there is no place in the certificate. It is, I think, mainly owing to this last-named reason why the Commissioners in Lunacy allow many of this class of facts to pass without comment, although they certainly appear to contravene the law when they constitute the principal proofs of the patient's insanity. Take, for example, the following instance:—"I have long known her to be an imbecile person, and at times to be subject to fits of irritability of temper, which have increased in frequency and violence of late, so that I consider it to be unsafe for her to associate with the other pauper inmates." The hearsay facts testified to acts of violence. As a really bad certificate this deserves a few comments. Its statements consist of three facts:—1. As to the patient being imbecile. 2. Liability to outbreaks of irritability of temper and of violence. 3. Being dangerous to others owing to violence. The second, as recorded, does not appear to have taken place on the day of examination, nor are the symptoms other than a sane person might display. This certificate was written in 1867. I scarcely think the Commissioners in Lunacy would pass a similar one unchallenged at the present date.

As all the symptoms noticed on the day the patient is examined by the medical man, must always be considered as the most important, whether as the reason for asylum detention or for supplying information in case of legal inquiry, I am strongly of opinion the practitioner would derive direct benefit and assistance if the facts under the heading I have suggested were arranged in a tabular form, so that all the symptoms then observed could be recorded under their several headings. Such a table might be based upon the principle I have already recommended for the practitioner to adopt when framing his certificate; or upon that recommended by a committee of members of the Medico-Psychological Association for insertion in the Case-book, to facilitate the labour of the asylum medical officer in recording all the symptoms of mental disturbance exhibited by a patient at the time of his admission. The adoption of some such plan would be attended with the following beneficial results:—1. All the essential points would be so brought under the notice of the certifier as to facilitate the examination of the patient. 2. All the principal symptoms would more probably be recorded in the certificate than is at present the case. 3. The negative symptoms would be recorded as well as the positive, which is not the case at present. There can be no question as to the great advantage of the last-named. Take, for instance, the symptom of delusion. Under the present form of certificate, all mention of any may be

[1] "Few of our duties require more vigilance than that of satisfying ourselves, in all doubtful cases, as to the validity of the orders and certificates on which patients are admitted into asylums, or become subject to detention in any place" (Fifteenth Report of the Commissioners in Lunacy, p. 65).

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omitted, and yet the document be perfectly valid, provided the other symptoms of insanity are recorded which in themselves are sufficiently indicative of the disease. Whereas if, under the heading "Delusions," the practitioner had to report whether the patient did or did not entertain any, and, in the event of the former being the case, had to describe them at length, the testimony, whether of a positive or a negative character, would be equally valuable and complete.

The personal facts observed on other days than that of the official examination would not require tabulation. The existing second heading would form No. 3 of the suggested form. The only addition necessary to make it more complete would be the name and address of the person communicating such information. The desirability of making this a statutory requirement has been commented upon by the Commissioners in Lunacy in their thirty-third report, p. 128. To these I would add a fourth, to contain such information respecting the mental and bodily symptoms and their causation as are not included in the other portions of the certificate. This requires an extended explanation and notice, as I regard this to be equal in importance to the other sections. Some of these particulars of required information are contained in the medical certificate in use in Ireland; but the most extended and complete form is the "additional statement" appended to the order of admission into the Royal Edinburgh Asylum. *(To be concluded.)*

ON SOME

PERIODICAL CHANGES WHICH OCCUR IN FIBROID TUMOURS OF THE UTERUS, AND THEIR SIGNIFICANCE.

BY JOHN WILLIAMS, M.D., F.R.C.P.,
ASSISTANT PROFESSOR OF MIDWIFERY AT UNIVERSITY COLLEGE, AND ASSISTANT OBSTETRIC PHYSICIAN TO THE HOSPITAL.

IT has been long known that fibroid tumours of the uterus undergo certain changes during gestation and menstruation. During gestation such tumours have been observed to grow with the growth of the uterus, and after parturition to undergo involution—in some cases simply to such a degree as to be restored to their condition when impregnation took place, in others as to disappear entirely. Though our knowledge of the changes which take place in tumours during gestation is not very large or very accurate, yet our knowledge of the changes which take place in them during the monthly changes of the uterus is even less. It is generally believed that during menstruation fibroid tumours of the uterus are larger than at other times; and women, subjects of such growths, not infrequently state that they are larger during menstruation than at any other period. The explanation usually given of the phenomenon is that the congestion which affects the uterus at the menstrual epoch extends itself to the tumour, and that consequently the fibroid partakes of the enlargement of the organ in whose walls it is lodged. This explanation is in accordance with the view of the menstrual processes which has prevailed for a considerable time—namely, that the time of the menstrual flow is a time of uterine activity, the intermenstrual interval a time of uterine repose, and that the flow itself is the result of a sudden congestion of the uterus depending upon ovarian influence.

I am not going to discuss the process or theory of menstruation in this paper, except in so far as my observations in cases of fibroid tumours bear upon that important question. The cases which form the basis of this paper are five, and all of them, except one, have been under observation for some time in the wards of University College Hospital. The exception has been observed for two or three years in a home for invalids. Some of the cases have been observed more carefully and reported more fully than others, because I was ignorant of the existence of the periodical changes of fibroid tumours until I stumbled upon indications of them accidentally, and because of the difficulty of watching patients with sufficient care to observe these changes fully.

CASE 1.—M. S——, a single woman, aged twenty-eight years, living in the country, was admitted into the hospital on 29th January, 1878. She was a teacher, and had been a teacher for nine or ten years. She had enjoyed good health, with the exception of having suffered from occasional attacks of neuralgia of the face, until her present illness. This began six months ago with a feeling of pain in the back and left side and retention of urine; the retention was relieved by catheter, but the pain and uneasiness continued. Retention has occurred six times during her illness—that is, during the last six months—on each occasion at the menstrual epoch. During the intervals micturition has been frequent. Menstruation began in the thirteenth year; it was regular from the first and has continued regular up to the present time. During the last two years it has been very profuse and has lasted longer (seven or eight days) than formerly, but it has not occurred at abnormal times.

On admission she was anæmic but well nourished. On examination the cervix of the uterus was found short, softish, high up, and directed forwards. The posterior part of the pelvis was occupied by a smooth, globular, firm tumour, which bulged the posterior wall of the vagina forwards, and descended below the level of the cervix. The sound entered three inches and a half, with the concavity backwards. It was evident that the mass was the enlarged body of the uterus. It was found impossible to raise it out of the pelvis. The tumour could be felt deep in the pelvis by abdominal palpation, but it did not rise above the pelvic brim. Three minims of a solution of sclerotic acid (half a grain) were ordered to be injected into the abdominal wall over the tumour twice a week.

The day before menstruation appeared she was unable to pass urine. Soon after the appearance of the catamenia the difficulty ceased. The flow was profuse, clotty, and accompanied with severe pain. It lasted six days. The day after its cessation (Feb. 19th) the patient was placed in the knee-breast position, and another attempt was made to push up the tumour. This proved successful, and an elastic ring was introduced to prevent the return of the organ into the pelvis. The sound was introduced two inches and three-quarters in the normal direction, in front of the tumour, which was in the posterior wall. The tumour now could be distinctly felt by the hand above the pubes.

On March 16th menstruation appeared again, profuse, but with less pain than previously. It lasted six days, and after its cessation the uterine cavity measured two inches and a half (March 23rd). At this time the uterus could be felt only by deep palpation through the abdominal walls. It gradually increased in size, and on April 6th it was distinctly larger. On April 16th it could be felt forming a distinct tumour reaching to about midway between the pubes and umbilicus. It was tender on palpation.

On April 17th menstruation appeared, profuse, and accompanied with severe pain. It lasted five days.

On the 23rd, the day after the cessation of the flow, the uterine cavity measured three inches, and the uterus had sunk so low that it could be felt only by deep abdominal palpation. After menstruation had ceased, retention of urine set in, depending apparently on the decrease in the size of the organ permitting it to sink into the pelvis, so as to press upon the neck of the bladder. The decrease in the size of the organ took place before or during the early part of the menstrual flow. Observations were not made with sufficient care and frequency to decide the exact time of its occurrence; but it was complete by the end of the first day of the flow. Since she has left the hospital she has been under the care of Dr. Griffiths of Swansea, and he informs me that, though he cannot determine the exact time of the decrease, yet he has observed that it had taken place before the end of the first twenty-four hours of menstruation.

CASE 2.—H. T——, aged thirty-six, unmarried, came under my care in January, 1877. She was then bleeding profusely, and was so blanched and exhausted that she was unable to leave her bed. She began to menstruate in her thirteenth year, and the catamenia used to return every fortnight, and last on each occasion ten to fourteen days. They were accompanied with a great deal of pain. From her twentieth year the pain grew worse and the bleeding more profuse. No tumour or swelling was, however, noticed until five or six years ago. When first seen a large median tumour was found rising from the pelvis, and reaching two inches above the umbilicus. It was smooth, moderately hard, non-fluctuating, movable, and had the characters of a

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fibroid growth. The cervix was large, high up, and unaffected by the disease; and the enlarged body of the uterus could be felt above forming the tumour which distended the abdomen. The sound entered along the anterior surface of the growth for five inches. The bleeding had been continuous for some time. Half a grain of sclerotic acid was injected under the skin of the abdomen twice a week; the bleeding began to lessen, and at the end of five or six weeks she had intervals of ten to fourteen days free from hæmorrhage, alternating with bleeding epochs of similar duration. At the end of three months the bleeding epochs had become still shorter and the intermenstrual intervals prolonged to nearly three weeks. The use of sclerotic acid was then discontinued for a month and the bleeding became profuse and almost continuous. Recourse was had again to the use of sclerotic acid with the effect of diminishing the hæmorrhage. She improved in health, gained strength and colour, and was able in August to go to her friends in the country, and stay there a month. During this time the acid was not used, and after her return to London the hæmorrhage began again. The acid was again used as before, and with similar effect. At the end of February, 1878, she complained of much bleeding, pain in the back, and bearing-down,—pains she had never suffered before. On examination the cervix uteri was found dilated and a portion of the tumour projecting through it into the vagina. This was removed, and the use of sclerotic acid continued some time longer. Portions of the tumour have been removed on two occasions since. The pieces removed were soft and œdematous. At this time the tumour seemed to have diminished in size, for it reached only to the umbilicus. I was not then aware of the alternate increase and diminution in the size of fibroids, so that I attributed to the effect of the acid more than perhaps was due. For the last eighteen months the acid has only been occasionally used, for the catamenia have not been very frequent or profuse, though still excessive. I have since repeatedly observed that the tumour diminishes at the beginning of and with menstruation, and grows again gradually during the intermenstrual period.

The following are the measurements during the last month: She menstruated from 15th Jan. to 23rd Jan. On February 7th the tumour reached three inches above the umbilicus. On the 10th it reached four inches above the umbilicus. She began to menstruate on the 9th, but very scantily; and on the 11th the upper border of the tumour was three and a quarter inches above the umbilicus, on the 13th two and three-quarter inches.

CASE 3.—H. W——, aged forty-four years, a widow, was admitted on November 7th, 1879, into University College Hospital. She has always enjoyed good health. She has been married eleven years, and has never been pregnant. The catamenia appeared first about the thirteenth year, and returned every four weeks, lasting each time two or three days. In February of this year she had a profuse flooding, but since that time the flow has been somewhat less. During the intermenstrual intervals she is usually quite well, but occasionally she has noticed a little yellow discharge. She never suffers from nausea or vomiting, and is free from pain. She first noticed the swelling in the abdomen about two years ago, and says "it flattens after each menstruation." She was well developed, well nourished, but pale; the mucous membranes were very anæmic. There was a systolic murmur audible over the heart and great vessels at the root of the neck, but loudest over the third left costal cartilage; otherwise the heart and lungs appeared healthy. In the lower part of the abdomen was felt a smooth, rather hard, oval-shaped (but with a slight notch in its upper border) tumour. It rose from the pelvis, was somewhat more prominent and reached a little higher on the left than on the right side of the median line. On the right it appeared flattened out, and was less defined than on the left. On November 8th she said that she daily expected her courses, and thought that she was a couple of days after her proper time; she added, "I am now much bigger, but I shall be quite flat when the courses are over." The vagina was relaxed, the cervix hard and thickened. The os uteri was much larger than is usual in nulliparæ, and was pushed forward. Behind the uterus was a hard, smooth, round body, continuous with the uterus and with the tumour in the abdomen. It was freely movable with the uterus, which was in front of the growth, and not tender. The sound could be introduced for four inches and a half in front of the tumour, and a little to the left side, to the highest part of the swelling in the abdomen, so that the left prominence was the fundus uteri. This part reached to within an inch and a half of the umbilicus. On Nov. 9th the highest part of the tumour reached within two inches and a half of the umbilicus—that is, it was one inch lower than on the previous day. In the evening, at 11 o'clock, the menstrual flow made its appearance, so that the decrease in the size of the swelling took place nine hours previous to the appearance of the flow (the visit being made at 1.30). On the 10th and 11th the flow was very profuse; between 4 P.M. on the 10th and the morning of the 11th nine large drawsheets were soaked through, and on the latter date the distance between the umbilicus and the upper border of the tumour measured three inches, only half an inch more than nine hours before the flow appeared. The distance remained unchanged till the end of menstruation on Nov. 18th. Then the sound was introduced, and the length of the uterine cavity was found to be three inches, an inch and a half less than on the day previous to the commencement of menstruation. During this time—that is, from her admission on Nov. 7th till Nov. 18th—she was put upon no treatment, so that nothing interfered with the natural course of the growth. On this day (the 18th) a hypodermic injection of sclerotic acid (half a grain) was given, and on the following day (19th) the distance of the upper border of the tumour from the umbilicus was four inches and a half, and on the 20th three inches and a half. The hypodermic injection was repeated on the 21st, and on the following day this distance had increased to five inches. On the 24th the distance had diminished to four inches and a half, and the length of the uterine cavity as measured by the sound was found to be three inches. From this time to Dec. 5th the distance gradually diminished as follows:—Nov. 26th, distance from upper border of tumour to umbilicus, 3⅜ in. On the 27th, 3½ in.; on this day there was a slight discharge of blood—two or three small clots. On the 28th, the distance was 3½ in. On Dec. 1st, 3 in. On the 3rd, 3 in.; no discharge of any kind; hypodermic injection of sclerotic acid. On the 5th, the distance was in the morning, 2⅜ in.; hypodermic injection given; distance in the evening, 3½ in. On the 7th, 4 in. On the 8th, 3½ in. On the 11th the distance in the morning was 3 in.; sound enters 3¾ in.; abdomen somewhat fuller; distance in the evening, 3 in. to 3½ in. On the 13th, the distance in the afternoon was 4½ in.; does not feel well; menstruation began. On the 15th, the distance was 4 in., menstrual flow much less than usual. On the 16th, the distance was 3½ in. On the 17th, 3½ in. On the 18th, 4 in. On the 20th, 4 in. On the 22nd, 4 in.; menses have been not at all excessive. On the 27th, the distance was 3½ in. On Jan. 1st, 3½ in. So that throughout the interval, despite the sudden decrease which followed injections of sclerotic acid, there was a gradual increase in the size of the tumour, and an equally sudden diminution before or about the commencement of menstruation.

(To be concluded.)

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

[EYE DEPARTMENT.]

CASES OF TEMPORARY AFFECTION OF ONE OPTIC NERVE, COMPARABLE TO BELL'S PARALYSIS OF THE FACIAL.

(Under the care of Mr. NETTLESHIP.)

CASES such as those given below are instances of a small but well defined group of cases in which the affection of the optic nerve is in several of its clinical characters similar to the common cases of facial paralysis attributed to the influence of cold. The failure of sight sets in quickly (though not *suddenly*), affects only one eye, is accompanied by slight inflammatory appearances at the disc, and is usually followed by complete recovery. There is very often pain on the same side of the head, generally "neuralgic" or "rheumatic."

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The disease is described by Leber (Graefe-Saemisch's "Handbuch") as due to a temporary and slight inflammation of the trunk of the nerve behind the eyeball. Mr. Nettleship said that he had now seen a considerable number of these cases, but believed the disease to be much less common than paralysis of the facial nerve. His patients had all been between about twenty and thirty-five, he had seen no cases in children or old people. He believed the disease did not relapse, and never attacked the second eye, but it was very interesting that one of the cases here given had recently recovered from facial paralysis; it did not seem probable that this optic nerve disease could be caused by cold. Mr. Nettleship remarked that cases of rapid failure of one eye, sometimes with gross neuritis, ending in permanent blindness, were also met with, but thought it more useful to consider them for the present as distinct from the present group.

CASE 1. — James G——, aged twenty-seven, a very intelligent man, of half Irish parentage, employed in the Westminster Aquarium, had for two or three years been an occasional patient on account of old granular lids, contracted when a boy at Forest-gate School. He had some hypermetropia and astigmatism, and an old convergent squint of the left eye, with defective sight from suppression. He wore a cylindrical glass for his working eye at one time, but found after a while that he could do as well without it. At the time the attack narrated below came on he had ceased attending school for about two months. His vision before the attack was taken more than once, when glasses were tried. On May 14th, 1878, it was: Right = $\frac{2}{6}$, and with $\frac{1}{18}$ spherical convex combined with + $\frac{1}{36}$ cyl. = $\frac{2}{5}$, well. Left had convergent strabismus; read 20 Jaeger with difficulty; had been practically blind for a long time. On Sept. 5th the sight of the right (good) eye began to fail, and by the 9th he "could not see anything." When he went to the hospital on the 10th only 18 Jaeger could be seen with difficulty, and the optic disc was very indistinct and hazy. Five grains of iodide of potassium were given three times a day. On the 17th the sight had already much improved. Vision = $\frac{2}{6}$, and 8 Jaeger could be read at from six to ten inches; not much improved by glasses. The disc of right eye was congested and hazy; veins enlarged and somewhat tortuous; pupil active. Left eye (strabismus and old defect); Disc healthy. On the 26th the sight was much better. Vision = $\frac{2}{6}$; slowly improved to $\frac{2}{4}$. Read 1 Jaeger fairly at from six to eight inches, unaided. On Oct. 3rd vision was the same; disc still too red, its border not clear, and the veins distended.

The visual field was not taken, nor was he tested for colours. Probably, however, there was some defect for red (i. e., central scotoma), for when the attack came on he found he could not tell gold from silver, nor "bright scarlet from brickdust." Even as late as Oct. 14th, when he considered himself quite well, he described "a slight mist or whitish tint" on objects, as if the centre of the field were not perfectly restored. For several days before the sight began to fail he had pain, chiefly of a dull character, but sometimes shooting, on the same (right) side of the head, passing behind the ear and to the back of the neck. He "thought it was a stiff neck." At the same time the eyeball was (according to his statement) reddened, and though not spontaneously painful, would hurt him if he looked up and to his left, "as if the eye was strained." He also noticed as peculiar at the time that he was "sweating so freely in the head," but did not think it was unilateral.

On the evening before the failure he had been saying to his companions how good his sight was, and had tested it by counting a long line of gas jets at a distance. This may be borne in mind in reference to the possible influence of dazzling by bright light in determining a change in the optic nerve. It may be added that the patient was not subject to stiff neck, nor had he ever had facial or any other paralysis. His father had for twenty years been an inmate of an asylum for "recurrent mania," attributed to a fall on the head.

CASE 2.—E. W. G——, aged thirty-three, a wheelwright, tall, strongly built, rather pale, with dark hair, was under the care of Dr. Greenfield for right facial paralysis for nearly a year before Mr. Nettleship saw him. It was attributed to sleeping in a keen draught, was treated by galvanism, and recovery was very nearly, if not quite, perfect when Dr. Greenfield sent him to Mr. Nettleship (on Oct. 10th, 1878) for examination of his left eye, which had recently failed.

The man's account of his eye symptoms was as follows. On Sept. 26th he complained to Dr. Greenfield of "flashes of light" in the left eye, followed by pain passing over to the back of the head. On the 29th, whilst reading, he gradually became aware of some defect of sight, and found that it was in the left eye. The exact rate of failure after this was not noticed. The same shooting pain continued, especially when he made sudden movements of the head or eye. He noticed also after the defect came on, that the left eye was not "so wide open" as the right.

Oct. 10th, 1878.—Vision: Right $\frac{2}{6}$, and 1 Jaeger at six inches, refraction normal; left, only counts fingers, seeing them best at periphery of field, especially above and below (great defect of centre of field). The pupils were equal and active, but the left acted less freely than the right to direct stimulation. The movements of the left eye were perfect, but the palpebral fissure was decidedly narrower than the right, and the lids rather puffy. There was no congestion of the eye; there was doubtful tenderness over supra-orbital notch, but none on pressing the eyeball back into the orbit.

With the ophthalmoscope the left disc was seen to be doubtfully redder than the right, but no definite changes could be made out. The retinal vessels in both eyes pulsated with unusually little pressure. There was no evidence of vaso-motor paralysis. He was not rheumatic, nor liable to neuralgia; had occasionally had a slight "stiff neck." Six years ago he had gonorrhœa; no proof of syphilis.

On the 18th he was ordered six grains of iodide of potassium, and twenty minims of solution of perchloride of mercury three times a day, and a blister to the left side of the head every night. On the 20th, on getting up he found his sight had begun to improve. On the 31st, the left eye could read words of 4 Jaeger held close, and $\frac{2}{3}$ (bad light). The fundus as before; no definite changes.

Nov. 7th.—Right, 1 Jaeger fairly and $\frac{2}{3}$; left, 1 Jaeger at from 9 in. to 12 in., but not so well as right and $\frac{2}{3}$. Pupils equal and active. Left palpebral fissure still rather narrower than right, but lids not puffy. Had only used five blisters in all.

On Jan. 2nd, 1879, he still did not see quite so well with left as right. He read 1 Jaeger with each, but the words "look brighter" with the right than the left. His visual field was not taken carefully, nor was he tested for colours until he could again read 1 Jaeger, when he showed no defect.

WANDSWORTH INFIRMARY.

SUPPURATIVE OTITIS; INTRACRANIAL ABSCESS; PYÆMIA; CEREBRO-SPINAL MENINGITIS; DEATH.

(Under the care of Dr. JAMES ALLEN.)

B. D——, a woman aged nineteen, was admitted on the 6th January, 1880, and died on the 10th. She had been rather deaf from childhood; and since four years of age she had been subject to fits. These came on at intervals of about a year, several then occurring in succession. Six years ago she had disease of the left tibia, which continued for two years with discharge of pus. Shortly before the present illness she was a domestic servant, and had to give up work on account of increased deafness. Drops for the ears were prescribed on her application at an Ear Infirmary. On the 19th December, 1879, she had pain in both ears. She was now unable to attend the Ear Infirmary, but the pain being increased by the drops, she discontinued them. Intense headache and vomiting soon followed, and the former symptom persisted. When raised in bed she could not hold up her head, and screamed unless it were supported. She had had several fits in the course of her present illness; she became paraplegic about a week before admission, and a few days later complained of pain in the right chest. The bowels had been regular. She menstruated on Dec. 29th; was unmarried, and had no children. There was a family history of phthisis.

On admission she had motor paralysis of the lower extremities, and seemed to suffer great pain on the slightest manipulation of the head or spine. During examination she showed much irritability of temper. The skin was pale, there was no eruption, but the skin was hyperæsthetic and dry with pungent heat. Tache cérébrale was well marked. Temperature in axilla 103·5°. There were sordes on the lips and teeth; the tongue was covered with a dry brown coat, but the edges were clean and red. There was great thirst. The pupils were dilated, equal, and contracted to light; the conjunctivæ were injected. The girl was very deaf in both ears. The cephalalgia was chiefly frontal, but also general, though not so severe as it had been. There was rachialgia along the whole length of the spine, increased

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by pressure and movements; the dorsal muscles were very rigid. The heart's action was tumultuous. Pulse 144, weak. There was increased frequency of respiration, and other evidence of pleuritis in both chests. The area of liver dulness was enlarged. The motor paralysis of the limbs was not quite complete. She had control over the bladder and rectum.

She was delirious during the night. Next morning the temperature was 103°; pulse 130. Milk and beef-tea were taken readily. Cold to the head was not well borne, and did not seem to give relief. Ordered quinine and ammonia in mixture, and to have fifteen grains of chloral at night. The evening temperature 103·2°; pulse 118. On the 8th the morning temperature was 103°; pulse 120. Evening temperature 102°; pulse 98. Had a good night. On the 9th the morning temperature was 104°; pulse 120. She had been delirious. The skin was very sensitive, when uncovered the patient becomes irritable in temper, and said she was "told," meaning cold. Evening temperature 98·4°; pulse 110. On the 10th the morning temperature was 102·2°; pulse 156. She thought herself better. The pulse was, however, very feeble, and the respirations were rapid. She died in the evening, having perspired very freely during the last hours of life. Temperature in axilla two hours before death was 98·6°; pulse 160. Skin then moist and cool, but the patient expressed herself as feeling intolerably hot. With this exception skin had been notably dry throughout illness.

Necropsy, forty-eight hours after death.—Rigor mortis fairly marked. The left leg presented a large cicatrix over the internal aspect of the tibia, and there was thickening of the bone. The mammæ were not developed. The pupils were equal and dilated. The scalp was thick, not adherent; skull cap thin and hard. The dura mater was firmly attached to the bone, its vessels were much injected. There was opacity of the arachnoid and œdema of the subarachnoid; the pia mater was thickened, and abnormally adherent to the brain, and the vessels were intensely injected and of a bright scarlet hue. The brain was notably firm throughout, the pineal gland and pituitary body included, the cut surface showing numerous puncta cruenta. There was very little fluid in the lateral ventricles. On the ventricular surfaces there were numerous large, full ramified vessels. The sinuses of the dura mater were distended with blood clot, partly ante mortem, chiefly post mortem. On the anterior surface of the petrous portion of the right temporal bone, near its base and upper border, a rounded tumour the size of a small hazel nut presented itself on removal of the brain, not adherent, but indenting slightly the lower surface of the right tempero-sphenoidal lobe, and at this part there was slight limited softening of the brain tissue. The tumour was due to a collection of pus between the dura mater and the bone; there was also a small blood clot. The bone was removed and the internal ear examined. The membrana tympani and ossicula were gone. There was suppuration in the middle ear and mastoid cells, and in a more marked degree of the internal ear; the surrounding bone was infiltrated with pus, and an intracranial abscess could be seen situated chiefly over the tympanum. On the left side there was suppuration of the middle ear alone, with perforation of the membrana tympani and absence of the ossicula auditus, except the stapes. Weight of cerebrum thirty-eight ounces, of cerebellum and pons four and three-quarter ounces. The spinal canal was laid open throughout its whole length from behind. The cerebro-spinal fluid was not increased. The spinal cord in the upper half of the cervical portion was abnormally firm; the vessels on its surface were full and tortuous. The remainder of the cervical and upper half of the dorsal portions were much softened, bulging on section, and adherent to the membranes, especially posteriorly. There was also marked injection of the pia mater. The rest of the cord was of the consistence similar to the upper half of the cervical portion. The pericardium contained two ounces of pale-yellowish, non-turbid fluid. The right side was distended with dark blood, not firmly clotted; the left ventricle was empty in diastole. The aortic valve had only two flaps, and was incompetent from thickening and rigidity. The left ventricle was considerably hypertrophied. The aortic arch was dilated, thickened, and slightly atheromatous. The right pleural cavity contained ten ounces of blood-stained serum. The lower lobe of right lung was hepatised, and at its base there was a circumscribed empyema, containing about two ounces of fetid pus, and arising from a small abscess on the lung-surface. On the base and posterior border of this lung there were found several similar superficial purulent collections, but over these the pleura had not given way. In the bronchi there was muco-purulent fluid; the bronchial mucosa dusky red. There was no fluid on the left chest, but there was general opacity of the visceral pleura, with here and there patches of fibrinous exudation. The parietal pleura was injected. The left lung at its base was œdematous and congested, and several small projections on the posterior border, on section, were found to be sub-pleural superficial infarcts in various stages of suppuration. The bronchi contained muco-purulent matter, but the mucosa was of more normal colour than that of right bronchi. The apices of lungs were quite free from disease. The liver was large, amyloid, but did not contain any purulent collection; weight eighty ounces. The spleen was soft; weight ten ounces. The kidneys were large, amyloid, congested; weight seven ounces each. The intestines were normal; no peritonitis. The uterine cavity contained viscid mucus, which also projected from the os uteri, the mucosa of the uterus being dusky red; no irregularity of surface. Both Fallopian tubes contained a thick whitish fluid; this fluid was found to consist chiefly of cylindrical epithelium; cells rather small, and of equal size. In the right ovary there was a recent corpus luteum.

In this case the absence of lymph or pus in the brain and cord—a usual anatomical character of cerebro-spinal meningitis—is peculiar; also the absence of sweats as a symptom of pyæmia.

HITCHIN INFIRMARY.

CONGENITAL PHIMOSIS, WITH PREPUTIAL CALCULUS.

(Under the care of Dr. O. H. FOSTER.)

On February 17th, 1880, B. M——, aged three years, was admitted into the infirmary. His mother stated that since he was five months old she had noticed that he had difficulty in passing water, which had gradually increased up to the present time; latterly he had almost constant desire to make water, which dribbled away from him, especially if he walked about. He suffered considerable pain at the end of the penis, which was aggravated by any attempt to make water. The urine was frequently thick and gritty. There had been a gradual enlargement of the end of the penis, the extremity of which on admission presented to touch a stony hardness, very unusual in cases of ordinary phimosis.

On February 23rd Dr. Foster performed circumcision, and found a calculus in a cavity, formed between the glans penis and the tightly constricted perputial orifice. The calculus slipped out easily, when the unnaturally thickened mucous membrane investing it was slit up. The operation was completed in the usual manner, and the child got perfectly well in a few days.

The calculus was about the size and shape of a sparrow's egg, its weight was fifty grains; its external surface presented a uniform, smoothly polished, phosphatic appearance; on section it was clearly, simply a phosphatic concretion, without any nucleus.

The case is, as far as Dr. Foster knows, a unique one.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Necrosis of Lower Jaw.—Volvulus of Ileum.—Imperforate Rectum.—Strangulated Hernia.—Sarcoma of Liver.—Ossifying Chondro-Sarcoma.—Talipes.—Divided Tendo Achillis in Pseudo-Hypertrophic Paralysis.—Syphilis.—Blood in Yellow Fever.—Aneurism of Aorta.—Cockscomb Moles.—Congenital Syphilis.—Complete Excavation of Lung.—Acute Atrophy of Liver.—Malformation of Arm.

THE ordinary meeting of the Pathological Society of London was held on Tuesday, May 4th, the President in the chair. There was a small attendance of members. Several very interesting specimens were exhibited, and it was necessary to prolong the meeting beyond the usual hour. MR. Parker showed in the ante-room a case of cyst in the back of a young child, which had recently very rapidly

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developed. Dr. Heneage Gibbes exhibited a longitudinal section through the whole kidney, it was double-stained, and so successfully prepared that the course of the renal tubules from glomeruli to papillæ was easily traced. It was cut with a microtome, and was probably one of the largest sections yet exhibited.

Mr. CRIPPS exhibited a Sequestrum consisting of nearly the whole of the Lower Jaw from a case of Cancrum Oris. A child two years old was admitted into St. Bartholomew's Hospital under Mr. Savory's care, with a history of having been perfectly well till a fortnight previously, when she was attacked with fever, loss of appetite, and a swelling over the right side of the jaw, which at the time of admission extended from the last molar to the canine tooth; a week later this swelling had involved the whole of the lower jaw. The swelling was hard and very defined; ulceration set in in the older part, and then after an interval the whole of the involved soft tissues sloughed, and the child died. The sequestrum was removed from the slough at the post-mortem; it was then found that the disease had begun to involve the upper jaw also. The case differed from cancrum oris in some particulars, especially in its slow course. Subsequently it was ascertained that a favourite cat with which the child had been playing had suffered from swelling of the nose and mouth, with fetid discharge, for which it was killed. Hamilton described the disease a century ago, and since his time little, if anything, had been added to our knowledge of the affection.—Mr. MORRANT BAKER had seen the case during life; although it was more like cancrum oris than anything else, it certainly did not present the usual features of this affection. He thought it fairly probable that it might be a special disease.—Dr. THIN asked if the child had taken mercury at any time.—The PRESIDENT remarked that it was quite unusual for cancrum oris to affect the bone so extensively; had the child been exposed to the fumes of phosphorus?—Dr. DOWSE inquired if the child had had measles, for he had had several cases of cancrum oris as a sequel to measles; in one instance he had three patients in one house, all of whom soon after recovering from measles had extensive necrosis of the lower jaw; two of them died. The disease in these cases seemed to begin in the alveolar process.—Mr. C. MACNAMARA considered it to have been a case of acute necrosis of the jaw from periostitis, such as is often seen in the extremities of young children, and that it could hardly be called cancrum oris.—Dr. SHARKEY had seen a case of cancrum oris in St. Bartholomew's Hospital following measles, in which the right half of the necrosed jaw came away, and the patient recovered.—The PRESIDENT, on calling on Mr. Cripps to reply, remarked that the Society had only seen the sequestrum, while Mr. Cripps had seen the whole course of the case.—Mr. CRIPPS stated that there was no history of mercury, phosphorus, or measles, and he could not agree to consider it acute necrosis, for it began first at one part, then slowly spread, and later on again spread and reached the upper jaw; the necrosis was secondary to the sloughing of the soft parts.

Mr. CRIPPS showed a specimen of an infant who had died from a Volvulus of the Ileum. When three days old it was admitted into St. Bartholomew's Hospital, under Mr. Willett's care, because it had passed no motion, and had vomited meconium. The anus appeared to end in a cul-de-sac an inch from the surface; the belly was moderately distended. Mr. Willett opened the abdomen above the right groin, and opened the first coil of intestine that bulged forwards. The child died two days later, and at the autopsy signs of general peritonitis were very evident. The whole of the colon and rectum was found to be perfect and patent, but firmly contracted into a cord like a pipe stem. Two feet above the cæcum was a volvulus in the ileum, with distension of the gut above. He thought that possibly a large injection might have succeeded in undoing the volvulus. The case was of great interest for diagnosis. Mr. Cripps at the same time exhibited a specimen of Imperforate Rectum, also admitted to the hospital, under Mr. Willett, when three days old, for vomiting, and no motion passed since birth. The anus was perfectly formed, and the finger could be passed inside for about half an inch; belly moderately distended. Operation was refused by the father, and the child taken away. Thirty days later she was brought back again apparently quite well; the abdomen was distended; food was taken well, but three or four times every day she vomited up fæcal material. Mr. Willett passed a trocar upwards from the termination of the anus, but only a little serous fluid escaped. Death from peritonitis ensued; and at the post-mortem examination the anal aperture was found three-quarters of an inch long, and the distended pouch-like rectum was seen to end just above it; the trocar had penetrated the peritoneal pouch between the two. Mr. Cripps thought it a good guide for diagnosis that if the anus is well formed the rectum is within reach, and ought to be searched for. If the trocar had been directed back towards the sacrum no accident would have occurred. It was noteworthy that the child was living on apparently well with this condition unrelieved. In the *Gazette Médicale* a case is mentioned of a girl, thirteen years of age, without rectum and vagina, who took her food well, and every third day vomited up pure fæcal matter. The girl is also stated to have passed urine through the nipples four times a day, which threw doubt upon the whole case. — Mr. MORRANT BAKER having seen the first of these two cases, bore testimony to the difficulty, if not impossibility, of making a correct diagnosis. Apparently the gut was completely occluded three-quarters of an inch from the anus, the only peculiarity to the touch being the sensation as of a slight rent in the mucous membrane.—Mr. MORGAN asked, if in the first case any attempt were made to inflate the gut, or distend it with water, and why Littré's operation was performed on the right side instead of the left; was it because in these cases the sigmoid flexure so often curves over to the right?—Mr. CRIPPS stated that the rent mentioned by Mr. Baker was no doubt the result of the previous examinations. He had only seen the case as pathologist, and did not, therefore, feel called upon to justify the course of treatment pursued.

The PRESIDENT showed a specimen of unrelieved Strangulated Femoral Hernia obtained from an old lady who died after seventy-two hours' strangulation; a few hours before death, after getting out of bed for the purpose of trying to pass a motion, collapse set in, which proved fatal. On post-mortem examination it was found that there was an entire absence of peritonitis. The gut below the hernia was pale, empty, and contracted; while that above was distended and intensely congested, the congestion extending into the attached mesentery. There was no rupture of the intestine or other local lesion to account for death, unless we fell back upon abdominal shock. The interest of the specimen was the evidence it afforded that death from an unrelieved strangulated hernia was not from peritonitis, which, in his opinion, did not occur until the injured gut was returned into the belly by means of taxis or kelotomy.—Dr. S. WEST thought this case was a pathological explanation of the condition of abdominal shock. The patient had really been bleeding into the abdominal vessels, until the anæmia of the brain and other parts was fatal. — Mr. WALSHAM asked if the brain was found anæmic. — The PRESIDENT stated that it was not examined. — Dr. THIN thought that the injury to some of the capillaries of the distended gut was the cause of collateral congestion, and that the condition was explicable on this mechanical ground. — The PRESIDENT was unable to explain the congestion of the gut above the hernia.

Mr. R. W. PARKER showed a specimen of Diffuse Sarcoma of the Liver. An infant three weeks old was found by Dr. Townsend, of Kensington, to have a very large liver, which almost filled the whole abdomen. Mr. Parker saw it soon after; the surface of abdomen was irregular, veins distinct, slight œdema of legs and belly wall, no ascites, very little intestinal resonance. The child died when five weeks old. At the autopsy, which was limited to an examination of the abdomen, the liver, which weighed thirty-three ounces, was of a dark-plum colour, quickly changing to bright red on exposure to the air. A large quantity of blood escaped on section, and then a new growth, in masses varying in size from a millet seed to a walnut, was found to be very largely diffused through the organ. The gall-bladder was only rudimentary. A second growth of similar nature was found between the left kidney and the spleen, but not involving either. The other organs were quite healthy. The liver was found to be densely infiltrated with small round granular cells, even in places where to the naked eye there was no deposit; and nowhere could healthy liver-cells be found. It was, no doubt, a congenital affection. There was no history of syphilis, and he thought the fact of the disease

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being limited to one organ, and having given rise to a secondary growth, was opposed to its being of syphilitic nature.—Dr. PYE-SMITH suggested that the case resembled one shown to the Society some years ago by Dr. Wilks, and was inclined to call it diffuse interstitial hepatitis rather than sarcoma. A diffuse sarcoma of this kind would be a unique observation, and a primary sarcoma of the liver of any kind is exceedingly rare. It was impossible to be certain that the other organs were healthy, for the autopsy was only partial. If the secondary growth was in a lymphatic gland, it was as likely inflammatory as sarcomatous; whatever the cause of the affection might be, he certainly thought it better to speak of the case as one of interstitial hepatitis.—Dr. CORY asked if the spleen was quite healthy.—The PRESIDENT inquired what was the negative evidence of syphilis, and suggested that the specimen should be referred to the Morbid Growths Committee. He had seen a similar case in which there was conclusive evidence of syphilis.—Mr. PARKER replied that the spleen was not enlarged. The father and mother were both questioned as to syphilis with negative results. There were no signs of syphilis in the child. He examined the lungs, and found them healthy. Mercurial inunctions had no influence upon the growth of the liver, and he thought this of considerable importance, as syphilitic growths yield very readily to mercury. General syphilitic hepatitis is quite a pathological curiosity, and he thought there was no difficulty in holding the view that in this case there had been an arrest in the development of the liver, and a persistence of the early embryonic condition.

Mr. PARKER next exhibited some drawings and microscopical sections of a case of Ossifying Chondro-sarcoma. A child, a year and a half old, had been suffering for three months from disease of the left knee, at first simulating arthritis; the inguinal glands on the same side were enlarged, and just before death the right knee became affected; death took place from sudden dyspnœa. At the post-mortem examination the tumour was found to involve the whole of the left femur except the head and great trochanter, which were still cartilaginous. The growth did not extend into the knee-joint, but closely surrounded the capsule and spread down to the tibia. In the centre the growth was almost entirely composed of bone; this was surrounded by a zone of cartilage, while the periphery consisted of fibrillated cartilage rich in cells, and was continuous with the surrounding tissues. The left lung contained a deposit of similar nature; the other organs were quite healthy.—Mr. PEARCE GOULD asked whether the tumour had actually infected the enlarged inguinal glands, and whether any growths were found in the veins of the thigh. In a similar case under the care of Mr. Christopher Heath, in University College Hospital, the inguinal glands were enlarged, but no signs of secondary deposit were found in them. He also thought it common for these growths to extend into the veins.—Mr. PARKER replied that there were no growths into the veins, and that the glands were infected with the tumour, showing the same structure as the other formations.

Mr. PARKER then showed two specimens of Congenital Talipes, the one of T. varus in which the fibula was displaced behind the tibia, the other of T. calcaneus. The specimens were of interest as bearing upon the cause and also the treatment of the deformities; he looked upon the change in shape of the bones as the primary affection; they are certainly twisted in T. varus, and it would be strange if they were to develop normally. The change in the muscles—the one set being lengthened, the other shortened—is secondary, and not dependent upon nerve changes. He could not understand how the condition of the muscles in T. calcaneus could be produced by paralysis.—Mr. ADAMS remarked on the great rarity of specimens of these deformities, and the consequent value of Mr. Parker's. He thought the position of the fibula in the first case was apparent rather than real. He could not believe that talipes was due either to malformation of the bones or to paralysis; the deviation in the bones was not greater than could be explained by the foot remaining in its position from the fourth to the ninth month of pregnancy; he had never seen a case of congenital paralysis. His view was that the disease was of nervous origin, and its exact nature he was ignorant of.—The PRESIDENT asked Mr. Adams whether his remarks applied to both varieties of talipes; from his experience the majority of cases of marked T. calcaneus are combined with spina bifida, with at any rate some degree of paralysis, certainly paralysis of the sphincters.—Mr. ADAMS stated that he had seen more cases of T. varus than T. calcaneus in connexion with spina bifida. He thought talipes calcaneus was due to position or "packing" *in utero*.—Mr. PARKER thought there was nearly always talipes in spina bifida, and most commonly T. calcaneus. The specimen of T. varus was from a monster, that of T. calcaneus from an otherwise healthy child. He thought the mechanical theory explained all the facts, and that if the disease were of nervous origin treatment would be less successful than it is.

Mr. ADAMS related the sequel to a case of Syphilitic Gumma recorded by him in vol. xx. of the Society's Transactions. The patient lived seven years; the tonsils, palate, pharynx, and larynx became involved, and tracheotomy was performed; the tube was worn for a year and then removed, death occurring a week later from asphyxia, apparently from disease lower down than the larynx. The patient was not benefited by drugs; the use of black wash for three or four days would produce salivation, and one-sixth of a grain of iodide of potassium gave rise to distressing nervous symptoms.—The PRESIDENT thanked Mr. Adams, and expressed a wish that other members of the Society would follow his example and complete the record of published cases.

Dr. SQUIRE exhibited some microphotographs of the blood, and black vomit in yellow fever, and of the air of the ward, taken by Dr. Sternberg, of the United States Army. No microzymes were found in the blood or in the air; but the white corpuscles in all the cases showed fatty granules upon them. Some specimens of spirilla found in the bilge water of the ship in which the outbreak occurred were also shown. Dr. Cunningham had described fatty degeneration of the leucocytes in cases of starvation.—Dr. THIN observed in two of the photographs rod-like bodies resembling bacteria, and he suggested that the so-called fatty granules in the leucocytes were really micrococci.

Dr. S. WEST showed two specimens of complete Excavation of the Lung obtained from patients recently in the Victoria Park Hospital. One of the patients was believed to have a localised pneumothorax, and was tapped for this. The second case was known to have a large cavity, and suffered from cough and dyspnœa: he improved, and was about to leave the hospital when he was attacked with severe hæmoptysis, which continued for seven days and then ended fatally. In each case the wall of the enormous cavity was formed of the remains of the lung and thickened adherent pleura. In the latter the cavity was filled with blood-clot, which came from a large rupture in an aneurism of one of the branches of the pulmonary artery close to the root of the lung. It is very rare to find a cavity extending beyond one lobe; Rokitansky mentions a like case, which also ended fatally, from rupture of an aneurism. The cases were very chronic, and might almost be called latent.

Dr. S. WEST also showed a specimen of Acute Atrophy of the Liver, from a child six years of age. She was admitted to the hospital with a history of one week's illness, vomiting, delirium, and slight œdema of ankles. The head was drawn back, knees raised, and there were fits of screaming, so that the case simulated meningitis. The temperature was 100° to 101°; pulse and respiration very rapid; the liver was found to be much enlarged, and to reach from the fifth rib nearly to the umbilicus; this rapidly decreased, and in four days hardly reached the ribs. Both the vomited matter and the stools contained altered blood. There was no jaundice. Post mortem the lungs were found congested, heart and kidneys fatty, spleen small, liver very small, weighing only sixteen ounces; the outer part of the lobules were grey, inner part red; with the microscope it was seen that the middle zones of the lobules were made up of cells distended with large drops of oil, while in the centre the fat had disappeared, only a granular nucleus remaining. It was acute fatty degeneration, not acute yellow atrophy. It was learnt that this and another child playing in the street ate something from the gutter, and the other child was also taken ill and died.

Dr. ALLEN STURGE showed a finely-grown man, whose left arm was malformed. It was perfect down to the elbow, and the forearm was represented by a short stump ending in a conical projection over the radius. The ulna was shorter, and over it the skin was umbilicated. The fingers were represented by five little nodules, the outer one of which was the largest, and, with its neighbour, was tipped with a distinct nail. Sir James Simpson spoke of such cases as due to intra-uterine amputation. It was a question whether they are not really examples of arrest of development.

The following card specimens were exhibited:—1. Tendo Achillis divided in Pseudo-hypertrophic Paralysis; by Mr.

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W. Adams. 2. Aneurism of Arch of Aorta rupturing into Trachea; by Dr. Orlebar. 3. Two Drawings of Cock's-comb Mole; by the President. 4. Specimens of Ostitis and Periostitis in Congenital Syphilis; by the President. 5. Skull in Congenital Syphilis; by Dr. Abercrombie.

The meeting then adjourned.

MEDICAL SOCIETY OF LONDON.

Neurasthenia.—Popliteal Aneurism, treated by Esmarch's Bandage.

AT the meeting on April 26th, F. J. Gant, Esq., President, in the chair,—

A paper was read by Dr. DOWSE on "Neurasthenia, or Nervous Exhaustion, and its Treatment." Dr. Beard, of New York, was the first to draw attention to this disease, and Erb, in Ziemssen's Cyclopædia, devotes a chapter to "Neurasthenia of the Spinal Cord." Dr. Dowse had for many years discarded the term neurasthenia as being vague and unsatisfactory, for he thought that any arrest of nervous function would be revealed by structural changes, but he had been compelled to change his view, and to admit that the term was applicable to a large number of nervous derangements. Sleep was due to nervous exhaustion, consequent upon an arrest of function in the hemispheres of the brain, and during this temporary arrest of function the trophic or nutritive elements of the brain were being recharged with nutritive pabulum. An asthenic state of the nervous system might be vital and general, or local and circumscribed, and an illustration of the former condition was seen during the course of many acute diseases, especially in diphtheria, where death generally took place from exhaustion of the nervous centres controlling the heart. In the inorganic world matter and energy are indissolubly united; we know of matter only through the transformation of energy, and we recognise energy only through its influence on matter. So it is in the organic world. The brain, and every individual cell composing it, is a factor as well as a nidus for the conservation of energy. Molecular displacement in the nerve-cells meant the exercise of disruptive energy leading to a failure in the power of resistance, a diminution of vitality, a lowering of tension, a decrease of tone and an exhaustion of the nervous system—in fact, an arrest of function and molecular inertia. The energy or force with which a nerve cell is endowed may be held to consist of—(1) active or automatic energy; (2) complementary, (3) residual or latent. Most functional diseases of the nervous system are due to the want of an equable development of stabile energy. After further consideration of this abstruse subject, Dr. Dowse considered the differential diagnosis between neurasthenia remaining for years a functional affection, and neurasthenia due to intractable arrest of development in the nerve-centres, and ultimately to organic disease—e.g., such as were associated with some forms of mental derangement and many forms of paralysis. He firmly believed that many of the incurable cases of insanity, locomotor ataxy, progressive muscular atrophy, and many other disorders of the brain and nervous system, commenced as a neurasthenia, and were then quite amenable to treatment. He then reviewed the signs and symptoms, bodily and mental, of exhaustion of the brain and spinal cord, drawing attention to the effects produced by overwork and worry. As to treatment, he agreed with Dr. Beard, that there was no routine plan; each case must be studied closely and carefully by itself. Iron and quinine were much less valuable than many other drugs, such as arsenic, phosphorus, and strychnine. He did not agree with many observers concerning the value of galvanism or faradisation; for in his hands, although it never failed to give great relief during its application, and it may be for some time after, yet the good effects soon wore off and left the patient no better. The drug on which he chiefly relied was opium—the pure watery extract—in doses of a quarter of a grain three or four times a day. He concluded by referring to the benefit of proper feeding, and the judicious use of stimulants, travel, and rest.—Mr. SPENCER WATSON had frequently met with cases suffering from eye symptoms, which he regarded as due to nerve exhaustion, especially in children.—Dr. ROUTH remarked that the age was one in which all were over-worked, over-worried, and over-taxed, and he considered that these cases were suffering from a form of disease akin to insanity. He advocated the administration of phosphorus, and of a fish diet, but he was adverse to the administration of bromides, unless occasionally in combination with phosphorus; and he could not agree with the author in his praise of opium.—Dr. DAY advocated moderate doses of opium, but had been disappointed with phosphorus. In children arsenic and quinine were of good effect.—Dr. THOROWGOOD considered sleep to be most important, and advised graduated doses of morphia or opium, good nutritious food, and fresh air.—Dr. DOWSE replied. He considered sleep a valuable curative agent. He had given phosphorus, but had been disappointed with its effect. Chloral hydrate was useful.

Mr. GOODSALL brought forward a case of Popliteal Aneurism cured by Esmarch's bandage, and exhibited the patient, who was a porter thirty years of age. He was admitted into the Metropolitan Free Hospital on March 5th, 1880, with a popliteal aneurism an inch and three-quarters to two inches in diameter, produced apparently by a strain three months previously. After being kept in bed and on low diet for six days the aneurism became smaller and less painful. On March 14th Esmarch's bandage was firmly applied from the foot up to the lower border of the aneurism, then obliquely over the patella to a point on the outer side of the thigh about two-fifths of an inch above the lower end of the femur, and from that point the thigh was firmly bandaged from above downwards to the upper border of the aneurism. The bandage was again carried upwards, and the elastic tubing tightly tied over the upper part of the bandaging. The bandage was kept on from 10.25 A.M. until 2.20 P.M., the upper part of the bandage having been removed one hour previously (a tourniquet being kept on the femoral artery during this alteration). Much pain was experienced in the thigh, necessitating morphia injection. On removal of the bandage the aneurism felt firm and free from pulsation. No anæsthetic was given. On the 17th pulsation felt in posterior tibial, and on the 20th in the anastomotica magna. On April 26th the right knee measured fourteen inches and a half in circumference, or one inch less than before the Esmarch's bandage was applied. — The PRESIDENT congratulated Mr. Goodsall on the success obtained, and thought this method preferable to that of flexion; but questioned whether it was suitable to large aneurisms.—Mr. ROYES BELL expressed satisfaction at the result of the treatment. He did not consider the aneurism a small one, and thought the method more thorough than compression, which was often exceedingly painful, and with difficulty kept up.—Mr. PEARCE GOULD said that whereas in compression by tourniquet or by the hand some circulation was possible, in the treatment by Esmarch's bandage absolute stasis was obtained. He thought a large aneurism with a large mouth the best form of aneurism for this treatment. Pulsation gradually returns unless the artery becomes plugged, and it is of importance to occlude the artery as well as the aneurism, and this is better secured in a large aneurism communicating freely with the artery.—Mr. GOODSALL, in reply, said that the communication in this case between the aneurism and the artery was very free. Esmarch's bandage had been kept on for two or three hours in several cases without any damage to the limb, and in one case—Mr. Barwell's (see THE LANCET, January 28th, 1876) for five hours. Dr. Walker Reid, who was the first to use Esmarch's bandage in the treatment of popliteal aneurism, removed the bandage as soon as he had adjusted the tubing.

NORTHERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

AT the combined meeting of the North-Western, Northern Counties, and Yorkshire Associations of Medical Officers of Health, presided over by Mr. S. W. North, two papers were read; one by Dr. Hime, of Sheffield, on "School Children and Whooping-cough," the other by Mr. F. Vacher, of Birkenhead, on "Health Economy."

Dr. HIME, referring to the prevalence of "whooping-cough among young children in Sheffield and elsewhere,

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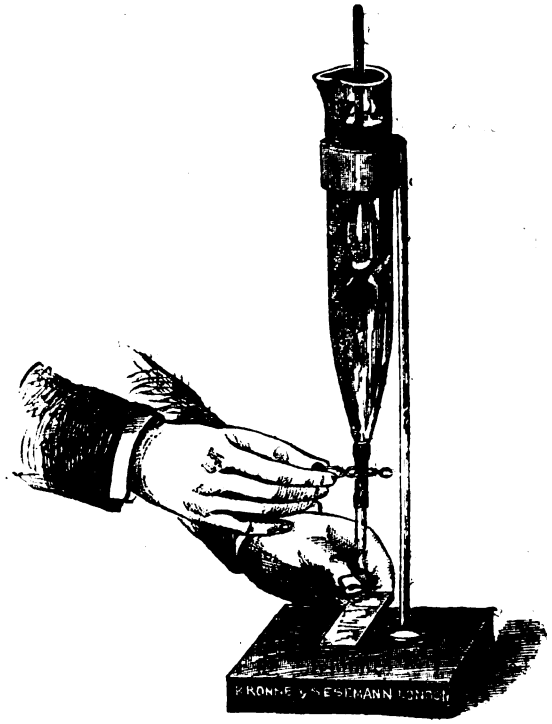
pointed out the seriousness in this connexion of the clauses in the Education Act which required the attendance at school of all children between five and thirteen years of age. It was desirable that School Boards should have the power of appointing medical inspectors, in order to insure the non-attendance of scholars affected with contagious disease. He repudiated the theory that there was a causal relation between whooping-cough and measles, basing his objection on statistics drawn from England during the last twenty-five years. He thought pertussis was not a disease specially of cold weather. More females than males died of the disease.

Mr. F. VACHER explained that by "Health Economy" he meant the management of health, being careful of it, protecting it from known sources of danger, and providing for its generation, nutrition, and preservation. Health saved was better than health gained. Referring to heredity, he classed its manifestations as transmissions of (1) faults of excess, (2) bad, morbid products, and (3) debased normal constituents. The author advocated the expediency of denial of the right of marriage to persons known to be suffering from hereditary and constitutional disease. With regard to nutrition, he deprecated the deprivation of infants of their natural food, an evil of the blame of fostering which he could not altogether acquit the otherwise useful *crèches*. After alluding to the advantages of pure air and water, and the evils of excess in eating and drinking, Mr. Vacher concluded by enumerating some of the needs most urgently demanded for the economy of health—viz., the entire prohibition of infant life insurance; the amendment of the Infant Life Protection Act, so as to provide for the registration and inspection of every house where a nurse child was received by other than relatives; the committal of adult men or women of known intemperate habits and unable to exercise control over themselves to proper hospitals for treatment and restraint; the extension of the Contagious Diseases Acts; the isolation of the initial subjects in the outbreaks of epidemic disease, and several others.

New Inventions.

IMPROVED URINE-GLASS FOR THE COLLECTION AND EXAMINATION OF URINARY DEPOSITS.

THE removal of urinary deposits by means of a pipette is an awkward and unsatisfactory mode of procedure, and several ingenious contrivances have therefore been devised to facilitate their collection and removal. Small glass trays with glass handles have been recommended; the tray is placed at the bottom of the urine-glass, and when the urine has deposited the tray is raised by means of the handle, and the sediment examined. In this way, however, the deposit is removed *en masse*, and successive layers cannot conveniently be examined *seriatim*. To obviate this, urine-glasses with glass or vulcanite stop-cocks at the bottom to draw off the sediment have been made; but the fittings are apt to get out of order by encrustation with phosphates unless considerable care is expended in keeping them clean. Messrs. Krohne and Sesemann have, however, on Dr. Ralfe's suggestion, contrived an exceedingly simple form of urine-glass, by which minute quantities of sediment can be withdrawn for the purpose of microscopic examination. The arrangement consists of a slight modification of Mohr's burette; this is shortened and widened, forming a conical cylinder of sufficient capacity to hold two ounces of urine, and width to allow a urinometer to float freely. The sediment is drawn off by means of a glass jet inserted into a piece of india-rubber tubing, which is attached to the neck of the urine-glass. The flow is broken by a spring pinch-cock, which, by compressing the tubing between the neck of the urine-glass and the jet, effectually prevents leakage. On pressing the pinch-cock the compression is removable, and a flow occurs. Three or four pieces of india-rubber tubing fitted with glass jets are supplied with each instrument, and these when not in use are to be kept in a bottle filled with dilute hydrochloric acid, to prevent their becoming encrusted. The



whole instrument, mounted on a black stand with lacquered brass supports, is a neat as well as useful adjunct to the consulting-room table.

VERMICULAR INSTRUMENTS.

DR. J. H. WARREN (America) has lately been actively engaged in adopting the principle of the screw to some old surgical instruments. Thus, he has brought out a hypodermic syringe and aspirator-trocar, and quite recently a catheter, with a screw-like extremity. The screw, which is very open, is carried on the end of a stylet, and projects nearly one centimetre and a half beyond the end of the catheter. It is stated that in cases of tight and difficult strictures, or of obstruction from hypertrophy of the prostate, the rotation of this screw greatly facilitates the passage of the catheter, while in all cases the pain and friction produced by it are much lessened on account of the smaller surface of the instrument in contact with the urethra. Possibly this modification may be of some service, but there are few lessons more important for all surgeons to learn than that the successful passage of a catheter along the male urethra depends far more upon the skill of the guiding hand than upon any modification of the shape, structure, or point of the instrument.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mr. Cecil Colvin Pitcairn, of Englefield Green, bequeathed £500 to the Royal Hospital for Incurables at Putney. Mr. Mark Firth, of Sheffield, has given £250 to the General Infirmary, £250 to the Public Hospital, £100 to the Jessop Hospital, £50 to the Eye and Ear Dispensary, and £50 to the Nurses Hospital, all in that town. The Hospital for Women, Soho-square, has become entitled to £500, under the will of Miss Reardon. The Charing-cross Hospital has received £101 5s. from the Rev. Sir Edward Repps Jodrell, Bart. The Mercers' Company have given fifty guineas to the Royal Infirmary for Children and Women in the Waterloo-road. The building fund of Jervis-street Hospital, Dublin, has received a bequest of £300 under the will of the late Mr. Michael Harry Stapleton, one of the medical staff.

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THE LANCET.

LONDON: SATURDAY, MAY 15, 1880.

THERE is a form of benevolence which may be described as giving half of somebody else's goods to heal the sick. A hospital is started, perhaps the necessary building is erected and furnished with money raised by contributions to a common fund, or as a charge on property bequeathed for the purpose. The surroundings, the appliances, in short, the machinery for medical work, may be provided, but the one essential element, the force by which all the good material is to be utilised, and the possible converted into the actual, is wanting. The hospital has no staff of medical men; it is a house of refuge but not of cure, and no single step forward is practicable until the services of experts in the healing art are secured to set the machinery in motion. Yet no philanthropist has ever the smallest misgiving as to the success of a hospital. It is perfectly well known by experience that medical men are only too eager to help in any enterprise of the class, and the difficulty will be to select the best-fitted of candidates for each appointment from a host of applicants. The service to be rendered is difficult and onerous, the sacrifice of time and strength it must entail on the medical men taking office is known to be great, but there is never any lack of willing labourers for the vineyard, and not unnaturally, therefore, no one thinks of paying or even feeling grateful for their services. What is the reason of this strange state of things? Why do medical men hold their dearly-bought knowledge, the knowledge by which they are to live and make their way in the world, so entirely at the disposal of society, that any combination of persons with money enough to provide the sick poor with shelter and food may count certainly upon the gratuitous supply of all the help and energy necessary to make the institution a hospital? Is the charity of medical men so exuberant that they are ever seeking opportunities of "doing good," or do they in some way find that it pays them to give their services to hospitals, and so, after all, the benevolence lies exclusively where the public seem to think it lies—namely, with those who create the opportunities of which the members of our profession almost greedily avail themselves? We want to get to the bottom of this mystery. It is just possible all parties—the promoters and financial supporters of hospitals, the public, and the profession—are labouring under some mistake.

If a particular hospital appointment is the making of a young physician or surgeon, that must be because the services of some medical man, or a number of men, have previously made the hospital. It is no credit to a beginner, however well qualified, to be attached to an institution which has either no reputation or a bad one. A young man may be ruined at the outset by linking his name with that of a fly-blown charity. The reputation earned by a hospital is that of the medical men who have stamped its work with the impress of their skill. Candidates are numerous when there is a vacancy, because the staff has won a name. This is one point the public, and the lay authorities of a hospital especially, do not understand or appreciate; and if it is not only easy to secure the services of medical men, but possible to command a choice of the best, that is the fruit of work done and services rendered by medical men who have spent their time and strength, perhaps worn out their lives, in the enterprise of the charity. It is clearly wrong that all this should count for nothing, or that the promoters of hospitals should set it down to the credit of their own benevolence, whereas it is due to the zeal and skill of their professional coadjutors.

The money value—we say advisedly the money value—of medical services in hospitals is not adequately estimated. If a hospital prospers financially, and draws new bequests and subscriptions, that is because its work as a *medical* charity is appreciated, and this work is the work of its medical staff. There would be no more bequests and subscriptions if it were not for the reputation achieved by the institution as a place where disease is cured and pain is relieved, neither of which could be effected without the aid of medical men. We are sometimes told that these matters must be looked at from a simply business point of view: that, as a matter of fact, medical services are always to be had for the asking, and therefore medical men must find a *quid pro quo* in the service of the hospital. The profession does not object to take up this view, but it claims to point to the circumstance that the reason why it is so easy to obtain medical aid in hospital work is that those of its own members who have laboured in connexion with most of the existing charities have made it an honour to follow in their steps.

It is an error to suppose that the mere fact of being attached to a hospital is, in itself, advantageous to a beginner in practice. Many have found, to their long and great cost, that it is damaging to be connected with a hospital unless the institution has earned high medical repute. The notion that a young man cannot find a sphere for the display of his professional abilities outside a hospital is an exploded conceit. There is ample work for willing and able hands and brains in the midst of the general population, and so far as the direct credit gained, or the fame won, by particular exploits in medicine or surgery is concerned, the free field is the most fertile. It is the professional status a hospital appointment gives which the young medical man justly values, and this status is one which *in no way* depends on the charity of the hospital. That may be small or large-hearted, the institution may be limited in its capacity for the reception of cases or of vast extent, the question the young physician or surgeon puts to himself is how does this institution stand in the eyes of the profession? What is the estimate formed of it by the only competent judges, those who know what practice really is and what it ought to be? If the answer is satisfactory he becomes a candidate, and the answer is no more, and no less, dependent on the lay element or the money element in the charity, than the success of a military expedition rests on its commissariat and ammunition-supply. How *essential* these are everybody knows. Their efficiency may make, or their defects mar, success, but it is the professional aspect of the case which absorbs the mind of the physician or surgeon in the one case, and the soldier in the other. No hospital can command the services of a reputable and efficient staff unless its medical reputation is good and the

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success of the institution as a whole is sought by subordinating every other consideration to that of its efficiency as a professional enterprise.

It is useless to blink this rugged truth. It may seem unpalatable at first, but the lay authorities of hospitals must be taught that no amount of building, furnishing, and organisation will create or maintain a *hospital*, or secure to the promoters of such an institution that vantage-point from which they think they command the services of professional men; whereas it is not the lay authority which exercises this influence, but the professional prestige won for the institution as a medical enterprise by the self-denying services of a succession of medical men. There is not a hospital in the country, let it be ever so well provided and endowed, which could carry on its work a single day without the assistance of its medical staff; and if anything occurred to compel the withdrawal of a body of men in whom the profession had confidence, and for whom it cherished a high esteem, the prestige of the institution, which alone makes it attractive to medical men seeking a sphere in life, would be gone. Men of an inferior rank in the medical profession might take the place of those who retired—as now and then happens,—but the first step downwards would have been taken, the damaged repute of the institution would react injuriously on the public mind and, in the long run, unless rescued by a timely revival of loyalty to the profession, it must become disreputable or fail. There is need to speak out plainly on this point. The services of the medical staff attached to hospitals have a distinct and considerable money value to these institutions wholly apart from the personal sacrifices they entail on the men by whom they are rendered. This substantial contribution to the funds of a charity ought to be acknowledged, and the bearing of the lay authorities of hospitals should be less overbearing, and show less puerile affectation of independence towards the professional men to whose good offices they owe the possibility of carrying out the charitable enterprise of which they are proud.

WE have received Indian papers containing official documents relative to the Calcutta Hospital reform. The question of hospital administration is one of very great importance, and the points involved in the case of the Calcutta Hospital appear deserving of careful consideration. From the documents now published by authority, we gather that, in reviewing the reports for 1876, the attention of the Lieutenant-Governor of Bengal was drawn to the heavy and increasing expenditure of these establishments, and particularly of the Sealdah and General Hospitals. The case of the former was "separately and carefully dealt with," we are not informed in what manner; and a committee of three medical officers was appointed to inquire into certain matters connected with the management of the latter. The report of this committee does not seem to have been satisfactory, for while it verified the facts, it offered no explanation of the increased cost, except that "it possibly might be caused by the out-door dispensary having been opened long before it was officially admitted to have been started." Dissatisfied with this result, and finding reason, from a careful examination of the medical reports, to entertain "grave doubts as to the character of the supervision, and check upon expenditure exercised throughout the medical institutions of Calcutta," the Lieutenant-Governor appointed a new Committee, consisting of the principal medical officers of the institutions under examination, three other medical officers of recognised standing and ability, the Accountant-General of Bengal, the Under-Secretary to Government, and, as president, a distinguished judicial officer, possessing statistical talent of a very high order. Their instructions were "to institute the most full and searching inquiry into the administration of each hospital and dispensary in Calcutta and the suburbs during the past ten years, and to draw up thereafter a general scheme for the management of those institutions on a uniform system." The Committee, after a careful and patient inquiry, submitted their report, upon which the Lieutenant-Governor founded orders regarding the future management of the Calcutta hospitals. In the document in which these orders were issued, he stated that while the primary object in instituting the inquiry was "to put an end to the confusion and waste which appeared to have crept into the administration of some hospitals, and to introduce an economical and uniform system of management," it was the desire of Government "not that less than they require should reach the sick, but that the public money should not, under the pretext of their needs, be wasted by the acts of dishonest or careless and inefficient subordinates. Fixed and uniform principles are required for the protection at once of the suffering poor and the public funds." The outcome of the inquiries conducted by this Committee proved, in the opinion of the Lieutenant-Governor, that while the professional duties were conducted with a praiseworthy devotion, and all that skill and science could dictate was done to alleviate suffering and cure disease, "there was a want of effective administrative supervision, to prevent waste and profusion, which added enormously to the Government expenditure, without in many cases benefiting the patients."

In publishing the results of this inquiry, and the new regulations founded thereon, the Lieutenant-Governor carefully avoided mentioning the name of any officer whom he considered in any way responsible for the unsatisfactory condition of matters, but he ordered copies of the report to be sent to three officers whom, we may consider, he deemed most inculpated, to "afford them an opportunity of offering any explanation" they might consider necessary. These were Dr. EWART, late Surgeon-Superintendent of the General Hospital; Dr. CHEVERS, late Principal of the Medical College (both of them now on the retired list); and Dr. D. B. SMITH, who acted for Dr. CHEVERS during some of the years covered by the investigation, and who is now Principal of the Medical College. Dr. SMITH'S explanation was incorporated in the official document now published, and the letters of the other two officers have been annexed to it in full. Dr. SMITH appears to have admitted (we have already stated that his letter has not been published) that the expenditure had been lavish, but to have justified it on the ground that it was considerably under the estimated sum. This, however, as the Lieutenant-Governor justly observes, may only afford proof of the wasteful scale on which the estimates were prepared and passed. Dr. SMITH also admitted "that there was laxity in the system under which the medicines were administered, and that the dietary system of the hospital was so cumbrous and faulty that he

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had himself brought its imperfections prominently to the notice of his successor."

The letters of Dr. EWART and Dr. CHEVERS go so much into detail, and are so long, that it would be impossible to enter fully into the statements contained in them. It may suffice to say, as the result of a careful study of them, that Dr. EWART seems to base his defence of the increased and heavy expenditure on the improvements introduced into the establishment during his tenure of office, all of them sanctioned by superior authority, on the advanced price of European drugs, the development of the out-patient department, the purchase of new and costly instruments, the introduction of the antiseptic system of Professor LISTER, "a most costly mode of treating wounds," the free employment of disinfectants, the necessity for a liberal and benevolent system of feeding and comforting the sick, and the impossibility of doing so at the rates now laid down by the authorities. Dr. EWART states his view of the duty devolving on the head of a hospital to be "the greatest possible economy of health and life, or the utmost attainable alleviation, mitigation, or cure of disease. This principle should always be posted in the foreground, and override mere money considerations. Viewed from a medical, as distinguished from a pecuniary point of view, true economy in the management of the affairs of a hospital consists not so much in the saving of money, as in the conservation and saving of life." Now, although this definition is perfectly correct as regards the duty of the medical officer in his professional capacity, it appears to omit a very important matter as regards the officer in charge of the administration of a hospital, in which function it is, as we conceive, that Dr. EWART'S conduct has been called in question. For while everything necessary for the treatment and comfort of patients should be provided, the administrative head of the hospital is bound in duty to see that the money is judiciously expended, that there is no waste, no pilfering, no undue ordering of extravagant articles which have no bearing on the judicious treatment of the case, or which may even be injurious, and granted merely to gratify a whim or from a dislike to refuse a request. Dr. EWART, though most zealous and careful in treating his cases, certainly seems to have failed in realising the full importance of those duties which devolved upon him in his administrative capacity, for he speaks somewhat too lightly of irregularities which from this point of view are serious. "The irregularities pointed out in Appendix C do not necessarily imply fraud, for the quantities said to have been written off have been found in store. Had they been missing such might have been suspected.' The question obviously arises, How could they have been "written off" if they were there, unless through gross carelessness? And if thus written off, were they not liable to be removed without any chance of detection? We think the Lieutenant-Governor was warranted also in expressing his regret at the tone of Dr. EWART'S letter, especially as "he has not hesitated to impute motives to the Government and to the Members of the Committee, for which there is not the slightest justification."

Dr. CHEVERS justifies the expenditure during the period of his charge on the ground that he and his colleagues worked under a very liberal system, and never exceeded the grants authorised by Government; that the gradual rise of prices involved increased expenditure; that, being a school as well as a hospital, it was necessary in the interests of the students to make trial of all new instruments, modes of treatment, and medicines; and that the dietary of the patients was not extravagant, it being impossible to obtain the necessary provisions of good quality at a lower rate. Dr. CHEVERS has a fair cause of complaint against the authorities that, when, with a view to prevent pilfering of drugs and other hospital property, he applied to have a porter in a proper lodge posted at the street entrance of the College, his request was refused. This refusal, therefore, transfers from him to them the blame for any such pilfering having been carried on. The whole tone of Dr. CHEVERS' letter is better than that of Dr. EWART'S, and it is a fair defence of his reign at the hospital. On one point, we think, he has somewhat failed. He does not appear to have endeavoured in any way to control the expenditure, except in his own wards; and he justifies this on the ground of the deference due to the position and professional character of the physicians and surgeons. But surely a good deal may be done in this way by friendly intercourse and advice on the part of the responsible administrative head of the hospital, without giving offence; it requires courage, tact, and knowledge, but with these much good may be effected.

In addition to the letters by Drs. EWART and CHEVERS, there is appended one by the Officiating Surgeon-General of Bengal, stating, by desire of the Lieutenant-Governor, the results of the new orders regulating the hospitals. These appear to be satisfactory, for under the reduced scale the supply of provisions has been adequate and good. In the few cases in which complaint has been made, the Surgeon-General shows that the defects arose rather from a misapprehension on the part of the medical officer than from any injurious restriction imposed by the new rules. So far as the effect of the change can be estimated by the mortality in the hospital, it is favourable; but we do not consider the death-rate, especially for a limited period, to be by any means a satisfactory test. The Officiating Surgeon-General goes into some detail on the subject of the quality and prices of the hospital supplies, and of the difficulties which have attended the introduction of the new regulations. His letter gives us the impression that he is well acquainted with the subject on which he writes, holds sound administrative views, and is fully competent to carry out an efficient and well-regulated system of hospital management. In conducting such an establishment as the General Hospital at Calcutta, with its important attached medical school, it must be remembered that, in addition to the treatment of disease, instruction is being given to the native students, who will hereafter be called on to work in and often to manage hospitals over the whole extent of our Indian dominions. It is therefore of paramount importance that they should be taught the principles, not merely of the medical and surgical treatment of disease, but also of efficient and economical hospital administration.

We have thus endeavoured to give an impartial summary of the documents before us, because they involve the very important question of hospital administration in India. A careful study of them has satisfied us that there was an imperative necessity for an investigation into the existing method, and that a clear case was established for a complete reorganisation. This we think is very obvious from the

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statement of the case in the minute of the Lieutenant-Governor, and is corroborated by the very arguments used by Drs. EWART and CHEVERS in their exculpatory letters. It raises the very important question how hospitals maintained at the expense of Government may be best conducted, with a view to the interests of the sick, the instruction of the native students, and a due regard to the economy of the public money without interfering with professional efficiency. It must be obvious to all who have had anything to do with large public institutions, that an able and efficient administrative head is imperatively necessary, with whom must rest the responsibility of the general conduct and finance. This may be obtained by the appointment either of a medical officer as the general administrator and director, or of a financial officer responsible only for the money expenditure and for the quality of the supplies. This latter system was tried in the British service, when everything except the medical duties was placed under an officer of the so-called Control Department; and with what results? General discontent on the part of the medical officers; a difficulty in obtaining promptly extra supplies, which were deemed imperatively necessary by medical officers; a very inefficient supervision of the expenditure as regarded diets, medical comforts, &c.; and, as events proved in more than one instance, no proper check upon pilfering and misappropriation of public property. This was so clearly shown that in 1873 the responsibility in hospitals was taken from the Control Department and placed upon the senior medical officer, who was at the same time invested with the requisite authority to enable him to administer efficiently. So far as we have been able to learn, this system has been found to work advantageously, and, carried out in connexion with the principle of selection for such appointments, rather than seniority, it ought to be in every way suited to the requirements of the case. The history of the Indian Medical Department proves that there is no lack of officers endowed with high powers of organisation and talent for administration, and now that selection is acknowledged as the rule for promotion to the administrative ranks, and the regulations for the conduct of hospitals have been established, there ought to be no difficulty in bringing that important branch of the public service into a state of very high efficiency. We are disposed to think that the investigation which has brought out all this points to the necessity for establishing a regulation by which the tenure of office in any one hospital should be limited to a period of, say, five years, a regulation which should be rigidly enforced. Such a regulation would tend materially to promote the object of the Government in introducing a system "under which intelligent personal supervision has had to take the place of mechanical extravagance."

IT is not very long ago that surgical interference with joints was looked upon as quite unjustifiable, and when we remember the results often obtained we cannot condemn the opinion. But with the great advances in the treatment of wounds, and the introduction of novel mechanical appliances, joints like the serous cavities have been brought into the region of practical operative surgery. Professor LISTER has demonstrated the propriety, under certain circumstances, of making free openings into articulations, and of securing the thorough escape of all inflammatory products within them; nor need the mobility of the part be endangered by the procedure. OGSTON and others have shown how articular processes can be sawn off with impunity, a perfectly movable joint being left. But we desire here to call attention to the far simpler, safer, and more widely applicable operation of aspiration of joints, which has now been very often performed with the best results, and without any serious consequences. The questions that arise in connexion with this operation are, What can be attained by it? What are its dangers, and how are they to be avoided? And what are the indications for its performance? Can a joint, for example the knee, be emptied by the aspirator? Undoubtedly it can. The fluid effused into a joint is, as a rule, free from the fibrinous coagula which so often plug the cannula when used for effusions in other parts, or remain behind and cause a resecretion of the inflammatory product. The fringes of synovial membrane, however, may plug the cannula, or the fluid may be partly encysted, as it were, by the mucous ligament stretching across the middle of the joint, and then the aspirator may only empty one-half of the articulation. On the other hand, we must note that there are some conditions which tend to make aspiration of a joint far more effectual than aspiration of the chest. As the fluid is withdrawn the surrounding soft structures are certain to fall in on the joint and support the capsule in the normal manner. A compressed lung often cannot expand again to its original size, and if the chest-walls are rigid it is obvious that no aspiration can draw out all the fluid, for then a vacuum would be left behind. In a joint there is never any such difficulty in extracting the last quantity of fluid, for the stretched muscles, fasciæ, and skin return at once or under pressure to their original condition. From the close interlocking of the bones of the elbow, there would be more difficulty in emptying that than other joints, but here the operation would be very rarely called for. What are the practical advantages of the treatment by aspiration? The first is the relief of pain, which is often very severe where a joint is much distended. This tension also leads to a persistence or exaggeration of the inflammation, and possibly to its extension from the synovial membrane to the ligaments and cartilages, and if prolonged causes a gradual yielding and relaxation of the ligaments, and subsequent weakness of the joint, while the maceration in inflammatory fluid may interfere with the nutrition of the articular cartilage. The time that can often be saved by this method is also a valuable consideration. The dangers to be feared are, on the other hand, trifling: all the joints that any surgeon would think of aspirating are easily punctured without risk to any artery or important structure; if the instrument is used with care there need be no fear of injuring the cartilage with the end of the needle or trocar, and as nothing approaching a vacuum is produced in the joint, there is no liability to suction of air into it when the cannula or needle is withdrawn. Indeed, if the instrument be clean, and employed with only ordinary care, there need be no hesitation in resorting to its use. Surgeons will no doubt differ somewhat in their judgment of the conditions calling for this treatment. But it appears to us to be desirable in cases of acute synovitis, with severe pain from distension of the joint, or where, from the increased general and local pyrexia, or greater swelling, there is reason to fear that the fluid is becoming purulent;

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where pus is actually present; where the absorption of the fluid flags or ceases altogether; in chronic serous synovitis or hydrops articuli; in pyæmia and suppurative synovitis, rather with a view of lessening suffering than of assisting the cure. In hydrops articuli it is not enough simply to remove the fluid; the relaxed ligaments require support for some time, and the best method of giving it is to strap the joint carefully and firmly immediately after evacuating it. This is no new operation; it has frequently been done in England, and perhaps relatively more often in America, where Dr. H. O. MAREY of Cambridge, Mass., has reported a number of cases of his own and other American surgeons in a paper in the Transactions of the American Medical Association for 1879.

Annotations.

"Ne quid nimis."

REPRESENTATION OF THE UNIVERSITY OF LONDON.

IT must not be supposed that our remarks as to the expediency of selecting a *graduate* to succeed Mr. Lowe in the representation of the London University in Parliament were aimed against the Vice-Chancellor, Sir John Lubbock. We wrote in view of the possibility that a medical graduate might be accepted by the majority of Convocation. Moreover, as a matter of principle, we think constituencies should be represented by persons who are members of the bodies for whom they will have to vote and speak. The case of the Vice-Chancellor of a University is, however, exceptional. If he is not a graduate, he is in a sense more than a graduate. His duties are executive as well as administrative, and he is already entrusted with the representation of the University in what is its special function—namely, the conferring of those degrees which constitute the grounds of membership. This is clearly not the case of an outsider representing the constituency. It is simply the extension of a function already performed. The Vice-Chancellor represents the University in its proper work as a corporation conferring degrees; nothing can be more natural than that he should be further commissioned to represent the University in Parliament. Again we say, it is foreign to our purpose to enforce the claims of any particular candidate, unless a medical graduate should directly occupy the field; but we are anxious not to be misunderstood, and therefore revert to the subject to define the limits we place in our own mind on the argument, strong as we shall always feel it to be, that a constituency must, *cæteris paribus*, be best and most fittingly represented by one of its own members.

POISONOUS DRUGS.

IT cannot be disguised that there are great practical difficulties in dealing with the perilous use and abuse of poisonous drugs. It is not easy to control the sale of these "medicines," and it is obviously impossible to restrain those who once have them in their possession from employing them in excess or improperly, either intentionally or by accident. The appeal must ultimately be found to lie at the tribunal of common sense. The public should understand that when a full dose of any drug is prescribed it cannot be exceeded without risk. It not uncommonly happens that even the average dose of a popular remedy is in excess of the special requirements, and may threaten the health or lives of individuals. There are always in any large number of persons some who are especially sensitive to the action of particular drugs, just as there are here and there a few who are peculiarly insensitive. The dose of most remedies sold for public use is fixed to meet the supposed requirements of the mean "constitution"—to use a hackneyed term—and it is at his individual peril any one takes it. If the common dose were fixed so low as to prevent the possibility of danger to any person, the drug would be generally considered useless, because to the majority it would be practically inert. This should be understood. There is, however, another point of even greater importance. A class of persons, to which any individual may, for aught he can tell, belong, are so constituted in respect to the nervous system that almost any potent drug acting in a particular way will prove dangerous. When a man takes medicine—of a potent sort—without medical advice as to his personal state and need, he does so at his peril. A single grain of mercury in a pill, which is expected to act as a safe aperient, the anticipation being, perhaps, based on experience of a similar medicine, may salivate; a very mild sedative may induce the sleep from which there is no awakening. It is not always carelessness in the use of drugs and "medicines" that kills, but ignorance—not ignorance of the remedy, or even of its customary effects, simply want of knowledge as to the way it *may* operate under special conditions. If the risks of unskilled physic-taking or giving were realised there would be less of this dangerous trifling in domestic life, fewer deaths "by misadventure," and, on the whole, we believe, the majority of the people would enjoy better health.

EPIDEMIC CYCLES.

DR. ARTHUR RANSOME of Manchester has been adding to his writings on epidemic diseases and allied subjects a very interesting and thoughtful paper on "Epidemic Cycles." Making use particularly of certain annual death-rates which have been kept in Sweden since 1774, he finds in them "internal evidence of accuracy in the characteristic peculiarities of the course of each disease," and holds that "they bear ample witness to the fact of the regular succession of epidemics in distinct cyclical periods." He has thrown the data from this source and from other sources into a series of diagrams, and from them he concludes that *whooping-cough* has a cycle of about four years; *small-pox*, before the introduction of vaccination, had a cycle of from four to five years; the cycle of *measles* is about seven years; while *scarlet fever* has an extended cycle of from fifteen to twenty years, when it recurs as a great visitation, fluctuations forming "less undulations," so to speak, occurring in the intervals. Dr. Ransome briefly considers the conditions which may probably determine the recurrence of these cycles, not omitting the question of possible relationship with the sun-spot period. This question he illustrates by a most interesting diagram of the sun-spot periods since 1775, but he is unable to trace any relationship between these periods and the epidemic cycles. He comes to the conclusion that the facts relating to the different cycles are susceptible of a simpler explanation than is commonly conceived. "A certain density of the population at susceptible ages," he says, "is necessary before a disease can spread with the vigour of an epidemic. Probably all the facts would be accounted for, if we suppose that these disorders can only become epidemic when the proximity between susceptible persons becomes sufficiently close for the infection to pass freely from one to the another. Exanthematous diseases rarely attack the same individual twice in his life-time. When, therefore, an epidemic has, by either a fatal or non-fatal attack, cleared away nearly all the susceptible persons in a population, mostly infants and children up to a certain age, then it must necessarily wait a certain number of years before the requisite nearness of susceptible individuals has been again secured. There must in the intervals be a gra-

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dual restocking of the nation with material fit for the epidemic to feed upon, and it can only spread when the requisite proximity is attained, when meshes of the network of communication are sufficiently close for it to include all susceptible persons in one grand haul." Dr. Ransome thinks that this hypothesis is supported by the peculiarities of the different epidemics he depicts. The paper is highly suggestive and interesting, the diagrams particularly well executed, and we shall trust to see the subject sooner or later elaborated by Dr. Ransome in greater detail.

THE SELECT COMMITTEE ON MEDICAL BILLS.

IT will be interesting to see the course taken by the Government in reference to the question of Medical Reform. There is just enough time left this session to complete the evidence, and to enable the Government to bring in a Bill next year that will remove the anomalies and faults of our present Medical Council and examining bodies. It will be remembered that when the announcement of dissolution came the Committee was hoping to be favoured with the evidence of Sir William Jenner. This evidence, and probably that of six or eight other witnesses, of whom the majority, it is to be supposed, would be unconnected with the licensing bodies, would complete the case on which legislation must be based. We have reason to believe that an early question will be put to the Vice-President of the Council, with the view of eliciting the intentions of the new Administration.

CHIAN TURPENTINE IN CANCER.

IN another column we print a letter from Professor John Clay, giving precise directions for the recognition of what he believes to be the true Chian turpentine. Without offering any opinion on the point at issue, we must strenuously insist on its crucial importance. As to the discrimination between genuine and spurious cases of the disease, the opinion of competent observers can and must, of course, be trusted; but in regard to the nature of the drug which it is desired to try there is great difficulty. Professor Clay says he has tested other varieties of turpentine, and has not found them to produce the effects he attributes to the particular drug he recommends. It will, therefore, clearly be impossible to attach the slightest weight to experiments, however well made, in which what Professor Clay calls "Chian Turpentine" is not used. It is not so much, perhaps, a question as to the precise characteristics of Chian turpentine as the identity of the drug for which the extraordinary effects produced by the new treatment of cancer are claimed.

THE RESUSCITATION AT RAAB.

AN account of the resuscitation of the executed criminal at Raab, in Hungary, which has been published by the Paris *Temps*, supplies some additional details of medical interest regarding the unfortunate occurrence. The method of execution adopted in Hungary is peculiar. There is no drop; the gallows is but little raised. The noose is of fine rope, and is placed around the neck of the criminal, and is then so tightened by a sudden "tour de main" of the executioner as to cause strangulation, and even dislocation of the cervical vertebræ. Great skill is, of course, necessary to produce this effect. Afterwards, the body of the criminal is raised to the gallows by the assistants of the executioner. Formerly the dislocation of the vertebræ was produced in a much more certain, although more brutal, manner. After the criminal had been suspended, the executioner jumped upon his shoulders with a force which never failed to produce the desired effect. In the present method a powerful contraction of the muscles of the neck may interfere with the effect of the sudden tightening of the noose. In the case of Takacs the same effect was produced by another cause. The execution took place in the ordinary way. The medical officer in attendance stated, immediately, that the man was dead, and in two minutes the body was cut down and carried to the post-mortem room of the Raab Hospital. Professor Bierbaurer proposed to make some observations upon it by electrical stimulation, but when he was about to commence tremors were observed, and a choking noise was heard in the throat. The professor's assistants were seized with panic, and a message was sent off to the Procureur-General to know what should be done with the body of a criminal, the muscles of which contracted without the aid of electricity! Pending the reply, however, the professor set about completing the resuscitation. It was found that the vertebral column was intact, and that there was a large scrofulous sore on the neck, which had apparently been so irritated by the rope as to cause extreme pain and death-like syncope. It seemed also that a number of enlarged glands had prevented the compression of the trachea, and strangulation. The first distinct movement which was observed was the elevation of the hand to the back of the neck. As consciousness returned the patient passed into an intense attack of delirium tremens, of which, as is known, he died next day. A fellow criminal, concerned in the same crime, had already died in prison, before the trial.

THE READING PROVIDENT DISPENSARY.

THIS institution is to be regarded as a successful and interesting experiment, judging from the Report for 1879; so, at least, the committee think. Medical service is paid for in it, except in respect of 963 patients who have been nominated by governors for gratuitous attendance and medicine. 1826 new provident members were admitted during the year. This is less than in the preceding year, and the diminution is attributed to the establishment of an Association of various Friendly Societies for kindred purposes, such as some medical and social reformers in the metropolis are recommending. The five surgeons receive, respectively, £297 0*s.* 1*d.*, £235 11*s.* 11*d.*, £317 3*s.*, £188 18*s.* 9*d.*, £54 3*s.*, £21 1*s.* 10*d.*, in all £1113 18*s.* 7*d.* This may seem a good sum, but it will appear very modest when viewed in connexion with the work it represents. The surgeons receiving, respectively, the above fees, paid, respectively, the following visits, those in parentheses being visits at the homes of patients:—16,240 (6833), 14,135 (8191), 19,275 (9499), 12,162 (5457), 2950 (1860), 928 (491). In the year 1879, 12,725 provident members were treated, and 747 cases were treated on governors' nominations. The Report is a very interesting one, by reason of the care and system with which it is compiled, and we may revert to its teachings and suggestions. It would be more valuable still if accompanied by a copy of the rules of the institution.

VIVISECTION IN GERMANY.

WE learn from the *Deutsche Medicinal Zeitung* that the Petition Commission of the Reichstag was occupied on April 28th with numerous petitions which had been presented against the performance of experiments on living animals. Some of them objected, on principle, to all vivisection, others would permit it to continue, in a limited form, in the interest of science. The Commission decided to postpone the consideration of the petitions to the next meeting, and to invite Virchow to be present, and to ask for the assistance of a Government Commissioner. At the next meeting Virchow accordingly explained to the Commission the importance of the practice to science, and showed how largely scientific progress during the last three centuries, and its present height, had been due to observations made on living animals. The occurrence of excesses was not contested,

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but it was urged that their control should be in the hands of the local authorities and not effected by Imperial enactment. The Commission could not decide, however, that the petitions were unsuited for discussion in the full Parliament, but held it desirable that the subject should be submitted to the Reichstag in the form of the following resolution:—"That, in the interest of scientific investigation, vivisection seems to be indispensable in the physiological schools; that the change in the laws of the kingdom which the petitioners wish is undesirable; that the petitioners should memorialise the local authorities on the subject of the alleged abuses."

"WOOLSORTER'S DISEASE."

IT will be remembered that in December last we reported the case of woolsorter's disease which occurred in Bradford, in which the examination of the blood showed the disease to be anthrax. This case was under the care of Dr. Bell, of Bradford. We understand that during the past three weeks five more cases have occurred in the same neighbourhood, four of which have been fatal. All the cases were in men employed in sorting what is known as "Van mohair." A malignant pustule formed in three cases. Dr. Bell, under whose care one of the cases which was not attended with pustules fell, found bacillus anthracis in the blood after death, and certified the case as one of splenic fever. An inquest has been opened on this case, but adjourned for further evidence. We understand that portions of the spleen and blood have been sent to Dr. Greenfield for examination. We hope to publish a full report of the outbreak in our next issue.

FASHION AND DEFORMITY.

PROFESSOR FLOWER, LL.D., F.R.S., delivered a very interesting lecture on this subject at the Royal Institution on Friday last, having passed in review the various methods adopted by different nations and at different ages of deforming or altering the natural shape of some portion of the body in obedience to the dictates of fashion. The different practices of shaving, cutting and dressing the hair and beard, and tattooing the skin were alluded to, but more attention was given to the disfigurement of the nose, lips, and ears by cutting holes and inserting various substances through them, almost identical customs being described among people living at most remote regions of the world. The fantastic methods of filing and chipping the front teeth into different patterns practised by the Malays and some African negroes were then noticed. An account of the mode of altering the form of the head, which prevailed once extensively in Europe, and was almost universally adopted in Peru and on the western coast of North America, was followed by a description of the effects produced upon the feet of civilised races by the unnatural form of the boots commonly worn, the evils of pointed toes and high heels being exemplified by diagrams and specimens. The construction of the waist was next noticed, the figure of the Venus of Milo, and one taken from the last Paris fashion book, being compared and contrasted. All these customs were shown to arise from a similar propensity, which manifested itself in the human mind under all conditions of civilisation, to tamper with a form which good sense, as well as good taste, ought to teach was the most perfect that could be designed. The origin of these fashions is mostly lost in obscurity, all attempts to solve them being little more than guesses. Some of them had become associated with superstitious observances, and some have been vaguely thought to be hygienic; most have some relation to conventional standards of personal appearance; but whatever their origin the desire to conform to common usage and not to appear singular is the prevailing motive which leads to their continuance. The vitiation of taste produced by these conventional standards which shows itself in the Malay in the preference of black teeth to those of the most pearly whiteness, in the Bongo negro and American Botocudas in liking lips and ears which are enormously and to our eyes hideously enlarged by huge wooden plugs inserted through them, in the Chinook Indian by contempt of any head which is not flattened like a pancake or elongated like a sugarloaf, is displayed among ourselves by the admiration of unnaturally pointed toes and contracted waists.

THE governors of the Manchester Royal Infirmary, as well as the poorer classes of sick people of the town, are to be congratulated on the completion of the building at the rear of the hospital, intended for the accommodation of out-patients. Besides offering great advantages from a sanitary point of view, the new arrangement will set free space hitherto taken up for dispensing purposes. This space may be utilised by the provision of some thirty additional beds, to which in-patients from another part of the infirmary will, it is stated, be transferred. There are several features in the construction of the new building which appear well-advised and calculated to facilitate the work connected with the treatment of hospital out-patients.

CARDIFF would appear to be passing into the background in regard to its hospital accommodation and the means for removing the sick and wounded. Dr. Alfred Sheen has been raising a question in the local journals of the erection of a new infirmary, and showing how much the existing building fails to supply the reasonable hospital requirements of the population; and Dr. Maurice G. Evans has been directing the attention of the local authority to the want of proper means—even of a common stretcher, it so seems—for the removal of cases of accident to the infirmary or elsewhere. There should be no difficulty on the part of this important town and seaport in providing at least and at once a fitting stretcher, as Dr. Evans urges.

AT a recent annual meeting of the friends of the Dreadnought Hospital, the President, His Royal Highness the Duke of Edinburgh, drew attention to the fact that on the previous Christmas-day the representatives of between forty and fifty nationalities sat down to dinner at the same table. This statement excited the interest of an artist of promise, Mr. John C. Dollman, who has represented the scene in a picture, entitled "Friends in Adversity," No. 471, of the present Royal Academy Exhibition. The figures in this picture are all portraits from life, and the motley assemblage is likely to excite the attention of all who take an interest in anthropology.

WE are requested to announce that it is proposed by some of the past students of Guy's Hospital to hold a meeting at Willis's Rooms, on Friday next, which will take place half an hour before the commencement of the Hospital Biennial Dinner, in order that the old Guy's men there assembled may have an opportunity of expressing their sympathy with the members of the medical and surgical staff of the Hospital under present circumstances, and their continued confidence in the staff's conduct of the affairs of the medical school of Guy's Hospital. All former students of the school are invited to attend.

PROFESSOR BUTLIN will commence his course of three lectures at the Royal College of Surgeons on Wednesday, the 2nd proximo, the subject being the "Relations of Sarcoma to Carcinoma." Mr. Lowne will commence his course on the "Development of Sensory Organs" on Monday, the 7th proximo; and the annual course of lectures will be brought to a close by Professor Hutchinson, who will deliver six lectures, four of which will be on "Some of the Surgical Bearings of Gout and Rheumatism," and two lectures on the "Etiology of True Leprosy."

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AT a late meeting of the Hertfordshire Natural History Society and Field Club, Dr. A. T. Brett read a suggestive paper "On Fluke in Sheep, with remarks on a new parasite discovered in the muscular fibres of sheep who have the rot." His attention was first directed to this new parasite by Dr. Mann, the Medical Officer of Health for Pontypool, and Dr. Brett proposes to name it *Distoma musculum*.

TERRIBLE accounts are received of the famine in Kurdistan, Armenia, and Persia. One letter states—"Thousands are dying in several places. We have reports of the dying feeding on the dead, of men killing all their children, of hundreds of children abandoned and perishing in the streets." And these are but the beginning of sorrows. Pestilence will come to glean the fields reaped by famine.

AMONG the many charities in the city of Madras (says the *Madras Athenæum*), that owe their existence to the benevolence of Mr. P. S. R. Moodelliar, not the least charitable is the pretty set of buildings which constitute the lying-in hospital. This institution was opened on the 6th ult. by the Duke of Buckingham and Chandos with great *éclat*.

THE physicians appointed to ascertain the mental condition of Veli Mahomed, who assassinated Colonel Commeroff about three months ago, have reported that the prisoner is not, and never has been, insane.

DR. THOMAS BARLOW, late Assistant Physician to the London Hospital, has been appointed Assistant Physician and Assistant Teacher of Clinical Medicine in University College Hospital.

THE Court of Appeal at Westminster has delivered judgment in the case of Howell *v.* West, refusing the application of the plaintiff for a new trial. The verdict for the Head Master of Epsom College and Mr. Jones therefore stands.

THE Society of Physicians of the Middle Rhine, consisting, it is stated, of 1600 members, intend to hold a meeting at Homburg on the 19th instant.

Local Government Department
IN ITS
PUBLIC-HEALTH AND POOR-LAW MEDICAL RELATIONS.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Middlesex and Hertfordshire Combined Sanitary Districts (population 97,606).—Dr. C. E. Saunders' report for 1879 gives evidence of sanitary progress in his district, even if the progress be slow. Very great and lasting improvements in the water-supply of the district have been made, he states, but still there are several localities where a much better supply is urgently called for. He has some observations on the very perfunctory manner in which the provisions of the Contagious Disease (Animals) Act, as affects dairies have been carried out, nothing, in fact, having been done with reference to dairy inspection. He illustrates the necessity for such inspection by a case under his own observation. He expresses regret that no further provision has been made in his district for the treatment of infectious disease occurring among non-paupers, and cites an example of a servant girl sent home while suffering from scarlet fever, and communicating the disease to her own family and others, in one instance the disease ending fatally. Had there been means available for isolation this extension could have been prevented. Of the several authorities entering into the combination for which Dr. Saunders is medical officer, one only has complied with the Local Government Board's request to furnish him with copies of the Poor-law Medical Officers' relief list, and so it happens that the Poor-law side of the Local Government Board stultifies the Public Health side. The mortality of Dr. Saunders' district in 1879 was at the rate of 16·3 per 1000 living.

Barnsley Urban (estimated population 29,405).—Dr. M. T. Sadler reports a death-rate of 21·79 per 1000 inhabitants for 1879. Steady progress would appear to be made in the drainage arrangements, and also to some extent in the arrangements for the disposal of solid filth in the town. Dr. Sadler has some excellent observations on the dangers from sewer-air.

Kendal (estimated population 14,200; area in acres 2622).—Dr. Page reports for this borough, in 1879, the lowest mortality, with one exception (1877), since the present system of registration was established, in 1837—nearly forty-three years ago. The death-rate for 1879 was 17·8 per 1000 of the estimated population. Of the diminished death-rate Dr. Page observes: "That this lowering of the death-rate in recent years is due to the operation of causes of no accidental kind, is, I think, pretty conclusively shown by the uniformity of its progress and by its concurrence with those costly measures which have been undertaken, having in view the direct object of promoting the health of the town. The death-rate is, in fact, the index by which we may hope to estimate rightly the influence of the sanitary measures upon the public health, just as it is from an analysis of the death-rate itself we must seek to ascertain the precise nature and the true direction of needful sanitary works." During 1879 Kendal was completely free from prevalent infections or zymotic sickness.

West Kent Sanitary District (estimated population 153,967; area 311,556 acres).—Dr. Baylis reports favourably upon the general sanitary condition of this district during 1879. The mortality was at the rate of 16·3 per 1000 inhabitants. He again gives interesting illustrations of the importation of cases of small-pox, principally from London, into his district, and the happy results, in the prevention of spreading, of the isolation of these cases in hospital or at their own homes when under charge of an experienced nurse careful in avoiding needless communication with the infected house, and in the use of disinfection. He notes especially the diminution to nearly half the usual amount of fatal infantile diarrhœa in his district during the low summer temperature of 1879. An interesting summary account of sewerage works completed since 1878, or now in progress in the district, shows how much permanent sanitary improvement is being effected.

Stroud Urban and Rural.—Dr. Partridge reports favourably of the *Urban Sanitary District* (population 7665), for the year 1879. The mortality (at the rate of 21·3 per 1000 population) was not unusually heavy, nor was it increased by any epidemic disease. Of the *Rural Sanitary District* (population 29,065), Dr. Partridge reports a gradual improvement, and greater regard given to public-health regulations. In both districts much attention is being devoted in detail on the local influences likely to affect injuriously the health of the people, and on their removal.

Brighton (population, parliamentary borough, 125,583; municipal borough 105,606).—Dr. Taaffe's report for 1879 shows a highly favourable state of health in this renowned health-resort. Gauged by the general mortality, this was at the rate of 17·7 per 1000 inhabitants in the parliamentary borough, and of 18·9 per 1000 inhabitants in the municipal borough. It is obvious that the sanitary authority is giving steady attention to the health condition of the town and to the maintenance and improvement thereof. We are glad to learn that the corporation propose to erect a hospital for infectious diseases, or, as they prefer to name it, a *sanatorium*. In view of the frequent introductions of infectious disease into the town, it is certainly desirable that the sanitary authority should have its own provision for isolation, and not be dependent on the County Hospital and the workhouse. Dr. Taaffe, who has for some time urged the need of a hospital for isolating cases of infectious disease, recommends also the adoption of the Artisans Dwellings' Act, the erection of a public slaughter-house, of a public mortuary, and of chalets de nécessité after the Paris model. All these recommendations will no doubt be acted upon in due time, and all go to show that Brighton has not yet reached the pitch of perfection she may yet attain.

Hexham Rural (population 27,696).—Dr. Maclagan's report for this district during 1878 is, happily, uneventful, but not the less interesting as showing sanitary progress, even if

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slow. The introduction in some cases of the earth-closets, in others of the Goux system, give promise of a better future for the privy accommodation of the district.

Epping Rural.—Mr. Trevor Forster is in the good position of having little to say as to his district during 1879. The death-rate was equal to 15·0 per 1000 of the population, and there was no special outbreak of disease. The most noteworthy feature in the sanitary record, he states, was the almost total absence of autumnal diarrhœa.

Longton Urban (estimated population 23,000). — Dr. Weaver congratulates his authority on the "highly satisfactory" facts of "a decreasing death-rate and increasing life-rate" in the borough. The mortality was at the rate of 20·6 per 1000 of the inhabitants.

Lytham Urban.—The mortality of this health-resort appears to have been at the rate of 17·8 per 1000 inhabitants during 1879; but we infer from Dr. Pountney's report that the sanitary authority is not so active and so judicious in its action as it might be. He refers to the flooding of cellars in heavy rainstorms by the "backing up" of water from the drains; to the *draining* (!) and covering over of old ashpits (midden-privies we take it), and of erecting others so provided; of the abandonment of the project for a "sanatorium" (that is, we presume, of an infectious-disease hospital); and of the want of a public disinfecting stove, so that in cases of infectious disease the clothing and bedding of the patient could be disinfected, and the risk of spread of contagion minimised. Lytham is evidently not keeping pace with other health-resorts in her sanitary progress, and she must be prepared to suffer from her neglect.

Dr. Angus Mackintosh has been reappointed medical officer of health to the Chesterfield Combined District. The reappointment gives an opportunity of offering some illustrative observations on what may be accomplished in a combined rural and urban sanitary district, even under the present imperfect condition of the law, by sanitary authorities wishful to do their duty when aided by an energetic and thoughtful medical officer. The Chesterfield combination has a population (in round numbers) of 50,000, and an area of 68,550 acres. Dr. Mackintosh was first appointed in 1873. Since that year the authorities, acting on his representations of the sanitary requirements of their districts, have borrowed from the Loan Commissioners and expended for sanitary purposes, £200,000. Proper sewerage and drainage of a previously unsewered and undrained district has been carried out, much sewage diverted from streams, and water from the mains of the Chesterfield Water Company to a great extent substituted for water from shallow, unprotected surface-wells. In furtherance of this distribution of purer water three large reservoirs have been constructed in various parts of the district, and a fourth is under construction which will give to the whole district the inestimable advantage of a pure water-supply. A decrease of the death-rate from 28 to 29 per 1000 population to 18 to 19, and a marked diminution in the prevalence of typhoid fever and diarrhœa following upon the great sanitary improvements effected in the district, may reasonably be attributed to them. We congratulate Dr. Mackintosh on the success of his labours—a success which must give heart to others who are labouring to overcome difficulties similar to those he has had to contend with.

Mr. Francis Godrich has sent us a plan of Fulham parish showing the parts from which cases of small-pox were removed to the Fulham Small-pox Hospital during the years 1877, 1878, 1879, a letter accompanying the map we give elsewhere in the journal. The Fulham Hospital was opened for the reception of small-pox patients in March, 1877. Since the opening numerous cases of small-pox have been received into it from Fulham parish, and by far the greater number of these cases, according to Mr. Godrich's statements and map, have been removed from the streets nearest to the hospital. It by no means follows, as Mr. Godrich appears to think, that the infection must, therefore, have been diffused from the hospital, but he certainly makes out a case for "impartial investigation." The sanitary authority for the parish, we believe, does not accept Mr. Godrich's inferences as to the influence exercised by the hospital on the dissemination of small-pox in its vicinity, neither does the medical officer of health, Dr. Dudfield. This question is one which ought not to be left in the unsatisfactory state that it is at present. It does not concern the Fulham Small-pox Hospital alone, but the Homerton and Stockwell Small-pox Hospitals also, and it is discreditable to the Local Government Board that an official inquiry has not been hitherto directed into its merits. The reference to this issue in Dr. Bridges' recent report on small-pox in the hospitals of the Metropolitan Asylums Board is, as we already had occasion to remark, far from sufficient to meet the requirements of the case.

Dr. Ballard, in an official report recently issued by the Local Government Board, on an outbreak of enteric fever at Tolcarne-road, New Quay, Cornwall, gives another excellent example of the sort of experiments which builders undesignedly prepare for us to illustrate the circumstances under which typhoid fever is very commonly developed in this country. Tolcarne-road is a part of the urban sanitary district of New Quay. There in recent years have been erected a hotel and a group of higher-class houses, deriving their water-supply from wells sunk on the spot, and having a system of drainage constructed under the supervision of the sanitary authority. The drains are emptied into a cesspit near to the sea-shore, cesspit and drains being alike unventilated and otherwise imperfectly ordered. The drainage arrangements, in fact, reproduced in deplorable detail those errors of construction and of plan which, in view of the prevention of enteric fever, it is most necessary to avoid. In February, 1879, there is good reason to believe that the dejections of a patient suffering from enteric fever found their way into the drains and cesspit, and following upon this occurred the outbreak of fever in the houses which formed the subject of Dr. Ballard's inquiry, and which was determined partly by the diffusion of air from the specifically polluted cesspit and drain air into the houses, and partly by the use of water from a well which had been contaminated by leakage from the drains.

The Local Board of Chippenham at a recent meeting, with reference to the question of establishing an infectious-disease hospital for the use of the urban and rural sanitary authorities, resolved "that as at present there were no infectious diseases prevalent in the district, they would not entertain any proposition for erecting an infectious hospital so long as the necessity for erecting one did not exist." In other words, they decided not to lock the door until the steed had been stolen. At the same meeting with reference to the efficiency of the fire-brigade, they did not propose to defer consideration of the question until a fire occurred, but gave directions to the surveyor to obtain at once a sufficient staff of men, and of drilling them so as to be "prepared in case of emergency." It did not seem to occur to the Local Board that there was as much reason to be prepared beforehand against the emergency of a deadly infection as against a fire.

In a recent report presented to the Bristol Sanitary Authority by Mr. Davies, the medical officer of health, an outbreak is recorded of eight cases of typhoid, occurring in five different houses, which he attributes to infected milk. The families occupying these houses derived milk from the same source, and on an inspection of the farm from which it came it was discovered that the water for dairy and domestic use was taken from a mill-stream which received the sewage from water-closets and the overflow of a cesspool within a short distance above the farm buildings, and was further polluted by decomposing animal matter, among which were portions of a calf which had died of quarter-evil (an anthracoid affection).

The protracted inquiry relative to the project for making a sewage farm near Molesey (as part of a scheme for the combined drainage of numerous places on the Lower Thames), held by Mr. Thornhill Harrison, C.E., for the Local Government Board, with Captain Hildyard, R.E., as assessor, came to an end on Thursday, the 7th instant. This inquiry has occupied not less than forty-five days, and during its progress eighty witnesses have been examined—forty-one for and thirty-nine against the scheme. The evidence submitted was exceptionally complicated and contradictory, and the report of the two commissioners will be looked for with much interest; and by the residents in the localities concerned in the inquiry, with no little anxiety.

Marpel, in Cheshire, is about to enter into an arrangement with the Stockport Water Company for the supply of water to the district of the urban sanitary authority. Under

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the advice of Mr. Alfred Moore, of Manchester, engineer, terms have been prepared by which the Water Company undertakes to deliver filtered water to the district at the rate of 8*d.* per 1000 gallons, the urban sanitary authority providing the necessary means of distribution. The cost for storage reservoir, pumping engine, and pipes is estimated at £7360.

A public inquiry was opened on the 30th ult. at Portobello, by the Board of Supervision, as to a complaint of nuisance from the ventilators of the sewers there. The sewers of the town are tide-locked except at low water, and their ventilation is effected by simple shafts running up from the crown of the sewers to the surface of the roadway. Mr. McNeill, of the Board of Supervision, is conducting the inquiry, which was not completed at the time of our latest news.

The report of Lieutenant-Colonel Bolton (the Water-Examiner) for March states that the water at all the intakes of the Companies drawing water from the Thames was in better condition during the month than in February, and that the filtration was efficient. All the companies appear to be actively moving in the matter and giving a constant water-supply.

The application of Scott's Sewage Company for permission to make a trial of their process for treating sewage at the Crossness pumping station has been granted by the Metropolitan Board of Works. The experiment is to be carried out subject to certain conditions, under the supervision of the engineer of the Board, and at the sole cost of the company.

The Medical Officer of Health for Brierley Hill reports that deaths among young children have largely increased in that district, and condemns the system so prevalent in the Black Country of effecting assurances upon the lives of the young as an encouragement to neglect by the parents.

We learn that several serious cases of enteric fever have occurred in Slough, and occasioned some alarm there. The Local Board, however, appears to be on the alert, and to be taking active measures and precautions.

An outbreak of small-pox has taken place in Enniskillen, and within the last few days seven additional cases have occurred, two being among the militia recruits at present up for drill.

Local journals write of Beaumaris as if the office of registrar of deaths there must be rapidly becoming, if it have not already become, a sinecure.

VITAL STATISTICS.

HEALTH OF LARGE ENGLISH TOWNS.

Mortality continues low in our large towns. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5571 births and 3053 deaths were registered last week. The births exceeded by 286, while the deaths were 222 below, the average weekly numbers during 1879. The deaths showed an increase of but 38 upon the low numbers returned in the previous week, and were equal to an annual rate of 21·2 per 1000, against 21·3 and 21·0 in the two preceding weeks. During the past five weeks of the current quarter the death-rate in these towns has averaged only 21·7 per 1000, against 25·2 in the corresponding periods both of 1878 and 1879. The lowest death-rates in the twenty towns last week were 15·7 in Hull, 16·3 in Oldham, 16·7 in Portsmouth, 17·7 in Leicester, and 18·0 in Brighton. The rates in the other towns ranged upwards to 25·0 in Liverpool, 25·2 in Sheffield, 28·0 in Manchester, 30·3 in Salford, and 38·3 in Plymouth. The excessive rate in Plymouth continues to be due to the exceptionally fatal epidemic of measles.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 457 and 415 in the two preceding weeks, rose again to 443 last week; they included 130 from whooping-cough, 121 from scarlet fever, and 81 from measles. The annual death-rate from these seven diseases averaged 3·1 per 1000 in the twenty towns, and ranged from 0·3, both in Hull and in Newcastle-upon-Tyne, to 5·3 and 18·1 in Salford and Plymouth. Whooping-cough showed fatal prevalence in Liverpool, Manchester, and Salford. The deaths from scarlet fever exceeded those returned in any week since the end of January, and were proportionally most numerous in Salford, Brighton, and Sheffield. Measles was most fatal in Plymouth, Sunderland, and Nottingham; 23 more fatal cases were recorded in Plymouth (against numbers increasing from 11 to 20 in the six preceding weeks), making no less than 274 that have been recorded within the borough since the middle of November last. No less than 15 of the 19 deaths referred to diphtheria occurred in London. Five more deaths were referred to fever (mainly enteric) in Sheffield, where the disease still shows excessive fatality. Small-pox caused 10 more deaths in London, but not one in any of the nineteen provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had already increased from 167 to 196 in the five previous weeks, had declined to 186 on Saturday last; 43 new cases were admitted to the hospitals during last week, against 44, 48, and 49 in the three preceding weeks. The Highgate Small-pox Hospital contained 24 patients on Saturday last, an increase of 3 upon the number at the end of the previous week.

Influenced probably by the cold north-east winds, lung diseases were somewhat more fatal last week. The deaths referred to diseases of the respiratory organs in London, which had steadily declined from 395 to 260 in the five previous weeks, rose again to 280 last week, but were 28 below the corrected weekly average; 161 resulted from bronchitis, and 80 from pneumonia. The annual death-rate from diseases of this class did not exceed 4·0 per 1000 in London last week; the rate from the same diseases was equal to 6·2 per 1000 in Liverpool and in Salford.

VARYING FATALITY OF LUNG DISEASES.

Much has yet to be learned as to the true import and practical application of mortality statistics, although few now venture to dispute their general value as indications of sanitary condition. Not many mistakes will be made in assuming the existence of insanitary conditions wherever high death-rates, from all causes and from zymotic diseases, co-exist with excessive proportions of infant mortality. There are many cases, however, in which high death-rates from all causes do not appear to be even mainly due to excess of either zymotic or infantile mortality; and analysis of those high death-rates, as to the causes of the deaths and the ages of the decedents, should yield useful results. We have frequently regretted that the Registrar-General's weekly statistics of the twenty large English towns do not include information bearing upon the varying fatality of diseases of the respiratory organs in those towns. We are glad therefore to note, in the Registrar-General's Quarterly Return just issued, that this subject receives some notice. The excessive mortality in London during last quarter, compared with that recorded in most of the other large English towns, appears to have been in great measure due to the unusual fatality of lung diseases. The deaths referred to diseases of the respiratory organs in London, excluding phthisis, during the first thirteen weeks of this year exceeded the corrected average number in the ten preceding corresponding periods by no less than 28 per cent., and was equal to an annual rate of 8·5 per 1000. When we are told that the rate from the same diseases, in the same period of thirteen weeks, did not exceed 2·9 in Wolverhampton, 3·5 in Sunderland, and 4·4 in Bradford, the inquiry why lung diseases showed such excessive fatality in London naturally suggests itself. The nearest approach to the London death-rate during last quarter from these diseases, among those of the large towns for which this information is available, was 7·5 in Liverpool and 7·8 in Plymouth; Manchester was the only town in which the rate (9·0 per 1000) exceeded that which was recorded in London. These variations are sufficiently wide to encourage the hope that investigation would add to our knowledge of the true significance of mortality statistics; they are too wide to be explained by differences of local temperature, and some other explanation must be sought. The Registrar-General suggests the inquiry "how much, if any, of the excess of mortality from these diseases is due to sanitary condition in its broader signification." There can be no question about the direct effect of overcrowding, and the indifferent housing of a population, upon its death-rate from lung diseases. The contrast between the mortality from these diseases during last quarter in the neighbouring urban sanitary districts of Manchester and Salford is noteworthy; the rates were 9·0 and 5·8 respectively,

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a difference exactly corresponding with the difference between the death-rates from all causes, which were 27·6 and 24·4 per 1000. Now, as regards zymotic and infant mortality, Salford suffered last quarter more severely than Manchester, whereas the contrary was the case with lung diseases. Such facts as these are worth the serious attention of medical officers of health.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

The report of the Manchester and Salford Association for the year 1879 shows that it continues and is still further developing its useful operations. The report for the past year consists of three separate sections, relating respectively to the Association proper, the Inspection Department, and the Ladies' Branch. The Association proper concerned itself chiefly with the questions of the pollution of air, the necessity for the extension of the functions of the City Analyst to other matters than food and drugs, and the improvement of artisans' dwellings, by promoting the application of the Artisans' Dwellings Act, or special legislation to the same end in Manchester. The report of the Inspection Department very instructively illustrates the advantages to be gained by the establishment of a ready means for householders obtaining skilled advice, at a minimum cost, as to structural sanitary defects in their dwellings. Mr. Corbett, one of the engineers of the department, states that he had inspected and reported on twenty-nine premises, including dwelling-houses, business premises, schools, churches, a large hospital, &c., and that he found that "only four of these places were of fairly healthy arrangement and construction; none had safely constructed sewers; only five had any attempt at ventilation of the dwelling-rooms; none having thorough and effective appliances. The sanitary conditions being so generally defective, it naturally followed that I heard of serious illness in twelve dwellings, including six cases of typhoid, two having terminated fatally; six cases of diphtheria, and several minor ailments." Mr. Corbett then adds the following comment, which reads as a bitter satire upon our architectural arrangements:—"I find that, as a rule, the larger and more elaborate a dwelling is the greater is its danger from defective or misplaced sewers and water-pipes." The report of the Ladies' Branch states that considerable advantages have been derived in pursuing their work by their amalgamation with the Association. The sanitary mission work in which they are engaged appears to be productive of much good. The work of the Association is still unfortunately cramped by its very limited income—an income curiously inconsistent with the magnitude and wealth of the northern metropolis and the beneficent labours of the Association.

We regret to see, from the report of the Institution for Infectious Diseases, Netherfield House, Liverpool, for the past year, that this hospital—the only one which Liverpool possesses for the reception of cases of infectious diseases among persons who are not paupers—is sorely straitened for funds. The hospital is supported by voluntary contributions and by the payments of the patients; but although the number of cases admitted in 1879 was only eighty-three—the smallest number admitted in any year since the opening of the hospital in 1858,—the receipts fell short of the expenditure by £520, and the accounts show a total deficiency of £767 15*s.* 6*d.* To meet, in part, the difficulty in regard to funds the Health Committee of the Corporation made a grant to the hospital of £256, and has promised for the present year a sum equal to the subscriptions which may be received. The value of this hospital is obviously very imperfectly appreciated by the population of Liverpool. The greater number of patients received during the year were domestic servants (15) and children (31), but it is not stated from what class of families the children came. The remaining patients were from middle-class families, and included also two gentlemen and three emigrants. Ought not the Corporation, in the interest of the great seaport, and seeing that it does not possess a sanitary hospital, to acquire, if possible, this "Institution"?

ADDENBROOKE'S HOSPITAL.—The collection in aid of the Funds of this Institution made after the University sermon on Sunday the 2nd inst., preached by Canon Farrar, amounted to £70 16*s.* 10*d.*

THE SERVICES.

HEALTH OF SOLDIERS AT ALDERSHOT.

A CORRESPONDENT of the *Times*, in noticing the recent review at Aldershot, called attention to the small proportion of the troops in camp that paraded before the Queen, and gave some statistics of sickness among the soldiers, which, notwithstanding certain inaccuracies of statement, is noteworthy. The strength of the division at Aldershot was stated to be 10,644 of all ranks, and the sick were numbered at 560. The *Times* reviewer calculated the proportion of the sick to be equal to a little over 8 per cent.; the true proportion, however, scarcely exceeded 5 per cent. A special reference was, moreover, made to the 7th Dragoon Guards, as the most sickly regiment, and having 18 per cent. in hospital. The colonel of this regiment has since demurred to this statement, and reports that the number on the sick list in his regiment on the review day was 42 (not 55 as reported by the *Times'* reviewer, on the authority of a "field state," signed by the Assistant-Adjutant General of the Division), out of 620, the strength of the regiment. Apart from this discrepancy of figures it is evident that the percentage of the sickness depends upon the method of calculation. The *Times'* reviewer evidently calculated his percentages upon the numbers present on parade, whereas it clearly should be calculated upon the total number of the regiment in camp. Thus, accepting the figures from the "field state," nearly 9 per cent. of the regiment of Dragoon Guards was unable through sickness to appear on parade, instead of the 18 per cent. spoken of by the *Times'* reviewer. With this reduction, however, the percentage of sick in this regiment is now exceptionally high, and suggests (together with an average of 5 per cent. throughout the whole division in Aldershot) an inquiry as to the causes of so large a proportion of sickness among the troops now stationed at Aldershot.

NAVAL MEDICAL DEPARTMENT.

The appointment of Admiral Hoskins to the superintendence of this among other departments, is so far auspicious from his having had before him very recently the points of inferiority to the Army Medical Department, which the active navy officers signalise as oppressive. These it is desirable to have removed at once, in order to induce young doctors to enter the service; although we admit not very much is to be anticipated from leveling up to a bare equality with a service that demands less restraint, and provides a better future. We would desire to see the new Order in Council exceed in all essential features what we have lately shown to be the very lowest requisitions admissible. When the evidence before the committee is in print, it will be seen how far it goes beyond our suggestions. Admiral Hoskins, as president of the committee, will have proper grounds for judging how far reforms may go, but these should not be wanting in liberality. We have less to fear in this direction when an entire department is undergoing a revolution, than when the pruning hook simply is being applied to exuberant branches, or to lop away the higher ones. In the first case our rulers walk tenderly over the many, and in the latter with less of reserve over the few involved in the changes. Therefore we may look for more of safe liberality, or even of generosity, than the department has been of late years accustomed to receive.

It should, however, be borne in mind that no perfect or permanent reform was ever yet effected which had not for its foundations a true examination of the defects that have rendered it necessary. If rumours floating about be truthful, there is no ground for suspicion that all which might have been done to insure this has not been done; in fact, it is said that the evidence received bears much of the form of selection, while such as might have proved inconvenient has been rejected.

The present Board of Admiralty, not being so strongly conservative of its mistakes as that which has passed by, will do well not to forget that it has to deal with a large profession very prone to judge of the future by the past, and that its juniors are greatly biased by those who have borne the brunt of the day. It will be well to have regard to outside opinion of the past as well as of the future, if the aim be to attract the best style of aspirants, by removing all

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the conditions that have tended to raise the actual deadlock of the schools.

We shall hope for a speedy issue of the Naval Medical Order in Council.

Correspondence.

"Audi alteram partem."

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—I beg to thank you for placing the columns of THE LANCET at my disposal for the purpose of giving information of my tests for the purity of Chian turpentine, and I may be permitted to strongly support your dictum, that this is a point "which should be settled at the very threshold of the research."

As regards the sources of the drug which has been employed throughout my investigations in the treatment of cancer of the female generative organs, I may state that we had a small supply in the Hospital Dispensary which I supplemented from a chemist in Birmingham. The two specimens were identical as regards their appearance, taste, and smell. We thus had a sufficient supply to carry us through the cases reported in THE LANCET for March 27th, 1880, as well as some for the treatment of private cases. Knowing the difficulty of procuring the Chian turpentine genuine, I relied in the first instance upon the characters given in Watts' Chemistry, Vol. v., page 920, as tests of its purity. The drug I used was many years old, and agreed with the following description given by Watts: "yellowish-green, has an odour of fennel and elemi, and an aromatic taste like that of mastic. It dissolves completely in ether, and partially in alcohol, leaving a glutinous residue." Subsequently I procured Flückiger's and Hanburys' Pharmacographia, from which I give their excellent description of the drug: "Chian turpentine as found in commerce and believed to be genuine, is a soft solid, becoming brittle by exposure to the air; viewed in mass it appears opaque, and of a dull brown hue. If pressed while warm between two slips of glass it is seen to be transparent, of a yellowish-brown, and much contaminated by various impurities in a state of fine division. It has an agreeable, mild terebinthinous odour and very little taste. The whitish powder with which old Chian turpentine becomes covered shows no trace of crystalline structure when examined under the microscope."

The specimens I used corresponded in every particular with these two descriptions, but it may be useful to describe more in detail some of the properties above mentioned.

The pure drug is of such a solid nature that a portion taken between the fingers may be rolled into the form of a pill without adhering to the fingers; thus it is very different from the large number of spurious specimens which have been supplied to the public, and which for the most part have been of a syrupy consistence. The odour of the genuine drug is peculiar. If a portion be softened between the fingers the fragrant odour can be readily perceived, and it is not by any means similar to that of turpentine oil, whilst the spurious kinds smell strongly of the latter substance. The taste of the pure article is characteristic in not being unpleasant. Indeed, it is almost tasteless; I have kept a piece in my mouth for two hours and scarcely knew that it was there. The taste of most of the spurious kinds is very bitter, and so unpleasant that I now rarely adopt the above-mentioned mode of testing the drug. The brittle yet elastic nature of the pure drug is very striking. If a piece is warmed and rolled out, and is allowed to cool, and is then dropped on the floor, it generally breaks into a number of fragments. If a mass is placed in a shallow vessel it usually flattens and spreads over the vessel, the surface being smooth. When the pure drug is placed between two pieces of warmed glass its appearance corresponds exactly with that given in the Pharmacographia. It is best to take a piece of glass, warm it very slightly with a piece of lighted paper, clean it, and then place the drug to be examined upon it; then cover the drug with another piece of glass, and allow both to cool; then by holding the double glass up to the light the characters are readily distinguished. If the drug is spurious, consisting perhaps of strained crude turpentine or Venice turpentine, and so placed between warm glass, it will present the appearance almost of water. If Chian turpentine is adulterated with Canada balsam, on a gentle heat being applied to the glass on which it is applied the Chian turpentine remains in the centre and the balsam flows over the glass, the reason being that the former requires a little stronger heat to liquefy it. If black resin is mixed with Venice turpentine, to make the specimes resemble the impurities of the real article, the compound in of a syrupy consistence only, and on heating the mass sufficiently between two glasses the resin is melted, so that the apparent impurities which it presented disappear, while these remain permanent in the genuine drug. Canada balsam when heated becomes transparent, and perhaps more so if the heating is repeated, and the smell is of a well-marked sickly odour. If the spurious kind consists largely of resin and a piece is put on a spatula and a lighted taper applied to it, the characteristic resinous odour is at once obtained.

The taste, odour, and appearance, then, are the chief characteristics of the drug. If it has a bitter taste it is not pure; if it has not much taste, as a mixture of resin and Canada balsam, on burning the mass the peculiar odour will reveal its impurity. If the mass does not dissolve in alcohol, but leaves a glutinous residue, then, all other things being equal, it is pure. If it is of a greyish-white, or black colour even, mixed with impurities, and of a syrupy consistence, it will have a strong smell of turpentine, and is not pure. I enclose you some specimens of the pure and of the impure drug for your inspection.

May I be allowed to say a few words in reply to Mr. Green's letter in your last impression. My original paper was merely a report of some trials I had been making with Chian turpentine in the treatment of certain forms of cancer. A general definition of cancer was given at the commencement of the paper, and as three of the patients suffered from extremely advanced cancer, I deemed it unnecessary, having given this definition, to minutely describe what was self-evident. As regards the inconsistencies of which Mr. Green speaks, I think they arise from his want of due consideration of my remarks as applying to recorded facts only, without any attempt at explaining them. Nowhere in the paper did I allege the cases to be cured, for I distinctly stated that there had not been sufficient time to decide whether the disease would or would not recur. From Mr. Green's point of view it is not likely to recur, as he infers that the cases were only "alleged" cases of cancer. With equal propriety I might ask Mr. Green for a definition of granular disease and hyperplasia of the cervix. This is unnecessary, as I hope I am able to distinguish the two diseases. As Mr. Green seems to impugn my veracity, I may state that I only published cases occurring in hospital practice, and which were open to the observation of competent medical men. I may add that the fourth reported case was seen by Dr. Heslop, the senior physician to the Queen's Hospital, who has had a large gynæcological experience, and who is an able pathologist, and he unhesitatingly declared the case to be one of cancer of the uterus.

I am, Sir, yours obediently,

Birmingham, May 12th, 1880. JOHN CLAY.

BENZOL IN WHOOPING-COUGH.

To the Editor of THE LANCET.

SIR,—The use of benzol vapour in whooping-cough was recommended some years ago, but I am not aware of any recorded instance of its use as an internal remedy. For ten or twelve years past I have used it in this way with very excellent, and often striking, results; and I therefore feel justified in bringing it under the notice of the profession, as a remedy of very great utility in a certain stage of the malady.

Recent statistics prove that whooping-cough is still one of the most fatal of children's diseases, and the extensive array of so-called cures bears witness to the difficulty of cure, as well as to the general inefficacy of the remedies themselves. But for the lengthened experience I have had in the use of benzol I should be unwilling to add to this long list; but in dealing with a zymotic disease like whooping-cough, it would seem that benzol, by its antiseptic properties, was likely to act beneficially; and, as a matter of fact, I have hitherto found no remedy so useful.

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In the early stages of the complaint benzol is not useful, and I do not give it until the acute stage is past and the lungs are free from congestion. I incline, however, to the belief that it might do good in the initial stage, before any congestive mischief is set up; but of this I have no experience.

For the first fortnight I give the usual remedies, such as ipecacuanha, hyoscyamus, and solution of acetate of ammonia, directing especial care as to temperature and diet. At the end of this period the following mixture is given every four hours:—Benzol, two to ten minims; tincture of hyoscyamus; compound tincture of chloroform; acacia mucilage; water in sufficient quantity. The benzol should be quite pure, in which state it has a peculiar "aromatic or ethereal odour," and is not at all unpleasant to the taste. When I first used benzol, it was in the impure form, which, though very unpleasant to the smell, was, when properly combined, not unpalatable, and I incline to think the effects were even better than those obtained by the pure preparation.

Of the action of benzol not much is known apparently, but its composition ($C_6 H_6$) would lead to the conclusion that it is harmless to man, even in considerable doses. It is true Chevallier reports a case of poisoning by it, but it is very likely that the poisonous action was due to some impurity. I am not aware of any other instance of the kind, and I have not observed the least unpleasant symptom from its use.

Paraffine, which is not very dissimilar, has been taken in large quantities without injury. Dr. Alexander informs me of a case he saw recently in which a man swallowed half a pint, by mistake, not only without injurious effects, but with the result of curing severe rheumatism of long standing. I incline to think that the dose of benzol might be increased with advantage, especially if used in the purest form.

In a case which came under my care, not long since, a boy of ten had suffered severely from whooping-cough for three weeks, each of the paroxysms bringing on an epileptic attack; after taking the benzol mixture for a week he was quite cured. In another instance, a young lady after three weeks' treatment was apparently quite cured. She had remained free from cough for a fortnight, but on her way to Switzerland the cough returned with extreme violence, and she was so extremely ill on arriving at Interlachen as to cause great alarm. Fortunately she was able to get the prescription for the benzol mixture made up there, and after a dose or two the cough ceased entirely.

I could adduce many other equally striking instances were I not fully mindful of the capricious nature of the malady and of the full meaning of *post hoc*. I would merely therefore say that it is well worthy of a fair trial under the conditions which I have laid down.

Your obedient servant,

King's Lynn, May 6th, 1880. JOHN LOWE, M.D.

CRUELTY TO WOMEN.

To the Editor of THE LANCET.

SIR,—I herewith forward you my pamphlet on "Counter Seats for Shopwomen," in which I called attention to the subject some eighteen months since.

I am happy to state that many leading firms have already recognised the evil complained of, not only in this metropolis, but in numerous provincial towns. There is, however, still much to be done. The Countess of Aberdeen has been working at the question for the last twelve months. Your annotation in this week's LANCET will serve to call professional attention again to the subject, and will, I trust, prove eminently useful in furthering the cause of the oppressed.

I beg to remain, yours faithfully,

Wimpole-street, W. ARTHUR W. EDIS, M.D., F.R.C.S.

ROYAL COLLEGE OF SURGEONS.

AT an ordinary meeting of the Council, held on Thursday last, the Collegial Triennial Prize was presented to Mr. G. A. Woods.

A letter was read from Mr. Simon, resigning his seat as a member of the Council, and arrangements were made for the annual election of members of the Council on Thursday, July 1st. Mr. Holmes' motion to abolish the payment of members of Council for attendance at meetings was rejected by eleven against nine.

The report of the committee appointed (see THE LANCET, Oct. 18th, and Nov. 15th, 1879) to consider the necessary arrangements to be made for the institution of examinations in Chemistry, Materia Medica, Pharmacy, and Midwifery, to be passed by all candidates for the Membership and Fellowship, was presented, and the following recommendations were made and adopted, *subject to confirmation at the next meeting*:—"That, in view of the uncertainty which prevails as to the compulsory establishment of a Conjoint Scheme in each division of the United Kingdom, and of the desirability of some combination being effected amongst the English Medical Corporations, for the purposes of a complete Examination in Medicine, Surgery, and Midwifery, the Council should give notice to the several medical authorities concerned in the Conjoint Scheme of the intention of this College to withdraw from that Scheme, so that the independent action of the College may be thereby secured."

On the motion of Mr. Marshall, the Council resolved to adopt the principle of instituting an examination in Elementary Anatomy and Physiology to be passed by candidates for the membership at, or after, the expiration of their first year of study, and it was referred to the "Committee on Examinations in Anatomy and Physiology," to prepare and submit to the Council for approval the necessary regulations for defining and conducting such examinations.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at Meetings of the Board of Examiners during the week:—

Arthur W. Wheatley, W. C. G. Collins, Charles E. F. Biggs, Charles F. Rumboll, Alfred J. Weakley, David John, Nicholas P. Marsh, Arthur S. Nance, Alfred P. Trinder, Rupert W. Newton, Roger D. de la H. Williams, and Herbert C. Simmons, St. Bartholomew's Hospital; Arthur J. Dalton, William E. Audland, Walter T. Harris, John G. Milnes, Daniel T. Edmunds, George H. Kinck, James H. Targett, Edgar R. S. Lipscomb, John H. Cox, Reginald J. Ryle, Frank N. Shillingford, Benjamin M. Moorhouse, William J. C. Tomalin, Henry A. B. Davies, George R. Green, and Michael A. Muirhead, Guy's Hospital; Frank L. Phillips, Sidney C. Lawrence, Birmingham; Herbert W. Knowles, Liverpool; Henry T. Rudge, Bristol; Harry I. Smith, Herbert W. White, and John Humphreys, Glasgow University; Benjamin Fenton, Melbourne, Australia; Robert P. Jefferson, Leeds School of Medicine; William A. Foxwell, Cambridge and St. Thomas's Hospital; Michael H. Feeney, Cork; Bassett C. E. F. Gunn, University College; Hugh Robinson and John R. Rygate, London Hospital; William F. Majoribanks, St. Mary's Hospital; Robert W. Shibley, Charing-cross Hospital; A. Barber, St. Thomas's Hospital.

The course of lectures for the present year will be resumed on Wednesday, the 2nd of June next, by Professor Henry Trentham Butlin, F.R.C.S., of St. Bartholomew's Hospital, who will deliver three lectures on "The Relations of Sarcoma to Carcinoma."

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on May 6th:—

Edward Cocks Johnston, Easy-row, Birmingham.
William Chy Jones, Llyswen, Breconshire.
Arman Jules M'Connel Routh, Montague-square.
Thomas Dixon Savill, St. Thomas's Hospital.

The following gentleman on the same day passed the Primary Professional Examination:—

John Lloyd Thomas, Queen's College, Birmingham.

UNIVERSITY OF GLASGOW.—Preliminary Examinations in General Education were held on April 1st, 2nd, and 3rd, when 332 candidates appeared. For the Professional Examinations 190 candidates entered, and the following passed:—

First Professional Examination (New Regulations) in CHEMISTRY, BOTANY, and ZOOLOGY.—Thos. G. Alexander, Robt. Berth, Andrew Lees Bell, Benjamin Blaine, John G. Burns, William Campbell, Joseph Carroll, Fergus Carswell, Norman M'Leod Clerk, Robert Davidson, Thomas Spence Dunn, Alex. Galbraith, James Gardner, John M'H. Gell, James F. Gemmell, William Gibb, Thos. J. Grime, Francis Johnstone, Isaac C. Hodgson, Alex. Jarvie Howel, Robert Horn, Robert R. Hunter, Creighton Hutchinson, Matthew Killoh, William Little, James D. M'Donald, Neil C. M'Donald, Thomas F. MacDonald, John Francis M'Gregor, H. Malcolm M'Intosh, John M'Intyre, Peter Maclean, James M'Nish, Matthew Martin, James Maxwell, Henry Mason, William C. Muir, William Patulls, William G. Pretsell, Richard A. D. Robb, William J. G. Robinson, Andrew Semple, Dugald Sinclair, John Sinclair, Alexander J. F. Skottowe,

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William Anderson Soga, Robt. Stewart, William G. Taylor, Edward T. Turnbull, William Waddell, Hy. Pelham Webb, John C. Wilson, David Gardner, James Jardine.

First Professional Examination (Old Regulations) in CHEMISTRY, BOTANY, and ELEMENTARY ANATOMY.—Robert M. J. Bennie, Geo. V. Fourquemin, John Logan, J. Ferguson M'Gregor, John Mathie, Wm. H. Hay Robertson, Patrick A. Smith, C. B. Hunter.

Second Professional Examination (Old Regulations) in ZOOLOGY, PHYSIOLOGY, and ADVANCED ANATOMY.—John Bond, John T. Brown, James Donald, John Goff, Oliphant Hamilton, C. Buchanan Hunter, John H. Low, Robert Miller, Donald Morrison, Alexander M'Indoe, David R. Oswald, James Rae, William Russell, Donald Simpson, John Stevenson, Thomas Stewart, Robt. G. Taylor, Henry Fraser.

Second Professional Examination (New Regulations) in DESCRIPTIVE ANATOMY and PHYSIOLOGY.—Roland Blamey, John Brown, John Buchanan, John Carruthers, David Durran, H. E. N. Doble, David Gardner, James W. Grange, George Hadden, John M. Hunt, Charles Jamieson, John Johnstone, John Hay, George G. Kenny, David Laurie, Dugald M'Phee, John Morris, Wm. Morrison (M.A.), Alexander F. Reid, James C. Robertson, Edward Williams, William M. Williams, Frank Wilson, George Wolstenholme, J. M. Robertson.

The following gentlemen received the degree of M.D.:—

Archibald Brown, M.B.,	Scotland.	Robert Ferguson, M.B.,	Scotland.
Chas. D. Hunter, M.B.,	,,	Wm. Jas. Fleming, M.B.,	,,
John Hutchinson, M.B.,	Ireland.	David Sime, M.B.,	,,
Thomas Reid, M.B.,	Scotland.	James Thomson, M.B.,	Ireland.
Robert Sinclair, M.B.,	,,	John D. M'Donald, M.B.,	Scotland.
Arthur R. Waddell, M.B.,	,,	Thomas Oliver, M.B.,	,,
James Campbell, M.B.,	,,		

The following received the degrees of M.B. and C.M.:—

‡Thomas B. Adam,	Scotland.	Angus M'Phee,	Scotland.
William Allan,	,,	William M'Vie,	,,
John A. Barton,	,,	Arthur Mechan,	,,
Thomas B. Birchall,	England.	Robert D. W. Mecredy,	Ireland.
Peter Buchanan,	Scotland.	Dugald Mitchell,	Scotland.
John M. Cameron,	,,	William B. Moir,	,,
†Archibald K. Chalmers,	,,	†Islay B. M. A. Muirhead,	,,
Thomas Dixon Cook,	England.	Daniel Mungall,	,,
Alex. W. Crawford,	Scotland.	Sambhu Chandra Naudi,	India.
John Crawford,	,,	Charles Napier,	Scotland.
Peter R. Cunningham,	,,	†William Nicol,	,,
Alexander Davidson,	,,	William K. Peden,	,,
William S. Donald,	,,	Charles Harry Pinck,	England.
John Duff,	,,	‡Charles Pinkerton,	Scotland.
Neil Fullarton,	,,	Alexander Barr Pollock,	,,
Robert Hamilton,	,,	William Pollock,	,,
Mark H. Hargreaves,	England.	Robert Porter,	Ireland.
Edwin Haworth,	,,	John M. Smith,	Scotland.
Edwin White Jones,	,,	Ralph D. Stevenson,	Australia.
Robert Lees,	Scotland.	George Storer,	Scotland.
David Longwill,	,,	William Taylor,	,,
Robert Lyon,	,,	George F. Wickens,	England.
H. S. Lyons,	Biscay.	William R. Willis,	Scotland.
‡William M'Allister,	Scotland.	James S. Wilson,	,,
Angus M'Auley,	,,	John Neil Wilson,	,,
James B. M'Kenzie,	,,	John M. Yair,	,,
William J. M'Kenzie,	India.	Henry Yarrow,	,,

The following received the degree of M.B. alone:—

‡John Glaister, Scotland. | Wm. D. M'Keith, Scotland.
John Sinclair, Scotland.

The following received the degree of C.M. alone:—

Walter M. B. Allsworth, England.

* Honours. † High Commendation. ‡ Commendation.

The degree of LL.D. has been conferred during the past year on the following members of the medical profession:—

John Hutton Balfour, M.D. &c., Emeritus Professor of Botany in the University of Edinburgh, and formerly Professor of Botany in the University of Glasgow.

Joseph Lister, M.B. &c., Professor of Clinical Surgery in King's College, and formerly Professor of Surgery in the University of Glasgow.

John B. Cowan, M.D., Emeritus Professor of Materia Medica in the University of Glasgow.

Michael Foster, M.D., Prælector on Physiology in Trinity College, Cambridge.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At examinations held on April 23rd and following days the undermentioned obtained the diplomas in Surgery of the College:—

James Law Atkinson, John Edward Snow Barnes, John Graham Blyth, James John Francis Cassidy, Daniel Bennett Clancy, Thos. Hobbs Crampton, Patrick Donnelly, Henry L. Ferguson, Richard Henry Ffrench, Arthur Daniel O'Connell Finnegan, Thos. Edward Geoghegan, William Frederick Gilbert, Edward Gloster, Henry Stoker Wilson Hill, Wm. Percy Jones, Michael Colville Kennedy, Henry Greenwood Mahon, Anthony Hickman Morgan, Patrick O'Grady, William Thos. O'Keefe, Richard Henry Stewart Sawyer, Michael Andrew Wade, Michael Walsh, John Warnock, Richard Benson Warren, Edward Tonge Yates.

SURGEON THOMAS D. GIMLETTE has been appointed to the *Minotaur*.

EARL FORTESCUE has accepted the office of President of the Sanitary Congress, to be held in Exeter in the autumn.

THE Guardians of Rotherhithe have received permission to borrow and expend £2085 for additions and alterations at their infirmary.

MADAME ALBANI has consented to sing, in aid of the funds of the Victoria Hospital for Sick Children, at the concert to be held at Chelsea House on June 2nd, at 4 P.M.

THE salary of Mr. C. Barrett, medical officer of the Weston district of the Bath Union, has been increased by £10 per annum.

DR. FOSTER MACGEAGH was presented on Saturday last with a handsome clock and candelabra, together with a purse of gold and address by his patients and friends on resigning his appointment as Resident Physician to the Tunbridge Wells Sanatorium.

MR. W. CHANDLER ROBERTS, F.R.S., Chemist of the Mint, has been appointed Lecturer on Metallurgy at the Royal School of Mines, rendered vacant by the resignation of Dr. Percy, F.R.S. Mr. Roberts will, says *Nature*, continue to hold his appointment at the Mint.

J. W. EASTWOOD, M.D., M.R.C.P. Lond., of Dinsdale Park, has been placed on the Commission of the Peace for the borough of Darlington. At the first meeting of the Guardians forming the Rural Sanitary Authority of the Darlington Union, Dr. Eastwood was unanimously elected chairman for the seventh time.

A BANQUET in aid of the funds of Charing-cross Hospital was held on Tuesday last, at Willis's Rooms. Lord Denman, in the absence of the Duke of Edinburgh, presided. It was stated in the course of the evening that the cost of the proposed removal of the mortuary buildings and providing new premises for the medical school would be about £10,000. Subscriptions to the amount of £2500 were announced.

METROPOLITAN WATER SUPPLY.—The Council of the Society of Arts have had under consideration the question of holding a public conference on this subject, and appointed a committee to consider and report thereon. This committee having met several times, and given full attention to the expediency of the Society holding a conference on the supply of water in the metropolis at the present time, and having confidence that the supply of the best water to the metropolis will be fully considered by Her Majesty's Government at an early period, reported that they were of opinion that no conference should now be held, and the council have accordingly resolved not to summon the conference as proposed.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The annual general meeting was held on May 7th, in the rooms of the Royal Medical and Chirurgical Society, Berners-street. The chair was taken by the President, Sir George Burrows, Bart. The report showed that the number of members was only 386—the same as in the previous year. Ten new members had been elected; five had died, and five resigned. During the past year fifty-nine widows and fourteen orphans had received £2968 10*s.* The expenses had been £222 17*s.* 10*d.*; the grants showing an increase of £72 10*s.*, the expenses an increase of £41. Three widows in receipt of grants had died, and one had become ineligible through marriage; five fresh widows had been selected. Two children had ceased to be chargeable on the funds, but five fresh cases had been adopted. A present of £5 had been made at Christmas to each widow, £2 to each orphan, and £4 to each of three orphans from the Copeland Fund. A legacy of £500 Consols had been transferred to the trustees of the Society by the executors of Miss Harriet Hurst, and the funded property had been further increased by the purchase of £814 0*s.* 9*d.* Metropolitan Consolidated Stock. The total expenditure of the Society for 1879 had been £3191 7*s.* 10*d.*, and the receipts available for payment of grants and expenses were £3242 5*s.* 4*d.*, leaving a balance of £50 17*s.* 6*d.* in favour of the Society. The following gentlemen were elected directors in place of the six senior who retired—viz., Thomas Dickinson, Esq.; Charles A. Aikin, Esq.; Dr. Church; Dr. Day; A. E. Durham, Esq.; and W. A. Brailey, Esq.; and Dr. Rugg was elected to fill the vacancy caused by the retirement of W. H. Sheehy, Esq. A vote of thanks to the editors of the medical journals for their kind services was carried unanimously. The meeting was then made special, to consider the proposal of Mr. Steet to extend the area of the operations of the Society from its present limits to a radius of twenty miles from Charing-cross. The alteration was approved by the meeting.

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BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.

Hay Fever, its Causes, Treatment, and Effective Prevention. By Dr. C. H. Blackley. Second Edition. pp. 281.
Manual for the Physiological Laboratory. By V. Harris, M.D., and D'Arcy Power, B.A. Oxon. pp. 124.
The Hair, its Growth, Care, Diseases, and Treatment. By Dr. C. H. Leonard. Illustrated. pp. 316.
On Insufficiency of the Aortic Valves. By Dr. J. Cockle. pp. 64.
Nature's Hygiene. By C. T. Kingzett, F.C.S. pp. 192.

CHURCHILL, J. & A., London.

Pharmacopœia of the British Hospital for Diseases of the Skin. By B. Squire, M.B. Second Edition. Small 8vo, pp. 92.

CURWEN & SONS.

The Mechanism of the Human Voice. By Emil Behnke. pp. 92. 8vo, 3s.

KEGAN PAUL & CO., London.

Health. By W. H. Corfield, M.D.

KEYS, E. (Government Press).

The Madras Manual of Hygiene. Compiled under the orders of the Government by Surgeon-Major H. King, A.M., M.B., Ch.L. Second Edition. pp. 434.

LEWIS, H. K., London.

General Paralysis of the Insane. By Dr. W. J. Mickle. pp. 246.
A Guide to the Examination of the Urine. By Dr. J. W. Legg. Fifth Edition. pp. 110.
Tables of the Physiological Action of Drugs. By E. A. Morshead, M.R.C.S., L.R.C.P. pp. 15.

LONGMANS, GREEN, & CO., London.

New Greek Delectus. By H. M. Wilkins, M.A. pp. 189.

MACMILLAN & CO., London.

Water-supply. By J. H. B. Browne. 8vo, pp. 104.

SAMPSON LOW, MARSTON & CO., London.

The Watering-places and Mineral Springs of Germany, Austria, and Switzerland. By Dr. E. Gutmann. pp. 326.

SWAN, SONNENSCHEIN, & ALLEN, London.

An Elementary Text-book of Botany. Translated from the German of Dr. K. Prantl. pp. 332, with woodcuts.

WARD, LOCK, & CO., London.

Long Life Series: Illustrated.
Long Life, and how to reach it. 1s.
Eyesight, and how to care for it. 1s.
The Mouth and the Teeth. 1s.
The Throat and the Voice. 1s.

Estudio sobre el Quebracho Bianco. Por F. R. Burgos.—The Victoria Review.—The Sanitary Journal. (Macdougall, Glasgow.)—Archives of Dermatology for April. (Lippincott, Philadelphia.)—Researches on Hearing through the Medium of the Cranial Bones. By Dr. Thomas —Reports of Tenant Farmers' Delegates on the Dominion of Canada as a Field for Settlement. Second Edition.—Canada: a Handbook of Information for Intending Emigrants.—A Tour through Canada. By T. Moore.—The Prairie Lands of Canada. By T. Spence.—Dominion of Canada: a Handybook for Emigrants.—Province of Manitoba, Nova Scotia. By H. Crosskill.—Evidence on the Closing of Public-houses on Sundays, given by E. Whitwell, Esq. (E. Stock.)—On the Removal of Foreign Bodies from the Eye. By Dr. C. S. Bull.—A New Study of Cerebral Cortical Localisation. By Dr. R. W. Amidon. (Putnam's Sons.)

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ALLARD, W., F.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Tewkesbury Urban Sanitary District. £50 per annum.

ALLEN, Mr. A. A., has been reappointed Analyst for the Borough of Sheffield.

ATKINS, T. G., M.D., M.Ch., L.M., has been appointed Assistant Physician to the Ophthalmic and Aural Hospital, Cork.

BROMLEY, F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Presteigne District of the Knighton Union.

BURTON, W. H., M.B., L.R.C.P.L., has been appointed House-Surgeon to the Deaconesses' Institution and Training Hospital, Tottenham, London.

CLARK, Annie E., L.K.Q.C.P.I., M.D., has been appointed Resident Medical Officer to the Children's Hospital, Birmingham, vice W. Rhodes, resigned.

DAVIES, A. M., L.S.A.L., has been appointed House-Physician to the Westminster Hospital, vice S. G. Hamilton, M.R.C.S.

DAVIES, Mr. M., has been appointed House-Physician at the London Hospital.

DINGLE, W. A., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for No. 8 District of St. Luke's Parish, in the Holborn Union, vice E. G. Pottle, deceased.

FAIRLEY, T., F.C.S., has been appointed Analyst for the City and Liberty of Ripon.

FORD, A. V., L.K.Q.C.P.I., M.R.C.S.E., has been appointed one of the Surgeons to the Out-patient Department of the Royal Portsmouth Hospital, vice Dr. G. Turner, resigned.

FREW, W. S., M.B., C.M., has been appointed Junior Assistant Medical Officer at the Warwick County Asylum.

GRANT, J. D., M.D., C.M., has been appointed Assistant-Surgeon to the Royal Maternity Charity.

HALE, E. T., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Fourth District of the Bedminster Union.

HARKNESS, T. D., M.B., has been appointed House-Surgeon to the Inverness Northern Infirmary, vice D. S. Macdonald, M.B., resigned.

JACOB, J. B., M.B., L.R.C.S.I., has been appointed Medical Officer to the Fifth District of the Plympton St. Mary Union.

KING, G. M., L.R.C.P.Ed., L.R.C.S.I., has been appointed Junior House-Surgeon to the Preston and County of Lancaster Royal Infirmary, vice H. E. Dixey, M.B., resigned.

LYONS, A. de C., M.B., C.M., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer of Health for the Axbridge Rural Sanitary District. £100 per annum.

MELLER, C. M., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Carisbrooke District of the Isle of Wight Union.

NICHOLSON, M. E. B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Staniland District of the Halifax Union.

PIZEY, G., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Clevedon Urban Sanitary District. £30 per annum.

ROSS, J. J., M.D., L.R.C.S.Ed., has been appointed Consulting Physician to the Inverness Northern Infirmary.

SUTTON, Mr. F., has been reappointed Analyst for the County of Norfolk for one year.

SYMONS, C. G., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Hendred District of the Wantage Union.

THURSTON, E., L.R.C.P., L.S.A.L., has been appointed House-Surgeon to the Portland Town Dispensary, vice H. G. Taylor, M.B., resigned.

WALKER, L. N., L.F.P.S.G., L.M., L.S.A.L., has been appointed Surgeon to the Royal Mail s.s. *Asiatic*, in the Union Company's service.

Births, Marriages, and Deaths.

BIRTHS.

GARRETT.—On the 5th inst., at Kenmare House, Walsall, the wife of Charles Frederick Garrett, M.R.C.S.E., L.S.A.L., of a son.

KNAGGS.—On the 11th ult., at Mayaro, Trinidad, B.W.I., the wife of Robert H. E. Knaggs, M.R.C.S.E., of a daughter.

MCDONALD.—On the 26th February, at Hamilton, Tasmania, the wife of Wallis McDonald, M.R.C.S.E., of a daughter.

PHILPOT.—On the 2nd inst., at Moorcroft, Parkstone, Dorset, the wife of John R. Philpot, L.R.C.P.Ed., L.R.C.S.Ed., &c., of a son.

SANDERSON.—On the 4th inst., at Fairfield, Penrith, Lily, wife of T. D Sanderson, M.B., F.R.C.S.E., of a daughter.

MARRIAGES.

COOPER—SMYTH.—On the 4th inst., at the Parish Church, Hampstead, Thomas Henry Cooper, M.R.C.S.E., eldest son of the late Thomas Cooper, of Well-walk, Hampstead, to Emma Eliza, eldest daughter of Luke Dowel Smyth, M.D., of South Hill-park, Hampstead.

BUSHE—HOSMER.—On the 6th ult., at Malmesbury Parish Church, Cape Colony, Cecil J. L. Bushe, A.M.D., M.D., son of the late Rev. Charles Bushe, Rector of Castle Haven, County Cork, to Ailleen Mary Beatrice, youngest daughter of the Rev. A. H. Hosmer, of Malmesbury.

DEATHS.

ALDER.—On the 8th inst., at East Dulwich, from the effects of Ashanti fever, Sydney Alder, Surgeon-Major, Army Medical Department, and late of the 23rd (Royal Welsh) Fusiliers, in his 51st year.

BERROW.—On the 3rd inst., at Milverton, Leamington, William Berrow, M.R.C.S.E., aged 83.

EDWARDES.—On the 5th inst., after a few days' illness, Conway Theodore Marrett Edwardes, M.D.A.S., eldest son of the late Conway Edwardes, Surgeon, of Batheaston, Somerset, dearly beloved and deeply regretted.

FOSTER.—On the 26th ult., at Eastlake-road, Brixton, John Frederick Foster, M.D., F.R.C.S., late of Hartley Wintney, Hants, in his 71st year.

JENKINS.—On the 1st inst., at his residence, Gower-road, Glamorganshire, Aneurin Jenkins, M.R.C.S.E., L.R.C.P.Ed., and L.M., eldest son of the Rev. E. Jenkins, of Loughor, aged 29.

JONES.—On the 11th inst., at 179, Brixton-road, S.W., Robertina, the dearly-loved wife of J. T. Jones, M.R.C.S.E., L.K.Q.C.P.I., L.M., aged 32, bitterly mourned.

MABERLY.—On the 23rd ult., at Menford-gardens, Wm. H. Maberly, M.D., F.R.C.S.E., aged 27.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, May 13th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
May 7	30·16	N.E.	49	42	86	54	41	..	Cloudy
,, 8	30·11	N.E.	48	42	93	58	42	..	Overcast
,, 9	30·29	N.E.	48	44	76	55	37	..	Cloudy
,, 10	30·13	N.E.	48	42	63	50	39	..	Overcast
,, 11	29·93	E.	49	46	94	60	43	..	Cloudy
,, 12	30·02	E.	53	47	95	62	43	..	Cloudy
,, 13	30·15	E.	53	49	102	69	41	..	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

SANITATION AT EDINBURGH.

WE have on previous occasions alluded to the good work done by the Edinburgh Sanitary Protection Association, which is now beginning the third year of its existence. This Society, numbering nearly 500 members, pays, by means of private subscriptions, a sanitary engineer to visit the houses of its members, to detect any fault, and suggest improvements or remedies. During the second year 400 houses were thus inspected. Every member's house has now been examined once, and some several times. The services of the Society have also been sought by several infirmaries, hospitals, and schools; while at St. Andrews a branch office has been started through the instrumentality of Professor Fleeming Jenkin and Dr. Mactier. The chief result of two years' experience is the necessity of repeated inspection. The water-supply and drainage are too often effected by a most complicated system of pipes, valves, and traps. However cunningly contrived and excellently executed, these were not proof against the effects of wear and tear. Stoppages due to carelessness or accident might at any moment occur, and the members of the Edinburgh Sanitary Association have consequently found plenty of work for their sanitary engineer, who has not only had to put their houses in order, but to return to them again and again to keep them in their necessary and proper condition. All this work, the result entirely of private initiative, is most commendable, and shows how widely sanitary knowledge has been diffused in the capital of Scotland.

M.B.—Bain's Logic and Mental and Moral Philosophy.

VACCINATION.

To the Editor of THE LANCET.

SIR,—It is the unfortunate custom of many private practitioners to vaccinate in two or three "places" in order to please their patients. Undoubtedly the practitioner is in a position of some difficulty. It has been my own custom to explain the necessity of producing four vesicular crops, but I have lost patients in consequence. What do you consider the duty of the vaccinator? Some prominent editorial remarks on this subject (which does not seem sufficiently understood by all practitioners—i.e., the necessity of four compound vesicles) would be of great advantage to the profession and to the public. Yours &c.,

May 8th, 1880. G. P.

*** The instructions issued by the Local Government Board, and previously by the Privy Council, for the guidance of public vaccinators in the performance of vaccination should be equally followed by all vaccinators whatever. It is unpardonable that any medical man who may have to vaccinate should be unacquainted with these instructions.—ED. L.

STIMULANTS IN WORKHOUSES.

THE question of the use of stimulants in West Derby Workhouse has been referred to a committee. It appears that the "drink bill" for the establishment now amounts to £2360 per annum. This seems a large sum, and has naturally excited the alarm of the guardians, one of whom alluded to the recent purchase by the Board of 30 hogsheads of brandy, and said it was no wonder that people were asking whether they were going to convert the workhouse into a gin-palace. The Chairman of the House Committee attributed the increased consumption of alcohol to the large number of "acute" cases in the house. The matter is also exciting attention in the Bristol Union, the guardians having appointed a committee to consider it. The question is one of more than local interest, and demands a stricter investigation than it has yet received.

Inquirer.—It is not customary for one commencing practice to advertise the fact in the public prints.

SMALL-POX HOSPITALS.

To the Editor of THE LANCET.

SIR,—I beg to invite your careful inspection of the accompanying map of the Brompton district of Kensington, of which I am the medical officer. It requires no explanation, as all that is requisite is mentioned on the map itself.

For nearly four years small-pox has been epidemic in a small area of my district, nearest the Fulham Small-pox Hospital, and nowhere else. In the adjoining parishes of Fulham and Chelsea the same thing has occurred. You will see by the map that by far the majority of cases have occurred within a radius of a little more than a quarter of a mile. You will also observe that the numbers decrease as the distance from the hospital increases. The question of how far concentrated small-pox poison (as it emanates from large hospitals) can travel is still *sub judice*. In my own mind I have not a shadow of doubt that it will travel much farther than it has been hitherto the custom to suppose. There can be no question, I think, that in my district at least the germs of the disease have emanated from the Fulham Small-pox Hospital. It is not a continuous epidemic, but one that varies directly with the number of patients in the hospital. When few or no cases are there, there are few or none in its immediate neighbourhood. Nor is this neighbourhood one to favour or invite an epidemic; it consists of a newly-built, clean, and well-drained number of houses and mansions. The only street in the Redcliffe estate that can make any pretension to having numerous inhabitants is the Ifield-road, and even that is inhabited by an extremely decent, clean, and orderly class, several occupying the whole house, and but few having less than two or three rooms. The most favourable locality in my district for the spread of an epidemic is, by far, that small triangular portion at its extreme eastern end, which consists of a number of old, ill-drained, over-populated streets, courts, and alleys, running out of a crowded main road. As you will see by the map, a few isolated cases have occurred there from time to time; but there has never been any spread of the disease from them. In each case the disease has been easily stamped out at once. Near the hospital nothing avails as long as there is anything like a large number of patients in it.

I have been between forty and fifty years medical officer of this district, and never before have had the least difficulty in stamping out epidemic outbreaks. Small-pox did not exist in the epidemic form in the neighbourhood of the hospital before its opening in March, 1877. Since then it has constantly raged there more or less. Within three days of May, 1878, cases were removed to the hospital from fifteen different streets, all at some distance from one another, but all within sight of the hospital; in other words, several people at some distance from one another inhaled almost at the same time small-pox germs. This fact does not look like the disease spreading from house to house, but points, I think, most conclusively to one great infecting centre. At that time, as far as I can ascertain, the hospital contained more patients than it has before or since, and we may naturally conclude that the air coming from it was more saturated than usual with small-pox particles.

I think by means of the map, and by the few remarks I have been able to condense in this communication, I have shown at least sufficient grounds for an impartial investigation. If, as I am myself fully convinced, small-pox hospitals are a source of danger, not only to those living immediately under their walls, but also to those at some distance removed from them, it is surely the duty of the Asylum Board either to remove them to a safer distance, or to adopt some such plan as I suggested some time ago—namely, causing all the air from the hospital to pass through a furnace, and be thoroughly burnt before it be allowed to carry, as it now does, disease, misery, and death to all coming within its influence.

The Fulham Small-pox Hospital is most unfortunately placed. It lies in a hollow, the former site of the old open Counter's Creek Sewer. On each side of it are two numerously attended running and athletic sports' grounds. The patients in the hospital can be seen watching the sports out of the windows. The Metropolitan Railway and its branch to Putney run close under its walls. What more efficient carriers of the disease could possibly be conceived, not only to other parts of the metropolis, but also to all other parts of the kingdom. Yours &c.,

Fulham-road, May 4th, 1880. FRANCIS GODRICH.

*** See remarks on this subject in the Local Government Department, page 780 - ED. L.

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THE WOURALI POISON.

MR. MONTAGUE FLINT, F.R.G.S., in *Temple Bar* for May, gives an account of the circumstances attending the preparation of wourali by the Macusis of the Canuca Mountains. The people of this tribe say they are the sole patentees of this subtle and renowned poison; and even of the Macusis, only a few know how to prepare it. It is accounted a great secret, and is imparted from father to son or next male heir when the former is believed to be at the point of death. The process of manufacture is carried on on comparatively rare occasions, and is surrounded with great solemnity. For ten days previous to the first boiling down, all the men who are to take part in it are supposed to fast, and all the women of the tribe are carefully kept out of the way. The long arrows the natives use with the bow are sometimes dipped in the poison, and a small tube of bamboo placed over the tip to prevent anyone being accidentally pricked by it. The blow-pipe arrows or shafts, mentioned by Waterton and others, are thin slips of hard wood, made from the stem of the leaf of the cucurite palm. They are generally from twelve to eighteen inches in length, sharpened at one end, and wrapped round at the other with common cotton, or with the brown silklike cotton of the silk-cotton tree. The sharp points are dipped in the wourali, which is of the colour and consistency of melted glue. These they carry in a wicker case, shaped like a dice-box, but larger, very closely woven, and with a leather top and bottom, the top opening on a leathern hinge. The length of the blow-pipe itself varies from twelve to fifteen feet. Thus equipped, they range through the forests, shooting monkeys, birds, or such other animals as come in their way. The only antidote to the poison they are in the habit of using is a kind of earth-worm, well known to them, and common enough in these parts. Should any of them be so unfortunate as to get scratched, a hasty search is made for some of these earth-worms, which are pounded together, a portion being used to anoint the wound, and the rest swallowed by the patient.

Dr. Reginald E. Thompson.—The paper will be inserted shortly.

AMPUTATION AT THE HIP-JOINT.

To the Editor of THE LANCET.

SIR,—In your issue of the 1st inst. a report is given of the proceedings of the Clinical Society on April 23rd, at which meeting Dr. Stokes, of Dublin, read a paper, relating a case of amputation at the hip-joint for disease. In the comments made by the various speakers, the question *as to the operation performed* was never raised, it being tacitly admitted that the "flap operation" as done by Dr. Stokes was the most satisfactory—at least I infer that, as no one present expressed any doubt about the matter. All the speakers agreed as to the risk in this operation from blood loss, and that, with the exception of Mr. Bryant, it came chiefly from the posterior flap.

Why was not Mr. Furneaux Jordan's method considered preferable? In the last year I removed in this way four limbs at the hip-joint successfully (one died subsequently from visceral lesions), and in each one the object was to give a chance of life to a patient practically doomed. Three were after failure of excision; the other in a case where this operation was not deemed advisable on account of the extent of the disease. In the first case Esmarch's band was applied to control the bleeding, but, proving ineffectual, the fingers were used instead. The remaining cases were efficiently dealt with in this simple way, the blood loss in any single case not exceeding two ounces. If the older (flap) method be adopted, I quite recognise the utility of Mr. Davy's lever, as pressure on the common femoral would not prevent loss from the gluteal vessels. But why substitute for a comparatively simple and bloodless procedure one which entails much anxiety as to the amount of blood lost and handling per rectum? Hitherto, I believe, no ill effects have been caused by this manipulation in the rectum. Still, I cannot think it desirable unless absolutely necessary, and if Mr. Jordan's plan be adopted there is no need for its use.

In conclusion, I may say that, by your kind permission, two of the four cases have already been published.

Your obedient servant,

LEWIS W. MARSHALL, M.D.,
Surgeon to the Nottingham Children's Hospital.

Nottingham, May 2nd, 1880.

N.B.—Ages of children:—One, two years eight months; one, five years six months; two, seven years.

An Old Subscriber.—If our correspondent would condense his letter within a reasonable compass, we should gladly allow him to ventilate the grievances of his department, and the more so as he has stated them temperately. He seems, however, in some of his remarks to have forgotten that the recent changes were made in accordance with the suggestions of an officer of the Indian service, and did not emanate from the War Office.

D. J.—None but medical men appointed under the Factories and Workshops Acts can officially examine the children engaged in workshops, and sign the books required to be kept by employers.

Mr. F. M. Robertson.—See Liveing's Handbook of the Diagnosis of Skin Diseases, p. 44.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE following were the questions submitted to the candidates at the preliminary examination for the diploma of Membership of the Royal College of Surgeons on the 7th instant, when, in pursuance of the new regulations, they were required to answer only four out of the six questions, both on Anatomy and Physiology. The following were the Anatomical questions:—

1. Describe the inferior maxilla, and state the changes it undergoes from infancy to old age.
2. Describe the inferior radio-ulnar and the radio-carpal articulations; state the movements of which they are capable, and name the muscles by which these movements are effected.
3. Describe the course, relations, and anastomoses of the external circumflex artery, and give the dissection necessary to expose it.
4. Describe the entire lachrymal apparatus.
5. Describe the membranes of the spinal cord, and mention the points of difference between them and the membranes of the brain.
6. Describe the course and relations of the inferior vena cava, and name its tributaries.

The following were the questions on Physiology:—

1. Describe the structure of the mucous membrane of the stomach. Give the composition and action of the gastric juice.
2. What are the essential parts of a secreting gland? What circumstances modify secretion? Illustrate your statements by reference to the salivary and sudoriparous glands.
3. Describe the structure of the urinary bladder. What muscles and nerves are engaged in the act of micturition?
4. Describe the structure and functions of the vocal cords. Enumerate the intrinsic muscles of the larynx, giving the nerve-supply and action of each.
5. Give the structure and connexions of the valves of the heart. What are their functions?
6. Describe the structure of striated muscle. Give the physical and chemical changes which accompany the act of contraction.

Enquirer cannot do such things legally on the strength of the qualification mentioned. He could not, even in Canada, with propriety use the title named.

Dr. A. Sheen.—We shall be glad to see the article mentioned.

Feliz.—The time has not been announced.

FOREIGN BODIES IN THE WINDPIPE.

To the Editor of THE LANCET.

SIR,—Dr. G. V. Poore, in your last week's "Mirror," brought forward some cases from the throat department of University College Hospital, one of which related to the impaction of a cockle-shell in the trachea of a boy immediately below the vocal cords. I do not gather from your report how long the boy was under Dr. Poore's care, but that he was able to diagnose the presence of the shell on the sixth day after the accident, and that on the following day he had the opportunity of seeing the shell in its position below the cords is evident.

I should like to raise the question whether it is advisable, on diagnosing the presence of a foreign body in the larynx or trachea, to delay taking immediate steps for the removal of that body. I am of opinion that delay is most unwise. Should in special cases delay be unavoidable, I would have the case watched, so that if necessary the trachea might be opened immediately. For myself I go further. In examining such cases I have tracheotomy instruments ready at hand. This may be over-solicitude on my part, and therefore I only wish to raise the question whether it is not advisable in the case of a foreign body in the windpipe to take measures at once for its removal, as at any moment displacement of the foreign body may take place, and fatal dyspnœa speedily occur.

Yours faithfully,

May 10th, 1880. W. PUGIN THORNTON.

H. G. D.—1. (*a*) The Superintending Inspectors of Factories attached to the Home Office; (*b*) the Board of Guardians; (*c*) the Sanitary Authority, urban or rural, as the case may be.—2. Consult Wilson's Handbook of Hygiene, published by J. and A. Churchill.

M.D. Lond.—Yes.

THE LOCAL TREATMENT OF ERYSIPELAS.

To the Editor of THE LANCET.

SIR,—I read with considerable interest Mr. Lenihan's letter on the above subject, which appeared in your last week's issue. The method described by Mr. Lenihan, and spoken of by you as "the revival of an old procedure," was, I believe, introduced by my father some thirty years ago, and is explained by me in a paper, "On the External Use of the Tincture of Iron in Erysipelas and other forms of Local Inflammation," published in the first volume of the *Medical Gazette* for 1875.

Yours faithfully,

Leeds, May 10th, 1880. CLARENCE FOSTER, M.R.C.S.

To the Editor of THE LANCET.

SIR,—If Mr. Lenihan will refer to the *Journal of Mental Science* for July, 1858, he will there see a short paper by the Medical Superintendent of the Dorset Asylum (Mr. Symes), who used tr. ferri sesquichloridi externally, and with the best results, and I know he continues to use it whenever a case of erysipelas occurs.—Yours &c.,

May 10th, 1880. AMICUS.

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VITAL STATISTICS OF ONTARIO.

THE annual report of births, marriages, and deaths in Ontario has just been published. The births during 1879 were 40,236; the deaths, 17,808; and the marriages, 12,729. Pulmonary diseases would appear to be the most prevalent maladies in the province. As to occupations, farming shows the most favourably; whilst sempstresses, as a class, are the most unhealthy. Bookkeepers and clerks also exhibit a large mortality.

E. H. M. had better apply for the advice desired to a Warden of one of the City Companies.

Mr. G. W. Wigner.—We shall be glad to receive the analyses.

ON THE VALUE OF ARTIFICIAL FEEDING.

To the Editor of THE LANCET.

SIR,—The following is not only an uncommon case in itself, but seems to illustrate the value of artificial feeding:—

William H——, aged sixty-six years, was admitted into this infirmary on March 9th. He had been out of work for many months, and had been much depressed in mind. Of late he had been generally feeble, slow of comprehension, clumsy in the use of his fingers, and for three months had been deaf in the right ear. On March 1st he had had what his friends looked on as a fit, but what from his account appeared to have been a sudden attack of giddiness, with great tinnitus in the right ear, and complete helplessness. Some time afterwards it was discovered that he was unable to swallow, and it was on account of this difficulty, which had kept him without food for nearly a week, that he was brought to the infirmary. On examination, the patient was found to be very feeble, and, though able to move all his limbs, was unable to stand or even to sit up. He was constantly giddy, but much worse if he attempted to move. The grip with both hands was good, and fairly equal, though developed slowly. Some paresis of the left side of the face was observed, with ptosis, and slight external strabismus on the same side, the left pupil being smaller than the right. The uvula could be tickled without causing retching, and, curiously enough, was observed to be drawn towards the left. There was no accumulation of mucus on the tongue and palate; the face was somewhat flushed, and the bowels confined. The slightest attempt to swallow fluid produced the greatest distress, causing cough and tracheal râles, and evidently putting him in great danger of suffocation. The fluid did not return through the nose, the pharynx seeming to be quite helpless, and it was by the cough alone that he cleared his throat, the cough forcing the mucus &c. past the paralysed pharynx into the cavity of the mouth, which was comparatively unaffected. The gravity of the case clearly depended on the paralysis preventing the ingress of food; and on the case being admitted into the infirmary, under the care of Mr. S. Charles Smith, the patient was ordered to be fed with the stomach-pump twice daily. He remained as an in-patient up to April 3rd, during which time he was regularly fed on beef-tea, thickened with pea-flour, and on milk and corn-flour. About a week after his case came under treatment, his condition was observed to improve, the power of deglutition gradually returning, so that first he became able to suck oranges slowly, then to take milk and egg, then smooth porridge, and ultimately any kind of solid food. On being discharged, he still had slight ptosis and double vision. He was also giddy, and had a peculiar weakness of the muscles of the trunk, so that, though able to move all his limbs, he could not even sit up without supporting himself by neighbouring objects. The morbid process in the brain, whatever its nature, whether hæmorrhage or softening, or both, no doubt remains untouched; but the particular symptom which was immediately dangerous to life has passed away. All sudden cerebral diseases seem for a time to involve wider areas than are permanently injured, and in this case it was fair to hope that the pharyngeal paralysis might not be in the main track of the lesion, but might be one of those side effects which can be recovered from, if the patient can only be kept alive meanwhile, which here was successfully accomplished by the aid of the stomach-pump.

I remain, Sir, yours truly,

THOMAS HAMMOND, L.R.C.P. Lond., &c.

Halifax Infirmary, May, 1880.

ECZEMA.

To the Editor of THE LANCET.

SIR,—In answer to the inquiry of "M.R.C.S." about a remedy for a case of eczema rubrum, I beg to state that I had last year a most obstinate case of that disease, which had been drugged almost with every remedy in the B.P., without success. As a last resource, and as I knew that every skill in the administration of drugs had been exercised, I adopted the following treatment:—Every night the affected parts (which really was nearly all over the body) were swathed in linen cloths dipped in oil and carbolic acid (1 to 60); over this was put cotton-wool, and a bandage applied lightly over all. In the morning I had the body completely washed with carbolic soap and water, and the carbolic acid and oil reapplied. This was continued for a fortnight, the patient keeping his bed. After this he was so much better that I only had the remedy applied at night. After morning bath he put his clothes on, without any local application, but taking a carbolic steam three times a week. The result of this treatment after two months was a complete cure, with great gratitude of the patient.

If this treatment can be carried out by "M.R.C.S." with success, I shall be very glad.

Yours obediently,

May 6th, 1880. EDWD. M. OWENS.

Volunteer Surgeon.—The adjutant is right. The cocked-hat in full dress and the forage-cap in undress are the coverings for the heads of medical officers, as established by the Dress Regulations of the Army.

B. H. M.—Yes. The matter certainly calls for notice. Serious issues may be involved.

ON SPLITTING OF THE TONGUE WITH A VIEW TO FACILITATING OPERATIONS AT ITS BASE.

To the Editor of THE LANCET.

SIR,—The following case is of interest in connection with the paper by Mr. Morrant Baker in your issues of the 10th and 24th of April:—

Francis C——, aged twenty-five, sent to me by Mr. Cran, of Salford, was admitted to the Manchester Royal Infirmary in October, 1878. He had been suffering for about two months from a tumour which was growing at the back of the tongue. There was no pain, but respiration and deglutition were becoming increasingly difficult, and the voice resembled that in a case of enlarged tonsils. On examination, the tumour was found to occupy the hollow between the tongue and the epiglottis. It was at once brought into view on the patient widely opening his mouth. In form it was rounded, with a slightly nodulated surface. It was softly elastic to the touch, and of a greyish-white colour, and it was diagnosed as a lymphoma. After a little observation of the case, it became evident that the growth was increasing somewhat rapidly, and accordingly, after a consultation with my colleagues, I determined to endeavour to remove it.

On October 19th a preliminary tracheotomy was performed, the principal operation being undertaken a week afterwards. The main difficulty in the case appeared to be the satisfactory exposure of the tumour. At first I thought of dividing the cheek from the angle of the mouth to the angle of the jaw on one side, sawing through the inferior maxilla behind the teeth, and forcibly pulling the tongue aside; but it did not appear that this procedure would adequately serve my purpose, and, after fully considering the subject, I determined on the following operation:—The chin, including the inferior maxilla, was divided in the middle line, after the manner of Mr. Syme, the incision being prolonged backwards through the floor of the mouth in the direction of the hyoid bone. Two threads were then run through the tongue near its tip, one at each side. I then passed a bistoury from below upwards, in front of the growth through the median raphe of the tongue, and, cutting forwards, readily split the organ in two. Mr. Whitehead, who kindly assisted me, then held the two halves apart while I completed the section backwards to the margin of the tumour. In this manner a most complete view was obtained of the parts implicated. The tumour was friable, and broke down under the finger; but I believed I succeeded in digging out the whole of it from its bed, together with some of the surrounding muscular and cellular tissue. It was about the size of a large walnut. The lingual artery of one side was divided; but, with this exception, there was no trouble from hæmorrhage. The two halves of the tongue were then stitched together with silk, the jaw fastened with wire passed through holes drilled at two levels, and the superficial parts brought together in the usual way. The tracheotomy-tube was left in as a prudential measure.

A few hours after the operation the patient was in an alarmingly collapsed condition. He soon recovered himself, however, under the administration of stimulants, and until his discharge he progressed perfectly satisfactorily. In a few days the tracheotomy-tube was taken out, and the stitches removed from the soft parts.

The patient left the infirmary on Nov. 19th, the wires in the bone being still left in their place. The relief of symptoms obtained by the operation was very evident, as he rapidly improved in appearance. Unhappily, however, this relief was of short duration. Soon after he left the infirmary the tumour began to grow again, and he succumbed three months afterwards.

On microscopic examination, the tumour proved to be composed of lymphoid tissue. Possibly, situated as it was, where a free removal of the surrounding parts was impracticable, it should not have been interfered with. My present object, however, is to direct attention to the method of operation. The exposure of the base of the tongue, and the facility with which the manipulations of the parts could be carried on, were all that could be desired, and indeed no real difficulty was experienced in the whole course of the operation.

I am, Sir, yours &c.,

JAMES HARDIE,

Assistant-Surgeon to the Royal Infirmary, Manchester.

Manchester, May, 1880.

LOCOMOTOR ATAXY AND PROCREATIC POWER.

To the Editor of THE LANCET.

SIR,—I think the following facts are of interest to the medical profession:—

In May, 1878, John A——, aged thirty-one, came under my care suffering from locomotor ataxy, the disease being at the time well marked. He informed me that it had been "coming on for the last eighteen months." He was a married man, and the father of one child. In July, 1879, his wife gave birth to a male child, and in February, 1880, the man died, he having been bedridden for some months prior to his death.

I have no reason to doubt the parentage of the child in this case, and I may mention that it bears a very marked resemblance to its deceased parent.

I am, Sir, yours faithfully,

Exeter, May 8th, 1880. CHAS. E. BELL.

ERRATUM.—In last week's annotation on Chian Turpentine in Cancer, p. 730, col. 2, line 7 from bottom, for "imperative," read *comparative*.

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COMMUNICATIONS, LETTERS, &c., have been received from — Dr. B. Yeo, London; Mr. T. Bryant, London; Mr. Teevan; Dr. R. E. Thompson; Dr. Reid, Newbiggin-by-Sea; Mr. Bateman, Tenterfield; Dr. Oliver; Mr. P. Thornton; Mr. Blackett; Mr. Mumby; Mr. Young, Sherborne; Dr. J. Williams; Dr. Brushfield; Dr. S. Norton, West Malling; Dr. Garstang, Blackburn; Dr. Weymouth, Mill-hill; Mr. Withington, Doncaster; Mrs. Jack; Mr. Mundy, Edinburgh; Mr. Wyles, Allesley; Mr. Oxley, Liverpool; Mr. Barton; Mr. Count; Dr. W. Edis, London; Dr. Hooper; Dr. A. L. Browne; Mr. Gardiner; Mr. M'Munn, Belfast; Mr. C. Foster, Leeds; Mr. Birt; Dr. Dana, New York; Dr. Laseron; Mr. Graham; Mr. Timothy; Mr. Layton, Kelso; Dr. Cavafy, London; Rev. W. Walker, Reading; Mr. Owens, Leamington; Dr. J. Lowe, King's Lynn; Mr. Binney; Dr. Davidson; Dr. Newcombe, Gateshead; Mr. Barnard, Edinburgh; Mr. Denham, Wimbledon; Dr. Bell, Exeter; Mr. Winfield, Manchester; Dr. Snow, London; Dr. G. W. Potter; Dr. Neal; Dr. Ryley, Taunton; Mr. Cooke; Mr. Heaton, Manchester; Mr. Harding, Westgate-on-Sea; Mr. French; Mr. Manners, Rugeley; Messrs. Shepherd and Co.; Mr. Jenkins, Loughor; Mr. R. Freeman, London; Messrs. Keith and Co. Edinburgh; Mr. Stewart, Southport; Dr. Ahmed, Doomka, India; Dr. Nesham, Newcastle-on-Tyne; Mr. Hardman, Blackpool; Mr. Ward, Burnley; Mr. Hudson, Cheltenham; Mr. Pearce, Brierley Hill; Mr. Dufton, Tuxford; Mr. Coulton, Lynn; Mr. Elliott, W. Australia; Mr. Morlew, Blackburn; Mr. Morrison, Hampworth; Mr. Crosse, Norwich; Dr. Barker, Bombay; Dr. Tatham, Salford; Dr. L. Down, London; Mr. Norton, Devonport; Mr. Nixon; Mr. T. R. Beckett; Mr. Hope, W. Australia; Dr. Arciniega, Cairo; Dr. Paterson, Grantham; Surgeon-Major King; Mr. Wigner, London; Dr. Dreschfeld; Surgeon-Major H. W.; Alpha; The Secretary of the Ladies' Sanitary Association; G. M. A.; Felix; E. H. M.; M.B.; Volunteer Surgeon; G. P.; Doctor, New Zealand; Amicus; H. G. D.; A Sussex Clergyman; Medicus; Dr., 1880; M.D.; Militia; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Wright, Wellingborough; Mr. Gould, Hatherleigh; Mr. Parry, Ferndale; Mr. Hordley, Stoke-on-Trent; Hr. Hacket, Leeds; Mr. Townshend, Seacombe; Mr. Whitlock; Dr. Glissan, St. George's; Mr. Bryant; Mr. Lowe; Messrs. Cadbury; Dr. Blair; Messrs. Mottershead, Manchester; Mr. Praeger, Fence House; Mr. Sach; Mr. Grant, Birmingham; Mr. Horne, York; Mr. Nicoll, Tomintoul; Mr. Knight, Whitehaven; Mr. Martin, Paisley; Mr. M'Bride, Stapleton; Dr. Archer, Liverpool; Mr. Bash, Nottingham; Dr. Maskew; Dr. West, Launceston; Mr. Philipps, Exeter; Mr. Callard, London; Miss Arnim, London; Surgeon; LL.D.; M.D.; X. Y.; Dispenser Delta; H. G.; M. Y. B.; K. O.; Omega; H. H. B.; J. M. B.; Sanitas; M. B., Rickmansworth; Medicus, Sheffield; Cymro, Edinburgh; H. M., Brixton; Dr., Middleton; G. L.; Medicus, Leicester; T. H. Y., Leamington; M.D., Eastbourne; W. E., Old Charlton; M.D., Liverpool; Wall, Wigan; Bets, London; J. C.; Thom, Newport; &c.

Night and Day, Students' Journal, Metropolitan, Hampshire Express, Surrey Advertiser, Hastings and St. Leonards Times, Renfrewshire Independent, Deutsche Medicinal-Zeitung, Tewkesbury Register, Warehousemen and Drapers' Trade Journal, Bradford Observer, Irish Banker, Colonies, Paisley Daily Express, Walsall Free Press, Clifton Chronicle, Eddowes' Shrewsbury Journal, The Newsvendor, Nouvelle Chronique de Jersey, Shields Daily Gazette, Paignton and Newton Directory, Brighton Guardian, Ilkley Free Press, Ross Gazette, &c., have been received.

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Medical Diary for the ensuing Week.

Monday, May 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, May 18.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. Fiske, "On American Political Ideas."

PATHOLOGICAL SOCIETY OF LONDON. — 8½ P.M. The following Specimens will be shown:—Specimens illustrating the Development of Cancer and the Histology of Painful Subcutaneous Tumour; Recurrent Mammary Tumour; Aortic Aneurism opening into the Right Auricle; Cirrhosis of Liver in a Child; Dermoid Tumour from the Rectum; Mixed Cystic Oxide and Lime Oxalate Calculus; Left Persistent Vena Cava; Aneurism of the Abdominal Aorta and Right Common Iliac Artery, communicating with the Inferior Vena Cava; Kidneys showing the Cystic Degeneration of Adults; Congenital Syphilitic Ulceration of the Tongue; three Cases of Sarcomatous Growths in both Kidneys; Congenital Malformation of the Heart; Tumour of the Face; Remarkable Renal Concretion; Cancer surrounding the Colon; a Double Kidney; &c. &c.

Wednesday, May 19.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M. — 5 P.M. Mr. F. R. Fisher, "On Club Foot."

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY. — 7½ P.M. Council.—8½ P.M. Casual Communications from the President and others.—Mr. Napier will exhibit the Polyscope for Illuminating the Mouth by Electric Light; and also a new Apparatus for the Administration of Nitrous Oxide without the risk of the Gas running short.

Thursday, May 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. T. W. R. Davids, "On Buddhist Sacred Books."

HARVEIAN SOCIETY. — 8½ P.M. Mr. G. P. Field: "An Analysis of 500 Cases of Perforation of the Membrana Tympani."—Dr. Mahomed, "On Bronchitis."

Friday, May 21.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION. — 8 P.M. Evening Meeting. — 9 P.M. Mr. Spottiswoode, "On Electricity in Transitu."

Saturday, May 22.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor H. Morley, "On the Dramatists before Shakespeare."

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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Lectures
ON THE
PHYSICAL EXAMINATION OF THE MOUTH AND THROAT.

Delivered to the Junior Class of Clinical Medicine, University College,

BY G. V. POORE, M.D., F.R.C.P.,
PROFESSOR OF MEDICAL JURISPRUDENCE, UNIVERSITY COLLEGE; LATE ASSISTANT PROFESSOR OF CLINICAL MEDICINE; ASSISTANT PHYSICIAN, AND PHYSICIAN IN CHARGE OF THE THROAT DEPARTMENT OF THE HOSPITAL, ETC.

LECTURE II.

THE PHYSICAL SIGNS DERIVABLE FROM THE TONGUE.

GENTLEMEN,—No organ in the body is appealed to so often to afford evidence of disease as *the tongue*. This is not to be wondered at, as it is the only internal organ which can be conveniently and instantaneously exposed. In inspecting the tongue, we have regard to its *size*, *form*, *colour*, *density*, *movement*, and to any *adventitious* appearances due to fur, sores, or morbid growths.

The *size* of the tongue differs in different people. It may be congenitally wanting, and at least one well-authenticated case of this deformity is upon record. Some persons have naturally small tongues. A tongue may be apparently, but not really, small, owing to an inability to protrude it properly. Atrophy of the tongue occurs in cases of damage to the trunk or origin of the ninth nerves. Such atrophy is generally unilateral, or, if bilateral (as in cases of bulbar or labio-glosso-laryngeal paralysis), it is generally better marked upon one side than on the other. In cases of creeping palsy, or Cruveilhier's atrophy, the tongue is occasionally affected, and wastes, as do the other muscles of the body.

We have now attending in the out-patient room a little girl of twelve years of age, who has atrophy of the right half of the tongue. This supervened upon an attack of right hemiplegia, which occurred a couple of years ago after scarlet fever. The paralysis of the right arm and leg is now almost perfectly well, but the atrophy of the right side of the tongue remains well marked. There is no evidence of any implication of the right ninth nerve in its course, and we are driven to the conclusion that the atrophy is caused by a degenerative change descending from the seat of the cerebral lesion along the course of the right ninth nerve.

Big tongues occur as congenital defects, and a certain number of children with "tongues too big for their mouths" are recorded. This congenital hypertrophy is sometimes so great that the tongue hangs from the mouth over the chin. In some few cases the hypertrophy has commenced after birth, but in such cases the enlargement has usually followed some inflammatory condition of the organ, and it is doubtful if it be due to simple hypertrophy of the lingual muscles. The tongue may be enlarged and swollen from inflammation or glossitis, brought about by mercurialisation, or errors in diet. In tertiary syphilis the tongue is sometimes the seat of a uniform infiltration, and undergoes enlargement in consequence. We have had one such case attending in the Throat Department in which the tongue was enormously increased in size. A tongue which is the seat of syphilitic gummata, or cancerous tumours, is necessarily bigger than ordinary. The size of the tongue apparently differs also according to its state of muscular tonicity, appearing smaller when the tone of the intrinsic muscles is great, and large when the muscles lack tone, as in some anæmic and depressed conditions.

The *form* of the tongue is a matter of secondary importance. It is remarkable how this differs in different individuals. Sometimes it is broad and flat, and at other times it is long and pointed. These variations depend presumably upon differences of muscular tone. The broad flat tongue is often seen in atonic conditions, and the long pointed tongue in conditions of irritative dyspepsia. This rule, however, if rule it can be called, is liable to many exceptions. In cases of unilateral atrophy the tongue loses its symmetry. The symmetry of the tongue is also interfered with by tumours and ulcers the cicatrisation of which causes contraction of one side. When the tongue is large and flat the edges of it are liable to be marked by the teeth, and present a characteristic crenulated appearance. In cases of glossitis from any cause the teeth-markings appear, and they are also very often seen in the broad flat tongues of anæmic persons suffering from atonic dyspepsia. These teeth-markings in the absence of any inflammatory condition of the tongue are important evidence of want of tone.

The *colour* of the tongue, apart from the presence of fur, of which we shall speak presently, varies from an extreme degree of pallor in patients who are the subjects of anæmia to an extreme degree of redness in scarlet fever. It is necessary not only to look to the colour of the organ itself, but of the papillæ, and especially the fungiform papillæ, which are situated round the tips and edges. These papillæ are apt to get enlarged and very red in conditions of irritative dyspepsia. They also enlarge very much in scarlet fever, and the enlarged papillæ standing out in bold relief against the white fur with which the organ is covered have given rise to the expression "strawberry tongue," on account of its bearing some resemblance to that fruit. The condition of these papillæ affords important evidence of stomach condition. Any irritation of the stomach will cause an hyperæmia of the tongue and pharynx, and it is surprising how quickly the presence of any obnoxious body in the stomach causes the characteristic appearance in the tongue. The irritation of the terminal branches of a centripetal (sensory) nerve causes, as you know, a dilatation of the vessels in the area supplied by that nerve. Irritation of the stomach causes, presumably, impressions upon the terminal branches of the vagus, which travel to the vaso-motor centre in the medulla, and produce by reflex action a dilatation of the vessels. This reflex effect produced by irritation of the vagus spreads beyond the area of the nerve irritated, and a dilatation of the vessels of the pharynx and soft palate (which are supplied with fibres of the vagus), as well as of the papillæ of the tongue (to which vagal fibres have, I believe, been traced with the branches of the hypoglossal) occurs. The reflex impressions producing variations in the blood-supply of the mouth and tongue, and variations in the amount of mucous and salivary secretion of those parts, may be merely psychical. The watering of the mouth produced by appetising thoughts, and the dryness of the same which may be brought about by fear, are two familiar examples.

The colour of the tongue is changed by any cause producing jaundice, when it assumes with the other tissues of the body the icteric tint. The tongue becomes cyanotic whenever the aeration of the blood is impeded from any cause. It may be well to remind you that it is turned brown by chewing tobacco, and is often black in patients who are taking preparations of iron.

The degree of moisture or dryness of the tongue is a point to be observed. A very moist tongue is seen in cases of ordinary catarrh. A dry tongue may be due to mental impressions, to increased evaporation from the surface, brought about by keeping the mouth persistently open, to the febrile state in which the secretion of the buccal mucous membrane is in abeyance, and the evaporation from the surface largely increased by the high temperature of the body. One of the dryest tongues I have ever seen was in a patient with a cleft palate and was caused by the constant evaporation from that part of the tongue which was exposed to the air passing through the nostrils. A very dry tongue in cases of fever is always a sign of considerable gravity. In cases of long-continued fever patients get into a low condition, known as the typhoid state, and then not only is the tongue almost absolutely dry, but almost black upon the surface. This dry black tongue occurring in cases of fever is a very unfavourable sign.

One may mention here that occasionally the circumvallate papillæ, which form a chevron at the base of the tongue, undergo a very great hypertrophy, so as to look like large warts standing on the surface. We had one such case lately attending in my out-patient room. The filiform papillæ are also occasionally hypertrophied and give a hairy appearance to the tongue.

The *density* of the tongue—i.e., its hardness or softness to the touch—is a point which is often of value, as affording confirmatory evidence. The tongue is soft in all anæmic conditions and in conditions of atrophy, and feels hard when it is in the long pointed state which I mentioned as

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sometimes accompanying gastric irritation. The tongue feels hard whenever it is the seat of simple, cancerous, or syphilitic infiltration. Many of you may have seen the case of tertiary syphilis attending my out-patients, which I have previously mentioned in which the tongue, without being in any way distorted in shape, was enormously enlarged and uniformly infiltrated, so that it felt, when gently squeezed between the fingers, as hard as a board.

Most important to observe are the *movements* of the tongue. Some patients, when asked to put out the tongue, do so with difficulty, and only just protrude the tip. This may arise from tightness of the frænum linguæ—the condition known as tongue-tie. It may be well to remark here that tongue-tie is not at all common, and that of the numerous babies who are brought to us by their mothers and said to be tongue-tied, a very small proportion only need any surgical interference. Occasionally a difficulty in protruding the tongue is an evidence that the patient wears false teeth, a circumstance of which it is convenient to have a knowledge. The tongue of a healthy person is protruded in the middle line, and any deviation to the right or left is evidence of disease. An imperfection in the line of the lower teeth will often cause a deviation of the tongue, and if there be a gap in the teeth on one side or the other of the middle line, the tongue will be pushed out through this gap. In cases of paralysis which implicates the ninth nerve on one side the tongue is protruded obliquely from the mouth, and is pushed over *towards the paralysed side*. Thus, in ordinary cases of hemiplegia we find the arm and leg paralysed, let us say, upon the right side. The muscles of the mouth are paralysed upon the same side, and consequently in all movements of the mouth it is dragged a little towards the left, but the tongue, owing to the failure of the right genio-hyo-glossus, is pushed over to the right by the healthy left muscle. Whenever we see the tongue deviate from the middle line we should always make diligent search for evidence of a past or present hemiplegia. The tongue may be paralysed by a lesion limited to the ninth nerve, and then we shall have deviation of the tongue without other signs of paralysis. If the muscles on one side of the tongue only be attacked with Cruveilhier's atrophy, the tongue will deviate towards the side of the atrophied and weakened muscles. In some cases of paralysis of the facial nerve—i.e., in cases where the paralysing lesion is on the central side of the junction of the chorda tympani—there is a slight deviation of the tongue towards the paralysed side. In cases of bulbar paralysis—i.e., the paralysis due to a lesion of the medulla implicating the origin of the seventh, eighth, and ninth nerves—the movements of the tongue are more or less impaired. It cannot be protruded, and swallowing and mastication are effected with great difficulty. In general paralysis of the insane the movements of the tongue are impaired so that speech becomes altered. Movement of the tongue may be impaired also by local causes, such as sores or ulcers which cause movement to be painful, and cancerous, syphilitic, or simple inflammatory infiltrations which offer mechanical hindrances to free movement.

The movements of the tongue may be irregular rather than deficient. In chorea the tongue is protruded in a jerky, irregular, and highly characteristic manner. Tremor of the tongue is very often seen. In weak, "nervous" girls, and in hysterical women and men, the tongue trembles so that it is scarcely ever quiet. Tremor is present in delirium tremens and in chronic alcoholism. In all febrile conditions accompanied by great prostration we get a tremor of the tongue. In general paralysis of the insane the tongue trembles as it is protruded; and in Cruveilhier's atrophy affecting the tongue, the side which is attacked is often the seat of the fibrillary tremor which is characteristic of that disease. Tremor of the tongue sometimes exists in typhoid fever to a degree which is out of all proportion to the other symptoms. It is accompanied usually by general tremor; and I would remind you that we have the authority of Sir William Jenner for regarding such tremor as an indication of *deep* destruction of the intestine. "A small *deep* slough will be accompanied by great tremor; a large extent of superficial ulceration may be unattended by symptoms."

We may now proceed to the consideration of the *adventitious appearances* of the tongue. The most common and the most important of these is what is known as "fur." The fur upon the tongue is mainly composed of epithelium. Epithelium here, as elsewhere, is constantly being formed and cast off; and whatever causes an excessive production of epithelium, or whatever tends to foster an accumulation of the epithelium which is formed, will produce a fur upon the tongue. In addition to epithelium, we also find among the constituents of fur, mucus, saliva, and occasionally confervoid growths (such as oidium and leptothrix), food particles, and perhaps a little blood from the mouth or gums. Seeing that epithelium, the chief constituent of fur, is formed in quantity proportional to the blood-supply, we may say that whatever tends to produce hyperæmia of the tongue tends to produce fur. Local conditions of the tongue and mouth may produce fur, such as ulcers on the tongue itself or on the oral mucous membrane, carious teeth, swollen or inflamed tonsils, or inflammation of the tongue. Among local causes one must mention excessive tobacco-smoking which, in some persons, is capable of producing a considerable fur.

Furs due to local causes in the mouth are often limited in extent to the neighbourhood of the exciting cause. Thus if one tonsil only be inflamed the fur may be most marked on the side of the inflamed tonsil. Again, a carious tooth may produce a unilateral fur. Mr. Hilton, in his work on "Rest and Pain," pointed out that unilateral fur might be produced by causes acting directly or in a reflex manner through the second or third divisions of the fifth nerve. The fur caused by carious teeth is due to a reflex action, and Mr. Hilton demonstrated that in these cases the fur is limited to that part of the tongue to which the fifth nerve is supplied—viz., the anterior two-thirds, and does not occur on the posterior third, which is supplied by the glosso-pharyngeal nerve. Mr. Hilton also mentions a case in which a unilateral fur was caused by a scrofulous deposit within the cranium pressing upon the convex edge of the Gasserian ganglion, and another case in which a unilateral fur followed a laceration of the foramen rotundum. There has lately been attending in my out-patient room a man with a unilateral fur upon the tongue depending upon a cause very different from the foregoing. His fur was limited to the right side of the tongue, and on examining the mouth we found a tumour projecting from the roof of the mouth on the left side nearly as big as a walnut, and this had the effect of wiping off whatever fur accumulated upon the left side of the tongue, which therefore appeared clean in contrast to the right side. Fur may be due merely to accumulation of normal epithelium. People who sleep with their mouths open and thus allow the dorsum of the tongue to become dry by evaporation have habitually a fur on waking in the morning. Always remember that some persons have a thicker coating of epithelium upon their tongues than others, and that a furred tongue is the normal condition of a certain proportion of perfectly healthy individuals.

The most common cause of fur upon the tongue is irritation in the stomach; and from what I have already said concerning the production of hyperæmia of the tongue by irritation of the stomach, and concerning the production of fur by hyperæmia of the tongue, you will readily understand how this comes about. The fur upon the tongue in these cases is generally in proportion to the amount of gastric disturbance. A copious fur, with enlargement and reddening of the papillæ at the tip and edges, is characteristic of acute gastric catarrh. A pale flabby tongue, with a thin coating of fur, is characteristic of the chronic dyspepsia of anæmic women. It is astonishing how quickly these furs, which are symptomatic of stomach conditions, will appear and disappear. The drunkard, whose stomach has been filled overnight with spirits, awakes in the morning with all the symptoms of gastric catarrh—nausea, vomiting, and a tongue thickly coated. The tongue condition is often gone by midday, and does not reappear until the recurrence of the cause. Again, when giving arsenic to patients, one is often struck by the rapidity with which the furred tongue characteristic of gastric irritation makes its appearance, to disappear as quickly on the discontinuance of the drug.

In almost all febrile states we get a fur more or less thick upon the tongue. This fur is primarily an indication of the state of the stomach; and you will bear in mind how in most febrile conditions we have symptoms which are referable to the stomach, such as loss of appetite, vomiting, or nausea. In addition to the stomach conditions which are present in fevers, we have also very often a hyperæmia of the tongue itself, which tends to produce an excess of epithelium, and the patient by lying with the mouth open allows this epithelium to become dry and to accumulate.

The fur upon the tongue varies very much in colour. It is often yellowish, which is due probably to a fatty degeneration of the epithelium. Sometimes it is brown or black, which is caused either by an admixture of blood with the

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epithelium, or by some pigmentary change which is less well understood.

In long-continued fevers, especially when the temperature is high, the epithelium, which is formed in excessive quantities upon the tongue in the early stages, ceases to be produced, and that already produced cracks off, leaving the tongue red and raw. This kind of tongue is often seen in cases of phthisis with high temperature. It must be borne in mind that, just as a fur upon the tongue may arise from local causes without any derangement of the stomach whatever, so there may be an extreme degree of local disease of the stomach without any fur upon the tongue. In many cases, for example, of ulcer and cancer of the stomach, the tongue may remain throughout perfectly healthy and normal in appearance. In many diseased states the tongue presents an appearance which is sufficiently characteristic to afford us material assistance in forming a diagnosis. For example, in *scarlet fever* the tongue is covered with a white fur, except at the tip and edges, where the enlarged papillæ show through, producing what is known as the "strawberry tongue." Many students seem to think that the "strawberry tongue" (a term which easily dwells in the memory) is diagnostic of scarlet fever. It may be well to say emphatically that this form of tongue is often present, especially in children, without scarlet fever, and that many cases of scarlet fever are not accompanied by a "strawberry tongue." All we can say of a "strawberry tongue" is this—that, *taken with other symptoms*, it is of a certain diagnostic value.

In rheumatism the tongue is covered with a thick creamy fur. In many cases of tonsillitis the fur upon the tongue is very like that which is seen in rheumatism. Before and during a paroxysm of gout the tongue is often covered with a thick white fur, which to the practised eye is characteristic. In typhoid fever the tongue is covered with a thick fur, except at the tip and edges, where the tongue is red and the papillæ big. As the fever advances the fur becomes yellower and cracks, and Sir William Jenner used to compare the appearance of the tongue to that produced by yelk of egg smeared over a white plate, and allowed to dry. In malarial conditions the tongue is said to have a distinct lateral margin of a faint bluish tinge, which is broader or narrower according to the state of the patient. There is also an appearance of indentation transversely. In diabetes mellitus the tongue is dry, fissured, red, smooth, and clean.

We may now pass on to the consideration of *ulcers* upon the tongue. Small aphthous ulcers arise upon the tongue as upon other parts of the buccal mucous membrane. They are small, circular, and sharply defined. They occur very often on the frænum linguæ, and at the tip of the tongue. They are painful, and depend generally upon errors in diet. Ulcerations of other kinds are liable to arise from local causes, and it is a rule that whenever a patient comes to us with an ulcer upon the tongue *we must examine the teeth to see whether such ulcer has not been caused by a sharp projecting piece of a broken tooth, or some other similar cause.* Always remember, however, that ulcers seldom occur upon the tongue, even when local causes be present, if the patient be healthy.

The most common cause of ulceration of the tongue is probably syphilis, and an adult patient who complains of a liability to soreness of the tongue must always be examined carefully for any signs of constitutional taint. The syphilitic ulcers occur usually at the sides of the tongue, and a little towards the under-surface. They are commonly small and superficial, and are generally in old cases surrounded by cicatricial tissue, the seat of former ulcerations. The appearances presented by the ordinary syphilitic tongue other than those which are due to ulceration may, for convenience, be here mentioned. The tongue which is characteristic of syphilis is usually enlarged, and often there are teeth marks at the side. Its surface looks white and shiny, the epithelium is thick and patchy, lines of cicatricial tissue are visible on the surface, sometimes there are genuine puckerings due to the contraction of cicatrices, and generally upon the dorsum there are visible fissures and cracks which are very characteristic. These appearances, combined with superficial ulcerations at the sides, are amongst the most certain evidence of constitutional syphilis which we possess. These appearances occur during the secondary stage. Other manifestations of syphilis occur on the tongue. Mucous tubercles—raised patches of mucous membrane surrounded by a congested ring—are not uncommon on the tongue in the early stage. The primary chancre may occur on the tongue as a rare phenomenon. Tertiary manifestations of syphilis are common in the tongue in the form of gummata or of uniform infiltrations. The gummy tumours are often to be felt, rather than seen, as dense masses as big as a pea or larger, buried in the substance of the tongue. These gummata are said to occur towards the middle line rather than towards the edge; but this is by no means always the case. I have already mentioned a case of uniform infiltration of the tongue, due to tertiary syphilis, attending in the out-patient room. The tongue was nearly twice its natural size, and very hard to the touch, but soon resumed its natural condition under treatment.

I mentioned that fissures and cracks upon the tongue were common, as a result of syphilis. These must not be mistaken for mere furrows in a healthy tongue. The one condition may be distinguished from the other by taking the tongue between the fingers and gently stretching it, when mere rugæ will disappear, but actual cracks will remain.

There are certain other conditions of the tongue of which it may be well to say a few words. Epithelioma of the tongue in its early stages is often indistinguishable from syphilis. It may begin with a little localised thickening, a blister, or an hypertrophy of the papillæ. It is most common after middle life, and is said to occur towards the side rather than the centre of the tongue. It begins to ulcerate early, and very soon it forms an ulcer with ragged edges and a foul secretion surrounded by infiltrated tissue. It is exquisitely painful, and interferes with all the functions of the tongue. The glands under the jaw are enlarged.

Simple inflammation of the tongue may produce a superficial glossitis causing a thickening of the epithelium and a shiny appearance. In extreme cases the tongue may become distinctly scaly, and this condition is then spoken of as psoriasis or ichthyosis, according to its degree. It is important to bear in mind that ichthyosis linguæ is generally the precursor of cancer. A kind of urticaria may occur in the tongue, causing it to swell enormously. Inflammation of the tongue may produce abscess, which may occur at any point. The tongue may be the seat both of vegetable and animal parasites; thus the oidium albicans and the leptothrix buccalis may grow upon the tongue, and among the animal parasites are the echinococcus, the cysticercus, the guinea-worm, and the trichina spiralis.

Clinical Lecture

ON THE

OCCASIONAL SERVICE OF ALCOHOL IN THE TREATMENT OF PNEUMONIA.

Delivered at the Westminster Hospital,

BY OCTAVIUS STURGES, M.D., F.R.C.P.,

PHYSICIAN TO THE HOSPITAL.

In the observation of pneumonia, so soon as that remarkable event has happened which we recognise as the crisis, we are at once relieved of the anxiety which, up to that time, no one can be without who is acquainted with the many phases and turns of the disease. We are reminded to-day by a case now under treatment that this supposed security for rapid recovery is not always valid. Upon this text, therefore, of a pneumonia of ordinary character and severity lingering far beyond its usual time, we may conveniently consider in what degree and by what methods, if any, an affection such as this, which has suffered, perhaps, more than any other at the hands of the druggist, can be helped through its critical stage, shortened in duration, or assured against untoward accidents.

Sarah F——, a slight pale girl of eighteen, engaged in laborious work as a biscuit packer, ill-nourished and neglected, was admitted on the third day of a sudden illness presenting the ordinary symptoms of pneumonia. Having gone to bed, that is to say, apparently well, and after the usual day's work, she awoke towards morning

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screaming from the severity of a pleural "stitch" of the left side, and had several shivering fits in succession. On admission the left lung, as to its lower half, yielded the proper signs of consolidation. The temperature was 104·4°; pulse 120; the sputum rust-coloured; there was some herpes on the mouth, and scarce anything was wanting (except, indeed, flushing of the face) of that assemblage of symptoms which so unmistakably betokens pneumonia. From no real necessity or fear for what might be threatening, but only because the girl was low and miserable, she was given during the first two days four ounces of sherry daily. On the fifth day the crisis occurred, the temperature falling from 103° to 98°, or five degrees in twenty-four hours, and along with this the patient exhibited the usual signs of general revival.

It was at this juncture (and here is the point to be discussed) when pyrexia had disappeared, and the sounds of resolution were audible, that an event happened which is rare in pneumonia, but by no means without parallel, and in consequence of which the duration of illness was at least doubled. Two days from the time of the crisis and almost in sight of convalescence a relapse occurred. The features became again depressed, the temperature rose, and the tongue, for the first time, became dry. And now, although the time was reached when properly the invaded lung should have been wholly free and pervious, it appeared upon auscultation that a solid patch still remained about the middle of the left lung, giving all the signs of consolidation as plainly as at first, but over a much smaller area. It was clear that the process of resolution had stopped short, or rather that in this bit of lung it had been altogether abortive. The unsealing of the lung by the clearing away of inflammatory products had been incomplete.

It is, I admit, a mere hypothesis, yet one which may fairly be ventured, and which, as I have said, there are other cases to confirm, that this return of fever and prostration was directly due to this improper or prolonged retention of effete material; that the system, if we may so speak, began after a while to resent such retention. And the question I would ask is this, Was this misadventure, which retarded recovery for three weeks and caused a relapse which for some days seemed even more serious than the original illness, due to any fault of our own, which may be avoided next time? Supposing, for instance, that, noting this girl's poverty and squalor, and seeing that she had little strength of herself to contend with pneumonia, we had continued the alcohol or had resumed it, in some form, at such time as the crisis was expected, would that have made any difference? I think so.

As a matter of fact, you may remember (for what it is worth) that when this patch of consolidation and this second fever had lasted some days, we did venture upon alcohol, two ounces of brandy per diem, and that from that day onwards the evening temperature fell from 103°, which had been its reading for more than a week, to below 99°. Along with this improvement the solid patch disappeared, and now for the first time, on the thirty-second day from the initial rigor, a most inordinate duration for pneumonia, the girl may be called convalescent.

Let no one suppose that alcohol or anything else of this kind is necessary generally for the cure of pneumonia. Let no one believe for a moment that the cases related from time to time of pneumonia successfully treated by this drug or that prove anything whatever. The sudden arrest of pneumonia is in the nature of it. We have suffered enough in the past from ignorance of this great fact to make us hold it now as a very precious truth. At the same time, and with the manifest and unquestioned good that has been got from letting pneumonia alone, it is possible that we may be resting at present too complacently in the belief that this affection *always* does best without active help—that our present results are not only better than those of the last generation (which is certain), but that they are the best possible, both as regards the mortality and the duration of the disease. Consider for a moment the nature of the pneumonic process. Its cardinal fact is crisis, and crisis consists in these two phenomena—how related we need not at present inquire—the sudden cessation of pyrexia, and, at or about the same time, the rapid disappearance of the inflammatory exudation which has been occupying the lung. Our chief interest and anxiety, therefore, concern the conduct of this exudation. We have reason to expect that in the course of a week or thereabouts it will spontaneously quit its hold. And for the while we wait in hope of this result—and very much in the dark, it must be confessed, as to any intimate changes actually in progress within the lung. What we fear most is lest, without our knowing, a process of destruction may be going on, and that instead of a simple pneumonia, perfectly harmless to the lung except for the room that it takes, we may have a rapid dissolution of lung texture, a form of suppurative phthisis, in fact, necessarily fatal. It is to be hoped we may be able some day to distinguish and separate such cases. We do sometimes recognise them even now, and always look out for the destructive form among the drunken and the starved, and wherever a pneumonia does not at once make itself manifest, but needs to be searched and listened for. But excluding such instances, there is another fear during this period of waiting. It is lest the exudation should overstay its proper time; lest, from some cause or other (and one within our own control it may be), resolution should be delayed or incomplete. What makes pneumonia go amiss is the miscarriage of this grand act of the disease. No case of the kind, therefore, can be free from anxiety until the exudation begins to move; no case can be absolutely safe until it is gone.

And what is the condition of the patient, as this great event approaches, which, in a quite literal sense, is to loose him from his disease? We somewhat disguise this condition, I think, by still preserving that old language of metaphor which speaks of pneumonia as "sthenic," as though we had strength to subdue instead of strength to provide. Early prostration is one great feature of pneumonia. It is indeed by this symptom, as measured by aspect and posture and mental activity, more than by any other, that we can best estimate the probable issue. But at the particular juncture we are considering, there is not only the natural weakening proper to the disease, but the patient has now had some five or six days of bed, and been suffering all the deteriorative effects of imperfect blood aeration, renal congestion, and heart strain. Meanwhile there has been a very inadequate food-supply to meet an inordinate tissue-waste: inadequate, because, whatever our wishes may be, the assimilative power is apt to be very feeble, and the directions of books as to frequent and ample nourishment seem only to mock us. It is in these circumstances, I say, that crisis comes. The lung is called upon to free itself of a burden whose nature and quality may be fairly estimated upon the evidence of fatal cases, where sometimes the actual weight of the occupied and solid lung exceeds that of its fellow by three pounds or more.

Now, by whatever process it be that this material is disposed of in recovering cases, we know as a fact that when prostration is extreme it is often not got rid of at all; that in other instances, like the one before us, it is only partially disposed of, and that at the best the process of deliverance is not without its own suffering, of which the profuse sweating and exhaustion sometimes preceding crisis afford some evidence. It may be that the composition of the inflammatory material is one factor in determining its conduct. The more catarrhal the pneumonia the more tardy may be its resolution. We have, in fact, to recognise many gradations between the orderly process we are considering and the quite different process of pulmonary catarrh. But that is not now the question. It is enough to know that the symptoms before us are those of ordinary lobar pneumonia; beginning as it begins, and likely to end as it ends. There is a material to be got rid of within an appointed time. It is the proper destiny of this material to liquefy and disappear. All that is necessary for the process (or at least all that we know of or can in any intelligible way help to supply) is an adequate vitality on the part of the patient. The crisis we are expecting is a vital act, for the performance of which it is necessary that a certain amount of strength should be still in reserve.

I need not remind you how strongly contrasted is this view of pneumonia with that which was formerly held. Nor can we doubt that by the old plan of depletion the natural course of the affection was disturbed and embarrassed precisely in the manner and precisely at the time when it was most easy and most dangerous so to treat it. The large mortality of that day is indeed hardly explicable without considering this nice adjustment, so to speak, of lowering remedies to an enfeebled and oppressed body. Patients would die of pneumonia, or rather with it, with lungs barely hepatised (we have the written records of such cases), while so much were the proper features of the affection disguised that its natural tendency to recovery, which at present governs all our treatment, was not so much as thought of. Pneumonia was a long, lingering disease, as well as a very fatal one. Now I think it must be admitted that our pre-

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sent treatment of pneumonia is, as a general rule, perfectly satisfactory—the treatment, I mean, first formularised by the late Dr. Hughes Bennett, and founded on the principle that the patient is to be fortified and sustained in the trial that awaits him by means of such nourishing food as he can best take. That by this method an acute disease of such apparent, nay, of such real gravity, should be practically recovered from in a little over a week, is, it will be admitted, remarkable. There is nothing that I know of which drugs can achieve half so striking as is this result achieved by discarding them. There can be no greater mistake, however, than that of supposing that the treatment just indicated amounts only to a treatment of waiting and expecting. On the contrary, it implies a very urgent need for support, and a very present danger when such support is withheld. It is the spirit and not the precise letter of the treatment which has to be kept in view. It may happen in some cases that the need is so pressing that mere feeding will not suffice, or the danger may be so imminent that there is not time to wait for the good of it. It is not always that "nutrients" can be taken in sufficient quantity; sometimes they can hardly be taken at all. These are not instances where the treatment fails, they are instances where it requires special modification; where we have to substitute for the while some means of support which shall be more prompt and immediate than ordinary food.

It is here that the question of alcohol occurs, and the great difficulty is to know betimes exactly where and when to apply it. If we measure pneumonia by the amount of lung that is solid, we shall never, or only by occasional accident, get a correct estimate of it. On the other hand, if we consider the actual present condition and aspect of the patient as well as his immediate antecedents and surroundings; if we remember that the pneumonia of destitution and of drunkenness; the pneumonia that is fought against and for a while disregarded; the pneumonia that appears, be it ever so small as to its site, after severe nervous shock or prolonged exposure, that all these have a special need of support, and as a rule an absolute need for alcohol, then I think we shall be taking such a view of the disease as experience teaches, and applying legitimately the great principle upon which its successful treatment is based.

It was from this chair, not long before his death, that my friend and colleague, the late Dr. Anstie, in a clinical lecture upon pneumonia, spoke of the large quantity of evidence that he had collected and was preparing to publish in proof of the proposition that high temperature combined with large urea discharge furnished the strongest *primâ facie* reason for the administration of alcohol. I will not assume so much as this. I will take rather the admitted service of alcohol as defined accurately enough for our purpose in the well-known investigations of Professor Parkes. We can hardly contemplate the condition of these pneumonic patients, their low vitality, and the physical change which has to be accomplished within them before relief comes, without being reminded that here are precisely the circumstances where alcohol claims to be of use. Just at the pinch of crisis, when a little access of strength, a little more ability to assimilate food, is so urgently called for, when, moreover, as the nature of the disease teaches, a few hours will bring us to the time when we shall be able to pay the penalty incurred by resorting to such a succour, here, if anywhere, is the occasion and opportunity for alcohol.

Such a method of employing alcohol in pneumonia restricts its use to a particular period and a particular phase of the disease. When the food that the patient is able to take is obviously insufficient, when with a small lung implication his aspect is like that of typhoid fever, when he is past middle age, or his habits of living have been dissipated, or a period of mental or bodily distress[1] has preceded, and perhaps caused, the pneumonia—in all such cases, I think, we may expect great service from alcohol, and often find necessity for it. If I were called upon to express an opinion in few words as to the use of alcohol in this disease, I could (apart from the question of age) put the result of my observation into no more definite or scientific shape than this—that the pneumonia of mystery, that which comes from some obscure or conjectural cause not commonly productive of such result, overwork or anxiety, or physical injury, or what not, and which nevertheless, upon interrogation of the other organs, appears to be a primary disease, is the kind that commonly needs alcohol; while the frank open pneumonia which is the result of some definite chill, or short exposure, commonly does without it.

And, finally, let it always be remembered that alcohol in pneumonia must be given in anticipation of danger rather than in the immediate presence of it. We find the patient blue and gasping, and hardly conscious, and, as by an instinct, in accordance with universal practice, we pour in brandy. But if we consider the matter, and especially the known action of alcohol as a powerful narcotic, it is rather harm than good that we ought to expect from such an agent at such a time. The opportunity for alcohol has passed. Whatever may be the hope in such a condition (a question I do not attempt to discuss now), it can hardly be this.

[1] Many examples might be quoted showing the greatly increased danger of pneumonia when happening (*cæteris paribus*) to a community exposed at the time to severe strain and excitement, as, for example, an army in the field, even although there should be no actual hardship or privation. The high mortality of pneumonia amongst our troops in Afghanistan may be perhaps accounted for in this way.

ON THE

MYDRIATIC PROPERTIES OF HOMATROPIN, OR OXYTOLUYLTROPEIN.

BY JOHN TWEEDY, F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

WITH AN ACCOUNT OF ITS

GENERAL PHYSIOLOGICAL ACTION,

BY SYDNEY RINGER, M.D.,
PROFESSOR OF MEDICINE IN UNIVERSITY COLLEGE, AND PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

THE discovery of a new mydriatic must always be a matter of practical interest to the ophthalmic surgeon. For many years his *materia medica* contained only one pupil-dilator—namely, belladonna or its alkaloid, atropin—and even now one or other of these is almost always and solely employed. There are, however, many objections, some trivial, some serious, to the routine use of atropin. In some instances solutions of this alkaloid prove so irritating that they cannot be endured; and in all cases when applied for the purpose of temporarily suspending the power of accommodation in order to make manifest the real state of the refraction of the eye, its effects continue an inconveniently long time. But much more serious than either of these is the proneness of atropin to precipitate an attack of acute glaucoma in certain conditions of the eye which otherwise call for the use of a mydriatic. The discoveries of late years have added largely to the number of pupil-dilators, and some of these may, perchance, be more or less free from these ill-effects of atropin. Daturin, duboisin,[1] ethyl-atropium,[2] gelsemin,[3] hemanthin,[4] hyoscyamin,[5] muscarin,[6] narcissin,[7] and pituria[8] have all been found to be more or less powerful dilators of the pupil when locally applied, and impairers of accommodation. To this growing list we have now to add homatropin, which promises to be of very great value and utility in ophthalmic practice. It is a bland but efficient mydriatic, rapid in its action, and of comparatively short duration. It has, besides, many of the better characteristics of atropin. The specimen which I have used was supplied a few weeks ago by Mr. Martindale of 10, New Cavendish-street, and was a solution of hydrobromate of homatropin, four grains to an ounce. Dr. Ringer kindly undertook at the same time to test its general physiological action. The following is his report:—

"As regards hydrobromate of homatropin, I shall speak first of its action on frogs, and then of its effects on man. Three-fifths of a grain administered to a moderate-sized frog

[1] THE LANCET, March 2nd, 1878.
[2] Ringer's Therapeutics, 8th edition, p. 534.
[3] THE LANCET, June 9th, 1877.
[4] See forthcoming number of Seguin's Archives of Medicine (New York) for an article by Dr. Ringer.
[5] Pharmaceutical Journal, Dec. 9th, 1876.
[6] Ringer's Therapeutics, p. 493.
[7] Foster's Journal of Physiology, 1878-9, p. 437.
[8] Journal of Physiology, 1878-9, pp. 377-381, and THE LANCET March 1, 1879.

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produces complete paralysis in about an hour, and the movements just preceding complete paralysis are tetanic. The paralysis soon grows less, and but little remains in the course of six or eight hours, and as voluntary movement returns the tetanus becomes more marked. Homatropin then, like atropin, paralyses and tetanises. The paralysis from both is transitory, and the animal recovers even when the paralysis is complete; but atropin paralysis more rapidly, and its effects are more persistent than homatropin. With atropin, tetanus only comes on after an interval of several days, but with homatropin tetanus appears just before paralysis is complete, and becomes well marked in a few hours, as the paralysis disappears. Whilst homatropin is a more speedy tetaniser than atropin, it does not tetanise more powerfully than atropin, and the tetanus, I think, lasts a shorter time.

"As after complete paralysis a very weak current of electricity (as, for instance, Du Bois Reymond's induction apparatus at 12) applied to the sciatic nerve through the skin causes energetic contractions of the lower leg and foot muscles, I conclude that the paralysis is not chiefly, if at all, due to the action of the poison on the motor nerves, and as the muscles contract readily and energetically with a very weak electrical stimulus, I conclude that the paralysis is not due to the action of the poison on the muscles, and as the paralysis is not due to the condition of the muscles or motor nerves, it must be due to the action of the poison on the nervous centres, and I conclude that, like atropin, its chief action is on the spinal cord.

"Homatropin, like atropin, paralyses the intra-cardiac inhibitory apparatus. I exposed the heart of a brainless frog, and on applying the electrodes to the junction of the sinus and the auricles, the heart was strongly inhibited and stopped beating for some time. I then poured some of the homatropin solution into the abdominal cavity, and a few minutes later again tested the heart with the same strength of electricity; but the heart was not stopped—on the contrary, its contractions were accelerated. I repeated this experiment on two frogs.

"Like atropin, I find that homatropin antagonises the action of extract of muscaria on the frog's heart.

"Both substances, when topically applied to the heart, slow its action. In a series of comparative experiments I find homatropin, on an average, slows the heart thirteen beats, and atropin twenty-three beats, in the minute.

"I am indebted to my resident assistant at University College, Mr. W. H. Copley, for the experiments on man, the greater number of which were made on my clinical clerk, Mr. Charles Stonham, who received on separate days a hypodermic injection of one-fiftieth, one-fortieth, and one-thirtieth of a grain respectively. On each occasion his pulse was slowed on an average of 21 beats, and became irregular in force and rhythm. No other effect occurred. His pupils were not dilated, nor did his mouth become dry, nor was his face flushed, nor his breathing hurried. In two observations on other people, the pulse fell 18 and 12 beats per minute respectively. In the first the pulse became irregular. The first received one-seventieth of a grain; the second, one-sixtieth.

"On a subsequent day Mr. Stonham received hypodermically one-sixtieth of a grain of sulphate of atropin, but as some of this escaped in thirty-five minutes, the dose was repeated. The atropin raised his pulse from 72 to 100 per minute, dried his mouth and throat, and dilated his pupils.

"Mr. Copley next tested on two occasions the antagonism between pilocarpin and homatropin. He administered hypodermically one-third of a grain of nitrate of pilocarpin, and immediately sweating became profuse. He injected one-sixtieth of a grain of hydrobromate of homatropin, and on both occasions this dose stopped the sweating in about ten minutes. On another day he tried a comparative experiment with sulphate of atropin, using the same dose of atropin as of homatropin. Mr. Copley found atropin a more powerful arrester of sweating than homatropin.

"Homatropin, then, appears to possess many of the properties of atropin, but in a weaker degree. On the heart, however, their effect is very different; for atropin accelerates and strengthens the heart's contractions in man, whereas homatropin slows the beats, and renders them irregular in force and rhythm."

The first sentence of the last paragraph of Dr. Ringer's report exactly describes my opinion of the action of homatropin on the eye when locally applied. "It appears to possess many of the properties of atropin, but in a weaker degree." It must, however, be distinctly understood that though relatively weaker than atropin, its action on the iris and ciliary muscle is really very powerful while it lasts. It is not merely weak atropin in the sense that it only does what a weak solution of atropin would do. A solution of the homatropin of the strength above mentioned widely and fixedly dilates the pupil in from fifteen to twenty minutes, and affects the accommodation in an equally rapid manner. The chief peculiarity, and in some respects the great advantage, of homatropin, is that its effects soon pass off, and certainly do not last anything so long as those of atropin. Within four-and-twenty hours after an application the accommodation, after complete apparent suspension, recovers its pristine vigour, the pupil is less dilated, and reacts to light, though it has not quite regained its original size. As regards its action on the ciliary muscle, though decidedly more prompt, it is not quite so intense as that of atropin. Homatropin is, moreover, singularly unirritating. I have applied it to about fifty cases, and in not one was there the smallest sign of irritation or discomfort.

One of the most remarkable facts respecting homatropin has yet to be stated. According to Herr Ladenburg, this body may readily be obtained by treating amygdalate of tropin with dilute hydrochloric acid in a water-bath, and precipitating the solution with potassium carbonate.[9] Now amygdalate of tropin is itself quite inert, at least it does not possess any of the properties of atropin. Locally applied to the eye it does not affect either iris or ciliary muscle, nor does it, according to the observations of Dr. Ringer, like atropin, antagonise the action of muscarin on the frog's heart. Injected hypodermically by Mr. W. H. Copley, it did not in any appreciable degree check sweating artificially produced in man by pilocarpin.

A few final explanatory words may assist the reader to understand chemical the relations of this body.

Some time ago Kraut and Lossen almost simultaneously found that atropin may be split up into *tropin* and *tropic acid*, and last year Ladenburg succeeded in reforming atropin from these two constituents.[10] By treating the different salts of tropin with dilute hydrochloric acid, a class of alkaloids may be artificially produced to which Ladenburg has given the generic name of tropeins; and homatropin is one of these alkaloids obtained from the amygdalate of tropin—that is, tropin combined with amygdalic acid.[11]

OBSERVATIONS ON THE UPPER AIR-PASSAGES IN THE ANÆSTHETIC STATE.

By BENJAMIN HOWARD, A.M., M.D., F.R.C.S.E.

I.—THE SUPPOSED ELEVATION OF THE INSENSITIVE EPIGLOTTIS BY PULLING FORWARD THE TONGUE.

UPON one point at least, and one not altogether unimportant, the entire profession, both in theory and practice, may fairly be admitted to be everywhere unanimous. To this unity, the jaw-priser and the tongue-forceps in every operating room bear silent witness. The livid face, pulseless wrist, motionless thorax, and locked-jaw supervening in anæsthesia, make it by common consent imperative, that instantly, at whatever amount of violence, the tongue be forcibly pulled forward; because thus, and thus alone, can the paralysed and fallen epiglottis be raised and the air-way be made free. With others, in this belief and practice I have fully shared, and I suppose for the same reasons: firstly, of authority; secondly, of supposed experience.

While recently pursuing some cognate investigations, however, I thought it well to take the opportunity to observe, not whether, but precisely how, the pulling forward of the tongue, as practised, raises the epiglottis as alleged. The result compelled me on this point to multiply my observations. In the course of them I endeavoured to see precisely what traction upon the tongue does, and what it does not.

[9] Berichte d. deutsche chemische Gesellschaft, xiii., 106; also Pharmaceutical Journal, March 20th, 1880, p. 751.

[10] Comptes Rendus de l'Académie des Sciences, tom. xc., No. 15, p. 874 (April 12th, 1880); also Pharmaceutical Journal, May 1st, p. 871.

[11] Pharmaceutical Journal March 27th, p. 771.

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What it does not, will, I trust, be found sufficiently clear in the following brief summary.

On several subjects within forty-eight hours after death, free from rigor, and covering the worst possible conditions of anæsthesia therefore, a fenestrum was made in the throat, which exposed the epiglottis without disturbing it.

On others this exposure was effected by the removal of cervical vertebræ with corresponding parts of the posterior wall of the pharynx.

On others sections were made, so that from one or the other a view was obtained of each of the parts with which we are to be concerned, without interfering with their movements or with the results in either of the experiments.

The respective subject being held firmly in the ordinary supine position of the patient, an assistant, in each instance with strong forceps, pulled forwards the tongue in the usual way, and in unusual ways, and with force of every practicable degree.

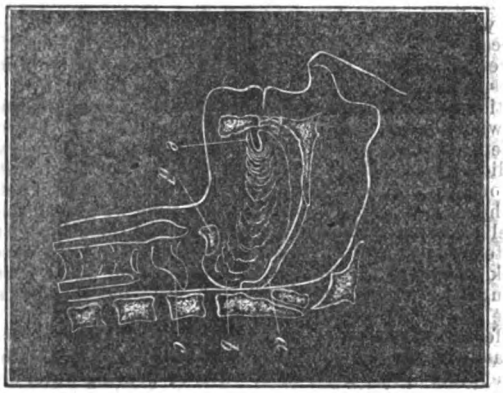
The epiglottis was correspondingly raised in not one instance.

So much for the fact; now for the reasons.

The interior of the mouth was clearly exposed in several subjects by removing a sufficient portion of the lower jaw and adjacent soft parts on one side. The tongue was then pulled forward with forceps in the usual manner, but very gradually.

The successive changes as the traction progressed were as follows (Figs. 1 and 2):—As the tip of the tongue advanced,

FIG. 1



The anatomical respiratory obstruction in the completely insensitive state, the patient being, in the ordinary supine position. *a b c*, The velum palati, tongue, epiglottis fallen back, and in contact with the posterior wall of the pharynx. *e*, Frænum linguæ. *d*, Os hyoides.

the body of it became of course elongated and correspondingly thinner in its vertical diameter, as well as narrower. Next, the dorsum of the tongue was shifted from contact with the hard and soft palates. Then the posterior part of the dorsum was shifted forward from contact with the posterior wall of the pharynx. At this point resistance to further progress was encountered from the frænum linguæ, which became very tense. Further force being employed, additional resistance was next visible from the anterior pillars of the fauces, which in their turn became tense also. The force being still further increased, and combined with a prising motion, the frænum became lacerated; the anterior pillars of the fauces slightly more tense. However much the traction was further continued, posteriorly to the anterior pillars of the fauces, and at the base of the tongue, no effect from it was apparent, and the glosso-epiglottidean ligaments, contrary to expectation, did not become tense.

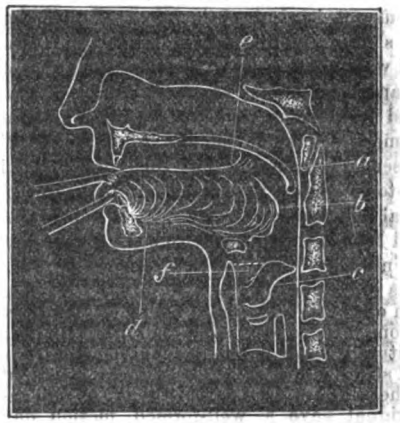
A vertical section of the same tongue in position showed laceration of some of the more anterior fibres of the genio-hyo-glossus muscle.

Traction being now repeated on the remaining half of the tongue, it was seen that, after the tip of it had become fairly withdrawn from the mouth, the force of further traction was expended through the anterior fibres of the genio-hyo-glossus, mainly upon the body of the inferior maxilla, to the superior genial tubercles of which they are attached. The inferior fibres of this muscle, as also the anterior fibres of the hyo-glossus, were comparatively relaxed. I had supposed that the posterior fibres of the genio-hyo-glossi muscles, and the glosso-epiglottidean ligaments, would both serve as media by which traction made upon the tongue would be communicated to the epiglottis. In both, however, I was disappointed, and the reasons for the disappointment I believe to be these. In the case of the posterior fibres of the genio-hyo-glossi, their attachment is not so much to the body of the hyoid bone as to the greater cornua. Allowing that some surviving tractile force happens to reach the cornua, their elevation will cause depression of the body of the bone, and depression rather than elevation of the epiglottis.

Respecting the glosso-epiglottidean ligaments: while these consist almost entirely of mucous membrane, the few fibres found within their folds have their origin, as we know, not in the tongue, but near the sides of the tonsils. Hence the apparent line of communication, for the tractile force from the tongue to the epiglottis, is for another reason less direct and complete than might at first appear.

An experiment, which I thought would very clearly corroborate or correct the above observations, was conducted as follows:—A good subject, unexceptionable in its analogy to a completely insensitive patient, but with a carefully-made fenestrum in the pharynx to permit of accurate observation, was held firmly in an erect position. The glosso-epiglottidean fossa in this position has for its floor partly, and for its anterior wall entirely, the fallen epiglottis itself. This fossa

FIG. 2.



Showing what forcible traction upon the tongue does, and what it does not. Resistance at *d*, the frænum linguæ; and at *e*, the anterior pillars of the fauces. *b*, Posterior part of the dorsum of the tongue being pulled forward from contact with the posterior wall of the pharynx by forceps; the lax condition of the mucous membrane at the base of the tongue, near the hyoid bone, being shown to be unaffected by it. *c*, The epiglottis, not lifted by the traction upon the tongue. *f*, The dotted lines show the level of the water introduced into the glosso-epiglottidean fossa, not spilled by the traction upon the tongue. *a*, Velum palati and uvula in contact with the posterior wall of the pharynx.

was filled with water. Traction upon the tongue was then made successively, with ordinary force, with extraordinary force, and then with violent jerks. The jerks shook the entire larynx and the epiglottis also, causing a vibration and elevation of the latter about the eighth of an inch. During the entire proceedings, however, the water was not upset nor spilled.

So far as the completely insensitive state is concerned, I think these facts clearly show then, that, *contrary to general belief, traction upon the tongue, however great the force employed, does not, and cannot, raise the insensitive epiglottis*, because

(*a*) The greater part of the tractile force is expended upon the frænum linguæ, and through the anterior fibres of the genio-hyo-glossi muscles within it, upon the body of the inferior maxilla, to the superior genial tubercles of which they are attached, the tractile force being there, and thus correspondingly arrested.

(*b*) The remaining part is almost entirely expended upon, and arrested by, the anterior pillars of the fauces.

(*c*) For any tractile force which might survive a sufficient medium for its transmittal to the epiglottis is wanting.

(*d*) *Proof.*—The glosso-epiglottidean fossa being filled with water, traction upon the tongue does not spill it.

I have thus submitted the fact, the reasons, the proof. They are not far to seek nor hard to find, and will therefore, I trust, receive the early attention of other observers.

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The sudden relief sometimes observed in insensitive patients after the tongue has been pulled forwards, and which is attributed to a consequent mechanical elevation of the epiglottis, has another and a better explanation, but one which is beyond the scope of this present communication.

According to the facts above submitted, the relation of cause and effect between the traction upon the tongue as practised, and the supposed elevation of the epiglottis as alleged, appears to be an anatomical impossibility; the belief in it to be a delusion.

CONSTIPATION AND ITS TREATMENT.[1]

BY WM. ROBERT SMITH, M.D.,
PHYSICIAN TO THE CHELTENHAM DISPENSARY.

THE subject of constipation is one of great general importance to us as medical men, not only from its frequency as a symptom of many and various diseases, but also when it is itself the disease giving rise in its turn to a series of most distressing and chronic discomforts. I do not propose to enter upon the consideration of constipation as a symptom merely of acute or chronic disease; nor to review in detail the various mechanical obstacles to the passage of the fæces. I shall therefore exclude tumours and cancer of the intestinal walls, hæmorrhoids, contraction of cicatrices, and the like, and that class of cases which are dependent upon feeble and insufficient contraction of the parietal walls of the abdomen, and shall use the word constipation in its ordinary sense, considering that this condition exists whenever the stools are few in number, quite irrespective of any mechanical impediment. And here at once it is necessary we should bear in mind that with some persons constipation is not an infirmity, it is the normal condition of the body, and unless it goes beyond certain limits, calls for no interference on our part. No doubt it is the rule for every adult man or woman to have a stool daily, but there are others who habitually have a passage but once in two or three days, and still feel quite well. To them constipation is the state of health; so true is this that in such cases should the individual have a well-formed motion daily, he at the same time suffers from all the discomfort which accompanies an attack of diarrhœa. I remember the case of a young man who came to me complaining of griping pains in the abdomen, borborygmi, and general uneasiness. The bowels had been moved once daily for three days; previous to this for many years it had been the custom for the patient to have a motion every third day. The tongue was clean, pulse quiet, whilst the motion, which I more than once examined, was well formed and in all other respects natural. I gave this patient the ordinary mixture of castor oil and mucilage of acacia gum, with five-drop doses of laudanum, and in a few days he was quite well again. The last time I saw him he told me his bowels were regular, being moved but once in three days, as before. The explanation of this state of things is unsatisfactory, we think, and in many cases with reason, that the cause of the difference depends upon such persons forming but little fæces, taking, as they do, but little indigestible food, and perfectly assimilating the digestible portions, whilst those who have a daily evacuation either take much indigestible food, or through some derangement of the digestive apparatus imperfectly assimilate it. Allowing this explanation to be correct, it still does not account for those persons who, eating similar food and digesting equally well, show this same difference in the number of the evacuations required to keep them in a state of health. The irritability of the intestinal mucous membrane, no doubt, varies in different cases. In some intestinal catarrh is soon set up by the accumulated fæces and products of decomposition; the mucus acting as a ferment, rapid decomposition results; in others the intestinal mucous membrane remains healthy.

Let us glance at the normal expulsive act of the intestines. The contents of the bowels pass onward by virtue of the peristaltic movement, the longitudinal muscular fibres temporarily shortening the canal, and the circular fibres, contracting behind the mass, continually press it onwards. In no part of the canal is the movement more energetic than in the small bowel; in the large bowel it is slower and less effective, the contractions being easily exhausted by acting upon a loaded rectum and firmly closed sphincter. We have all, perhaps, experienced how easy a matter it is to successfully resist the sensation which apprises us of the necessity to relieve the bowels. This resistance of the peristaltic action of the bowels will, if persevered in, however, end by a complete enfeeblement of the excitability of the bowel. If the sensation to relieve the bowels is habitually resisted, the muscular coat exhausts itself in superfluous efforts, with the result only of distending the bowels with gas, &c., and just like other muscles under similar circumstances its force becomes expended, and it ultimately loses its contractile power from the undue distension to which it is subjected, the accumulation of gas contributing not less powerfully than the accumulation of fæces towards the destruction of the elasticity of the muscular coat; thus habitual distension of the large bowel produces muscular atony, and this atony is the main cause of constipation. Then, again, we know that the continuous contact of fæcal matter with the extremity of the bowel impairs the sensibility not only of the mucous but also of the muscular coat, and the contraction of the upper portion of the large bowel takes place, if at all, in a most ineffectual manner. We should remember that in old age the muscular coat loses its tone just as the vesical muscular coat does, and the condition of constipation so frequently the result of carelessness becomes then a natural state.

If we recall to mind what happens in the normal state, it will help us, I think, in arriving at a proper conclusion of the whole matter. We know that in health the act of defecation is a reflex act, consisting in an irritation of the nerves of the lower part of the rectum by an accumulation of fæces, which irritation is immediately followed by a contraction of the muscular coat, not only of the rectum, but of the whole bowel, even including the duodenum; the entire contents of the bowel are consequently propelled downwards, a solidarity existing between all the parts of the intestine, not only in respect of excess, but also deficiency of action. We have an illustration of this every time we give an enema to relieve the bowels; we not only distend the colon, but we excite this beautiful peristaltic movement. I know some think an enema acts merely as a distending agent passing through the cæcum into the small bowel; but the ileo-cæcal valve allows nothing to pass it in an upward direction; it is as effective as the mitral or aortic valves of the heart, as can be easily shown by tying that portion of the bowel with the valve intact upon a glass tube, when by pouring water down, or by the more delicate experiment of blowing, we prove it forms a complete barrier to the passage of either air or water. In the child and the adolescent the intestinal muscular coat is the main agent for expelling the fæces, but this is not the case in old age and those habitually confined; the expiratory muscles of the abdomen then materially assist, but it is well to remember that under certain circumstances these become enfeebled, and their power of assistance limited. I call to mind a case where a young married lady whose bowels were moved daily with the greatest regularity for many years, after the birth of her first child suffered from constipation, and had continually to resort to aperients or laxatives to procure an evacuation. In her case the trouble was but temporary, but frequently women suffer from constipation after repeated pregnancies owing to impairment of the power of the abdominal muscles from their excessive and long-continued distension.

Practically, a similar state exists when the muscular efforts produce pain, as in rheumatism of the diaphragm, or any painful affection of the abdomen, such as fissure of the anus, when the bowels are not relieved but at the expense of great pain. Persons with such affections as these restrain the expulsive acts of the abdominal walls. These causes, like the will, act in producing constipation. Diseases of the uterus also indirectly cause constipation in this way: the patient abstains from going to stool because she is afraid of going; as, e.g., in a case of prolapse of the womb the woman restrains muscular effort as much as possible, because, independent of the pain and discomfort, she knows the prolapsus is increased if she bears down. In such cases as anteversion or retroversion there is not only a mechanical obstacle through the uterus pressing the bowel against the sacrum, but the position of the womb causes an accumulation of fæces in the sigmoid flexure; constipation results, however, principally from the voluntary retention of fæces, because of

[1] Read before the Gloucester Branch of the British Medical Association.

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the pain and other troubles which follow the attempt to defecate. Great abstemiousness and sedentary habits also produce it.

Before discussing the question of treatment, let me briefly cite a case which in nearly all particulars may be considered typical of this troublesome condition.

On Nov. 5th, 1877, I was consulted by a gentleman, thirty-eight years of age, married, and the father of several children. For three years his bowels had been inactive for periods varying from three or four days up to as many weeks. The patient, whose business a few years since obliged him to frequently travel to all parts of Great Britain, attributed his complaint to an irregularity both as regards his food and his habits during his railway journeys; over and over again he had resisted the inclination to defecate. He suffered much from dyspepsia, but mental irritability and general enervation were his most prominent symptoms. He had always had good health, with the exception of once passing a small stone, for which he was treated by Sir H. Thompson. He was a thin, spare man, apparently of a happy disposition, and stated he should have been quite well if the bowels acted regularly. He was very active, and at the time of my seeing him was most abstemious and regular in his meals; had a cold bath every morning, followed by an eight o'clock breakfast consisting of coffee, eggs, bacon, and the like, with stewed or fresh fruit the whole year round; luncheon at one o'clock, dinner at seven. He smoked three cigars daily, and generally took claret. Tongue clean, breath not offensive. Pulse 75, good tone. Urine, specific gravity 1020, contained phosphates; in all other respects normal. Had been gradually losing flesh. Chest well formed; normal percussion and auscultatory sounds. Heart-sounds healthy, percussion normal. Hepatic dulness normal; masses of fæces could be felt in the transverse colon. Diagnosis: constipation from atony of the colon.

The treatment of the case up to this time appeared to have been purgative, the dose of the drug chosen being continuously increased as its power became abortive. I gave specific direction as to diet, exercise, and the like, and ordered the following pill to be taken every night: Extract of nux vomica, quarter of a grain; ipecacuanha powder, half a grain; aloes and assafœtida, five grains. On November 20th patient was much better; bowels moved daily. I now changed the treatment to the following pill, to be taken three times a day: Sulphate of zinc, two grains; extract of nux vomica, half a grain; extract of anthemidis, two and a half grains. On December 29th his bowels acted regularly, and he was getting much stronger; had gained six pounds in weight since the 5th of November; appetite good. I continued this treatment, increasing the dose both of the zinc and nux vomica until January 18th, 1878, when the following note was taken:—Patient not felt so well for ten years; bowels acting regularly. From this time he continued steadily to improve in general health and strength, from the first gradually gaining in weight, and with almost uninterrupted daily action of the bowels. The doses of the sulphate of zinc and nux vomica were slowly increased until he was taking ten grains of the former and twenty drops of the tincture of the latter three times in the twenty-four hours. From this time the doses were slowly diminished until the 14th day of May, when all medicine was discontinued. On October 10th I find the following note in my case-book:—"Has a motion daily; occasionally takes a dose of Friedrichshall water in the morning; is generally in the best of health." In addition to the exhibition of sulphate of zinc and strychnia in gradually increased doses, to my patient I gave particular directions as regards habits and diet. Every morning he had a cold bath, followed by friction with a good Turkish towel of the abdominal muscles. He daily after breakfast, which always included fruit, walked to his office, during which walk he smoked a cigar, and then made an attempt to relieve the bowels. This gentleman has continued perfectly well up to the present time (January 19th, 1880), the bowels acting daily.

I also remember attending a nurse of the Children's Hospital in Sheffield, who was suffering in exactly the same way. For some time I gave her belladonna with no permanent good, but she rapidly improved after taking zinc and strychnine.

In considering more in detail the treatment of this important class of cases, the first thing I think we should always bear in mind is that the will, so powerful in causing the trouble, is equally powerful in remedying it. The individual should daily at the same hour make powerful defecatory efforts; should these efforts be unsuccessful, he must still be urged to persevere. This daily repetition of the attempt to defecate usually ends by a daily need for relief of the bowel at that hour.

During the treatment it is sometimes necessary to procure an evacuation. An enema of tepid water followed by one of cold will generally be sufficient for this purpose, or what I have found equally useful, a suppository of belladonna, or of ordinary yellow soap, or of honey hardened by heat. An injection of warm linseed oil where there is diminished secretion I believe is of service, but this I have not tried—indeed, for my own part I never use enemata in the treatment of this form of constipation, for I invariably have found the bowel afterwards less ready to respond naturally. Purgatives I never give but under the greatest necessity, and then I have used the colocynth pill with hyoscyamus in such cases as the one I have detailed. I think it best, before beginning the tonic treatment, to get the bowels relieved, and then employ, as in this case, the aloes pill with assafœtida combined with ipecacuanha and nux vomica, which increase the purgative action.

Mineral waters are frequently of the greatest service, more particularly those of Carlsbad and of Cheltenham—a tumblerful taken warm before breakfast occasionally will often be found all that is required to keep the bowels in healthy action.

Belladonna has been used with much success by Bretonneau and Trousseau; they advise its administration in one dose, say one-sixth to one-quarter of a grain of the extract, taken fasting by preference in the early morning.

Having seen excellent results from the use of sulphate of zinc and strychnia, I should be inclined to give them the preference.

But much of our success depends upon the directions as to habit and diet. The tablespoonful of cold water at night, the cold bath and cold compresses to the abdomen in the morning, the taking of large quantities of fruit, the use of oatmeal porridge and of bran bread, the cigar after breakfast, the daily walk, have all their influence in bringing about the desired end.

In that large class of domestic servants and women of the lower classes, who systematically ignore the promptings of nature in this respect, and who as systematically take antibilious—another name for purgative—pills, I find a carefully-prescribed diet, including the use of figs and stewed prunes or other fruit, is in most cases all that is required; but I usually supplement this with ten-drop doses of the tincture of nux vomica in an alkaline tonic.

For infants the use of oatmeal boiled with milk, an occasional soap suppository, abdominal friction with the warm hand, combined with small doses internally of cod-liver oil, I have never found to fail.

In all cases of constipation it is absolutely necessary to obtain the confidence of patients; and then, with steady perseverance, the results of treatment in the majority of cases will, I believe, be good.

IDIOPATHIC PERICYSTITIS, ENDING IN THE PRODUCTION OF INTESTINO-VESICAL FISTULA AND DOUBLE HYDRO-NEPHROSIS.

BY THOMAS OLIVER, M.D.,

PHYSICIAN TO THE NEWCASTLE-UPON-TYNE INFIRMARY.

CASES of idiopathic pericystitis are so infrequently met with, and their diagnosis when they do occur is a matter of such difficulty, that to those who are making of pelvic diseases a study the notes of the following case may prove of some interest.

Some time ago I saw on one or two occasions, in conjunction with the late Mr. Rigby of Preston, a patient in whom, from the peculiar symptoms which were present, we were led to infer the existence of a fistulous communication between the bowel and bladder, the exact seat of which, however, we were unable to determine.

J. W——, aged about forty-five years, a butcher, has been for the last few months unable to follow his occupation from

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a very severe pain which he has experienced in his perineum and supra-pubic region. Patient, who is a strongly-built man, but who is now extremely cachectic, was very healthy until lately, when he began to suffer from the severe pains above described, and from frequency of micturition. His urine, which is turbid on being voided, has a feculent odour, and at times, when the last few drops are being expelled—a process which is accompanied by an excruciating pain—there is an explosion of fetid gas by the urethra. The urine on examination is found to have a sp. gr. of 1016; a thick turbid deposit, which occupies about half of the glass, is found on microscopical examination to be chiefly composed of pus-cells. Patient states that he has never at any time passed urine by the rectum, but it would seem that on one or two occasions after eating some grapes he passed a day or two afterwards a few of the seeds by the urethra. These he kept and showed to us. The introduction of a catheter into the bladder by Mr. Rigby was followed by an exacerbation of the symptoms, and it would appear that at the entrance into the bladder some difficulty was experienced to the progression of the instrument. An examination of the rectum by the finger and the speculum gave negative results.

On visiting this patient a few days after the above notes were recorded, we elicited the fact of his having had gonorrhœa twenty years ago, and that for the last four or five years he has had slight difficulty in micturating. He has never had any fever, but has complained lately of being chilly. The rectum was on this occasion explored with the hand, but, beyond a slight bulging in the region of the prostate, which was painful on pressure, nothing could be detected. The sufferings of this man were most intense. Relief from pain and a little sleep could only be obtained by the free use of opiates and the frequent employment of morphia suppositories.

The patient soon afterwards removed into the country, where we lost sight of him, until I was asked by Mr. Rigby to make a post-mortem examination on March 31st, 1877.

Autopsy, twenty-eight hours after death.—A plump body; rigor mortis well developed. There is a cyst about the size of a pigeon's egg just above Poupart's ligament on the left side; it is very superficial, and on being punctured very fetid gas escaped.—Chest: The heart is normal; valves and aorta healthy. The right lung is slightly emphysematous at the apex; otherwise it is normal. The left lung is hyperæmic, and somewhat œdematous at the base. — Abdomen: The abdominal wall contains a good thick layer of fat. Fat is freely distributed over the omentum. Peritoneum healthy, with the exception of that which is in the neighbourhood of the pelvis. The liver is very much enlarged; it is pale and friable. The left lobe is much increased in size. A few white spots are seen on the surface of the right lobe, and these when cut into are found to be collections of pus. Numerous and somewhat larger abscesses are met with in the interior of the organ, which seemed to be very definite in their distribution; they are arranged along both sides of the portal vessels. These collections of pus are only met with in the right lobe. The spleen is enlarged and soft, but otherwise healthy. Kidneys normal in situation. With its ordinary coverings upon it, the right kidney feels like an emphysematous lung. On being cut into, it is found to be a dilated, sacculated pouch, the covering of which is the thickened capsule, and the interior of which is lined by a delicate layer of what looks like softened renal tissue. The ureter is normal, and can be traced amid adhesions to the brim of the bony pelvis. The left kidney is in a state somewhat similar to the right. It is a distended sac, with exceedingly soft and flabby walls. Its pelvis is much dilated, and the ureter is dilated to about twice its normal size. The left ureter is traced with difficulty through some firm adhesions to the brim of the bony pelvis, and in its course we find it firmly bound down to the internal iliac artery. The stomach is healthy. On examining the intestines it is found that the colon is enormously distended, and filled with soft fæcal matter. Lying across the brim of the pelvis, we find the terminal portion of the ileum, and from it there pass to the peritoneum in front and adjacent structures bands of lymph of a soft and friable nature. The surface of this portion of the intestine for about four inches in length is of dark-blue colour. Lying a little to the left and somewhat to the front is a portion of the sigmoid flexure. The bladder, the portion of the ileum above mentioned, and the sigmoid flexure are all matted closely together; and on slightly raising the terminal portion of the small intestine there wells out from underneath it a few ounces of a dark-green fetid fluid of pretty thick consistency. The whole of the intestine, with the exception of those portions which are adherent by bands of lymph to the bladder, were removed, and we are now able to trace a line of communication of pus extending from the depôt of dark fluid already described, through the inner wall of the abdomen just above the left Poupart's ligament, into a large abscess, whose contents are similar to the fluid just described. This collection of pus has undermined the abdominal wall in various directions. By one channel it can be traced up as far as the crest of the left iliac bone. By another canal this intra-parietal abscess can be traced towards, and is found to be in communication with, a large collection of pus lying in front of the psoas and iliacus muscles, and bounded in front by thickened peritoneum. The anterior crural nerve is much thickened. From a small portion of the fourth lumbar vertebra the periosteum has disappeared, and the body of that bone is undergoing softening. The pelvic viscera were removed *en masse*, and the bladder when cut into is found to be somewhat reddened towards its base; the vessels are injected. The entrance of the ureters is somewhat contracted. Towards the middle, and especially in the upper third of the posterior wall of the bladder, are five or six small perforations, each of which is surrounded by a ring of slaty pigmentation. These small foramina are seen to pass directly into a large ragged space, from which exuded the dark fetid pus already noted. Immediately behind this abscess lies the terminal portion of the ileum; in fact, the surface of the gut forms the posterior wall of the abscess. The intestinal wall for about four inches is in a state of deep pigmentation, and tears like blotting paper. It is pierced at one spot by an opening large enough to admit a penholder. Around this opening there is a ring of inflammation. Direct communication, therefore, exists between the lowest portion of the small intestine and the bladder through the intervening collection of pus. The sigmoid flexure and rectum are normal.

This case is of interest partly from its rarity and partly from the absence of any definable cause to account for the inflammation of the cellular tissue behind the bladder. In the discharge of his duties it is more than probable that the patient was a good deal exposed to the combined action of wet and cold. Whatever its onset the whole progress of the case was one seemingly subacute in character, and differing from those attacks of cellulitis in the neighbourhood of the rectum which have been met with in people who are intemperate in eating and drinking. The development of double hydronephrosis from partial occlusion of the ureters is a point worth noting, as is also the association of pyæmic abscesses in the liver, with the suppuration already described.

A CASE OF FRACTURED SKULL,

WITH SYMPTOMS SIMULATING DRUNKENNESS.

BY G. A. WRIGHT, F.R.C.S.

A. M——, a healthy man of twenty-eight, was brought to the Manchester Royal Infirmary at 12.50 on the afternoon of March 12th, 1880. While engaged in loading hay upon a cart he was standing upon the top of the load pulling a rope to bind the hay to the cart when the rope broke, and he fell upon his head upon a stone pavement. He was brought to the hospital in less than half an hour after the accident.

On examination, an extensive scalp wound was found over the right fronto-parietal region, laying bare the bone for a space of about one square inch. No fracture could be detected. There had been some bleeding from the nose, and blood was effused into the upper eyelid of the right side. There was no paralysis of any part. The man was perfectly conscious; he walked into the accident room, but his manner was peculiar; he was noisy and irritable, resisting examination of the wound and application of dressings, and complaining much of pain in the back of the neck, where, however, no lesion could be found. His condition much resembled that of a drunken man, but the peculiar irritability and restlessness of his behaviour were not quite like the manners of one intoxicated, and this, in spite of the absence of any history of insensibility, induced further inquiry into his state. After some difficulty it was ascer-

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tained that he had drunk in the course of the morning about a quarter of a pint of spirits, but this had not been taken at one time, and had not produced any symptoms of intoxication. On asking the man himself if he had been unconscious after the fall, he replied, "What fall?" and evidently was unaware of what had caused the injury; this answer, as showing that he had been insensible as well as the peculiar state of irritability above described, led to the diagnosis of some more serious injury than was apparent externally, and the man was therefore admitted into the hospital.

A few hours after admission he gradually became unconscious, the right pupil became dilated and slight facial paralysis on the right side set in. There had been no bleeding from the ear. His breathing became stertorous, and he was soon totally unconscious. In the evening his temperature rose to 103·2°, and his pulse, which on admission showed no peculiarity, became rather slow, 56, full and bounding in character, and between midnight and one o'clock rose to 170; at this time there was some rigidity of his limbs.

He remained in much the same state throughout the 13th; his pulse, however, became weaker, and he sweated profusely, and died at 9.50 P.M.

The onset of these symptoms soon after his admission naturally led to the diagnosis of fracture of the anterior and middle fossæ of the base of the skull.

Post-mortem examination. — A fracture, without any depression or other displacement, was found running through the frontal bone on the right side of the middle line, but to the left of the portion of bone exposed in the wound, so that it could not be discovered until the scalp was more fully separated from the bone. The fracture ran through the right side of the cribriform plate, and from it another fissure extended outwards through the lesser wing of the sphenoid and across the anterior inferior angle of the parietal, where the middle meningeal artery was torn across, and a large clot of blood was found compressing and deeply indenting the middle lobe and lower part of the frontal lobe of the brain. On the left side some bruising by *contre coup* of the middle lobe was found over a small area. There was some laceration and contusion of the muscles at the back of the neck.

Remarks.—There did not appear during life to be sufficient evidence of any benefit likely to be obtained by operation; and indeed the only indication at all would have been to trephine over the middle meningeal on the chance of the injury being localised. The symptoms, however, pointed more markedly to hæmorrhage at the base than anywhere else, and the extent of the hæmorrhage, together with the other lesions, found post mortem, did not encourage the belief that operation would have done much good.

The case is particularly interesting as an instance of the caution necessary in deciding whether such symptoms as the patient presented were due to drink or injury; and when the man was first seen considerable hesitation was felt as to the source of his peculiar manner; this was, however, clearly due to the surface irritation of the brain by the blood which was at that time being effused upon it, and hæmorrhage increasing soon gave rise to the ordinary symptoms of compression. The case was under the care of Mr. Bradley, by whose kind permission I am enabled to publish it.

Manchester.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mrs. Townend, of Puckrup Hall, has given £2000 for the erection of a new wing to the Tewkesbury Rural Hospital. Mr. Robert Barr bequeathed £500 to the National Institution for Imbecile Children at Larbert, £500 to the Edinburgh Royal Infirmary, and £250 to the Edinburgh Royal Hospital for Sick Children. Mr. Joseph Gurney Barclay has given £500, additional, to the North Eastern Hospital for Children. The Great Northern Hospital has received £450 under the will of Miss Dobson. The Clothworkers' Company have given one hundred guineas to the Earlswood Asylum for Idiots. The Grocers' Company have given £50, additional, to the Victoria Hospital for Sick Children. Miss Anne Allison, of Glasgow, bequeathed £100 and a proportionate share of the residue of her estate, each, to the Glasgow Royal Infirmary and the Archibald Colquhoun Bequest for Relief of Incurable Poor. The Mercers' Company have given one hundred guineas to the Hospital for Consumption, Brompton, and fifty guineas to the Royal Infirmary for Children and Women.

A Mirror

HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

CASE OF STRANGULATED VERMIFORM APPENDIX; OPERATION; DEATH; REMARKS.

(Under the care of Mr. PICK.)

THIS case, in which the vermiform appendix of the cæcum had descended into the sac of a hernia and had there become so tightly strangulated as to produce very severe symptoms, necessitating operation and terminating in speedy death, appears to be worthy of being placed on record on account of its rarity.

Robert E——, aged fifty-four, painter, was admitted into the hospital on Feb. 21st. He stated that he had ruptured himself twelve years previously, but that his hernia, which he had always been able to return, had never given him any trouble nor prevented him following his occupation. He had therefore paid no attention to it, and had never worn a truss. Five days before admission his rupture came down, and he was unable to push it back again. Soon he began to suffer great pain in the part, and it became much swollen. His bowels had not acted since the descent, and he had been constantly sick, the vomit latterly having been of a very offensive nature. The day before admission a medical man made a prolonged attempt by taxis to reduce the hernia, but without success. The proceeding caused him great pain.

When admitted he was in a state of collapse. The surface of the body was cold and covered with a clammy sweat; the pulse was scarcely to be felt, and very quick; the tongue was coated with a white fur; the abdomen was tympanitic, but not rigid. In the right inguinal region and lower part of the abdomen, extending nearly to a level with the umbilicus, the tissues were swollen and œdematous, and the skin was red. Just below and internal to the abdominal ring was a tense, hard swelling, which occupied the upper part of the scrotum and extended up into the inguinal canal, along which considerable fulness and hardness could be felt. There was no impulse on coughing, and the patient did not complain of much pain during the examination.

He was at once placed under the influence of ether, and a vertical incision was made over the external abdominal ring. Upon cutting into the subcutaneous tissue a large quantity of serum escaped. The various coverings of the sac were then divided. They were much infiltrated, and adhered to each other. The sac, having been exposed, was opened, and a large quantity of thick fetid pus escaped. The sac wal' was very much thickened, and was coated on its internal surface by flakes of lymph. After the fluid contents of the sac had been carefully sponged away, the sac was found t· contain only the vermiform appendix. This portion of intestine was much thickened and congested, and, like the interior of the sac, was covered with flaky lymph. The stricture, which was so tight that it was with difficulty divided, was situated at the neck of the sac. After the division of the stricture the finger could be passed freely up into the abdominal cavity. The vermiform appendix, which was not perforated, was now carefully cleansed, and returned just within the opening into the abdomen. As the sac was in a state of acute suppuration, it was dissected out from the tissues with which it was in contact and removed; the external wound was then closed. The operation was performed with strict antiseptic precautions. During the operation the patient was very faint and collapsed, and required brandy. He never rallied after his removal to bed, and died in about five hours.

Necropsy.—There was a wound some three inches long over the right inguinal canal, closed by silver suture. The wound being opened gave access to a small sac communicating directly with the peritoneal cavity by its neck, which was about one-third of an inch in diameter. At the upper part of the sac was the extremity of the appendix cæci,

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adhering by soft adhesions, which were easily broken down, to the lining membrane of the neck of the sac, which was continuous with the peritoneum. The rest of the appendix and the cæcum were close to the opening of the sac in the abdominal cavity. At the point of junction of the appendix to the cæcum was a ring of discoloration, and here the tube was compressed and slightly ulcerated. The appendix was thickened and covered by flakes of lymph, but otherwise appeared tolerably healthy. The peritoneum in the neighbourhood of the sac was dark-coloured, showing a little soft lymph on its surface. There was no general peritonitis. The lungs were very emphysematous and congested. There was puriform fluid in the bronchi. The heart weighed ten ounces; it was uncontracted. There was a little partially decolorised clot in the right ventricle. The muscular tissue was very soft and friable, and had undergone considerable fatty change. The valves were natural. The liver weighed 3½ lb.; it was soft and pale, and infiltrated with fat. The other organs were natural.

Mr. Pick remarked in connexion with the above case that it was one of great rarity. He had never certainly seen a similar case. Nor did he even remember to have read of one where the vermiform appendix was alone strangulated. Of course cases where a portion of the bowel, probably cæcum, and the vermiform appendix together were found in a hernial sac were not uncommon. He had looked through the tables of operations for strangulated hernia in St. George's Hospital for the last twenty-eight years, and had not been able to find an instance of the same thing mentioned in these records, nor had he found the subject alluded to in any of the authors he had consulted. It seemed difficult to account for the way in which the vermiform process had become strangulated. How a tube of such small dimensions as the appendix should have been so tightly constricted in a canal which on previous occasions had allowed the passage of a much larger body, as a portion of the gut, or, at all events, omentum. For it seemed perfectly clear to his mind that the hernial sac must on a former occasion have contained either gut or omentum, for he could scarcely conceive how a soft, freely movable tube like the appendix could produce a hernia by forcing before it the peritoneum along the inguinal canal, though it was easy to understand how it might find its way into a hernial sac when it was once formed. He could come to no other conclusion than this, that the sac had been originally formed by the protrusion of a portion of intestine or omentum in the usual way, and into the sac thus formed the appendix has descended. It seemed strange under these circumstances that it should have become strangulated, and at the operation he had expected, when he saw what was in the sac, to find a small knuckle of intestine high up by the side of the appendix, but that this was not the case was abundantly proved by the post-mortem examination, which showed that the whole of the intestine was natural, except this little process, and that this had been tightly constricted was proved by the ring of ulceration which surrounded it, at the point of constriction, close to its junction with the cæcum. He believed that the strangulation must be explained by supposing that some inflammatory exudation had taken place in the tissues external to the neck of the sac, and that this was the cause of the stricture. From whatever cause it had arisen it was very tight, for it was with the greatest difficulty that the extremity of the hernia knife could be got beneath it to divide it.

Another point of interest was, he said, the acute symptoms which were produced. One would scarcely have imagined that constriction of the appendix would have produced such urgent symptoms, and such early vomiting, for it must be borne in mind that this was a very different thing to strangulation of a portion of the intestine, in which the perfect condition of the tube was essential to life. With regard to the appendix cæci it was not so; this tube might become obliterated without any absolute detriment to the patient, and Mr. Pick supposed that if the operation could be performed with safety it might be removed without in any way interfering with the natural functions of the individual. The symptoms of strangulation were due, no doubt, to arrested peristaltic action; but it was difficult to understand why this arrested peristaltic action should have taken place so suddenly from constriction of a small tube like the vermiform appendix, which was not essential to life. Mr. Pick further stated that at the time of the operation he was in considerable doubt as to how he should deal with the appendix: whether he should return it into the cavity of the abdomen; or whether, having freed the constriction, he should leave it in the sac. On the one hand, it seemed a hazardous proceeding to return it, acutely inflamed as it was, and covered over by shaggy lymph, into the abdominal cavity; and on the other hand, if it were allowed to remain, it would undoubtedly contract adhesions to the tissues with which it was in contact, and would therefore always remain as an irreducible hernia, and might possibly become again strangulated by the contraction of the tissue during cicatrisation. Under these circumstances he decided upon pushing it back just within the cavity of the abdomen, and leaving it there in the expectation that it would contract adhesions to the peritoneum in the neighbourhood of the abdominal ring. And that this did occur was shown by the post-mortem examination, when it was found that it was already adherent in this situation.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

CASE OF PHTHISIS, PROBABLY OF CONTAGIOUS ORIGIN.

(Under the care of Dr. MURRELL.)

THE chief point of interest in the case was the history, the symptoms having appeared immediately after nursing her husband, who died of phthisis.

Lizzie E——, aged twenty-six, was admitted on Sept. 1st, 1879, with phthisis pulmonalis. Her family history was good. Her father, a captain in the navy, was always a very strong man, and died of fever abroad. He was not subject to cough, and never, to the best of her knowledge, suffered from any chest complaint. Her mother was living, aged sixty-four years, and had been "asthmatical" for the last twenty years. She also had a cough, more or less, all the year round, and was very short of breath if she went out in the fog. The patient had three sisters, all well and healthy. There was no apparent trace of consumption at all in patient's own family.

She was quite well in every way up to the time of her marriage. Her husband, as far as she knew, was a healthy man when she married him, but he came of a consumptive stock. His father died of bronchitis, and his mother from phthisis. One of his brothers was, at this time, dying from consumption, and another was far gone with it. The patient was married in April, 1878, and in the second week of the following July her husband broke a bloodvessel and lost a great deal of blood. After that he had a cough, grew weaker and weaker, and could hardly do anything. In August he got too weak to go out, and from that time till the day of his death in February, 1879, he was assiduously nursed by his wife. He expectorated a great deal, a spitting-cup was of no use to him, and he had to have a hand-basin with water to spit into. Patient hardly ever left him, and slept with him. At night he perspired very much, but not enough to wet patient's things, or make her cold. She was in and out of bed pretty well all the night, through the long cold winter of 1878-9, and he refused to have a fire in the room.

After her husband's death the patient was worried and pressed for money, but did not suffer in any way from want of food or comforts. She went to live with her mother, and was as well off there as she would have been at home, or, perhaps, better. She had no cough up to the day of her husband's death; she was then completely knocked up, was seized with cold shivers, which continued for three days. She had a bad cough, and that gradually got worse. Nine months after she had coarse crepitation at both apices, was losing flesh, and sweating profusely at night—was in fact, consumptive.

It is certainly a question worth considering whether in cases of advanced consumption with copious expectoration there is not some danger of infection, however slight.

BIRMINGHAM HOSPITAL FOR WOMEN

LARGE INTRA-MURAL MYOMA REMOVED BY ENUCLEATION.

(Under the care of Mr. LAWSON TAIT.)

A. H——, aged twenty-eight, was admitted into the hospital on May 15th, 1879, suffering from profuse menorrhagia. The fundus was found to be retroflected to an extreme degree, and of very large size. The diagnosis of myoma was made, and an attempt to dilate the cervix by Mr. Tait's plugs was made, but it was unsuccessful owing to the extreme retro-

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flexion. The cervix was therefore completely divided by the hysterotome, the thick capsule of the tumour opened, and the tumour separated as far as the fingers could reach. The patient was so extremely anæmic that everything done to her was done in the constant fear of the production of heart-clot, and even the administration of ether in her case seemed risky. Nearly eight weeks elapsed after this preliminary proceeding before it was deemed safe to do anything more, when it was found that the opening into the capsule had closed, though the division of the cervix had remained permanent. On July 26th the dilating plugs were applied, and next day the cervix was so open that a large free incision over the tumour was made, and the tumour freely separated. On August 4th the tumour was found presenting through the os, and a large piece of it was removed by the écraseur. On August 12th the rest of it was found extruded and hanging by a thick pedicle, which was divided, and the mass removed. For many weeks after this operation she hung between life and death, and made a convalescence protracted over nearly eight months.

Mr. Tait is of opinion that in such a case removal of the ovaries is a much safer operation than enucleation of the tumour, and in his hands it has given much better results. Out of five cases where he has performed vaginal enucleation in the last three years there have been only two recoveries, whilst of seven similar cases in which he has performed oophorectomy there has been only one death, and that death was due solely to the operation having been too long delayed.

SOUTH STAFFORDSHIRE GENERAL HOSPITAL.

POPLITEAL ANEURISM; TREATMENT BY FLEXION; CURE.

(Under the care of MR. NEWNHAM.)

GEORGE L——, aged forty-four, a goods guard, was admitted with popliteal aneurism. His previous history was excellent: he had never had syphilis, and had always been abstemious. Several months before he noticed the aneurism he wrenched his knee, and had to lay up for a short time. He could remember no other injury to the leg, nor could he recollect having made a forcible or sudden muscular effort to lift weights.

The history of the aneurism was as follows: Three weeks before admission (since Jan. 10th), the patient noticed a pulsation in the left popliteal space. His attention was directed to the seat of disease by pain in the calf when walking, the pain passing off if he stood still even for a moment. He thought that the swelling when he first noticed it was nearly as large as on admission.

On January 31st he was taken in under the care of Mr. Newnham. In the left popliteal space there was a tumour, about the size of a hen's egg. It had an extensile pulsation which could be arrested by pressure on the femoral artery. The area of pulsation extended over the popliteal space. There was a distinct bruit, and a thrill was communicated to the hand. On examining the other arteries of the body the left radial and temporal arteries were found feebler than the corresponding arteries on the opposite side, but no intra-thoracic tumour could be detected. The superficial arteries had not an atheromatous feel, the heart was healthy, and no visceral disease could be discovered. The patient had a cataract of the right eye, which did not result from injury. He was a corpulent man, and somewhat aged in appearance, but his health, he said, was exceedingly good.

The patient was put on meat diet, and given five grains of the iodide of potassium and fifteen of the bicarbonate of potash. He was kept in bed and had an occasional purge. On Feb. 4th, he was directed to keep his thigh flexed on the abdomen, and the leg on the thigh; the iodide was increased to ten grains. On the 6th, he was put on a modified Bellingham's diet. Breakfast: bread and butter, two ounces; milk, two ounces. Dinner: meat, two ounces; bread, two ounces; beer, two ounces. Supper: bread and butter, two ounces; milk, two ounces. On the 8th, the extensile pulsation had ceased in the tumour, although the pulsation in the popliteal and posterior tibial arteries could be felt. On the 9th, the angle of flexion was increased; daily allowance of fluid fourteen ounces. On the 11th, flexion was discontinued; patient put on meat diet, with one pint of fluid. The aneurismal sac was felt to the inner side of the popliteal artery; it was a little larger than a walnut, and felt solid to the touch. The patient was left in bed for ten days after pulsation had ceased, and was discharged on the 9th of March, when the tumour could be scarcely felt.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Extra-uterine Gestation treated by Abdominal Section.—The Treatment of Pelvic Suppuration by Abdominal Section and Drainage. — Sub-coracoid Dislocation of the Humerus.

THE ordinary meeting of this Society was held on the 11th inst., J. E. Erichsen, Esq., F.R.S., President, in the chair. The subject of abdominal section was under discussion, introduced again by Mr. Lawson Tait, who, it will be remembered, contributed papers dealing with abdominal surgery earlier in the session. This time he related a third case of extra-uterine gestation, and in his second paper advocated the rather bold treatment of pelvic abscess by abdominal section. Both papers gave rise to some discussion. A paper by Mr. Eve, describing a rare variety of dislocation of the humerus, was also read.

A paper was read on "A Third Case of Extra-uterine Gestation, treated by Abdominal Section," by MR. LAWSON TAIT. The case differed from the two previously read before the Society in that the operation was performed before the death of the child, whose life was saved, but the mother succumbed to the operation. MRS. S——, aged thirty-three, had been married fourteen years, and had had six children. Since her last menstruation in May, 1879, she had been in constant pain, of which a severe attack occurred in July. In October she became satisfied she was pregnant, and Mr. Lattey, suspecting the nature of the case, asked Mr. Tait to see her. A large abdominal swelling was evidently a pregnancy, and to the left of the umbilicus was a prominent mass, which, from its rhythmic contraction, was clearly the uterus, and was attached to the larger mass behind it. The head of the child was detected between the rectum and the vagina. The pain becoming agonising, and being unrelieved by opiates, an operation was determined on. Ether was administered on the morning of Jan. 31st, and on making the median incision the empty uterus was found, and the cyst, which was the right broad ligament, was opened, and the child removed without difficulty, the edges in the opening of the cyst being then secured to those of the parietal wound, leaving an opening for the discharge of the placenta, and the peritoneal cavity was closed. The child was at first profoundly narcotised, but is now, three weeks after, thriving and well. The death of the mother, which occurred on the fourth day, seemed to be from protracted shock. At the post mortem there were found some morbid appearances in the liver and ante-mortem clots in the heart, but no peritonitis; the cyst proved to be the broad ligament as diagnosed, and there was a deciduous lining in the uterus in process of separation. The Fallopian tube had been ruptured at its lower aspects, the ovum thus escaping into the tissue of the broad ligament; and the case confirmed the author's opinion that all extra-uterine pregnancies are originally tubal, that the tube bursts in between eight and twelve weeks, and when not fatal an extra-uterine pregnancy is completed. The unfavourable result to the mother was due to the delay in the operation; but the case is of interest from the saving of the child. The child might have been removed by vaginal section, but large venous sinuses in every direction made it likely that any injury to one of them would be fatal, and in vaginal section it is impossible to see what to avoid.—MR. DORAN had recently dissected three cases of advanced tubal pregnancy, and had come to the conclusion that operating from the vagina was unjustifiable. The cyst in each of the three cases had pushed down the upper part of the rectum, which had become adherent to it. An incision of any length sufficient for the extraction of a fœtus could not have failed to wound the gut (and possibly a loop of small intestine as well pushed under the cyst); this would entail the most disastrous results.

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—Mr. SPENCER WELLS could not agree with Mr. Tait that all cases of extra-uterine gestation were tubal; and he instanced as opposed to this view a case where extra-uterine fœtation occurred, together with intra-uterine pregnancy. Nor did he see why there should be rupture of the Fallopian tube.—Dr. JOHN HARLEY was glad to hear the author advocating early operative measures, as affording more chance to the mother than the old plan of delaying operation until the full time was reached. It seemed as if operation should be performed as soon as the diagnosis was established. Dr. Harley referred to a case which he had seen in a very early stage, where there was a small, painful, hard, and nodulated swelling attached to the abdominal wall; a few weeks later (when about the third or fourth month of pregnancy had been reached) fœtal movements could be felt. The case was transferred to the obstetrical ward, but owing to some unavoidable delay operation was not undertaken until the full term. The child survived for a short time; and the mother died. The small developement of the placenta at an early period was another reason for prompt interference.—Mr. KNOWSLEY THORNTON asked for details concerning the condition of the patient during the period of "prolonged shock," to which her death was attributed. Was there any rise in temperature? Did Mr. Tait attribute the shock at all to the ether administered? Mr. Thornton believed that ether was followed by more shock than either chloroform or bichloride of methylene.—The PRESIDENT asked what measures were taken with reference to the placenta.—Mr. TAIT, in reply, said that he now always left the placenta alone in such cases. No hæmorrhage follows, and the placenta gradually comes away. He had now performed upwards of 200 abdominal sections, and had found no ill result accrue from the use of ether, which he did not think had any share in the fatal result in this case. There was no rise of temperature, and no peritonitis. He was pleased to hear Mr. Doran's observations in support of his view that vaginal section should not be performed. He could not agree with Mr. Wells as to the pathology of extra-uterine pregnancy. In all the cases he had dissected (fifteen in number) he had found them to be tubal, the fatal result being due to rupture at the free end of the tube. When death did not occur suddenly, there was generally a history of symptoms pointing to rupture of the tube about the eighth or twelfth week of pregnancy, and in such cases he believed the rupture took place into the broad ligament, near the origin of the tube. And these were the cases which came to operation. He did not think operative interference justifiable until the child was viable, unless there were urgent symptoms. In the present case the child has survived. In reply to a further question he said that the Fallopian tube was found ruptured after death.

A paper was then read "On the Treatment of Pelvic Suppuration by Abdominal Section and Drainage," also by Mr. LAWSON TAIT. The author advocates the principle of opening and draining the various conditions of suppuration classed as "pelvic abscess." He points out, and quotes Dr. West in support, that in very many of these cases the abscess opens into the rectum or other part of the intestine, the bladder, or round amongst the muscles of the anterior abdominal wall. When such openings are established either death occurs or recovery is extremely protracted. Even when the abscess opens into the vagina or can be tapped from that canal, the recovery is frequently prolonged to an extent not commensurate with the size of the abscess. Six cases of pelvic origin are narrated, all of which seem to have originated in extra-peritoneal hæmatoceles. In none of them would vaginal tapping have been effectual in properly emptying the abscesses of the clot-débris. They were opened from above, the opening into the abscess cavity being carefully stitched to the opening in the abdominal wall, save in one case where an already-made adhesion rendered this part of the operation unnecessary. Wide glass drainage tubes were then inserted and then were changed for smaller ones, and then again for wire or soft rubber tubes. The abscesses were closed and the patients restored to health in about thirty days, and all the patients made rapid and complete recoveries. Mr. Tait concluded that the opening of such abscesses by abdominal section was neither a difficult nor a dangerous operation, and that recovery was made in this way more certain and rapid than in any other. In future he would always advise an exploratory incision in cases where there is proof of an abscess, but when this could not be reached or emptied satisfactorily, from below.—The PRESIDENT, in according the usual vote of thanks, said the paper was a very valuable contribution to abdominal surgery, opening up a new field in a department which has made more advance than any other in surgery. He asked whether antiseptic precautions were taken; also for particulars as to the size of the glass tubes employed, and whether any precautions were taken to exclude air.—Dr. JOHN HARLEY asked whether there were any adhesions between the coils of small intestine.—Mr. KNOWSLEY THORNTON said there could be little doubt that the measures described were a great advance in the treatment of a very intractable class of cases. He had twice resorted to the same plan. The details of his first case are recorded in the Pathological Transactions, vol. xxix (p. 145), where a second operation was performed to evacuate a large quantity of blood effused into a peritoneal cyst. The second case he treated much as Mr. Tait had done his, using, however, a small-bore india-rubber tube; the abscess putrefied, and the sinus had not yet healed, so that the result was not more satisfactory than if it had been opened through the vagina. He had recorded two cases of large hæmatocele, which had been opened through the vagina, where he had used glass drainage tubes and injections of iodised water.—Dr. HEYWOOD SMITH asked the author whether he made his incisions low down—i.e., to the pubes; and whether any difficulty was encountered in stitching the abscess wall to the abdominal wall. Might not there be some risk of rupture from the tenuity of the membrane bounding the abscess?—Mr. SPENCER WELLS hoped that Mr. Tait would say what cases should be dealt with by abdominal section in preference to puncture by a large trocar through the vagina, and treatment by injections of carbolised or iodised water. Seeing how readily such cases could be treated through the vagina and free drainage thus obtained, he would hesitate before opening the peritoneal cavity, involving further risk to the patient.—Mr. HENRY MORRIS asked if Mr. Tait preferred this method of treatment in all cases of pelvic cellulitis, even though the abscess could be reached by an incision elsewhere. About four months ago he was asked to see a man with a view to circumcision. There was a large, long foreskin, and the scrotum was thickened and warty, probably from the constant irritation of urine. But, in addition, the left iliac region was brawny and thickened, and there were fistulæ in the perineum. So extreme was this condition that at first Mr. Morris thought the case one of malignant disease. The man was admitted under his care, and soon an abscess pointed above Poupart's ligament in the region of the internal abdominal ring. A free incision was made into this, and subsequently circumcision was performed, the perineal fistulæ were incised, and the patient is now quite convalescent. Although the case was of long duration, he did not quite see that anything would have been gained by a double incision through the peritoneum. He could recall cases of pelvic abscess which had done well after incision through the vagina. Mr. Lawson had such a case last year.—Mr. MORRANT BAKER asked for some precise information as to the extent of incisions employed. How far was the peritoneum opened? and to what extent were other parts exposed than the cyst in which the pus was contained?—Mr. TAIT, in reply, said he could not give any precise information as to antiseptic precautions, for he had ceased to regard the influence of antiseptic treatment as of any account. He believed the first four cases were treated antiseptically during, but not *after*, the operation. In the other two no antiseptics were used at any time; and in the sixth case, all "septic symptoms" ceased as soon as the abscess was evacuated, and air had free access into its cavity. The glass tubes were those introduced by M. Koeberlé; they measured from six to eight inches in length. In no case were there any peritoneal adhesions. As to the propriety and comparative harmlessness of the operation, he adduced the case of a woman with abdominal symptoms, and an obscure swelling, where the abdomen was laid open for exploration, "just as we always now open every abdomen in which there is doubt as to the diagnosis," and lymph and pus evacuated with good result. He invariably made his incision in the middle line, and in five out of the six cases the peritoneal cavity was opened. In no case was any difficulty met with in securing the wall of the abscess to the parietes, but of course great care was exercised. Mr. Wells had a very proper and conservative regard for the peritoneum, but he (Mr. Tait) had ceased to fear any operative measures dealing with the peritoneum. The advantage he claimed for the operation in

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question was the rapidity with which the abscesses so dealt with healed. At present he might limit the operation to cases where the abscess could be better got at above than through the vagina; but he was not sure that they should stop there, seeing how long and tedious was recovery after the necessarily limited incision made through the vagina.

A paper followed on a case of "Sub-coracoid Dislocation of the Humerus without laceration of the capsule, and with an indentation on the posterior surface of the head of the Humerus, with remarks on the mode of production of fracture of the anatomical neck with dislocation;" by Mr. FREDERIC S. EVE, F.R.C.S. The patient, aged thirty-six years, was knocked down by a train, while at work on the line. On admission to St. Bartholomew's Hospital, he was found to have sustained a sub-coracoid dislocation of the right humerus, presenting the ordinary character. The dislocation was readily reduced by traction with the heel in the axilla. He died twelve hours after the accident from injuries to the thorax. Except some laceration of the lower part of the deltoid, the muscles of the shoulder were not damaged. The joint was unopened, but on incising the capsule, it was found to have been detached from the anterior margin of the glenoid cavity, but remained continuous with the periosteum. On the posterior surface of the head of the humerus at the margin of the articular cartilage, a deep vertical indentation or groove was seen, into which the anterior margin of the glenoid cavity accurately fitted. The injury was probably produced by direct violence. The author had been unable to find on record a single case of traumatic dislocation in which the joint was not opened. The groove or indentation was doubtless, from its position and shape, produced by the forcible impact of the humerus against the anterior margin of the glenoid cavity. Malgaigne,[1] who mentions two specimens of old dislocation forwards, in which somewhat similar grooves had been formed by attrition, thinks that they are sometimes produced as in the case related. An easy explanation of the mode of production of fracture of the anatomical neck with dislocation of the head is suggested by this case, for if the blow had been sufficiently forcible the head would have been chipped off by the anterior margin of the glenoid cavity, and would then have been displaced forwards. Also an explanation of the cases of impacted fracture of the anatomical neck with rotation of the head of the humerus on its axis, which is borne out in several particulars by the two cases recorded by Mr. W. R. Smith.[2] In both of these the head was displaced forwards.

PATHOLOGICAL SOCIETY OF LONDON.

Reports of the Morbid Growths Committee.—Development of Cancer.—Subcutaneous Painful Tumour.—Recurrent Sarcoma of Mamma.—Aortic Aneurism.—Cirrhosis of Liver.—Dermoid Cyst in Rectum.—Cystine and Oxalate of Lime Calculus.—Varicose Aneurism.—Scleroderma Adultorum.—Cystic Degeneration of Kidneys.—Ulceration of Tongue in Congenital Syphilis.—Primary Sarcoma of Kidneys.—Congenital Malformation of Heart.—Alveolar Sarcoma of Face.

THE closing meeting of the present session of the Pathological Society of London was held on Tuesday last, the President, J. Hutchinson, Esq., in the chair. There was a large attendance of members and the specimens exhibited were both numerous and interesting. At the close of the meeting the President reminded the members that the debate on rickets would take place early in the autumn, and expressed a hope that preparations would be made for it by those who had special opportunity of studying this disease in its pathological aspects.

Four reports from the Morbid Growths Committee were read and received. The first was on Dr. Coupland's specimen of Primary Sarcoma of the Liver, which was reported to be a carcinoma with changes in the connective tissue resembling those met with in cirrhosis. The second was on Mr. Eve's specimens of Syphilitic Disease of the Bones of a Fœtus, the committee adopting Mr. Eve's description, but being unable to assert that there was sufficient evidence of the fœtus being really syphilitic. The third report was on Mr. Morris's specimen of Pulsating Tumour of the Cranium, and suggested that the growths in the bones were secondary to a growth in the thyroid gland, which was enlarged; in structure they resembled certain forms of bronchocele. The fourth report was to the effect that Mr. Nunn's case of Recurrent Tumour of the Breast was a cancer of rather peculiar structure. A vote of thanks to the committee was, at the suggestion of the President, carried.

Dr. THIN showed specimens and drawings prepared from a case of Cancer of the Liver, secondary to cancer of the breast, the breast tumour having been associated with the disease of the skin of the nipple and areola, described by Sir James Paget. The cancerous growth consisted of rounded columns of epithelial cells, small in size, and rounded or polygonal in form. The liver cells showed only retrogressive changes, and began to break down at a comparatively great distance from the cancerous epithelium. They first became charged with bile pigment, then underwent fatty degeneration, and finally broke down. The nucleus remained entire until the cell was broken up. There was no cell-division or growth from the liver cells. The cancerous epithelium could be distinguished from them even when in direct contiguity by the larger size of the nucleus and the different elective qualities when the sections were doubly stained by eosine and logwood. The frequent descriptions by authors of the growth of cancer from the liver cells had led Dr. Thin to select the case for investigation. The result had been negative. Dr. Thin also showed microscopical specimens and drawings prepared from a cancerous tumour of the breast removed by Mr. Lister from a woman aged twenty-eight, the mother of five children. The tumour had in three years grown from the size of a hazel-nut to that of a small orange. There was a second smaller tumour in the same breast. The axillary glands were enlarged. The interest of the case consisted in the fact that the tumour clinically had the characters that lead surgeons to diagnose scirrhus, whilst its structure showed it to belong to the class of cancers which Dr. Thin had recently described at the Royal Medico-Chirurgical Society in connexion with disease of the nipple as being examples of a distinctive variety of cancer of the breast, and had termed duct cancer. The tumour consisted of an epithelial growth extending at its margin in nodules about the size of a pea. These nodules contained an epithelial growth in the form of columns of cells. The columns were seen in transverse section as groups of circular cell-masses occupying the area of a lobule. At the first manifestation of disease, the secreting epithelium of the acini broke down, then groups of cell-columns, mostly solid, but sometimes with a central lumen, took their place. These columns increased in diameter, destroying the connective tissue between them until they coalesced, forming large circular masses of cells lying in a comparatively little-changed connective tissue, the interlobular tissue tolerating and resisting the growth to a degree not found in true scirrhous tumours, in which the growth develops from the secreting epithelium. The large round masses frequently fell out of the sections, leaving either cleanly-cut round holes in the connective tissue, or cavities lined by a single layer of cells, having a tendency to the formation of a columnar epithelium. In some of the round, smaller, and growing masses a distinct columnar and subcolumnar epithelium was present, although not in a highly-developed condition. The individual cells were small and rounded, and distinguished by an almost complete uniformity in the size of the nucleus, differing in this respect from the other form of breast-cancer. In the lobular areas, in which the cell-growth had not extended beyond the stage of small columns, a central lumen existing in some of the latter, the appearance coincided with that which is described as distinctive of adenoma, or chronic mammary tumour.—Mr. PARKER considered Dr. Thin's second case to be not cancer, but adenoma of the mamma, a simple hypertrophy of normal gland structure. His reasons for thinking so were that the patient was quite a young woman, and the connective tissue was not at all invaded by the epithelial growth—the large amount of epithelium in the spaces was probably owing to the active state of the gland. He was also unable to follow Dr. Thin in his views of duct cancer; he thought that a cancer starting from the galactophorous ducts would develop in the same way as one springing from the acini of the gland, especially as the epithelium of the acini was developed from that in the ducts, the ultimate difference in the cells in the two parts being easily explained by the dif-

[1] Fractures et Luxations, p. 496.
[2] Fractures and Dislocations, pp. 196, 197.

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ference in their mechanical condition.—Mr. H. MORRIS thought Dr. Thin was mixing up two classes of cases—those which begin as tumours in the breast, and led to retraction, inversion, and then ulceration of the nipple, and the others in which the formation of a tumour succeeds eczema of the nipple. In the latter series when the tumour has formed it progresses exactly as in the former class; but it was very rare; he had only met with two cases, though he had met with others in which a cancer in the breast had followed a transient attack of eczema.—Dr. PYE-SMITH remarked that according to the observations of Schiff and Creighton, the galactophorous ducts are ingrowths from the epiblast, while the acini are formed from the mesoblast; having seen Dr. Creighton's specimens he thought this view more correct than the old one referred to by Mr. Parker.—Mr. CRIPPS would have called the tumour an adenoma, and asked whether the axillary glands were affected, and whether there had been any recurrence of the affection.—Dr. THIN replied that the operation was performed on March 13th, that the axillary glands were removed at the time, and that up to the present there was no recurrence. He was quite aware that these cases were classed as adenomata by surgeons, but in his view such growths did not exist; if the epithelial growth were circumscribed it was called an adenoma, but if it spread and infiltrated it was called a scirrhus, while in reality it was but a modification of one and the same structure.

Dr. HOGGAN showed specimens exhibiting the histology of Painful Subcutaneous Tumour. He stated it to be an adenoma of the sweat glands, the pain being due to the pressure of the growth on the nerves which were not degenerated. Blood was continually effused into the tumour and organised into tumour tissue; it was this altered blood which by others had been described as connective or fibrous tissue, and by Axmann as Pacinian bodies.

Mr. GAY related the sequel to a case of Tumour of the Mamma exhibited and recorded by him in 1865, which he had removed from a young girl aged nineteen, in whom it had been growing for six months. It was removed again in July, 1867; a third time in May, 1869; then in May, 1874; again in 1877; and, lastly, in 1880. The tumours had been examined, and were found to be spindle-celled sarcomas; but the last time, one of two growths removed, which had grown very rapidly, was described as a myxoma. The patient had gradually become strong and stout, and appeared to be in all respects well. The specimens were referred to the Morbid Growths Committee.—The PRESIDENT remarked that the Society was greatly indebted to Mr. Gay both for the record of such an interesting case, and for the important sequel to an observation recorded years ago.

Dr. NORMAN MOORE showed a specimen of Aneurism of the Aorta opening into the right auricle. During life there were no symptoms of the disease, merely some increase of the cardiac dulness. The aneurism sprang from the aorta close to the valves, and opened into the right auricle by a smooth rounded aperture close to the opening of the superior vena cava, which was pressed upon by the tumour.

Dr. F. TAYLOR exhibited a specimen of Cirrhosis of the Liver from a child eight years of age, which had been under observation by himself and Drs. Pye-Smith, Barlow, and Cheadle for over three years, the symptoms having lasted for three years and a half. The symptoms were jaundice, sickness, and diarrhœa, with an enlarged liver and spleen and ascites; then later on diminution in the liver and great ascites. The liver weighed 25 oz., and measured 5½ by 3½ by 2½ inches. There was a great increase in its fibrous tissue, with large nodules on the surface. No uniform thickening of the capsule, portal vein and ducts patent. Spleen weighed 23 oz. Dr. Barlow had been able to extract from the boy that he both knew and liked the taste of brandy and gin, and often had them at night. At the present time he had under his care at the Evelina Hospital a child with an enlarged liver and ascites, who confessed to a liking for gin, which she had had given her since two years of age.

Dr. PORT showed a Dermoid Cyst from the Rectum, which he had removed from a girl sixteen years of age. It was attached by two pedicles to the back of the gut about two inches from the anus; it caused pain in defecation and intestinal obstruction. It became prolapsed and gangrenous, and he then ligatured the pedicles. The tumour contained a large quantity of long hair, and also a well-formed canine tooth. He had found a similar case recorded in Langenbeck's *Archives*, in which a long curl of hair protruded from the bowel.

Mr. SHATTOCK showed a Calculus mainly composed of Cystic Oxide with a thin zone of Oxalate of Lime close to the surface. It was removed from a man aged nineteen, whose urine presented the characters common in such cases.

Dr. PYE-SMITH showed a specimen of Varicose Aneurism of the Aorta, removed from a young man who had been ill eight weeks when first seen. He was then suffering from dyspnœa, orthopnœa, great pallor, and dropsy. His heart was healthy, but there was a loud systolic murmur to be heard all down the spine. The œdema of the lower limbs became intense, and was relieved by Southey's trocars, the use of which was speedily followed by gangrene and death with acute pneumonia and slight peritonitis. The aneurism sprang from the aorta close to its bifurcation, projected forwards, and so did not press upon the vena cava, but it opened into that vessel close to the junction of the two common iliac veins.

Dr. DYCE DUCKWORTH showed a living specimen of Sclerodermia Adultorum, the chief interest in which lay in the association of the diffuse and circumscribed forms of the disease in the same subject. The woman, twenty-four years of age, had a patch of morphœa on the left thigh, which slowly increased; an attack of subacute rheumatism came on, and left the fingers swollen and stiff. Three years later she noticed a second small spot of morphœa under the left knee, which slowly spread, and in eighteen months was followed by another attack of rheumatism. There is now a large patch of morphœa on the left thigh, which was retrogressing in the centre, and connected with the patch over the knee. The right lower leg and both hands and forearms were affected with the diffuse sclerodermia, the skin being as it were tightly stretched and indurated. The disease was evidently asymmetrical in this case.—Mr. CRIPPS thought the hardness was due to some affection of the deep fascia, and not of the skin of the forearms.—Dr. DUCKWORTH maintained that there could be no possible doubt as to the diagnosis.

Mr. EVE showed two specimens of Cystic Disease of the Kidney, which were found in a middle-aged man, who, seven days before admission to hospital, had hæmaturia and dyspnœa. Death occurred on the ninth day of the disease by uræmic coma. Both kidneys showed marked cystic degeneration. On examination of what was left of the kidney structure he found the tubules—but not the Malpighian capsules—greatly dilated and bare of epithelium.—The PRESIDENT was reminded by the short history, of a case of his own, where a seaman, apparently in perfect general health, was admitted into hospital for a compound fracture of the leg, and died a fortnight later of uræmia; post mortem there was hardly a trace of kidney structure to be found, the whole organs having undergone cystic degeneration.

Dr. BARLOW described a case of Ulceration and Gumma of the Tongue in a girl aged six, the subject of congenital syphilis, which he had shown to the Society a few weeks back. This form of disease had not hitherto been described in inherited syphilis.—The PRESIDENT remarked that if not described it had certainly been recognised, and he had seen several examples of it.

Dr. ABERCROMBIE showed three specimens of Primary Sarcoma of both Kidneys, all met with in young children who were admitted to hospital for enlargement of the spleen. There was no history of syphilis or malaria or symptoms of renal disease except in one case, in which there was also found some desquamative nephritis. The growths were all found to be small round-celled sarcomas.—Dr. PAYNE asked if it was certain the disease was not lymphoma, for the drawings reminded him of that disease, and the enlargement of the spleen lent weight to that view.—Dr. ABERCROMBIE replied that the spleen, though enlarged, was in each case normal in structure. In one case the growths were nearly entirely formed of connective tissue, and he thought this opposed to the view that they were lymphomatous. They were, at the suggestion of the President, referred to the Morbid Growths Committee.

Dr. S. MACKENZIE exhibited drawings of two cases of Congenital Disease of the Heart. In the first there existed stenosis of the pulmonary orifice, and the infundibulum was prolonged down into the ventricle by a septum incomplete below, simulating a supernumerary ventricle. The left superior vena cava was pervious, and thus the systemic veins opened into the left auricle. In the second case there were three ventricles, separated by incomplete septa. From the one furthest to the right came off the superior aorta, which after

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giving off the innominate, left carotid, subclavian, and the vertebral trunks, was continued into the pulmonary artery through the ductus arteriosus; the pulmonary artery beyond this vessel formed the descending aorta.

Mr. MCCARTHY showed drawings and microscopical specimens of a Tumour of the Face, which commenced as a wart on the lower eyelid of an old man. This was picked and scratched, and rapidly grew to such a size as to cover the eyeball completely. There was no pain, no affection of glands. It was removed with the thermo-cautery, and the wound healed and remained sound. In structure it was an alveolar sarcoma, round cells of varying size being continued in large spaces in a firm fibrous tissue, which sent in a fine supporting reticulum between the cells.—Dr. THIN thought the specimens exactly resembled those he had prepared of rodent ulcer.—The PRESIDENT stated that clinically the case was very far removed from rodent ulcer. It was a firm pedunculated growth of rapid formation, with no tendency to ulcerate.

The following card specimens were exhibited:—(1) Drawings of unusual forms of Cancer and Rodent Ulcer of the Skin of the Face; by the President. (2) Drawing of an Indurated Chancre on the Tongue; by the President. (3) Branched Calculus of Calcic Phosphate in the Kidney; by Dr. Ralfe. (4) Acute Fatty change occurring in an enlarged Liver (acute hepatitis), probably due to necrotic changes from plugging of the vessels; by Dr. Ralfe. (5) Cancer surrounding the Colon; (6) Strangulation of the Funis; (7) Double Kidney; by Mr. McMahon. (8) Persistent left Vena Cava; by Mr. Walsham. (9) Spontaneous Intra-ocular Hæmorrhage in an Infant; (10) Degenerated Eyeball containing much cholestearine; by Mr. Nettleship.

The meeting then adjourned until October.

Reviews and Notices of Books.

Army Medical Department Report for the Year 1878. Vol. XX. Parliamentary Blue-book. pp. 332.

[FIRST NOTICE.]

THE report just issued from the Army Medical Department, on the health of the troops in 1878, shows a great excess, compared with 1877, in the sickness, mortality, invaliding, and mean daily sick of the army generally, which however has not extended to all the stations. In all these particulars, except the mortality, the proportion has been above the average of the preceding ten years; the deaths were 0·65 per 1000 under that average. The most marked increase in the admissions into hospital, in comparison with 1877, took place in India, Mauritius, China, the Straits Settlements, and the Cape of Good Hope; and there was also the very heavy sick rate of Cyprus to be added. The high death-rate occurred among the troops in Cyprus, at the Cape of Good Hope—from disease, not casualties in the field,—in India, and at Mauritius.

The results for the troops serving in the United Kingdom differ so little from those of the preceding year as scarcely to require notice. There has been a reduction of 0·67 per 1000 of mean strength in the death-rate, which has only amounted to 6·53 per 1000 during the year. The progressive diminution in the mortality is undoubtedly satisfactory, but we are not quite prepared to accept it as evidence solely of an improved state of health. It is probably to some extent, we have no means of deciding how much, a result of the system of short service; and this view appears to be supported by the circumstance that the decrease has taken place principally in the deaths from phthisis, the shorter period of service removing the man from the ranks before the deteriorating influences to which he is exposed have had time to develop this disease. It would be highly interesting to have accurate returns rendered of the death-rate among the young soldiers transferred from the active force to the army of reserve. We do not know whether the War Office possesses the means of furnishing the requisite information on the subject, but, if not, steps should be taken to inaugurate such returns. The highest proportion of admissions into hospital occurred among the troops in the Home District, consisting almost entirely of the Household Brigade, and the cause of the great excess appears to have been venereal; next to it is the Channel Islands, where there was an excess of diseases of the respiratory and of the urinary systems—the latter, we presume, arising from gonorrhœa. The Eastern District stands third, and in it those of the digestive and cutaneous systems were prominent; we guess the diseases to have been diarrhœa and itch, but unfortunately the parsimonious regulations of the Stationery Office are still in force, and the valuable documents formerly published in the appendix to these Reports are now withheld; we are therefore obliged to put up with information of the class of diseases, without any indication as to the specific causes of admissions or deaths.

Very full information is given as to the results of the working of the Contagious Diseases Acts. It appears that in 1878 the admissions into hospital for primary venereal sores amounted to 40 per 1000 at the fourteen stations under the Acts, while they were 181 per 1000 at fourteen large stations not under the Acts; or 86 per 1000 at all the stations in the United Kingdom exclusive of those under the Acts. The prevalence of gonorrhœa in these groups amounted to 78, 121, and 82 per 1000 of the strength respectively. These results fully bear out those published in previous volumes as to the beneficial influence of the Acts in reducing the most formidable of these diseases.

From the table showing the mortality and invaliding of the different arms, we find that the highest ratio of admissions took place in the Foot Guards; and the lowest, omitting garrison staff and departments, in the Household Cavalry. The highest death-rate was in the Brigade Depôts (probably from the number of old soldiers with deteriorated constitutions from foreign service), and next to them the Artillery; while the lowest was in the Household Cavalry. The highest amount of invaliding was from the Cavalry of the Line; and the lowest from the Royal Engineers. Unfortunately, no information is given respecting the classes of diseases in which the excess and exemption respectively occurred in each arm. We would suggest for the consideration of the Director-General the advantage of having tables for the arms of the service similar to those for the Districts as given on p. 9. It would add much to the value and interest of the report.

The section on the influence of age on the mortality of the troops shows that, as compared with the average of the preceding ten years, the improvement has been distributed over all the ages. As compared with the civil population of England and Wales at the same ages, the death-rate is lower at each quinquennial period under thirty-five years of age, but higher in the two following periods. The comparison, however, is not perfectly accurate, as a large number of damaged lives are got rid of by invaliding, which may account for the lower rate among the troops at the younger ages, while the excess among them at the older is doubtless a result of deterioration arising from service in unhealthy climates.

The returns from Gibraltar give very favourable results for the year, even though they include the sickness of the 42nd and 71st Regiments on their return from Cyprus. The admissions amounted only to 671, the deaths to 6·59, and the mean sick to 37·2 per 1000. Although the ratio of admissions generally was little above the average, that by fevers was very nearly doubled, owing to the number of cases in the corps which had been serving in Cyprus, and which furnished 340 admissions, or upwards of 72 per 1000 of the strength of the garrison.

The admissions and deaths at Malta were considerably above the average, though the former differed very slightly

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from the preceding year. The diseases in which the excess of cases was most marked were fevers and debility, and of deaths, fevers. Enteric fever appears to have prevailed to a considerable extent, having caused 94 admissions and 32 deaths, or in the ratio of 15·2 and 5·16 per 1000. The greatest number of cases occurred in October and November, and next to these months in July and August, and the last furnished the largest number of deaths. The cause of the outbreak does not seem to have been clearly traced, but it is stated that "drains in the district during the year have in many situations been for long distances open, for the purpose of carrying out a reform in the drainage—this must have let loose obnoxious gases; a fact that could not be doubted when passing along the streets." The disease, however, does not appear to have prevailed to any great extent among the civil population at Malta. No precise information is given as to the cause of the increase in the admissions for debility, but it is presumed they were men who had suffered from fever, and after discharge were re-admitted in consequence of not regaining their strength. The Royal Malta Fencibles had higher ratios of admissions and deaths than in 1877, but the former were considerably under, and the latter only slightly above, the average. They had no cases of enteric fever among them.

The Report upon Cyprus shows the admissions from the 24th July to the end of the year to have been in the annual ratio of 4397 per 1000, and the deaths of 40·27. More than three-fourths of the admissions, and half of the deaths, were from paroxysmal fevers. The principal medical officer attributes the excessive sickness and mortality in the 42nd Regiment, as compared with the 71st, to the circumstance that it was stationed in a locality less favourable for health, "one where illness was more frequent, and where it was not recovered from, the individual attacked often suffering again and again from recurrences." He omits all reference, however, to the previous service of the 42nd in the Ashantee war, to which we believe the susceptibility of the men to contract malarious fever was in a great measure attributable. As we entered very fully into the question of the health of the troops in Cyprus at the time of the expedition,[1] it is unnecessary again to go over the ground. We can only express our regret that the history of it, as drawn up by Sir A. D. Home, does not at all come up to our idea of a good medico-historical report.

The health of the troops in Canada was satisfactory, the results differing little from the preceding year, and both sickness and mortality being under the average. Almost the only point worthy of note was the increase in the prevalence of paroxysmal fevers, but this was entirely due to the cases in the 101st Regiment after its arrival in November from Cyprus. None of them proved fatal; only one case of enteric fever occurred during the year. The invaliding from the command was a little below the average.

Bermuda furnished equally favourable results, the admissions being slightly under, and the deaths only one-half, the average. The most unsatisfactory feature was the occurrence of 15 cases of delirium tremens, and of 9 cases and 2 deaths of sunstroke, "the men attacked being, as a rule, of intemperate habits, and in a debilitated condition." The invaliding was exceptionally low.

In the West Indies the admissions, though differing but slightly from the preceding year, were a tenth, and the deaths 3½ per 1000, above the average. Half of the deaths were from fever. Of 7 of this class, 5 occurred in Jamaica from yellow fever, which prevailed at Port Royal in the end of August and beginning of September, and again in December. On both occasions the troops were moved from the town to "Apostles Battery" on the opposite side of the harbour, and the disease ceased. The principal medical officer attributes the outbreak to "climatic conditions, and a very insanitary state of the town of Port Royal, in immediate vicinity to the barracks, any evidence in support of importation of the disease being absent." Among the black troops the admissions were rather above, but the deaths little more than half, the average. One case of yellow fever occurred among them, and proved fatal. Phthisis is the chief cause of mortality in this class of troops; the ratio of deaths by it in 1878 was 3·58. It was in this class chiefly that the great reduction was manifest, the average of the last ten years having been 8·28 per 1000. The invaliding of the white troops was very low, but that of the black troops was nearly double the average, chiefly from diseases of the constitutional group, and possibly to this may have been due the reduced rate of mortality by phthisis.

In West Africa the admissions and deaths, particularly the latter, were very much under the average. The reduction has been chiefly in fevers and diseases of the digestive system; in 1878 there was not a single death from fever, and only one from phthisis.

At the Cape of Good Hope the admissions were slightly under, but the death-rate was nearly double, the average of the preceding ten years. The increase in the mortality was chiefly due to fever, but diseases of the digestive system also furnished double the usual proportion of deaths. Enteric fever furnished 115 admissions and 31 deaths, being in the proportion of 20·4 and 5·51 per 1000 of the strength. The principal medical officer thinks it should "properly be called typho-malarial, and was prevalent among the troops engaged in the Galeaka wars. It commenced almost simultaneously in East London, King William's Town, and Fort Beaufort, and gradually extended, in a lesser degree, to the camps in the Transkei and Ciskei." He thinks it was "due to the insanitary state of the grounds in the vicinity of the several camps, brought about by the filthy habits of the native troops and camp followers." Nine deaths are returned as having been caused directly by alcohol, and one by delirium tremens. Two men were killed in action, and three died in hospital of their wounds.

The health of the troops in the Island of Mauritius continues to be eminently unsatisfactory. The admissions, deaths, and mean sick were considerably higher than in the preceding year, and greatly in excess of the average. The chief cause of sickness has been the continued, or rather the increased, prevalence of paroxysmal fevers. The high death-rate arose from fevers, phthisis, and hepatic disease. Fevers were most prevalent in March, April, May, and June, and were attributed to "an unusually early rainy season, and to the fact that the men were under canvas at Point d'Easy, undergoing musketry instruction during the wettest season." We are not informed whether the P.M.O. took any steps to put a stop to so foolish a proceeding in a colony where the troops have been for some years past very unhealthy.

In Ceylon the sickness and mortality among the European troops were under the average. Trincomalee still furnishes a very large proportion of cases of ague. The most fatal disease was hepatitis, four deaths having occurred from abscess of the liver. The native troops are now reduced to a company of gun Lascars, the average strength of which was only eighty-six men.

The admissions and deaths among the European troops in China and the Straits Settlements were also under the average, amounting to 1105 and 13·02 per 1000. There seems to have been an unusual number of admissions under the head of phthisis at Hong Kong, but this may have been an accidental variation where the force is small. The invaliding was very high from diseases of the constitutional group and of the circulatory system. The Asiatic troops consisted only of a company of gun Lascars, averaging eighty-five men, stationed at Hong Kong.

[1] See THE LANCET of May 31st, 1879.

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THE LANCET.

LONDON: SATURDAY, MAY 22, 1880.

THE events of the last meeting of the Council of the Royal College of Surgeons proved those to be in error who imagined that Mr. MARSHALL had wholly abandoned his scheme of instituting an elementary examination in Anatomy and Physiology at or after the expiration of the first year of professional study. Over four years and a half ago, when Mr. MARSHALL first broached the subject, we were constrained, in what we believed to be the interests of medical education, to oppose it with all the force we could command. While sympathising with Mr. MARSHALL'S aims, and respecting his intentions, we did not attempt to conceal the fact that we were totally at variance with him as to the means to be employed to secure the end in view. The lapse of nearly five years has found our relative attitudes apparently unaltered. Mr. MARSHALL seems more than ever enamoured of his idea, while we like it, if possible, less. It is stale work furbishing up old objections, but until Mr. MARSHALL advances new arguments we have no alternative. We would refer those who are specially interested in the matter to the articles we published in November and December, 1875. We then stated our belief that Mr. MARSHALL had got hold of the wrong remedy for the evil of which he complained, and we think so still.

The defect which Mr. MARSHALL points out is one that others equally recognise and deplore. It is too true, the medical student does not learn enough of Anatomy and Physiology, and does not learn it in the right way. What he does acquire often slips before he has fairly finished his formal education; and at the Pass examination for the membership candidates are too frequently found to have very hazy notions about surgical and medical anatomy. Mr. MARSHALL would correct this by instituting at the end of the first year's study a compulsory examination in *elementary* Anatomy and Physiology. Surely this is a topsy-turvy way of viewing the matter. The student is not so much at fault as the system of education to which he is submitted. Mr. MARSHALL has, however, little to say against the folly of much of the prescribed course of study, and the hampering and irksome regulations imposed by the examining bodies. He fails to perceive that the imperfections in the acquirements of the student are in part due to influences of which the student is a victim. It undoubtedly makes shorter work to take Mr. MARSHALL'S representations as true. The student, he affirms, is idle, careless, and indifferent during his first year of study, and a compulsory examination at the end of this term would excite a wholesome terror, especially if it were made rigidly punitive. There is, we believe, no provision in Mr. MARSHALL'S scheme for improvements in general preliminary education, and no idea whatever of supervising the instruction given in the medical schools. Indeed, Mr. MARSHALL'S way of improving medical education is not unlike the profitless efforts to get more work out of a tired jade, by giving him his "refreshment" chiefly in the shape of whipcord. He would draw more out, but is not so careful to see whether more be put in. In truth, the student is already over-examined and under-taught. The only sensible and logical reform will be one that aims chiefly at improving the methods and character of medical education, indirectly diminishing rather than increasing the number of examinations. We need better examinations, and fewer of them. There is everywhere, among the best educational authorities, a growing antagonism to the supremacy of examinations for educational purposes. By an increasing number of competent persons examinations are looked upon as evils—necessary evils they may be, but none the less evils, and only tolerable as a preventive of a possibly worse order of things. What, therefore, is needed is an arrangement by which examinations shall accomplish more of good and less of ill. But Mr. MARSHALL'S plan seems to threaten the maximum of evil with a minimum, if not a total absence, of good. Sham knowledge and the pretence of knowledge are liable to grow up under any system of examinations, but under a purely inquisitorial examination like that which Mr. MARSHALL seeks to introduce they would become rank and rampant.

We believe that at the meeting at which he reintroduced his scheme Mr. MARSHALL cited a number of authorities who had acquiesced in its principle. As he has shown such a respect for authority he will thank us for bringing to his notice the opinion of a representative man of science whose utterances may have slipped him. Professor HUXLEY, in some remarks on scientific education, said that "A young man commencing the study of medicine is at once required to endeavour to make an acquaintance with a number of sciences, such as Physics, as Chemistry, as Botany, as Physiology [Anatomy is oddly omitted], which are absolutely and entirely strange to him, however excellent his so-called education at school may have been. . . . . The youngster, thus unprepared for serious study, is turned loose among his medical studies, with the result, in nine cases out of ten, that the first year of his curriculum is spent in learning how to learn. Indeed, he is lucky, if at the end of the first year, by the exertions of his teachers and his own industry, he has acquired even that art of arts." Yet Mr. MARSHALL would force on this bewildered youth a compulsory and punitive examination in which his only hope of safety would lie in a cunning concealment of his imperfect and unformed thoughts, and the flaunting of a spurious and factitious knowledge.

If this were the time for uttering compliments, we should say that no one on the Council of the College of Surgeons is more capable than Mr. MARSHALL to undertake the subject of educational reform, and that if he will only keep himself free from the taint of officialism, and follow the leading of his large and liberal instinct, no one is more competent to devise the machinery for raising the mass of his professional brethren to a higher level and one nearer to his own. But the occasion is too serious for stopping at compliments. In whatever light we view Mr. MARSHALL'S scheme, it strikes us as essentially vicious, and likely in the end to prove disastrous. If instead of squeezing the medical student almost beyond endurance, Mr. MARSHALL would exercise his influence on the Council towards ameliorating the preliminary education of the student, and thereby securing to the medical profession a higher grade of intellect, or at least

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a better trained one, he would earn the gratitude of his brethren and of the general community. In this direction there is plenty of scope for his energy and activity. For example, the Council of the College of Surgeons entrusts the charge and management of its preliminary examinations to the College of Preceptors, and this body shows its appreciation of the educational requirements of the medical student in French, German, and Greek, by never changing the subject for examination in these languages. A candidate who cannot succeed in committing to memory SAYNTINE'S "Picciola," or SCHILLER'S "Wilhelm Tell," or the first book of XENOPHON'S "Anabasis," in two or three years, must be a hopeless dolt. But the College of Preceptors have not changed any of their subjects for ten or fifteen years! As Mr. MARSHALL would not expect to gather grapes of thorns nor figs of thistles, so he should not look for first-class attainments from the medical student who only seeks a minimum qualification and who may not perhaps be educated beyond the requirements of the College of Preceptors.

IN the current number of the *Birmingham Medical Review* is a paper by Mr. WILLIAM THOMAS, one of the surgeons to the Birmingham and Midland Free Hospital for Sick Children, on the surgical treatment of empyema, as illustrated by several cases in which resection of one or more ribs has been practised. The success recorded by Mr. THOMAS is very marked. He has performed the operation nine times; four of the children have recovered with expansion of the lung and restoration of the excised rib, in three others all discharge has ceased and the lungs are in various stages of expansion; another case is "doing well," and the ninth case was almost moribund when operated on, and died six hours later from asthenia. The case of Dr. F. TAYLOR and Mr. G. HOWSE is also recorded in the paper. The object of the operation is to allow of full retraction of the ribs and efficient drainage of the pleural cavity. It is of course obvious, but yet not always borne in mind, that an empyema can never be cured unless the cavity of the pleura is obliterated by the expansion of the lung, the displacement of viscera, or the falling in of the chest wall, or all of these together. But only when the lung expands to its former size have we any right to speak of a "cure" having been accomplished; in the other cases recovery may have resulted, but the patient is sadly crippled, having a much diminished breathing power. We cannot keep this consideration too constantly and clearly in view; it is not enough to save the life in such cases, we ought also to save the lungs, and it is as much a stigma on surgery to allow a patient to recover with a collapsed useless lung, as to permit anchylosis of the hip to occur in a false position. This is not a mere quibble, for the want of a clear perception of this point leads to errors in practice which have very disastrous results: patients with pleuritic effusion are left alone so long as no serious symptoms arise, there is a long delay before the fluid is withdrawn, and meanwhile the lung is being compressed and possibly bound down, so that it can never fully expand again. We know that of late years paracentesis thoracis has become much more generally adopted and employed at an earlier period in the disease than formerly, but we want still further progress in the same direction. The main issue to consider in any case of pleurisy is the injury to the lung, and recovery with a damaged lung ought never to be looked upon as a satisfactory termination to a case. There is no period in the disease, after effusion has taken place, too early for aspiration of the inflamed pleura; there is no consideration more pressing than the speedy removal of the force compressing the lung. These being our views, we look upon such an operation as resection of the ribs as evidence of failure in the earlier treatment of the case. The removal of a portion of a rib allows freer drainage than can otherwise be obtained, and no doubt permits of a more complete recession of the chest walls than is otherwise possible, and the bone is eventually reproduced; but we must again repeat that recourse to it is an admission of failure to obtain a "cure," the effect of which is in many cases as disastrous as the saving of a life at the expense of a limb.

THE action of the Royal College of Surgeons, as reported in THE LANCET of last week, is of considerable interest to all who feel concerned about the efficiency and completeness of the examinations which qualify men to be registered and to practise the profession of medicine in Great Britain and her dependencies. We may recall the previous action of the College to the memory of our readers. At a meeting of the Council of the College on the 16th of October last, the late Mr. HANCOCK proposed several important resolutions in view of the little prospect which exists of any immediate medical legislation. He suggested that a Committee be appointed to consider the following questions, and to report thereon to the Council:—1. The necessary arrangements to be made for the institution of examinations in Chemistry, Materia Medica, Pharmacy, and Midwifery. 2. To advise the Council as to the degrees, diplomas, or certificates which should be accepted as exempting candidates from the necessity of passing the examinations in these subjects. 3. The desirability and the practicability of effecting a voluntary association between the Royal College of Physicians, the Society of Apothecaries, and this College, in the establishment of conjoint examinations comprising all the subjects required for the practice of medicine, surgery, and midwifery. 4. That before reporting the Committee be empowered to enter into such negotiations as they may think proper with the authorities of the above-named examining bodies, for carrying out the proposed association. In the end only the two first questions were referred to the Committee. This Committee, appointed on the 13th of November, and consisting of Mr. BIRKETT, Mr. MARSHALL, Mr. SAVORY, Mr. HOLMES, the President and Vice-Presidents, reported last week to the Council, and the following recommendation was made and adopted, subject to confirmation at the next meeting:—

"That in view of the uncertainty which prevails as to the compulsory establishment of a conjoint scheme in each division of the United Kingdom, and of the desirability of some combination being effected amongst the English medical corporations for the purpose of a complete examination in medicine, surgery, and midwifery, the Council should give notice to the several medical authorities concerned in the Conjoint Scheme of the intention of this College to withdraw from that scheme so that the independent action of the College may be thereby secured."

This is a very serious and, we may add, somewhat curious

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resolution, which, we may suppose, will be well discussed before being confirmed by the Council. It affirms two propositions, and recommends a course of procedure to the College. And it may be viewed from two very different points. It alleges an uncertainty as to the compulsory establishment of a Conjoint Scheme, and the desirability of a voluntary Conjoint Scheme among the English corporations for the purposes of a complete examination in Medicine, Surgery, and Midwifery, and, in consideration of these two facts, gives notice of the withdrawal of the College from the English Conjoint Scheme, the College's fidelity to which has been so conspicuous and so creditable.

As to the uncertainty of legislation. Legislation was never more certain than it is at the present moment; that is to say, so far as certainty is made up of probabilities. The last two Governments had to consider the question of medical reform. The Government of Lord BEACONSFIELD agreed to the appointment of a Select Committee, which has collected, at much cost of time, labour, and money, a great mass of information, which must now either be completed and used, or left incomplete and be wasted, leaving the great questions of medical reform still unsettled. Some of the most conspicuous members of the Liberal party, now in power, took great pains to arrive at the truth as to the defects and faults of our existing examining bodies and of the General Medical Council. Is it likely that a Liberal Government will be more slow to reform these bodies than a Conservative one? Or that the course of inquiry by a Select Committee, adopted by both parties in the House of Commons, will now be abandoned, when it is nearly completed? It may be so. The new Government may be so absorbed with transcendental reforms that it may have no time for measures of improvement which have been called for for ten years at least by the most earnest men in the Medical Council, and by the whole medical profession. We say this may be so; but we shall not believe it to be the case until it is categorically announced by the Vice-President of the Council, who is not altogether unacquainted with this subject. There is, of course, no absolute certainty in politics; but it would be difficult to imagine any greater certainty of legislation in a medical matter than that which is constituted by the history of this question in Parliament and in the medical profession. So much for the uncertainty of legislation, on the ground of which the College proposes to extricate itself from the English Conjoint Scheme.

The College advances a more forcible proposition when it asserts the desirability of a combination being effected amongst the English Medical Corporations *for the purposes of a complete examination in medicine, surgery, and midwifery*. The College may well evince some feeling of uneasiness at the incompleteness of its examination, on the strength of which alone a large number of practitioners are practising medicine. This imperfection was brought out fully in the Select Committee, and, indeed, frankly admitted by such important witnesses as Sir JAMES PAGET and Mr. SIMON. The examination for the College was never more effective than it is to-day; but what shall be thought of an examination admitting to the Medical Register which does not include Therapeutics, Pathology, Midwifery, or Medical Jurisprudence? An examination so defective could not have existed so long apart from the system of medical bodies which exists, and which is more worthy of the eighteenth than the nineteenth century. It is creditable to the College of Surgeons that it should wish to see a complete examination in Medicine, Surgery, and Midwifery, but it is very questionable whether the College is well advised in withdrawing from the English Conjoint Scheme in order to bring this about. The College has made some amends for its hitherto very defective examinations by the stand which it has taken in defence of the English Conjoint Scheme, and by giving its great influence in furtherance of similar reforms in each division of the kingdom. It is scarcely acting up to its own recent high standard of behaviour in taking a step which must tend to break up the English Conjoint Scheme, which will be regarded as an admission of failure by the enemies of reform in other divisions of the kingdom, and which can in no way tend to answer the demand for better and for equal minimum examinations in each division of the kingdom. It is no secret that very influential members of the Council disapproved of the above recommendation, and it will be interesting to see whether it will be confirmed at the next meeting.

Annotations.

"Ne quid nimis."

EXAMINATIONS AT THE LONDON UNIVERSITY.

IT will be remembered that at the meeting of Convocation on Jan. 13th last the members, in accordance with a recommendation from the Annual Committee, passed a resolution stating the desirability of holding the Preliminary Scientific and first M.B. examinations twice annually instead of once, as is now the custom. A committee of the Senate has been appointed to consider the reasons which have been urged for such a change, and we hope that the question of expense will not, as is rumoured, be allowed to stand in the way of an alteration which every consideration of justice to the student so imperatively demands. The committee, we are glad to see, is thoroughly representative, being composed of the following members of the Senate:—Lord Derby, Dr. Barry, Sir G. Burrows, Mr. Busk, Mr. Fitch, Sir Wm. Gull, Sir J. D. Hooker, Mr. Hutton, Sir Wm. Jenner, Dr. Johnson, Mr. Osler, Sir James Paget, Dr. Quain, Mr. Shaen, Dr. Storrar, and Dr. Williamson. As was pointed out so clearly in the report of the Annual Committee the proposed change would have a tendency to increase the number of graduates without in any way lowering the present standard for the medical degrees, as must be obvious to every one who has had any experience as teachers or as examiners at the University. Another most important innovation sanctioned by the Senate is the introduction of original research among the qualifications for the degree of Doctor of Science, and we shall anxiously watch the results of this new departure.

THE GENERAL LYING-IN HOSPITAL AGAIN.

THE General Lying-in Hospital in York-road has repeatedly made an unfavourable appearance before the public. The evil genius of mismanagement seems to mar its hope of usefulness. Some time ago it was closed, not for the first time, on account of an outbreak of puerperal fever. Six thousand pounds were then expended in structural and other alterations, under the advice of Professor De Chaumont, with the result of securing a hospital, in so far as a mere building is concerned, fairly fulfilling the requirements of

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modern science. An old bye-law provided that "the matron should be a single woman or widow without incumbrance." This was set aside, and a lady with two children was elected. In vain the acting physicians protested, pointing to the old law designed for the express purpose of screening the patients from a possible source of danger. Again, infinite pains were taken, under the guidance of Professor Lister himself, who accepted the post of consulting surgeon, to form a system of antiseptic precautions. The scheme was adopted by the Committee with much parade of conviction and resolution to carry it out. But they reckoned without the matron. The system of nursing did not work. Nurses were often changed. In the case of one woman dangerously ill with septicæmia seven nurses were put on within six days. The physicians were helpless. Their representations were treated as frivolous. Nurses came into the hospital and were not supplied with copies of the antiseptic rules, although it was an essential part of the antiseptic scheme that these should be studiously observed. One of the matron's children brought measles into the house, and shortly afterwards one of the patients caught the disease. The remonstrances of the physicians were again disregarded. Dr. Hayes, Dr. Fancourt Barnes, and Dr. Moullin resigned. Dr. Hirst, the house-physician, had resigned some time previously. Respecting themselves, their profession, and their duty as public servants, they could do no less. They cleared themselves of a responsibility practically unsupported by the authority which alone could make it endurable. In this conjuncture the committee sought to find more pliable physicians. A list of young men who might be induced by payment to take the office for a time was, it is said, prepared. Dr. Cory, the first applied to, on learning the circumstances under which the entire acting staff had resigned, at once honourably declined the overture. A strict investigation must follow, the report of which will be looked for with anxious interest. In the meantime, as it stands, this episode in the history of a public charity offers a not inapt illustration of our recent remarks on "the hospital charity of medical men." It must be read in conjunction with the history of what has been lately passing at Guy's. These two stories together seem to show that the natural tendency of the craze for lady-nursing is to place the nurses first, the physicians and patients last.

"THE STRANGER WITHIN THY GATES."

UNDER the Mosaic system of government the amplest provision, looking to the conditions of life in those times, was made for personal and social hygiene. The code of morals and cleanliness did not overlook the stranger within the gate, although he was generally a bond slave, and therefore not entitled to the highest consideration. For his own good, and for the sake of those in whose midst he lived, care was bestowed on him. We have changed all this. Modern civilisation, in its refinement, is becoming fairly solicitous for the public health, and, with commendable prudence, is beginning to place the customs and surroundings of domestic life under reasonable control; but we have not yet realised the fatuity of leaving the stranger within our gates wholly out of the sanitary scheme! With rare exceptions, the heads of even well-regulated households do not deem it necessary to enforce habits of personal cleanliness upon their domestic servants. Probably they know almost nothing of their menials. They are strangers when they are admitted into the household, and strangers they remain. We sicken at the thought of an Irish peasant keeping a pig in his hovel, and allowing it to feed off the same platter with his children; while at the moment we have in our houses, in the closest association with the young and most susceptible members of our firesides, men and women who, for aught we know, possibly wash only at long intervals, seldom change their under-clothing, and in their habits and mode of life vie with the pilgrim to Mecca. Some curious facts which have come to our knowledge suggest a word of caution on this point to the heads of households and parents of families, who are careful enough of their own lives, but forget an ever-present peril to which they are exposed by contact with the *stranger* within their gates. There is an obvious remedy for this evil, and scrutiny might, perhaps, lead to startling disclosures. In one case that has just been brought to our notice, and which suggested these remarks, it was accidentally discovered that a female cook, in a respectable family, had not, to the knowledge of her fellow servants, occupiers of the same rooms, changed her clothes for a whole month!

OUR COMMISSION ON WORKHOUSE INFIRMARIES.

IN another column will be found the preliminary Report of a Commission appointed by THE LANCET to investigate the condition and work of the infirmaries attached to workhouses. This is a very practical subject, not less interesting as studied from the economic standpoint than from the medical. The infirmaries of workhouses represent the provision made by the ratepayers to satisfy the hospital requirements of the indigent classes. Pauperism is increased by the sickness of the bread-winning members of families who fall ill and leave those dependent upon them to be maintained out of the rates. We do not say that sickness is the only, but it is beyond question, one of the most active causes of pauperism. Guardians of the poor—that is, of the rates—and political economists generally should look at the matter in this light. The progress of this inquiry will probably afford much material for their earnest consideration.

MEMBERS OF COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

THE ensuing contest of candidates for a seat in the Council of the Royal College of Surgeons is likely to be unusually exciting. There will be four vacancies—one caused by the death of Mr. Hancock, two through the retirement by rotation of Mr. Busk, F.R.S., and Mr. Curling, F.R.S., and one by the recent resignation of Mr. Simon, F.R.S. It is said neither Mr. Busk nor Mr. Curling intends to seek re-election. For these four vacancies there are likely to be at least six candidates, and perhaps more. The names of the following Fellows have been freely mentioned in the order of their standing: Mr. Cadge, of Norwich, 1848; Mr. William Adams, 1851; Mr. Lister, 1852; Mr. Bryant, 1853; Mr. Sydney Jones, 1856; Mr. Hulke, 1857; Mr. Thomas Smith, 1858; and Mr. Berkeley Hill, 1859.

PATHOLOGICAL SOCIETY OF LONDON.

THE closing meeting of the present session of the Pathological Society was held on Tuesday last. This year the meetings have all been devoted to the ordinary work of the Society, no debate having been held. The new arrangement, by which specimens may be exhibited "by cards," on which short descriptions of the cases are recorded, without occupying the valuable time of the Society, appears to have worked well, a large number of interesting specimens having been in this way shown, and an important addition made to the work accomplished by the Society. When originated, the plan was stated to be tentative only, but we hope that the council of the Society will continue it in operation. We would suggest that it might be made still more useful and acceptable if either the secretaries, or two or more gentlemen specially appointed for the work, were to decide which specimens should be fully described and discussed and which exhibited "by card," for occasionally exhibitors appear not to make the wisest choice of the method best

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suited to their own specimens. The time of the Society is sometimes taken up with specimens that might well have been shown by card, and devoted with advantage to the fuller consideration of those merely placed on the table. There might be difficulties in thus interfering with the "liberty of the subject," but surely they would not be insuperable, and, at any rate, the plan might be tried; it only requires loyalty to make it successful.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

A MEETING of the Fellows will be held on the last day of this month to consider a notice of motion by Dr. Brunker, a member of Council. Dr. Brunker, in conjunction with a large number of the Fellows, considers it advisable that steps should be taken to enable all Fellows of the College to vote by proxy or voting papers for the election of the President, Vice-president, and Council. About one-fourth or one-fifth only of the Fellows vote at the annual elections each June of the College officers, a large number distributed through different parts of the country being unable to record their votes for various reasons. It is suggested that in order to accomplish the change indicated the Council should make application to have words introduced in the Medical Bill when again before Parliament to the following effect:—"That, notwithstanding any existing Charter, all Fellows of the College of Surgeons in Ireland may have the privilege of voting by proxy or voting papers for the election of the President, Vice-president, and Council."

On the 7th prox. the annual election for President, Vice-president, Council, and Secretary for the ensuing year will take place. Dr. McClintock, vice-president, will, in the ordinary course, become President, and the office he vacates will probably be occupied by Mr. Chaplin, of Kildare. As regards the Council, it does not seem likely that there will be any change in its present constitution.

THE QUALITY OF MEAT.

THOSE who perpetuate the old English custom of living on food which is so far honestly cooked for the table that the eater may know what he is taking—who do not in fact use made dishes which may be made of anything,—must have noticed of late a considerable depreciation in the quality of meat. It is either soft and flabby, or stringy, tough, and poor in flavour. This is a serious matter, and may be taken as a foretaste of what is to come unless something can be done to stay the plague of reckless importation. It may be *safe*—though we doubt the conclusion—to eat the flesh of unhealthy animals, some suffering from loathsome febrile and wasting diseases, and killed to prevent their dying naturally, but it is not nice or prudent to do so. Better diminish the proportion of animal food in our ordinary diet than eat measly pork, the flesh of sheep affected with liver disease induced by the fluke parasite, and the wasted, or, which is quite as revolting, the artificially fattened, carcasses of unhealthy bullocks and cows. Poultry loaded with fat by a process imitated from the phenomena of disease, are appreciated by the palate. It does not, however, follow that these things are really "good for food." We believe that those who would be healthy should use healthy nutriment. If it is impossible to procure this luxury in sufficient quantities, let the public pursue a sensible course, and resort to articles of diet which supply an equally serviceable material, less costly, and more under control. We have no sympathy with the vegetarian craze, but unless animal food can be furnished at a fair price, and in healthy condition, it will soon become necessary to prefer vegetable diet. The slaughterers of cattle and those who prepare their flesh for food are able to recognise many hideous diseases, and have terms of their own with which to designate them. For example, they know tuberculous disease when they see it, and yet they are content to remove the sickening mass and send the residue for human consumption, as though the whole animal were not poisoned!

MILK AS A CAUSE OF TUBERCULOUS DISEASES.

IT seems that a considerable percentage of the cows in dairy farms throughout the country are infected with tuberculous disease, and the milk from animals so affected has been found to propagate the disease in other animals, for example pigs. Boiling does not render it innocuous. May not this be one cause of the spread of tubercle among the human species, and particularly the population of large cities? Children are very largely fed on cow-milk; and the class of maladies which has a known connexion with the formation of tubercular deposit in the various organs of the body is undoubtedly increasing. It is not a philosophic conclusion that the young of one species can be safely or naturally fed on the milk of another. This is obviously a grave question to raise, and we raise it with a full sense of responsibility. If it can be shown that the feeding of infants on milk of the cow and the extensive use of that commodity as an article of diet is a perilous error, the inference must be grave indeed.

"CRUELTY TO WOMEN."

WE do not intend to allow the subject of seats for women serving in shops to drop until the wanton ruin of lives has been abandoned at least by the leading houses in the metropolis. Two letters which appear in another column, from the large and important firms of Farmer and Rogers, drapers, Regent-street, London, and Goodlet, of Edinburgh, are, we hope, the first of a series of notifications that seats have been or will be, *at once*, provided. We shall publish such communications as they arrive, and appeal to all with whom we have any influence to patronise the establishments to which they relate, and avoid others where the concession to health so repeatedly urged in THE LANCET, and by individual practitioners like Dr. Edis, is refused. Finally, it is our intention to publish a list which may act as a guide to visitors in London, and we trust many residents, showing where their custom may be bestowed without the feeling that they are helping careless employers to inflict a life-long injury on their servants, with no better excuse than the desire to produce a semblance of business activity which does not exist. The total number of medical practitioners in the country having personal influence with the families they attend is very large. If, as we have reason to hope, these gentlemen will take measures to place our list of *humane* shopkeepers in the hands of their patients, the effect can scarcely fail to be such as to secure the result we *mean* to obtain. We invite communications from the heads of establishments wishing to make the concession which humanity claims.

THE SEAMEN'S HOSPITAL.

A STRIKING feature in the report of the last year's proceedings of this valuable charity, which has been lately published, shows how grateful the seamen themselves are for the benefits which they and their comrades have received from the present medical staff and their predecessors on board of the old *Dreadnought*. One-tenth of the annual cost of the institution—i.e., a sum of £1200—has been contributed by the seamen themselves out of their scanty earnings in answer to a hope that collections on board ships would be made in aid of so deserving a charity. The wages of seamen during the past year have been so low, and the number of those unemployed so great, that the response is gratifying in the extreme. In no hospital in London, and

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probably in none in the provinces, has the class which derives medical attendance and aid therefrom done so much towards maintaining the institution whose object is their welfare and succour. "Poor Jack," in one way at least, sets a worthy example to the working-classes on shore, whose wages, as a rule, far exceed his.

"OVERWORK AND UNDERWORK."

CONSIDERABLE interest has been excited on the subject of "underwork" by a popular lecture recently delivered by Dr. Wilks, and the theme is one of very high importance. Underwork is the converse of overwork, and it cannot be doubted that it is the more wide-spread and worse evil of the two. The reason of this is obvious; work is the natural stimulant of growth, and the cause as well as the complement of nutrition. A person who does not work *cannot* eat, to paraphrase a dictum of the purest science and philosophy. The working capacity is the measure of the capacity for nourishment. An ill-trained system, or part, of the organism not only lacks the power to act, but also the power to recuperate itself under any accidental strain of exercise. The loungers and loiterers in life, the listless, purposeless people, who have no joy in their labour for its own sake, form the class from which the population of asylums is principally recruited, and it is the temporarily active individuals of this order who break down from overwork. Sometimes a man or boy who has not been educated, in any physiological sense of the term, whose faculties may be naturally brilliant, but who is not formed for continuous exertion, becomes inspired with a special longing to exert himself. He works on earnestly, but he is like a man trying to play the part of an athlete with no trained muscular system to call upon. He breaks down, as it seems, from overwork, but it is the underwork of previous years that kills him.

CAFÉS IN THE PARKS.

THE season is coming when for about three months, if the weather should be propitious, the middle-class residents in London may be expected to use the parks as places of pleasure and exercise. Would it not be possible to provide a few well-conducted and conveniently-placed cafés, of the simplest description, but suitably furnished? As it is, milk, of a sort, and, we believe, a few sweetmeats, may be procured at one or two of the lodges in Regent's Park; but without violating the national tradition which compels the people of England to take their pleasures sadly, is it altogether impracticable to go one step further, and provide for the supply of a cup of tea or coffee, with a little simple food, for the use of those who desire something more palatable to the adult taste than "milk" and sugar-plums? It seems almost sacrilegious to suggest that the creature comforts of "the people" should be allowed to trouble the thoughts of a Royal Ranger of a Royal park; but inasmuch as the vulgar crowd are permitted to enjoy the luxury of an outing in these beautiful enclosures their pleasure might be enhanced by the additional boon we ask for them.

SECTION OF THE OPHTHALMIC NERVE.

AT a recent meeting of the Académie de Médecine M. Laborde shewed two rabbits in which he had succeeded in dividing the ophthalmic branch of the fifth nerve alone. Hitherto, in operating according to the method of Claude Bernard, the lesion had not been limited to the ophthalmic branch of the fifth. The motor parts, the cerebellar peduncles, and even the cerebral substance, were divided, whence nervous disturbances arose. The method of M. Laborde consists in dividing the nerve through the temporal fossa, by which means he succeeds in limiting the injury to the nerve, and has found results which differ from those hitherto described. In the operation of Bernard the nutritive alteration in the eye has been ascribed to the insensibility of the cornea, but Laborde finds that the changes do not commence in the cornea, but that the first change to be observed is an accumulation of pus in the anterior chamber, and that this leads to secondary perforation of the cornea. The two rabbits exhibited presented different stages of the lesion. In one the pus was already escaping from the anterior chamber. In the other there was only a cicatricial opacity of the cornea, indicating the commencing regeneration of the divided fibres.

THE MIDDLESEX HOSPITAL.

WE understand that the school buildings in connexion with the above hospital are to be forthwith enlarged. Owing to the increasing number of students the accommodation in the dissecting-room was found to be so inadequate last session that one of the class rooms had to be utilised for this purpose, in addition to the dissecting-room itself. It has now been decided to enlarge the room by throwing into it the whole area now occupied by the lecture theatre; whilst a new theatre, to accommodate two hundred and fifty, is to be built in front of the west wing of the museum. Plans for these alterations, drawn up by Mr. Wyatt, have been approved by the Weekly Board and Medical Committee, so that in a few months the theatre wherein Charles Bell was the first to lecture will cease to exist.

CHILDREN'S HATS.

NOW that the sun is again occasionally visible, it may be worth while to remind parents that the use of a child's hat is to cover its head, and the use of the brim is to shade the eyes. It is painful to see infants and little folk of tender years with half-closed eyelids, corrugated brows, and faces screwed up and distorted by the glare of the sunshine, from which they ought to be protected. Fashion is the Juggernaut of life all the world over, and children are tortured, with the kindest intentions, in the worship of the hideous monster; but it is needless to inflict petty sorrows and annoyances which do not actually form part of the orthodox sacrifice to folly. While children are beneficently allowed to wear hats with brims, these useful appendages should be turned down so as to shade the eyes. This simple precaution will save considerable pain, spare some trouble with the eyes, and produce a more pleasing expression. Children who are perpetually struggling to keep the sun out of their eyes do not either feel amiable or look happy, as a walk in one of the parks any fine morning must convince the attentive observer.

HUMANITY IN HANGING.

SOCIETY prides itself on being humane even in its most vindictive moods. It would not needlessly, still less wantonly, prolong the torture of a criminal dying at its hands. In the extremest severity of justice it would remember mercy. It can, therefore, only be necessary to point out to those in authority, and even to the common hangman, that by lengthening the rope by which a malefactor is to be strangled, in order to give him a "long drop" and thereby accomplish what is erroneously called "instantaneous death," a new horror may be introduced into the act of execution. An appreciable time, which may seem an eternity, is occupied in the act of falling. We know by the study of dreams, and the recollections of persons who have been half drowned, or stood for a moment face to face with death in one of his most appalling forms, how much may seem to happen in an instant. What torture may not the criminal falling with a rope round his neck some nine feet experience? We recognise the aim of the executioner, and approve it; but there is an obvious

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limit to the pursuit of one humane purpose at the risk of creating an evil worse than that it is desired to remedy.

UNIVERSITY OF DUBLIN.

RESOLUTIONS have recently been adopted by the Council to the effect that the medical scholarships shall be divided into two, one being for anatomy and physiology, for which no student will be allowed to compete after the completion of his third year, and the other for physics, chemistry, botany, and materia medica, for which no candidate after his second year will be eligible. The course in ophthalmic surgery will consist of three months' clinical instruction, and a systematic course of lectures delivered twice a week, there being not less than ten full ophthalmic beds in use during the course.

ARSENICAL POISONING THROUGH A DRESS.

A RECENT number of the *Neue Freie Presse*, of Vienna, gives, on the authority of the *Berliner Börsen Courier*, the following account of arsenical poisoning through a dress:—A certain Commerzienrath L—— brought home for his daughter from a well-known Parisian *atelier* a splendid dark-green dress trimmed with light-green leaves. The dress was frequently worn, but, after a time, the lady, who had a very beautiful complexion, remarked an outbreak of pustules on her neck and arms, which was especially painful at night. For a long time she concealed her state from her parents and the family physician, but after applying in vain all kinds of domestic remedies, she could no longer keep the matter secret, as she had become much worse. The family doctor at once recognised the effect of arsenical poisoning, and on chemical examination detected a large percentage of arsenic in the material of the dress.

MURCHISON MEMORIAL CLINICAL SCHOLARSHIP.

THE Hon. Treasurer, Dr. Potter, has acknowledged in *The Times*, this week, the receipt of a £100 bank-note as a donation to the funds of the above from an anonymous contributor "who loved and esteemed Charles Murchison." The Committee will meet shortly to arrange the details of the Memorial scheme, and all who have not yet forwarded their subscriptions, or intend to contribute to it, are requested to communicate with the Treasurer without further delay.

THE VACANCY AT THE EDINBURGH ROYAL INFIRMARY.

MUCH interest is felt in reference to the appointment of an extra assistant physician in the Edinburgh Royal Infirmary. The growth of the Edinburgh School, and the overwhelming necessity of securing a physician who will turn the appointment to the best uses, explain this interest. The candidates are Dr. Byrom Bramwell, Dr. Andrew Smart, Dr. James, Dr. Allan Jamieson, Dr. Meinet, and Dr. Sinclair.

THE death of Surgeon-Major Sydney Alder, from the effects of Ashantee fever, is announced. The deceased entered the army as assistant-surgeon in 1854, and served with the 62nd Regiment in the Crimean campaign, for which he received the medal with clasp and the Turkish medal. He became surgeon-major in 1867, and was appointed to the Royal Welsh Fusiliers, from which regiment he recently retired. Mr. Alder was in his fifty-first year.

A BILL has been introduced into the French Chamber for making vaccination and revaccination compulsory. The measure provides that vaccination shall be performed on a child within six months of its birth, and that revaccination shall be done every ten years afterwards.

THE guardians of St. George's in the East have offered an example of appreciation of public medical service which it would be gratifying to see followed by other boards. Mr. J. J. Rygate, after thirty-two years' labours as medical officer of the union, feeling the need of rest, tendered his resignation. The announcement of this decision on the part of Mr. Rygate, however, elicited from the guardians so many expressions of kindness and sympathy that the medical officer was induced to ask permission to withdraw his resignation. This request was acceded to, the good feeling of the Board being also displayed by granting Mr. Rygate two months' leave of absence.

The Governors of the Worthing Infirmary and Dispensary have decided upon the Lansdowne-road site as the most eligible one on which to erect the proposed new infirmary. Without desiring to express a positive opinion, in the absence of precise local knowledge, we are nevertheless inclined to attach some weight to one objection, at least, advanced by the dissentients from this arrangement. Contiguity to gas works certainly does not seem a desirable feature in the situation of an institution for the cure of the sick. We think this disadvantage in the chosen site did not receive in the discussion of the subject the consideration it merited.

THE Edinburgh Graduates' Club held its quarterly dinner at the Inns of Court Hotel, on May 13th inst. The chair was occupied by Dr. Farquharson, M.P., and most worthily so. Dr. Farquharson has long been a most arduous and efficient honorary secretary. It was but a fit recognition of his services, and of the recent honour done to him in West Aberdeenshire, to place him in the chair. There were several distinguished visitors, and the night passed pleasantly. If some of the speeches—like the dinner—were a little too long, they were all good.

AT the Romford County Court, on the 14th inst., J. T. Abdy, Esq., judge, decided in favour of the claim of a surgeon for 12*s*. 6*d*. for medicine and attendance. The plaintiff attended the defendant's son-in-law at her house, and he stated that she promised to pay. This, however, was denied by the defendant, who also said that she had not sent for the surgeon. Judgment for the plaintiff was, nevertheless, given.

A LETTER in the *Echo* of the 19th inst. directs attention to the need of a general hospital for the poorer inhabitants of West Ham and South Essex. At present the London Hospital appears to be the only readily accessible institution for the reception and prompt treatment of the numerous cases of accident that occur in the large works and manufactories which abound in the district.

A FATAL case of poisoning is recorded at Chelmsford, which arose, according to Dr. Meymott Tidy, from eating hemlock-water-dropwort. Several boys while at play picked parts of this plant and ate them. Three were taken ill, and one died after a short illness of an hour or two.

SIR ROBERT CHRISTISON, Bart., has, we hear, been nominated as a candidate for the Lord Rectorship of the University of Edinburgh, vacant in November next. Sir Robert is the nominee of the Conservative Club.

WE are asked to state that Mr. Osman Vincent's lecture at the National Orthopædic Hospital, on Genu Valgum, has been postponed until Wednesday, June 2nd.

THE chair of Logic and English Literature, in Aberdeen University, lately held by Professor Bain, has become vacant. The appointment to the post rests with the Crown.

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The Lancet Commission
ON
WORKHOUSE INFIRMARIES.

INTRODUCTORY.

WE have been persistent in urging that sickness is the most important and constant factor in the production of pauperism. Intemperance and improvidence, no doubt, play their part; the former by weakening the constitution and rendering it less able to resist the inroads of disease, and the latter by dissipating the means which might have served as a defence against times of sudden difficulty and emergency. Nevertheless we are convinced that the case against the poor in this respect has been made the most of, and they have suffered materially in consequence. The Quaker physician, Lettsom,[1] who at the commencement of the present century eloquently urged the importance of promptly curing sickness arising among the poor if it is desired to save them from drifting into hopeless pauperism, well remarked that "one drunken or profligate man makes more noise, and becomes more conspicuous, than a thousand starving, modest, industrious, and worthy persons." And with regard to their alleged improvidence, he calls upon his reader to reflect "on his own expenses; ask himself what he expends, on clothes, on washing, on coals, on house-rent; nay, let him alone calculate what he spends for bread alone, an article in which there is rarely much waste, and he will then wonder how a poor man with a few shillings a week feeds and clothes a family, pays rent for his apartment, buys a few coals, and contrives to exist." Since Lettsom wrote, public opinion has taken a fairer view of the trials and difficulties that combine to pauperise our labouring classes. The pauper now is not perhaps regarded as only one remove above a criminal, but as a social failure whom it is convenient to hide away and forget. It is not our present purpose to descant on the demerits of the workhouse system; it will be sufficient to state that in our opinion, and in the opinion of many others, next to sickness, the workhouse is the most active factor in the production of pauperism. The children who in all workhouses until lately, and in many still, are reared within its walls, and whose very hours of play are shadowed by failure in the presence of the attendant pauper, go forth into the world bearing the stigma attached to its name. The temporary inmate, whom sudden distress or sickness has compelled to take refuge within its walls, on his discharge finds himself regarded by his associates, if not by his superiors, as tainted with the stain of pauperism, loses his self-respect, and with that all pride of independence. As has been well observed, "every passion that gives energy to soul and body seems buried in the common wreck of his independence, his offspring inherit the same inertia, and a mean and beggarly squalid race is generated, doomed to become a burthen to themselves and to the community as long as the same policy is pursued." If pauperism is to be successfully combated, the causes that produce it must be dealt with at their commencement; and our present purpose is to show how this can be best effected by the prompt and effectual relief of persons disabled by sudden illness.

The poor man when stricken with illness has three asylums offered him—the hospital, the dispensary, and the parish. Under the present system the hospital in many cases tends indirectly to the production of pauperism, as a little consideration will show. A working man is attacked, say with pneumonia, pleurisy, or bronchitis, as the case may be. The case is urgent, and he is at once admitted, and under treatment makes a good recovery, and is discharged, say at the end of a month or five weeks. During that time his wife and family subsist on his club allowance, rarely more than 10*s.* or 12*s.* a week. The man on leaving the hospital finds himself compelled to seek employment long before his powers are sufficiently restored, although, undoubtedly, the disease for which he entered the hospital is cured. The history of many a workhouse case tells what most frequently befalls him, and how, after a time, he drifts into some chronic pulmonary affection, and, in his fall, drags down his wife and children to hopeless pauperism. The extension of convalescent homes in connexion with our hospitals is greatly needed; at present the accommodation in that respect is sadly inadequate. In only one hospital in the metropolis (the Seamen's), we believe, is the important principle recognised that the patient should not only be cured of his disease, but should also be fully restored to health and strength before he is discharged. The out-patient rooms of hospitals furnish also a large contingent of those who ultimately drift into pauperism disabled by chronic diseases, which in their earlier stage might have been arrested. Physicians accustomed to out-patient work have frequently pointed out that a very large percentage of those coming under their care require medical treatment less than good food, rest, warmth, and nursing. The cases of debility, dyspepsia, general malaise, which ultimately culminate in an utter breakdown, permanently disabling and throwing the sufferer on the rates for months, perhaps years, might be altogether avoided if relief for a few weeks could be obtained at the right time. Instead of which valuable time is spent in seeking palliatives for symptoms in the out-patient room, whilst the causes which induce the disease are unrelieved. The superintendent of the Highgate Central Asylum in his report for the present year, has pointed out another way in which the out-patient room furnishes inmates for the workhouse. "Cases of fracture of the arm are often admitted, and these, from the circumstances which usually surround them, are among the most difficult cases which it is my lot to treat. As a rule, these patients go to a London hospital immediately after the accident, where their arm is placed in splints, and they are told to come again in a day or two. This advice is rarely, however, attended to, the bandages become loose, and the arm becomes crooked from want of support: they go to the workhouse and are sent here with an arm more or less firmly set in almost any position but the right one." There can be very little doubt that with proper organisation the out-patient room might be made a useful means of arresting the development of chronic diseases among the poor. If the physicians in the cases we have indicated were authorised to give recommendations of relief to be carried out by the parish authorities entitling the patients to receive the assistance in money, food, and clothing their necessities required. By such timely aid many an honest man might tide over a period of ill-health without losing his independence, and the ratepayers in the end would in the majority of cases save by their prompt liberality.

What we have said with regard to hospitals may be repeated with respect to dispensaries. But there are some features peculiar to dispensary management that deserve a passing notice. Those patients who are too ill to attend at the dispensary are visited at their homes by the medical officer. There is no doubt a certain advantage in this, as it enables the medical officer to better judge of the surroundings and circumstances of the patient, and to direct his treatment accordingly. But frequently he finds the conditions insurmountable, and from want of adequate care and nursing, from neglect of all the rules of hygiene, from the unsuitability of the overcrowded house as a place for the sick, it too often happens that acute cases under such conditions drift on to grave chronic disorder. To be sure, in many cases the hospital is open to receive those who cannot have proper attention at their own homes, whilst it is obvious that a large number are doomed, from one reason or another, to go through a long illness under conditions of air, food, and nursing which are most inadequate and pernicious. It has been suggested—and in Glasgow the plan has received practical enforcement—that a system of house-visiting by senior students under the direction of members of the honorary staff should be undertaken in connexion with our out-patient hospital system; but it is nursing rather than medicine that is needed. To a certain extent this want is met in some parts of London, the visits being made by lady nurses, who see that the directions of the out-patient medical officer are carried out, and endeavour to instruct the poor people in the elementary facts of nursing and the care of the sick. Certainly, of all ills that can beset a poor man the greatest is that of being compelled to lie sick within his own home; and much yet remains to be done, either by the extension of hospital relief or in some other way, to remedy this. None who have been enabled to con-

[1] Hints respecting the Immediate Effects of Poverty. Printed in the Gentleman's Magazine, vol. l.

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trast the care and comfort they receive within a hospital ward with the lamentable deficiencies that cannot but exist even in the better class of home, have any hesitation as to their preference for the one over the other in time of sickness.

We now pass to consider the last resource for the poor in case of sickness—the parish. The system of medical relief would doubtless work well were it not for the insuperable objection the poor have to entering the workhouse. This is hardly surprising when it is considered that at the present moment there is no practical distinction between the *sick poor*—that is, the industrious mechanic who has broken down in health whilst endeavouring to maintain himself and family by honest labour—and the *sick pauper*, the regular inmate of the workhouse. Can it be wondered at that a family possessed of a spark of pride and independence, who have had a good name in the neighbourhood, hesitate before encountering such associates, and enrolling themselves henceforward as paupers? Hence it is that the struggle with illness is prolonged till it is too late to prevent its serious incursion and the production of chronic disease. So long as they can attend the out-patient room of the hospital, or can secure the attendance of the dispensary doctor, they struggle on subsisting on their club money, on the scanty earnings of the wife, eked out by precarious doles of private charity, till at last, all means having been exhausted, the inevitable step has to be taken. In a very considerable number of cases this is taken too late to be of any service, and the case which, if it had been placed under favourable conditions some months or weeks previously, might have been entirely restored to health and strength, is found to have passed into a hopeless condition. There can be very little doubt that the rigid application of the workhouse test is a false economy. Whilst it has little deterrent effect upon habitual paupers, it presses very unfairly on the honest and industrious poor in times of sickness and distress. It should never be forgotten that when once the spirit of independence is lost, and the struggle to maintain respectability in the eyes of friends and neighbours is abandoned, the man who once was ready to endure any sacrifice rather than enter its walls on the first occasion will soon learn to fly to it on the least possible pretence. "They don't like it when they first come," remarked the intelligent master of a large workhouse to us, "but after a bit they settle down and come back to us again and again!"

Considering that not a small proportion of the cases of chronic disease met with in the workhouse infirmary wards is the outcome of neglect and insufficient attendance in the earlier and acute stages, when the disease might be amenable to treatment, it is obvious that a serious attempt should be made to remove the cause of distress at the commencement. We believe that under the present system of poor-law relief the attempt cannot be made owing to the almost insuperable objection the respectable poor have to make acquaintance with pauper inmates and pauper life, or to contract the stigma that poor-law relief brings with it. Hospitals, unless they extend their convalescent accommodation very considerably, can do but little; probably, as regards the very poor, they do harm in some cases, by discharging the patient cured of his disease, but before his strength is sufficiently recruited to engage fully in the battle of life. It seems, therefore, that some other provision should be made by which the sick among the deserving poor should receive relief promptly, adequately and effectively, so as to diminish the number of cases which annually drift from the acute into the chronic form. We are convinced that if such a scheme were devised and carried into effect it would ultimately lead to a very material saving in the rates. A great number of the labouring class would be restored to health and activity, who now go on from bad to worse till they become settled inmates of the workhouse infirmary; and the workhouse itself would cease to become the focus for the dissemination of pauperism. A step in this direction has already been partially taken by the separation of many of the workhouses in this metropolis from their infirmaries, and the sick are treated in distinct buildings from those set aside for the able-bodied, the aged, and infirm. But still the objection remains that the sick poor and the sick paupers are treated in the same wards; and it is very evident from an examination of the class of cases at present in the wards of these infirmaries that they receive only a small proportion of the acute diseases arising among the poor. Thus, for instance, if we take the statistics of the Highgate Central Sick Asylum, we find, out of a total of 2144, 20 cases of acute bronchitis, 26 of pneumonia, 14 of acute rheumatism, and one of typhoid fever, the proportion of chronic cases being vastly disproportionate to the acute.

The practical suggestion we would offer as a remedy for the present state of things would be the entire separation of the sick poor from the pauper class. In other words, sickness should not be allowed to pauperise. The honest man should always be able to claim a respectable refuge when overtaken by ill-health, and not till every possible effort had been made to restore him, should he be brought in contact with those whose life is hopelessly darkened. We therefore urge that the sick poor applying for relief be treated in buildings quite distinct from those set apart for the treatment of sick paupers, and that having been an inmate in one of the sick asylums should in no way carry with it a taint of pauperism. Furthermore, we would insist that no patient should be discharged till he was not only thoroughly cured, but till he had regained his full measure of strength and vigour, assuming recovery to take place. As far as the metropolis is concerned no difficulty ought to arise in carrying such a scheme into effect. At the present time most of the unions have distinct infirmaries, and by arrangements among themselves some might be set aside for the sick poor, others for sick paupers. It may seem paradoxical to urge this assumption of new duties, new responsibilities, and new expenses on the guardians of the poor as a means of reducing the rates, but we are convinced that by treating promptly and adequately all cases of disease at their very commencement, an efficient blow would be struck at one of the most productive causes of pauperism.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Sunderland (estimated population in 1879, 114,575).—Dr. Yeld's report for the year 1879 gives further illustration of the greater control which the Corporation of this borough, with the aid and advice of their excellent officer of health, are obtaining over the unwholesome conditions which at one time appeared to render the sanitary future of the borough almost hopeless. The mortality during the year was at the rate of 21·8 per 1000 of the estimated population, showing a diminution of 3·7 per 1000 as compared with the rate of the previous year; and in Sunderland proper, "where the population is very dense and the property principally tenemented and occupied by the poorest of the poor, the mortality was exceptionally low, the death-rate being only 20·0 per 1000, the lowest rate recorded in that portion of the borough—unmistakable evidence of the good effect of the carrying out of the Town Improvement Act of 1866, Sunderland parish being at that time, as it had been for many years, the hotbed of typhus fever and other zymotic diseases. During 1879, only two deaths from typhus occurred, and both in the first quarter of the year." Sunderland proper, indeed, affords a striking illustration of the immense sanitary advantages obtained in old towns by clearing away densely-packed houses, irremediable in their sanitary defects and relations. The deaths registered from "fever" in the whole of Sunderland borough since 1871, year by year, have been as follows:—1871, 221; 1872, 106; 1873, 53; 1874, 53; 1875, 42; 1876, 53; 1877, 61; 1878, 53; and 1879, 27. Notwithstanding an exceptional mortality from scarlet fever during the year, the infantile mortality, Dr. Yeld states, was the lowest on record in the borough, the deaths being at the rate of 9·6 per 1000 of the population, and giving 44 per cent. of the total deaths. Dr. Yeld has no doubt that the systematic cleansing now carried out in the borough by the Corporation has had considerable influence in reducing the sickness and mortality from summer and autumn diarrhœa; and he is of opinion that scarlet fever (constantly present in Sunderland) might be "stamped out" if first cases could be removed to hospital or properly isolated at home. But he proceeds to show that the "if" is a very portentous one practically. He has to report an outbreak of typhoid in the Borough Infirmary, consequent upon imperfect drainage and other structural defects. Instances of this sort have

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been so frequent in recent years, that it would appear as if the institutions erected for the special treatment of disease were falling into the rear in respect to sanitary state. The privy system in force in Sunderland, which aforetime was one of the most unwholesome features of the borough, is obviously being steadily amended, and the Corporation have recently decided to adopt, and are now introducing, a pail-closet system.

Bournemouth (estimated population in 1879, 13,000).—The report of the medical officer of health (Mr. Philip W. G. Nunn) of this favoured health-resort is very meagre. It is not, however, without a certain suggestiveness. He gives the death-rate among residents during 1879 at 12·0 per 1000, and of both residents and visitors (a large proportion invalids) at 21·4. He tells of an outbreak of scarlet fever, which although not assuming any large proportions, and originating in a bordering district, "might have been entirely prevented had [the place] possessed any means of isolating in a suitable hospital the cases that occurred." He gives a brief account also of an outbreak of ringworm (Tinea tensurans) among the day-schools in the district, particularly among the boys' schools, which he attributes in great measure to the boys wearing each other's hats and caps, and placing their caps on pegs already infected. The sanitary condition of the slaughter-houses does not appear to be satisfactory, and wells have had to be condemned as unwholesome and closed in outlying districts. Mr. Nunn is concerned about the tendency to cut down pine trees in the vicinity, and raises his voice against the practice, holding that they constitute an element in the salubriousness of Bournemouth; and he is obviously not quite satisfied that the drainage of houses in the district is as impeccable as it might be. In other words, Bournemouth needs to learn, even more completely than it has yet learned, that its value as a health-resort is deteriorated by reckless destruction of foliage, by imperfect sanitary conditions of houses, and by the want of an infectious-disease filter in the shape of a hospital. The hospital is promised, we believe, and the inhabitants will not, we trust, give a deaf ear to their medical officer of health's advice on the other matters.

SMALL-POX HOSPITALS.

With regard to the alleged spread of small-pox from the Fulham Small-pox Hospital to families living in the vicinity—a subject to which we referred, and concerning which we printed a letter from Mr. Francis Godrich in our last impression—it would appear that Dr. Bridges, under instructions from the Local Government Board, has made an investigation of the matter, and that the results of his inquiry have been communicated to the Guardians of the Fulham Union. These results, it is stated, entirely dispose of the allegation that the hospital had any part in causing such prevalence of small-pox in its neighbourhood. It is admitted that a considerable number of cases were admitted to the hospital from the houses within a radius of a mile from it, but an inquiry into these cases showed that the patients had been directly exposed to the contagion of the disease, and that there was not a shadow of foundation for the supposition that it had been conveyed to them from the hospital through the atmosphere. The principal centre of the disease, however, was not, it appears, in the near vicinity of the hospital, but in a part of the parish three-quarters of a mile distant from it. Twenty-one cases were traced to infection from a single case in this part of the parish. There was, as might be surmised, special conditions of intercourse between the families first infected and those subsequently infected in the district near the hospital, which chiefly suffered. There is no house nearer to the hospital than two hundred yards. We reserve further remarks on this subject until Dr. Bridges' report is accessible.

LONDON WATER-SUPPLY.

A deputation from the Commissioners of Sewers of the City of London had an interview with the Home Secretary (Sir W. Harcourt) and the President of the Local Government Board (Mr. Dodson), on the 13th inst., with respect to the water-supply of London. The deputation sought to ascertain whether the Government would deal with the subject as a general question (whatever that may mean), and would legislate to prevent an increase of the water-rates to the ratepayers, with regard to the new assessment. The action of the deputation was certainly premature. Sir W. Harcourt contented himself with eliciting from the gentlemen composing it that the Commissioners had not formed any definite opinion on the subject, and with informing them that the course the Government would take would depend upon the views of persons like themselves who represented the ratepayers and the public at large. He added: "It would be of great assistance to the Government to know their opinion upon this water question." This was rather hard upon a deputation who disclaimed for themselves and the body they represented having any opinion on the subject.

Dr. William Collingridge, of Selwood, Mayo-road, Forest-hill, was elected by the Court of Common Council, on the 13th inst., Medical Officer of Health for the Port of London, in the place of Mr. Harry Leach, deceased.

VITAL STATISTICS.

HEALTH OF LARGE ENGLISH TOWNS.

A low death-rate continues to afford satisfactory evidence of the health condition of our large towns. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5453 births and 3029 deaths were registered last week. The births exceeded by 298, while the deaths were 246 below, the average weekly numbers during 1879. The deaths showed a decline of 22 from the low number returned in the previous week, and were equal to an annual rate of 21·1 per 1000, against 21·0 and 21·2 in the two preceding weeks. During the past six weeks of the current quarter the death-rate in these towns has averaged only 21·6 per 1000, against 24·6 and 25·2 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 15·8 in Norwich, 17·6 in Oldham, 17·7 in Leicester, 17·8 in Leeds, and 18·0 in Brighton. The rates in the other towns ranged upwards to 23·7 in Sunderland, 25·1 in Manchester, 27·4 in Liverpool, and 30·6 in Plymouth. The excessive death-rate in Plymouth was entirely due to the remarkably fatal epidemic of measles.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 415 and 443 in the two preceding weeks, declined again to 439 last week; they included 152 from whooping-cough, 102 from scarlet fever, and 90 from measles. The annual death-rate from these seven diseases averaged 3·1 per 1000 in the twenty towns, and ranged from 0·9 and 1·1 in Oldham and Leeds, to 5·6 and 17·4 in Salford and Plymouth. Whooping-cough showed fatal prevalence in Liverpool, Manchester, and Salford. The deaths from scarlet fever were proportionally most numerous in Norwich, Sunderland, Salford, and Sheffield. Measles was most fatal in Plymouth, Sunderland, Leicester, and Salford; 23 more fatal cases were recorded in Plymouth (against numbers increasing steadily from 11 to 23 in the seven preceding weeks), making no less than 297 that have occurred within the borough since the middle of November last. Enteric fever is still fatally prevalent in Sheffield, and caused five more deaths last week. Small-pox caused 8 deaths in London and one in Sheffield, but not one in any of the eighteen other provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 196 and 180 at the end of the two previous weeks, was 193 on Saturday last; 36 new cases were admitted to these hospitals during last week, against 49 and 43 in the two preceding weeks.

The continuation of cold north-easterly winds probably caused the further increase in the fatality of lung diseases recorded last week. The deaths referred to diseases of the respiratory organs in London, which had been 260 and 280 in the two previous weeks, further rose last week to 286, but were one below the corrected weekly average; 164 resulted from bronchitis, and 83 from pneumonia. The annual death-rate from diseases of this class did not exceed 4·1 per 1000 in London last week; the rate from the same diseases was equal to 7·4 per 1000 in Liverpool and in Salford.

HEALTH OF EIGHT SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 24·8 per 1000, exceeding by 3·7, or nearly 18 per cent., the average rate in the twenty large English towns. The lowest rates

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in these Scotch towns last week were 18·3 and 19·8 in Greenock and Dundee; the rates in the other towns ranged upwards to 27·6 and 27·8 in Paisley and Glasgow. The deaths referred to the seven principal zymotic diseases in the eight towns were equal to an annual rate of 5·5 per 1000, while in the English towns the zymotic rate did not exceed 3·1; the highest zymotic rates were 6·2 in Leith, 6·8 in Glasgow, and 9·7 in Perth. Whooping-cough, fever, and measles showed fatality in Glasgow. Of 26 deaths referred to fever in the eight towns, no less than 23 were recorded in Glasgow, against 7 and 18 in the two preceding weeks. The high zymotic rate in Perth was due to the fatality of diarrhœa, which has there been prevalent in an epidemic form for several weeks. The deaths referred to acute diseases of the respiratory organs (including bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 118 and 131 in the two previous weeks, declined again to 118 last week, and were equal to an annual rate of 4·8 per 1000, against 3·6 from the same diseases in London.

THE HEALTH OF DUBLIN.

The 211 deaths in Dublin last week showed a further slight decline from recent weekly numbers, but were equal to an annual rate of 35·0 per 1000 of the population. In the six weeks ending last Saturday the death-rate in the city has averaged 36·3 per 1000, while the average rate in London during the same period has not exceeded 21·6. The 211 deaths last week included 43 from the seven principal zymotic diseases, of which 14 resulted from scarlet fever, 8 from small-pox, 7 from whooping-cough, 6 from fever, and 6 from measles. The zymotic death-rate was equal to 7·1 per 1000, against 2·8 in London and 4·8 in Edinburgh.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

WOOLSORTER'S DISEASE AT BRADFORD.

WE mentioned last week that some deaths from "woolsorter's disease" had been reported from the Bradford district. The disease thus named is one concerning the nature of which many differences of opinion have existed, and it is only of late that the opinion has been adopted that it is a form of charbon or splenic fever, caused by direct contagion from the fleeces of animals which have died of the disease. Even now it seems not improbable that only a certain number of the cases are cases of direct anthrax inoculation, and that some may be cases either of septicæmia or of a low form of pneumonia set up by inhalation of putrid organic particles. Although for some years deaths have occurred from time to time, especially amongst men employed in sorting "Van" mohair, a very strong feeling seems to have been aroused amongst the workmen by the recent cases, and at one mill the men have struck work rather than sort this kind of mohair until properly disinfected. There can be no question of the necessity for a thorough investigation of the subject, with a view to ascertain the precise nature of the disease, its immediate causes, and the possibility of prevention; and we are glad to learn that the Medical Department of the Local Government Board have directed an inquiry to be made.

We are happy to publish the following reports of cases which have recently been observed. The first two are by Dr. J. H. BELL, of Bradford:—

"S. F——, aged forty-three, has been a sorter over twenty years, has drunk freely, but never was ill in bed before. For some months he has been sorting 'Cape' and 'average' mohair, which was not washed beforehand. On Friday, April 30th, this was cleared out of the bins (a dusty and disagreeable duty), and 'Van,' an inferior quality of mohair, was substituted. The sorting of this in its dry condition is very dangerous to life. It was therefore washed the day before by passing it through tanks filled with soaped hot-water, then, after going through a drying machine, it was packed in sheets. Some of these when opened (wringing wet and steaming hot) smelt very bad, much worse than usual.—May 1st: Was not 'first-rate,' but managed his work easily; during the evening complained of sickness and dizziness; slept well through the night.—2nd (Sunday): Did not feel well; out of bed about two hours; in the evening felt chill; slept well.—3rd: Not ill, but not well; remained in bed. I visited him at 5 P.M.; complained of nothing, excepting he felt rather sick and weak; no pain; slight cough; no expectoration; tongue, thin white fur; chest, percussion in front and behind clear; respiratory murmur over right lung very feeble and imperfect; no moist sounds. Respiration 24; pulse 126, firm, sharp, regular; temperature, armpit 100·4°.—There was nothing apparent in his general condition to cause or correspond with the dangerous character of the pulse.—4th, 10 A.M.: Has had little sleep; Respiration 28; pulse 120, small, feeble, uneven; temperature, armpit 98·1°, mouth 100°, rectum 102·4°.—7 P.M.: Complains of nothing but sickness; has vomited frequently; extremities cold. Respiration 28; pulse 116; temperature, armpit 97·6°, mouth 99°; rectum 101·4°.—10.20 P.M.: Visited by Drs. Tibbits and Rabagliati. Right lung-sounds very feeble, no decided dulness. Respiration 30; pulse 116, very weak; temperature, armpit 97·3°, mouth 97·9°, rectum 101°.—5th, 4 A.M.: Has slept a little, frequently; skin moist; slight cough and expectoration; no pain; vomiting frequently. Respiration 28; pulse 112; temperature, armpit 97°, mouth 98°, rectum 100·8.—10 A.M.: Seen by Drs. Tibbits and Rabagliati. Lungs resonant, no crepitation; tongue moist; extremities cold.—1.45 P.M.: Collapse increasing. Respiration 40; pulse 120, scarcely countable.—5 P.M.: Lungs anteriorly resonant. Pulse almost imperceptible; respiration 48; very restless.—At 8 P.M. he died. Duration of illness four days. The treatment consisted of stimulants and carbolic acid by lungs, stomach, and rectum.

"In this case, as in many others I have seen, the absence of pain and unconsciousness of danger to within a few hours of death have been remarkable. The continued condition of collapse is not common; more frequently reaction takes place within twenty-four hours, followed by pulmonary congestion and death within the same period. If the temperature has been high on the second day (104·5°), it decreases daily till death. Blood was taken three times from the finger; it did not form *rouleaux;* white corpuscles were numerous; no bacilli. Blood twice withdrawn by leech from chest, injected under skin of rabbit, had no effect.

"*Autopsy, forty-eight hours after death.* — Rigor mortis well marked. Claret discolouration on chest, sides of abdomen, upper surfaces of penis and scrotum. Percussion right side of chest duller than left. Muscles good colour. Pleuræ: Right contained three to four pints of tolerably clear yellowish fluid; left, two to three pints of blood-stained fluid. Visceral and parietal layers smooth and transparent. No ecchymoses. Lungs: Right, anterior border of middle lobe collapsed and airless, sank in water; left, apex adherent (old), contained a small nodule of granular cheesy matter; both were œdematous. Bronchial glands: Right much enlarged, and contained blood-clot; left natural. Bronchial tubes: The lining was of a dark-claret colour. The pericardium about the base of the heart, and tissues covering the large vessels under the sternum, were of a dark-red colour from extravasation of blood. The pericardium contained three ounces of sanguinolent serum. No petechial spots; none on the endocardium. On cutting through the large vessels, a quantity of dark fluid blood escaped from the aorta and pulmonary veins; internally they were of a bright-red colour, that of the latter being darker. In the aorta was a considerable patch from blood effused in the subserous tissue. Heart: Size natural; cavities dark, staining throughout, the right side being darker than the left. In the substance of the tricuspid valve, at the points of attachment of the cords, were numerous small blood clots; on section, a thin, dark red, even layer is seen between the serous layers of the valve. These were more numerous than I have noticed in other cases. There were several similar clots in the mitral valve, also in one flap of the aortic around the corpus Arantii; in another was a minute gritty substance. Peritoneum: visceral and parietal natural; no ecchymoses; no fluid in cavity. Stomach healthy. Liver very tough. Spleen four and a quarter ounces. Kidneys and bladder natural. Brain natural."

Some of the blood and spleen from this case were forwarded to Dr. Greenfield, of the Brown Institution, for examination. He reports as follows:—"The spleen was in too advanced a state of decomposition when received to be of any value. The blood in capillary tubes, received on May 12th, was found also to be in a state of decomposition, the red corpuscles almost completely broken up, and the fluid swarming with bacteria of common forms. In addition to these, there were a small number of motionless bacilli, corresponding in size and appearance with bacillus anthracis. In some of these all the stages of spore formation could be

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traced. Although I am inclined to the belief that these were really anthrax bacilli, I do not think that in the present state of our knowledge this could be positively affirmed, as similar bacilli have been found by good observers in putrefying blood from other diseases. The inoculation of mice with the blood gave a negative result."

"*Case of Malignant Pustule.* (By courtesy of Dr. ROBERTSON.)—S. H., aged fifty-eight, worked at the same place as the man whose case is given above. His work was to open the bales of 'Van,' shake out the bumps (rolled-up fleeces) and throw them through an opening in the floor to the wash-house below. For some months before his illness he had not been well; felt 'out of sorts' ever since he had to do with 'Van.' On Friday, April 16th, he noticed a small pimple on his left temple; it was not painful, and he continued his work.—18th: He felt very ill; the swelling had extended over the eyelids, and was very painful.—20th: Much brawny swelling and inflammation around a black patch, size of sixpence, with prolongation two inches in length, to outer canthus of lids.—23rd: Pulse 78; not able to open eye, slough dry, swollen part painful. Blood taken from eyelid and injected under skin of rabbit had no effect.—May 7th: Swelling continues, involving glands about ear and jaw on the same side.—14th: Swelling and pain subsiding, slough separating; feels much better."

The subjoined cases have been forwarded by Mr. F. HARRISON TETLEY, F.R.C.S.:—

"1. On Sunday, April 25th, 1880, I was called to see J. Starkey H——, a woolsorter, aged twenty-six, a strong, well-made young fellow. The following is the short history I got from him:—Of late he had been sorting 'Van' mohair, and had several times felt sick from the smell, but much more so the week preceding his illness; but he thought he might have felt it more on account of having lost one of his fellow-workmen and bosom companion from woolsorter's disease during that week. But on the night of Friday, the 23rd, he felt worse than usual, but managed to go to work on Saturday, but only for an hour or two, his chief complaint being sickness. Upon my visit I found the patient very feverish, complaining of severe frontal headache and pain in the lumbar region, with incessant vomiting; the tongue coated with a white fur; bowels confined; the skin dry and harsh; pulse 120; temperature 102° F.; urine scanty and febrile. The right side of his neck was considerably swollen; the right parotid gland was enlarged and indurated, and below this was a small pustule, evidently charbon. These symptoms considerably increased, the pulse getting to 140; temperature 105°, with loss of sleep; delirium until the 29th, when a severe attack of diarrhœa and diaphoresis set in, after which the febrile symptoms decreased and the patient began to improve. The pustule rapidly increased in size until it measured one inch and a quarter by three-quarters of an inch. The slough came away on May 12th. The treatment adopted consisted of purgatives and febrifuges, and afterwards large doses of chlorate of potash, chinchona, and port wine. At the present time the patient is well, and the ulcer healing."

"2. On May 3rd I was called to see Fredk. H——, a woolsorter, aged twenty-six, a strong, healthy fellow, and one who always enjoyed the best of health (this man is no relative of the other H——). He left work on Saturday, May 1st, quite well, after sorting Persian wool. On Sunday he had a long walk, and whilst out felt somewhat sick. On his arrival home he commenced to vomit, but thought it was only a bilious attack. On my visit he complained of excruciating pain in his legs and over the forehead, so much so that he could not bear his eyes open. The tongue was coated with a white fur; vomiting incessantly; bowels confined; urine scanty and febrile; pulse 125, temperature 101·4°. In the centre of his forehead was a small pustule about the size of a sixpence, with vesicles around it. In the evening patient worse; vomiting continued; head no better; bowels slightly moved; pulse 130; temperature 102·6°; slight delirium.—4th, 10.30 A.M.: Patient still worse; pain evidently very great; partially insensible; not vomited since my last visit; no action of bowels; pulse 140; temperature 103°.—5 P.M.: Much worse, looking ghastly; bowels moved once; no vomiting; urine scanty, and passed in bed; insensibility more increased; pulse 156; temperature 106·8°.—11.30 P.M.: Patient appearing worse; pulse dropped to 102; temperature 100·8°. Soon after this he was seized with convulsions, which continued until 10.30 A.M., when death ended the scene. The treatment I adopted consisted of purgatives, large dose of quinine, leeches to temples and ice to head. I may add, the pustule considerably enlarged, and on the morning of his death there was a black slough in the centre."

For the account of the next case we are indebted to Dr. W. LOGAN, of Bingley.

"Edwin S——, a woolpacker, who had been engaged in packing 'Van' mohair, commenced to feel chilly on Saturday evening, May 1st. He went, however, to witness a cricket match four miles from his home. On Sunday he continued to feel chilly, depressed, and vomited occasionally. He went to his work on Monday morning, but felt so ill that he had to give up; the chilliness was now intense, and the vomiting more frequent on Monday and Tuesday. On Tuesday night he was very restless, with cold perspirations. When I saw him for the first time on Wednesday at 10 A.M. he was livid, pulseless, and the extremities cold as ice. There was great restlessness. He was perfectly conscious, and remained so up to an hour before his death, when he became delirious, and died at 2 P.M. on Wednesday. There were no symptoms or signs of any local disease whatever, but the cause of death appeared perfectly clear. No post-mortem was made."

Another death attributed to the same cause occurred on the 14th inst. It was that of a man aged thirty-nine, a wool-packer, engaged in packing Persian wool after sorting. He first felt ill after leaving work on the 8th, feeling cold and weak. On the 10th he went to work, but was obliged to leave it at noon. Vomiting, great sense of oppression at the chest, and collapse were the chief symptoms. He died at 5 P.M. on the 14th, and the cause of death was certified by Mr. Raynes of Birstal as "splenitis." The case was generally regarded by the medical men who saw it as one of "woolsorter's disease," but it is to be regretted that no post-mortem examination was made.

THE METROPOLITAN MAIN SEWERAGE OUTFALLS AND THE THAMES.

The arbitrators appointed by the Thames Conservancy Board and the Metropolitan Board of Works (Captain Douglas Galton and Mr. F. J. Bramwell, with Sir Charles A. Hartley as umpire), to inquire into the allegation of the former board that the navigable channel of the Thames had become seriously obstructed by deposits of sewage mud in the bed of the river in the vicinity of the Metropolitan Main Sewerage Outfalls, have made their report. After a protracted inquiry, hearing much evidence, and ascertaining for themselves as far as might be the state of things in the section of the river in which it was averred that the navigation was impeded by the formation of shoals formed mainly of road detritus and solid sewage matters, poured out by the main sewers, they have come to the conclusion that the shoals in question were formed by the ordinary action of the stream on its banks and bed, the particular sites of deposit having been determined by the dredging operations required for keeping the navigable channel clear. Whatever deposit may arise from the sewage poured into the Thames at Barking and Crossness, this, it appears, is practically infinitesimal as compared with the deposit of mud from the washings of the banks and channel carried in suspension in a great tidal stream, and apt to be deposited in slack water. The inquiry had no concern with the health aspects of the outflow of the metropolitan sewage into the stream; but it may be taken that the evidence tendered by the Metropolitan Board of Works on the chemical character of the water and mud of the stream in the vicinity of the Barking and Crossness outfalls has commended itself to the judgment of the arbitrators. This evidence showed a remarkable uniformity of chemical constitution of both water and mud before Gravesend was reached, where the question of the influence of the metropolitan sewage on the river hardly exists. The evidence from the chemical constitution of the mud is, perhaps, the most satisfactory in estimating the probable influence of the river upon the public health, and this goes to show that the river in its present state would not be more harmful between Barking and Crossness, in the intervals of the sewage outflows, than between Vauxhall-bridge and Teddington. The only special inquiry which we are aware of touching a public health matter in a part of the river within the presumed influence of the sewage flow from the outfalls, was that made about two years ago by Mr. Netten Radcliffe, for the Home Office, under instructions from the Local Government Board, into the sanitary condition of the

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reformatory schoolship *Cornwall*, moored off Purfleet. This vessel is moored seven miles below the Barking outfall, and five and a half miles below the Crossness outfall, and it had been suggested that the health of the boys on board suffered from the flow of sewage into the stream. He found no evidence in support of this suggestion, and writing of the general question of the sewage pollution of the stream, in this part of its course from his independent inquiry, he said:—"Assuming that the small proportion of organic matter found in the several samples of mud is more or less of sewage origin—an assumption, it must be remarked, which rests rather upon the physical character of several of the samples and generally from our knowledge of the river than upon the chemical analysis—it is to be inferred either that the suspended matters of the sewage which finds its way into the Thames, both above the metropolitan area towards the source of the river, and below the metropolitan area at Barking and Crossness, are equally distributed within the section of the river selected for examination [Vauxhall-bridge to Greenhithe], or that each successive outflow of sewage at the Barking and Crossness outfalls undergoes so great a dilution and dispersion as practically to become unrecognisable on the cessation of the flow from any deposit of suspended matter it contained. In either case, sewage matters in solution may be ignored as inappreciable." The chemical evidence submitted by the Metropolitan Board of Works to the arbitrators tends to confirm this view of the state of the river in the section referred to in relation to sewage pollution.

TYPHOID FEVER IN GLASGOW AND THE MILK SUPPLY.

A peculiar and alarming epidemic of typhoid fever has, within the last three weeks, occurred in Glasgow and a neighbouring suburb. Nearly 400 people, up to the present date, have been attacked, and the circumstances connected with the case, so far as they can be definitely ascertained, are singularly interesting and suggestive. The epidemic appears to have four distinct areas—one at Possil-park, a rising suburb composed chiefly of operatives connected with a large cast-iron industry, the others situated in the northern and working-class districts of Glasgow, although separated by a distance of nearly a mile from one another. The origin of the fever can be traced to a farmhouse in the country, where a case of typhoid was under treatment. The occupier of this farm supplied a dairy in town with milk, which was again vended to the four areas mentioned as being the seats of the epidemic. Other families in the same districts, and even in the same landing, supplied with milk from other sources, have not been affected. Rigorous measures have been adopted, the suspected milk-supply has been stopped, and the patients, so far as possible, have been removed to the fever hospital at Belvidere, and there is every reason to believe that it will spread no further. The investigation of the subject is under the guidance of two most efficient and experienced sanitary authorities—namely, Dr. J. B. Russell, acting for the City; and Dr. James Christie, medical officer for Hillhead; acting on this occasion at the request of the Barony parochial board. Their report, when published in full, will, it is hoped, do much to pave the way for the salutary supervision and inspection of all town milk-supply.

THE PLAGUE.

During the alarm of plague in the province of Astrakhan last year, the French Academy appointed a Commission, with instructions to report on the course which future researches should take with a view of elucidating obscure points in the etiology and pathology of the plague. The Commission consisted of MM. Pasteur, Morilland, Bouillaud, Bouley, Fauvel, Duvernis, Jaccoud, Marey, and Rochard, M. Bouilland being elected as president, and M. Rochard as reporter. Before the committee had completed its labours the cause which had given occasion for its formation had come to an end; nevertheless the members continued the work which had been assigned to them, and at the sitting of the Academy on the 20th April last, M. Jules Rochard presented their report. The reading of this report occupied three sittings—namely, those of the 13th, 20th, and 27th April; and it appears in three portions in the proceedings of the Academy for the respective dates. The report opens with some general observations on plague and on the particular outbreak which gave rise to the Commission, and then proceeds to consider, in view of further investigation, the clinical, etiological, and prophylactic aspects of the disease. In the first section the further knowledge needed as to symptoms, forms, evolution, and necroscopic appearances of the plague are dealt with; in the second section the practical and experimental researches required with reference to contagion, inoculation, transmission by contact, clothing and air, spontaneous development, and the question of endemicity. In the third section the views of the Commission on the prophylaxis of the malady are developed. The Commission appear to have made little use of the knowledge we have obtained of plague in its recent outbreaks as helping to a clearer understanding of the writers on the subject in the earlier parts of the century; and in dealing with the views of the older writers they appear to have largely foregone the advantages obtained by the clear notions of the conditions predisposing and determining disease that we possess in the present day. This is particularly obvious in the section on prophylaxis, where the influence exercised on the Commission by the medical traditions of plague will strike English readers with surprise. On a particular point, which is made an illustration of the value of quarantine measures in plague, we are unable to reconcile M. Rochard's statements with previously published facts. He avers that the greatest intensity of plague at Vetlianka, on the Volga, in the recent outbreak, occurred in the week ending the 28th December, and that the first *cordon sanitaire* established around the village was formed on the night of 19-20th of the month. But Hirsch and Zuber[1] (one of the French medical commissioners to Astrakhan) state that the week of the greatest intensity was in the week ending 16th December. Neither writer mentions that he is using Old Style, but M. Rochard uses the dates given by both as if they were. The question is important with reference to the effects of the precautionary measures used at Vetlianka on the decline of the disease. M. Rochard displays a curious want of knowledge of principles and practice of sanitary administration in England, especially in reference to quarantine and local requirements. Obviously local or internal sanitary administration in respect to epidemic disease is in a very rudimentary state in France.

The *Comptes Rendus* of the French Academy of Sciences for the 12th ult. contain a note by Dr. Tholozan, physician to the Shah of Persia, on plague in modern times, the imperfection or absence of precautions against it, and its spontaneous limitation. The note is designed to herald a detailed work on the subject, now in the press, and its consideration may well be deferred until the work is published.

In consequence of a serious outbreak of small-pox in Antwerp and elsewhere in Belgium (500 cases having recently occurred in Antwerp, Dorst, Jumetz, and Gilly) M. Croq, physician and senator, has pressed upon the Government the desirability of making vaccination compulsory. The Minister of the Interior has, however, informed M. Croq that the subject could not be considered during the present session of the Legislature, the Lower House having already finished its business. All that can be done now, it appears, is to distribute lymph gratuitously.

It would appear that the Town Council of Wick and the sheriff of the county are in collision respecting the condition of a particular drain (which offends the sheriff's notions of the fitness of things) and the outlet of the town's sewers. Jupiter, in the form of the Board of Supervision, has been appealed to by the sheriff.

The National Health Society is giving a series of drawing-room lectures to select audiences in Mayfair. Dr. W. B. Carpenter opened the series by a lecture on "Predisposing Causes of Disease." The subjects of other lectures will be "Overwork and Underwork," "Germs: our Unseen Enemies," and the "Doctor in the Kitchen."

The inquiry concerning the ventilation of the sewers at Portobello, to which we made reference in our last week's impression, was still unended at the time of our latest news. In its then phase it had resolved itself into an investigation of the recondite problem of "Nose and no nose, or the art of smelling."

An enlargement of the Holborn Infirmary has been decided upon to render the building capable of holding 620 patients. The cost of the additional block is estimated at £2000.

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[1] Revue d'Hygiène, t. i., pt. ii., p. 989.

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THE SERVICES.

THE GUARDS' MEDICAL OFFICERS.

WE regret to learn that the Royal Warrant for the medical officers of the Household Brigade, which was understood to be ready for immediate promulgation, has, for the present at least, been suspended. For many reasons we think this unfortunate. When the recent Warrant regulating the Medical Department of the Army was drawn up, the Guards were specially exempted from its operation, on the ground, it was understood, that the organisation established under it was not adapted to the system still followed in the Guards, which is a modification of the old regimental system. But even if thus kept apart from the Line, it would seem only just that pecuniary advantages, deemed necessary to be granted on account of the greatly altered state of the profession, should not be withheld from the medical officers of Her Majesty's Guards, and that they should also have the benefit of the new grade of Brigade-Surgeon accorded to their brethren in the Line. Indeed, they would appear to have even a stronger claim to the latter, as the Guards have always been worked as a brigade, and in olden times, when sent on service, to the Peninsula, for example, had invariably one of their own medical officers put in charge with administrative rank.

We have been struck with the fact that in the recently issued volume of Army Medical Reports there is no reference whatever in the sanitary report to the defects or requirements of the barracks for the Guards in London or Windsor. If this arises from any difficulty connected with the inspection of them by an officer of the Army Medical Department it might easily be remedied by the promotion of one of their own officers to the rank of Brigade-Surgeon, who should report on sanitary matters to the Director-General. The medical officers of the Guards are, under existing regulations, cut off from all chance of promotion above the rank of surgeon-major, and it is not too much to claim for them a brigade surgeoncy. This, with the extension to them of the advantages in the increase of pay and earlier promotion in the junior grade, recently granted to the Line, would be simply a matter of justice, and we trust the new Secretary of State for War will at an early date sanction this measure, which we are assured was in readiness to be brought out by his predecessor.

THE NEW KNIGHTSBRIDGE BARRACKS.

The new barracks at Knightsbridge were formally opened and occupied by the Royal Horse Guards on the 5th instant. The new buildings are a decided improvement on the old brick structure which they replaced. The disgraceful sanitary conditions of the old barracks were reported on by our Sanitary Commission several years since, and the statements then made subsequently received ample confirmation from many eminent authorities of the Army Medical Department. In spite, however, of repeated protest, they probably would have remained in their then unwholesome condition till the present moment had they not solved the question for themselves by their rapid decay. Considerable opposition was raised by the inhabitants of the district against their re-erection on the same site, and many very cogent reasons were brought forward for the removal of troops from that quarter of town. We pointed out at the time that the site was too contracted for the purpose, and advocated the reconstruction of the barracks in a position where more space could be obtained. Although the present buildings are more lofty than the old, and consequently more airy, still the same objection holds good that we formerly urged, in that too many men and animals are brought together in a contracted space. We protest against the arrangement of barracks in which the sleeping apartments of the men are placed directly above the stables. It may not prove injurious when the men are only quartered for short periods, but when, as is the case with the Royal Horse Guards, they are used permanently, the arrangement is most objectionable. We are not alone in this opinion, for the Barrack Improvement Commissioners, in their report on the ventilation of cavalry stables, showed that ventilation could only be satisfactorily carried out in one-storied buildings, and therefore recommended that the men's rooms should not be placed over stables. In spite of this, in the present barracks the old arrangement is still adhered to; the building consists of three stories, and this, too, after scientific evidence had plainly shown that ventilation could only be properly effected in a one-storied building. Surely, the ways of the War Office are inscrutable. Why issue a commission to report on the sanitary condition of barracks, and then act directly in the face of its recommendations?

The following announcements appear in the *Gazette* of May 18th:—

MEDICAL DEPARTMENT.—Surgeon-General Hampden Hugh Massy, M.D., C.B., has been granted retired pay; dated 4th April, 1880. Surgeon-Major James Kellie, M.D., has been granted retired pay with the honorary rank of Brigade Surgeon; dated 21st April, 1880. The promotion to the rank of Brigade Surgeon of Surgeon-Major Edward Young Kellett in the *Gazette* of 24th February, 1880, dated 27th November, 1879, is cancelled. Surgeon-Major Edward Young Kellett retires on half-pay; dated 5th April, 1880. Surgeon-Major James Winterscale Lougheed retires upon half-pay; dated 19th May, 1880.

The undermentioned medical officers resign their commissions:—Surgeon William Hargreaves Manifold (2nd Royal Lancashire); he is permitted to retain his rank, and to continue to wear the uniform of the regiment on his retirement; dated 19th May, 1880. Surgeon Henry Estcourt (33rd Lancashire Corps); dated 19th May, 1880. Honorary Assistant-Surgeon John Cooke (5th Staffordshire Corps); dated 19th May, 1880.

HOSPITAL ADMINISTRATION IN INDIA.

To the Editor of THE LANCET.

SIR,—The comments in your leading article of to-day upon my late management of the Calcutta Medical College Hospital are, although somewhat adverse, so moderate in tone that I am not anxious to trouble you and your readers with any controversy upon the subject, as it immediately affects myself, especially now that I am watching events in India, which, I think, are rapidly tending to prove that the reform in the system of hospital dieting, which I and other medical officers are blamed for not having inaugurated, is proving less and less successful day by day.

In a few weeks many new and rather startling facts illustrative of the working of this ill-advised and rashly-conducted experiment will probably come before you. In the meantime I beg to refer you to the opinions upon this measure which were published in the *Medical Times and Gazette*, on the 14th of February last, by Surgeon-General James Irving, the first authority whom the Lieutenant Governor charged with the principal duty of carrying out his novel system of retrenchment. With regard to myself, I will only say that my administration of that hospital was never found fault with by the successive Governments under whom I held office during fifteen years. If the new system be in reality a great and useful invention, I am free to confess that my poor ability could never have disclosed it, and that I feel as little troubled in conscience by this fact as the spirit of Humphry Davy is by the knowledge that he failed to discover the art of making diamonds.

I am, Sir, yours faithfully,

NORMAN CHEVERS, M.D., F.R.C.S.,
Deputy Surgeon-General.

Tavistock-road, W., May 15th, 1880.

*** We regret that a letter from Dr. James Ewart on the same subject reached us too late for insertion this week. It shall appear in our next issue.—ED. L.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Fellows of the College on the 13th inst.:—

Thomas Barlow, M.D. Lond., Montague-street.
Sidney Coupland, M.D. Lond., Nottingham-place.
Edward Harriman Dickinson, M.D. Edin., Liverpool.
Horatio Bryan Donkin, M.B. Oxon., Upper Berkeley-street.
James Frederick Goodhart, M.D. Aberd., Weymouth-street
Charles Kelly, M.D. Lond., Worthing.
Robert King, M.B. Camb., Harley-street.
Frederick Henry Horatio Akbar Mahomed, M.D. Brussels, St. Thomas's-street.
Thomas Claye Shaw, M.D. Lond., Banstead Asylum, Surrey.
John Topham, M.D. Lond., Collingham-road.

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ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on Tuesday last:—

H. Thurstan Bassett, Birmingham.
L. Alfred Cantin, Mauritius.
G. W. Harry Cook, L.R.C.P. Edin., Southsea, Hants.
G. Henry Crowther, Wakefield.
Arthur Jones, Higher Broughton, Manchester.
V. Alexander Jones, Birmingham.
A. Tims Kingsland, Birmingham.
James Ernest Lane, Norfolk-square.
A. Sextus Mackrell, L.R.C.P. Edin., Queen Anne-street.
I. Wesley Megarry, M.D. Dublin, Lavender-hill.
F. Walker Mott, Hastings.
H. Chester Nance, Eccleshall, Staffordshire.
C. Joseph Plummer, L.R.C.P. Lond., Valparaiso.
E. Meredith Redman, Peckham.
J. H. Alexander Rhodes, Liverpool.
H. Boyle Runnalls, New Quay, Cornwall.
Alfred Smart, L.R.C.P. Edin., Luton, Beds.
H. Havelock Sturge, Dartford.
F. Spencer Watson, L.S.A., Isleham, near Soham, Cambs.
George Weldon, Brompton.
A. T. Oliver White, L.R.C.P. Edin., Lansdowne-road.
R. Prosser White, M.B. Edin., Wigan, Lancashire.
T. Michael Young, L.S.A., South Shields.

The following gentlemen were admitted members of the College on Wednesday last:—

John Alexander, Trinity-square.
William Edwin Barton, Etchingham, Sussex.
J. W. Cross Cook, L.S.A., Colchester.
Thomas Brown Cross, Scarborough.
Arthur Mercer Davies, L.S.A., Barnard's-inn.
Edwin Hurry Fenwick, Harley-street.
Thomas Harker, M.B. Edin., Pateley-bridge, Yorks.
Frederick Hitch, L.S.A., Bromley-by-Bow.
George Alma l'Anson, Great Portland-street.
Edwin Walter Long, Southsea, Hants.
Frederick William Pilkington, Chorley, Lancashire.
Frank Rushworth, Carlton-hill.
Norman Rushworth, Carlton-hill.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at Meetings of the Board of Examiners on the 11th, 13th, 14th, and 15th inst.:—

J. A. Waring, J. L. Wright, W. H. George, E. H. Myddelton-Gavey, E. T. Carlyon, F. Spicer, and H. C. Coupland, St. Bartholomew's Hospital; H. P. Keatinge, R. A. Baillie, H. T. Sells, F. A. A. Bush, W. R. Etches, E. T. Trevor, M. Carnelly, J. B. Berry, and J. H. Gibson, Guy's Hospital; H. G. H Clarkson, Leeds; W. A. Ellison, St. George's Hospital; T. R. J. Clarkson, Leeds; A. B. Clarke, Charing Cross; William H. Moore, Henry G. Plimmer, Walter C. Spiller, John E. Salvage, Holland H. Wright, Langford M'E. Anderson, John C. Underwood, James M. Griffin, Charles Y. Shuter, Edwin C. Hunt, Henry R. Todd, John O. Littlewood, Henry C. Ensor, Richard P. Samut, and George P. Longman, Guy's Hospital; William G. Ellis, Alfred Haward, Albert Ramsden, Charles G. Grimmer, Harry Campbell, and William R. Cowan, St. Bartholomew's Hospital; Millward E. Dovaston and Charles F. Dowman, University College; John C. Kershaw, Leeds and Midd'esex Hospital; H. R. Hancock, Charing-cross Hospital; Archibald G. Andrews, London Hospital; Henry Ward, Glasgow and St. Bartholomew's Hospital; Charles W Whistler, St. Thomas's Hospital.

Of the 157 candidates examined during last week, 54 failed to satisfy the Board of Examiners, and were referred for three months' and 8 candidates for six months' further anatomical and physiological study.

For the Primary Fellowship Examination, which commences this day (Friday), there are upwards of 70 candidates.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on May 13th:—

William Glaholm Black, Ludhoe Grange, Durham.
James Hunt Condon, Sydenham, Kent.
Charles Robinson Crane, Charing-cross Hospital.
Henry Albert Powell, Huntley-street.
Wolfgang Schmidt, Leman-street.
Henry Wickham Stevenson, Charterhouse-square.
James Scott Tew, Marquis-terrace.

The following gentlemen on the same day passed the Primary Professional Examination:—

Walter Hull, St. Thomas's Hospital; Charles James Parke, Guy's Hospital; Frank Leslie Phillips, Queen's College, Birmingham.

COLLEGE OF PHYSICIANS IN IRELAND.—At the May examinations the following obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—Henry Cusack, Henry Hamilton Dwyer, Henry Lindo Ferguson, Edward Michael Finucane, William Forrest, L'Estrange Isdell, Thomas Joseph O'Donnell, Thomas Payton.
MIDWIFERY.—Henry Cusack, Henry H. Dwyer, William Forrest, L'Estrange Isdell, Thomas Joseph O'Donnell, Thomas Payton.

DR. SAMUEL FRANCIS HAWTHORNE has been placed on the Commission of the Peace for the County Down.

THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—George Constantine Phipps, M.D., of Manchester, was elected a Fellow of the College at the meeting of the Council held on May 17th.

AT Huddersfield a meeting has been held to give an impetus to the Infirmary Saturday movement.

THE Brighton and Hove Lying-in Institution is, we regret to hear, temporarily closed for want of funds.

DR. WOODWARD, public vaccinator, has received £50 10s. Government award (5th) for the vaccination of the Worcester district.

ON the 7th instant, the Right Hon. H. C. E. Childers laid the foundation-stone of a new public dispensary for Pontefract. The building is to cost £3000.

DR. THOMAS SANDIFORD, medical officer of Kilshannig Dispensary District, has had his salary increased by £10 per annum.

DR. ROBERT SPENCE, of Denholme, Roxburghshire, has been presented with a handsome clock, and Mrs. Spence with a silver épergne and kettle, on the occasion of their leaving the village.

THE working classes of Birmingham made their eighth annual collection towards the Hospital Saturday Fund on the 14th inst. Their contributions amounted to £2714, which is £233 in advance of the sum raised in 1879.

NORTH-EASTERN HOSPITAL FOR CHILDREN.—The twelfth annual meeting of the friends of this charity was held last week. According to the report, the number of in-patients during 1879 had been 397, the number of out-patients being 13,472 new cases, and 45,058 attendances. Included in the number of in-patients were 101 cases which were treated at the Convalescent Home at Croydon. The subscription list showed a slight increase. The Duchess of Connaught had consented to open the new wards of the hospital on June 2nd. The income had been £4978, which, however, included £1869 due to the treasurer, overdrawn upon the general fund.

Births, Marriages, and Deaths.

BIRTHS.

CARMICHAEL.—On the 11th inst., at Wyrley-grove, in the County of Stafford, the wife of William Carmichael, M.D., late R.N., of a daughter.

CLARKE.—On the 11th inst., at Somerset East, South Africa, the wife of Thomas Furze Clarke, M.R.C.S.E. &c., of a daughter (Fanny Ellis).

FAIRBANK.—On the 15th inst., at Moulsey House, Windsor, the wife of William Fairbank, M.R.C.S.E., of a daughter.

SIMPSON.—On the 13th inst., at Queen-street, Edinburgh, the wife of Professor Simpson, M.D., of a son.

WILL.—On the 7th inst., at 12, Union-terrace, Aberdeen, the wife of J. C. Ogilvie Will, M.D., F.R.S.E., of a son.

WORLEY.—On the 16th inst., at Brooke Lodge, De Beavour-road, the wife of W. C. Worley, L.R.C.P.L., of a son.

MARRIAGES.

BABER—WALKER.—On the 18th inst., at St. John's Church, Walham-green, S.W., Henry Aitkens Baber, M.R.C.S.E., youngest son of the late John Monkhouse Baber, Esq., of Exeter, to Adeliza Ann, youngest daughter of the late Sanderson Walker, M.D., of St. Michael's, Azores.

BISDÉE—ROGERS.—On the 12th inst., at St. Michael's Church, Helston, Alfred James Bisdée, M.R.C.S.E., L.S.A.L., of Hopewell House, Clevedon, Somerset, younger son of Alfred Henry Bisdée, of The Court, Hutton, Weston-super-Mare, to Emily Mary, eldest daughter of Henry Rogers, of Nansloe, Helston, Cornwall. No cards.

GARDNER—MOORE.—On the 30th March, at Christ Church, North Adelaide, by the Rev. F. Coghlan, William Gardner, M.D. Glas., to Louisa, elder daughter of R. W. Moore, M.R.C.S.E., of North-terrace.

DEATHS.

BRACEY.—On the 8th inst., at Bristol-street, Birmingham, W. Arthur Bracey, M.R.C.S.E., aged 38.

BRIZZEL.—On the 13th inst., at his residence, Commercial-road, Newport, Mon., W. J. Brizzel, L.R.C.S.I., aged 29.

COLEMAN.—On the 9th inst., at his villa, Cimies, Nice, James George Coleman, retired Medical Officer of the Madras Army, late East India Company's service, aged 81.

EVEREST.—On the 12th inst., at Westbourne-terrace-road, Henry Everest, Esq., F.R.C.S.E., aged 64.

GAMAN.—On the 8th inst., at Hambledon, Emily, widow of the late John Gaman, M.R.C.S.E., of Hambledon, Hants, aged 46.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, May 20th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
May 14	30·15	N.E.	54	51	107	76	45	..	Cloudy
,, 15	30·11	E N E	55	52	108	76	48	..	Overcast
,, 16	30·25	N.E.	55	50	101	68	48	..	Cloudy
,, 17	30·16	N.E.	51	48	97	61	42	..	Cloudy
,, 18	30·37	E.	50	45	98	60	44	..	Overcast
,, 19	30·28	E.	49	44	76	61	39	..	Overcast
,, 20	30·18	N.W.	60	56	95	67	46	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

WORK OF ENGLISH PHYSICIANS IN NORTH CHINA.

THE *Missionary Herald* (America) publishes some details of the labours of Dr. Mackenzie, of the London Mission, among the Celestials, which are of interest. Dr. Mackenzie having been appointed to "heal the sick" at Teintsin, a yard, with ample buildings—forming part of the great temple of the city recently built by the Viceroy,—was appropriated to his use. "For nearly three weeks this dispensary has been opened," says the reporter, Mr. Isaac Pierson, "and Dr. Mackenzie, assisted by the Vice-Consul, Mr. Pethick, who has been indefatigable in his labour of love, has daily given treatment to eighty or ninety patients, in addition to an average of forty or fifty opium smokers, who, with medical help, are trying to break off the habit of using opium. Many interesting surgical operations are performed. Four days ago the number of hare-lips cured had reached eleven. There is a general of the army at the dispensary, whose leg is being reset for an old fracture. Many other surgical operations have been successfully performed. In all this the Viceroy is intensely interested." These facts are noteworthy in view of the well-known repugnance of the Chinese to the use of the knife. In former years foreign surgeons were obliged to conduct their anatomical and pathological investigations in secret, and even lecturers were not allowed to illustrate their prelections by parts of the human body, but were compelled to employ dissections of the lower animals.

A.'s illustrations, we are afraid, are too hypothetical, and would do the cause more harm than good. Let a little patience be exercised till the practical working of the system is developed. It may prove more favourable than our correspondent imagines.

Mr. McMenn.—It would be desirable to have the instruments made and tested before noticing them.

SALICYLATE OF QUININE.

To the Editor of THE LANCET.

SIR,—At the Clinical Society on Friday evening, May 14th, the lateness of the hour, and my desire not unduly to hinder others who might wish to give the results of their experience of the value of the salicylates in rheumatism, obliged me to curtail my remarks on the increasingly satisfactory results gained by the use of the salicylate of quinine. There is one particular, however, which I omitted, which I consider important, and which I beg you will permit me to supply through THE LANCET. It is this: that while toxic effects, more or less serious, result from the administration of salicylic acid and salicylate of soda in doses thought necessary to reduce the temperature, no injurious consequences whatever have hitherto followed (while greater benefit has been derived from) the free use of the salicylate of quinine, given even in its full dose of three grains.

I am, Sir, your obedient servant,

Chester-square, May 7th, 1880. ARCHIBALD HEWAN

THE LANCET INQUIRY CONCERNING SCHOOLS.

IN answer to correspondents, we beg to intimate that for about a fortnight longer we shall be prepared to receive additional replies and any further information which schoolmasters may be inclined to submit to the Commissioners appointed by this journal for the preliminary examination now in progress. The answers already to hand are very numerous.

Dr. Arciniega.—Any woman may set up as a midwife in England, without incurring expense. If she wish to take the certificate of the Obstetrical Society, the time required would be six months. The cost would be that of living for that period, together with fees, which would amount altogether to five pounds perhaps.

G. H.—We cannot advise in the matter.

THE TREATMENT OF ECZEMA RUBRUM.

To the Editor of THE LANCET.

SIR,—Assuming that the case mentioned by "M.R.C.S." is dependent upon disorder of the gastro-intestinal mucous membrane, and that both the pulmonary and genito-urinary systems are free from disease, I desire to offer the following suggestions for his acceptance:—

The patient must be, if possible, confined to bed, and the affected limb maintained in an elevated position. The application to the inflamed surface should consist of bran lotion, of the strength of a double handful to a pint of hot water, and applied, when cool, upon a single thickness of soft rag. The rag must be frequently moistened, and must not be covered with waterproof sheeting. The diet should consist of light nourishment, and be composed, exclusively, of the articles found most suitable during the seasons of health; certainly tea, coffee, cheese, beer, and wine must be absolutely forbidden. The bowels must be kept fairly open through the agency of non-irritating laxatives, such as olive oil, castor oil, or confection of senna. The water-pack will undoubtedly hasten the cure. I strongly urge the taking of a course of vapour-baths as soon as the patient leaves his bed. Mr. Milton's apparatus, sold by Mr. Walters, of Moorgate-street, constitutes the most efficient portable vapour-bath that has as yet come within my knowledge.

Eczema is, in my opinion, almost invariably a vent established by nature as a means for the elimination of internal irritation from the system.

Yours truly,

Canterbury, May 18th, 1880. J. BEADNELL GILL, M.D.

EXAMINATION FOR MEDICAL SERVICE IN THE ARMY.

IN reply to the query of a correspondent last week, we may state that an examination for commissions in the Army Medical Department will be held at Burlington House on August 9th.

Mr. Elmes.—The announcement will be made on the publication of the official list.

"CRUELTY TO WOMEN."

To the Editor of THE LANCET.

SIR,—I have read with much pleasure your article on the above subject. The firm of which I am a member has for many years employed a great number of young women as saleswomen and workers, and in all cases, when not attending to customers, they have had the privilege of resting on cane-seated chairs provided for them. A greater system of cruelty could scarcely be imagined than that of causing young girls to stand in an upright posture from nine o'clock in the morning until perhaps eight or nine in the evening, and I sincerely hope that the kind effort you are making to stop such cruelty will be successful, thus saving many a poor young female from falling a victim to disease.

Yours truly,

ALEXANDER GOWANS,

Edinburgh, May 12th, 1880. (Of Gowans and Goodlet.)

To the Editor of THE LANCET.

SIR,—Referring to the article in your journal on "Cruelty to Women," we beg to say that we have for the last twenty-five years provided seats for our female assistants.

Yours faithfully,

Regent-street, May 14th, 1880. FARMER AND ROGERS.

Mr. G. Morrison.—We are not aware of any institution offering the facilities desired. There *are* institutions for cripples—e.g., one in Marylebone road; another at Richmond-terrace, Clifton.

Mr. F. G. Prosser.—Manual of Exercises for training Stretcher-bearers and Bearer Companies. (Clowes and Son or Harrisons.)

FOREIGN BODIES IN THE WINDPIPE.

To the Editor of THE LANCET.

SIR,—In answer to Mr. Thornton's question in your last issue, I beg to state that I first saw the patient on the afternoon of July 10th, on the sixth day after the introduction of the cockle-shell into the windpipe. A doubtful diagnosis was then made, which became a certain diagnosis on making a second examination on the morning of the 11th. Had not the cockle-shell been coughed up, the patient would have been sent back to Mr. Godlee for the immediate removal of the foreign body.

I am, Sir, your obedient servant,

Wimpole-street, May 18th, 1880. G. V. POORE.

*** The publication of a letter we have received from Mr. Stewart, of Welbeck-street, on the above subject, appears unnecessary after the above explanation from Dr. Poore.—ED. L.

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A Clergyman wishes to be informed if a medical man guilty of habitual drunkenness is amenable to any authority or discipline. "The Law and the Church are both subject," he says, "to discipline. Why not the medical profession? What constitutes infamous conduct in a professional point of view? If not incapacity for attending to duties duly contracted for through a slavish habit of drinking, then what does?"

One who Likes, &c.—Has our correspondent not kept back some circumstance connected with his service? Did he ever exchange or apply to be allowed to remain in India? If he never did, we shall agree with him in thinking he has not been fairly treated, but not otherwise.

DEATH DURING THE INHALATION OF CHLOROFORM.

To the Editor of THE LANCET.

SIR,—I send you the following brief notes of a death during the inhalation of chloroform:—

On April 23th, Mr. P—— asked my brother and myself to assist him in the removal of a large cancerous mass from the right breast of Mrs. ——. The patient appeared a fairly nourished woman, of nervous temperament, but without any indication of cardiac disease. Ether was first administered for a few minutes; but, as it did not appear to produce the usual effects, chloroform was substituted. This she took well, anæsthesia being complete in about the usual time. The operation was proceeded with, and occupied about twenty-five minutes, the patient breathing well, and the pulse continuing good all the time. The first indication of anything wrong was a sudden lividity, which came on just as the last sutures were being inserted. The tongue was immediately drawn well forward, and artificial respiration resorted to for some time; but all was of no avail, the patient dying in about three minutes. The respiration all along was good, the breathing never having become stertorous.

After a careful consideration of the facts of the case, I do not consider that anything could have been done to avert what we must all feel is a terrible calamity—viz., a death during the inhalation of chloroform.

I am, Sir, yours faithfully,

May, 1880. F. T. U.

AN ARCADIAN VILLAGE.

THE following description of a village in Lancashire is given in a letter which recently appeared in a daily contemporary, and is extracted, we are informed, from a local almanac:—

"Low Moor, a village about a mile from Clitheroe, contains a population of about 1100 souls. There is neither public-house, beershop, nor any place for the sale of intoxicating liquors; neither is there a policeman, prison, pawnbroker, doctor, nor lawyer. The rate of mortality is remarkable. During the last ten years the average number of deaths per year has amounted to only 15 and a small fraction per thousand of the population."

Mr. M. H. Elsby might apply to the house-surgeon of the Children's Hospital and to the registrars of the large general hospitals.

TREATMENT OF GOUT.

To the Editor of THE LANCET.

SIR,—As an old general practitioner, I am desirous of obtaining from some of your numerous correspondents information concerning the treatment of gout. I should like to know whether any of them have ever applied a blister during acute gout on toe or knee. I have never heard of any practitioner attempting the cure of gout in this way. I have informed myself about most of the accepted remedies, and applied them, but without finding in the most acute stage of an attack any appreciable remission of sufferings. I do not know whether the ether spray has been applied to the part affected by gout, and whether the effect has been immediately beneficial. I should like to know whether morphia or any other sedative has been injected subcutaneously, and what have been the effects. Has pain been checked rapidly? Are further attacks checked altogether?

I am, Sir, your obedient servant,

May 4th, 1880. SENEX.

D. 1880.—Arnold's Greek and Latin Grammar; Adams's English Grammar; Green's History of the Students; Hume; Johnston's Geography; Todhunter's Arithmetic and Algebra; Worrall's Natural Philosophy; Rousse's Chemistry. Any standard French Grammar and some modern author would be suitable.

SUPRA-PUBIC PUNCTURE FOR RETENTION.

To the Editor of THE LANCET.

SIR,—The letter of Mr. Wm. J. Marsh, in your issue of May 8th, reminds me that I punctured the bladder of a child above the pubes for retention of urine in the year 1861; but, not thinking there was any particular merit or novelty in it, I have never before thought of recording what seemed to me a very simple proceeding. The child had had retention for several days, and there was every indication of nature very shortly making an opening for herself, if art did not; so, finding that I could not pass the very smallest catheter, I pushed the small trocar and cannula through the spot, showing some change of colour to the great relief and cure of the little sufferer. No bad symptom whatever followed; and after once or twice using a catheter the child was as well as ever.

Yours truly,

Devonport, May 12th, 1880. HENRY NORTON, M.R.C.S., &c.

ELECTRICITY IN THE HUMAN BODY.

THE following paragraph, on the varying "electrical condition" of negroes, is extracted from the *Eastern Morning News*:—

"Most people are familiar with the 'sparks' which may be produced under certain conditions by stroking the fur of a cat; and travellers in Canada and other cold, dry countries have witnessed the still more remarkable phenomenon of the human body being turned into a conductor of electricity, and the possibility of lighting the gas by merely placing one's finger—given the necessary conditions of electrical excitement—near the gas-jet, without any other agency. Mr. A. W. Mitchinson, the African traveller, who is engaged in writing a narrative of his exploring expeditions in West Central Africa, gives some still more startling facts. He states that one evening, when striking an African native in a moment of anger with a cow-hide whip, he was astonished to see sparks produced, and still more surprised to find the natives themselves were quite accustomed to the phenomenon. He subsequently found that a very light touch, repeated several times under certain conditions of bodily excitement, and in certain states of the atmosphere, would produce a succession of sparks from the bodies of native men as well as native cattle. A lazy nigger, it seems, yielded none of these signs of electricity—a rather unfortunate circumstance for his more active brethren, who may possibly come in for a share of undeserved flogging at the hands of future travellers in search of electrical phenomena among the human race. We are not aware that these facts have been recorded by other travellers, but they certainly deserve thorough sifting by competent observers."

Dr. George Potter.—The length of our correspondent's letter makes it inconvenient to publish it, though in many of his views we concur.

TRANSVERSE DEPRESSION OF THE NAILS.

To the Editor of THE LANCET.

SIR,—You have lately admitted several letters on transverse depressions on the nails, all the writers attributing this curious appearance to arrested nutrition of the nails during illness; and it has been urged, as a practical application of this theory, that when an applicant for a life assurance denies that he has suffered from any indisposition, an examination of the nails may prove that such an assertion is not worthy of credit. Now, the state of my own nails is typical of this deformity. For the last thirty years each of my nails, on the hands only, have had from five to ten well-marked transverse depressions, the deepest being on the thumb nails. I have never in my life had any illness, and during the forty-nine years that I have carried on a large medical practice I have never been laid up for an hour, and have never had even an attack of indigestion. If, then, I had been rejected by a Life Assurance Office, or had had to pay an extra premium in consequence of the state of my nails, I should have suffered a great injustice.

I am, Sir, yours faithfully,

Barnstaple, May 17th, 1880. RICHARD BUDD, M.D., F.R.C.P.

X. Y. Z.—1. Yes, with moderate care.—2. One shilling per diem in lieu of servant, when not provided with one from A.H. Corps.—3. Quarters provided.—4. No band fund; must subscribe to mess fund when there is a mess.—5. Yes.

A DISCLAIMER.

To the Editor of THE LANCET.

SIR,—It has just come to my knowledge that my name is being advertised as physician to a provident dispensary in Lambeth-walk. I know nothing of such an institution, and am at a loss to understand why such use has been made of my name.

I am, Sir, yours truly,

C. E. ARMAND SEMPLE, B.A.; M.B. Cantab., &c.
Physician to the North-Eastern Hospital for Children.

Torrington-square, May 15th, 1880.

Volunteer Surgeon.—Our correspondent had better apply, through his commanding officer, to the Deputy Adjutant-General for Auxiliary Forces, from whom he will receive an official answer.

Mr. Richard Paramore.—We are sorry we cannot enlighten our correspondent as to the locality of the dispensary in question.

ERRATUM.—In the report of a case of Conical Cornea in our "Mirror" of May 8th, p. 719, the patient's vision is stated to have been improved by a "concave" lens. The word quoted should have been *convex*.

Capital and Labour, Hackney and Kingsland Gazette, Willesden Chronicle, Coventry Standard, North British Agriculturist, Isle of Wight Mercury, Waterford Citizen, Teignmouth Gazette, Tiverton's Exeter Flying Post, Scarborough Gazette, Leeds Chronicle, Scottish Guardian, Bland ford Express, Malvern News, Church of England Temperance Chronicle, Rifle and Isle of Wight News, Aberdeen Herald, Cambridge Chronicle, Yarmouth Gazette, Eastern Morning News, Retford News, Wenlock Express, Craven Herald, Wellingborough News, Carmarthen Journal, Prescot Reporter, Folkestone Express, Newbury Weekly News, Tyrone Constitution, Middlesborough Observer, Leigh Chronicle, Wrexham Advertiser, Croydon Chronicle, Willesden Chronicle, Beverley Recorder, Kensington News, West of England Observer, Hayle Weekly News, Suburban Press, Oban Telegraph, Brighouse Gazette, Spiritual Notes, La Crónica Médica, Isle of Man Times, Kilkenny Moderator, Hawick Express, Walsall Free Press, Southampton Observer, Indian Medical Gazette, Pilmoor, Daily Review, &c. &c., have been received.

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COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Barnes, London; Dr. S. Mackenzie, London; Dr. B. Bramwell, Edinburgh; Dr. Duckworth, London; Dr. Tibbits, London; Dr. R. Budd, Barnstaple; Mr. Ingpen; Mr. Greenway, Plymouth; Dr. A. Hewan, London; Mr. Watts, Newport; Dr. Chevers, London; Mr. Ellerby; Dr. Wallace, Greenock; Dr. A. H. Bennett, London; Messrs. Feltoe and Sons; Mr. Ladell, Spring-grove; Messrs. Cassell and Co., London; Dr. A. T. Keyt, Cincinnati; Dr. W. W. Clarke, Wellingborough; Dr. B. Browne, London; Messrs. Gilbey; Mr. Bond, Brinklow; Dr. F. E. Pearse; Mr. Horton, Devonport; Dr. Weaver, Longton; Mr. S. C. Fisher, Lewisham; Dr. J. B. Gill, Canterbury; Mr. Ivens; Mr. Mann, Glasgow; Messrs. Farmer and Rogers; Mr. Gilbert, London; Mr. Kitson, Torquay; Mr. Mitchener, Newcastle; Mr. Dolan, Halifax; Mr. Semple, London; Mr. Howell, London; Mr. Galton; Mr. Hamilton, Liverpool; Mr. Davis, Detroit; Dr. Murphy, Sunderland; Mr. Crowden, Cranbrook; Mr. Walker, London; Mr. Fleming; Mr. Harrison, London; Mr. Blomfield; Mr. Forster, Oswestry; Mr. White, Brentwood; Mr. Wright, Manchester; Mr. E. S. Bishop, Manchester; Mr. Renton; Dr. Cartwright Reed; Dr. P. Bell, Edinburgh; Dr. Thin; Mr. Murphy, London; Mr. Todd; Dr. Yeld, Sunderland; Mr. Butterfield, Bradford; Dr. Clark, Folkestone; Messrs. Harrison and Brass, Newcastle; Mr. Atkinson, Farnham; Dr. Reid, Tenby; Dr. Wilson, Yoxall; Miss Graham; Dr. Neades, Dundee; Mr. Stewart; Messrs. Evans and Co.; Dr. W. H. Jones; Dr. Brailey, London; Dr. Davison, Carlisle; Mr. M. Smale; Mr. Sloane, Bradford, Yorks; Messrs. Blandy and Co., London; Mr. Swetenbank, Bristol; Messrs. Hally, Burton, and Co., London; Mr. J. Akhurst, London; Messrs. Ward and Son, London; Mr. Greenway, Plymouth; Dr. Sheen; Dr. Eberle, Easingwold; Messrs. Maclachlan and Co., Edinburgh; Dr. Reid, Enfield; Dr. Moffat; Dr. Hugo, Reading; G. H.; H. G. D.; Constant Reader; The Manager of the *Bazaar*; A. L. F.; X. Y. Z.; Reform; Volunteer Surgeon; The Medical Officer, Amalgamated Friendly Societies' Medical Association; A Struggler; Alpha; L.R.C.P.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Norman, Adelaide, Australia; Mr. Gaman, Hambledon; Mr. Trenery, Bristol; Messrs. Harvey and Reynolds, Leeds; Mr. Collins, East Grinstead; Dr. Beatson, Glasgow; Messrs. Bragg and Son, Taunton; Mr. Abbott, Sheffield; Messrs. Lee and Nightingale; Mr. Fairbank, Windsor; Mr. Finney, Dublin; Mr. Irwen, Darlington; Messrs. Farwig and Co.; Mr. Dove, Sherburn; Mr. Haycroft, Starcross; Mr. Egar, Woking; Mr. Devenport; Mr. Turnbull; Mr. Lamb, Hull; Mr. Small, London; Dr. Hill, Glasgow; Mr. Pratt, Cardiff; Mr. Woodall, Scarborough; Mr. Adams, Ipswich; Mr. Knaggs, Trinidad; Mr. Manners, Rugeley; Mr. Brunton, Limehouse; Mr. Larmuth, Manchester; Mr. Lightfoot, Arwell; Lieutenant Fox, Bristol; Mr. Setley, Keighley; Mr. Spence, Newcastle; Messrs. Gordon and Gotch; Messrs. Lumley and Co., London; Mr. Cosburn, Newbury; Mr. Radmayne, Newcastle; Mr. Dobbin, Brompton; Messrs. Meggs and Son, Yeovil; Mr. Wright, London; Dr. Hicks, Hendon; E. R. S., Tring; E. F.; Medicus, Nottingham; F. D., Notting-hill; H. J., Woking; Physician, Cliftonville; G. G., Milford Haven; G. S. S., Manchester; A. B., Manchester; J. G., Manchester; Medicus, Wellingborough; Veritas; George; W. X., Rhyl; Steamship; W. E., Charlton; Surgeon; G. W.; M.D., Portland-street; S. S., Dublin; Medicus, Exmouth; M., Stockwell; R. S. L., Notting-hill; Medicus, London; Medicus, Cambridge; Medicus, Newcastle; W. G. H., Swindon; A. B.; Zeta, Hastings; M.R.C.S., Lydney; Beatrice, Farringdon; &c.

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Cheques to be crossed "London and Westminster Bank."

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

Agent for the Advertising Department in France—

J. ASTIER, 67, Rue Caumartin, Paris.

* To Subscribers, no charge is made for the insertion of these Notices.

Medical Diary for the ensuing Week.

Monday, May 24.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, May 25.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. Fiske, "On American Political Ideas."

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. John Milne, "On the Stone Age in Japan." — Mr. C. Pfoundes, "On the Japanese People."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Mr. Wm. Adams, "On the Treatment of Lateral Curvature of the Spine by Steel Supports, Plaster-of-Paris Jacket, &c." — Mr. Henry Morris, "On Epithelioma of the Neck following a Patch of Chronic Skin Disease, in which the Cancer was twice Excised and the Jugulars Ligatured."

Wednesday, May 26.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M. — 5 P.M. Mr. Osman Vincent, "On Genu Valgum and Rachitic Deformities."

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

Thursday, May 27.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. T. W. R. Davids, "On Buddhist Sacred Books."

Friday, May 28.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—8 P.M. Evening Meeting.—9 P.M. Mr. F. Hueffer, "On Musical Criticism."

QUEKETT MICROSCOPICAL CLUB. — 8 P.M. Mr. A. D. Michael, "On two Species of Acarina, not hitherto recorded as British."

CLINICAL SOCIETY OF LONDON.—8½ P.M. Report of the Committee on Dr. Crocker's Case of "Congenital Disease of the Scalp." — Report of the Committee on "Keloid."—Dr. Graily Hewitt, "On a Case of Acute Hysterical Vomiting of ten months' duration, caused by Displacement of the Uterus."—Mr. Clutton, "On a Case of acquired Hypertrophy of one Limb." — Mr. Henry Morris, "On two Cases of Disease of the Mastoid Bone, in one of which a severe attack of Herpes of the Face followed Thrombosis of the Jugular Vein and Lateral Sinus."—Dr. F. Taylor, "On an unusual Case of Cardio-pulmonary Bruit."—Dr. Whipham, "On a Case of Cancer of the Pylorus; Ulceration of the Cancerous Growth, and formation of an Abscess between the Pylorus and the Liver; Gangrene of the Left Foot and Leg."

Saturday, May 29.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor H. Morley, "On the Dramatists before Shakespeare."

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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THE

Lumleian Lectures

ON

THE DIGESTIVE FERMENTS, AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians,

BY WM. ROBERTS, M.D., F.R.C.P., F.R.S.,

PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY; PROFESSOR OF CLINICAL MEDICINE TO THE OWENS COLLEGE.

LECTURE III.—PART IV.

Clinical Experience of Peptonised Food.

THE extreme difficulty of arriving at reliable conclusions in regard to the effect of therapeutical agents is well known to every sober-minded inquirer. The difficulty is not less, but probably greater, in judging of the effects of dietetic means. I have now had a considerable experience, extending over a period of two years, of the use by invalids of peptonised milk and peptonised milk-gruel, and it would be an easy task for me to recite a string of cases in which improvement and recovery followed the use of these articles of diet. But evidence of this sort would be wholly delusive unless checked by such an analysis of the circumstances of each case as would enable me to isolate the influence of the dietetic means. In the immense majority of cases such an analysis would be obviously impossible, the conditions to be taken into account would be too numerous, and their relative influence too difficult to determine. In a question of this kind one is obliged, in a large degree, to fall back on general impressions, and on deductions based on physiological considerations. Nevertheless there are certain cases—most of them cases of incurable disease—in which the conditions are sufficiently simple to permit direct trustworthy conclusions to be drawn.

I found that peptonised milk-gruel was generally preferred, as being more agreeable to the palate, to simple peptonised milk; and by far the larger number of my observations were made with the former preparation. I was also soon satisfied that, with most rare exceptions, peptonised milk-gruel was perfectly acceptable to the invalid's stomach, and that a diet composed exclusively of this article could be used for many consecutive weeks without the slightest sign of failure of nutrition.

The cases in which the use of peptonised aliment appeared to produce the most striking benefits were those in which complete anorexia prevailed, and those in which the stomach was intolerant of food, and immediately rejected every form of nutriment. A brief review of the results obtained in cases of this kind will, I think, prove instructive.

Uræmic Vomiting.—In advanced Bright's disease incessant vomiting is sometimes a distressing and intractable symptom. In some cases of this class I have seen the vomiting at once and permanently allayed by the use of peptonised milk-gruel. The downward course of the disease may not have been a moment checked, but the relief to the dying patient was great.

Gastric Catarrh.—That form of gastric catarrh which is the Nemesis of alcoholic excess often yields immediately to the use of peptonised food. In the later periods of cirrhosis there frequently prevails severe intolerance of every kind of food, the stomach rejecting even beef-tea and diluted milk in the smallest quantities. The relief afforded by the use of peptonised milk-gruel in some of these cases is most striking; the vomiting ceases almost from the first, and the intolerable sense of distension diminishes.

Crises of Cardiac Disease.—Persons suffering from cardiac dilatation and valvular incompetency usually encounter one or more crises which are susceptible of relief before finally succumbing to their disorder. These crises are marked by a general venous stagnation, with severe congestion of the lungs, liver, and kidneys, and rapidly rising dropsy. Associated with these symptoms there is generally almost complete inability to take food, and sleeplessness. In this condition I have seen marked relief follow the use of peptonised aliment. I have long observed, as I doubt not have many of you, that the condition here described is often alleviated in the most striking manner by the use of exclusively liquid nourishment, such as milk or milk-gruel, given in small portions sub-continuously, or sippingly, as it were, throughout the waking hours, the patient being never permitted to take a distinct meal, nor a particle of solid food. As my practice has been to direct, in cases of this class, the administration of the peptonised aliment in this sipping fashion, the gratifying results noted have been partly due to the mode of administration; but I have been convinced by more than one example, when the same liquid nourishment, in the natural and in the predigested condition, has been used in succession, that there was a distinct superiority in the predigested article.

Pernicious Anæmia.—In the earlier periods of this singular disorder, I am inclined to hope that predigested aliment may prove a valuable resource. In cases where the ailment, although fully declared, was still of comparatively recent origin, I have, in the last eighteen months, seen the disorder checked under the use of peptonised milk-gruel. In one case, owing to the irritability of the stomach, the milk-gruel was at first administered per rectum with pancreatic extract, but was afterwards tolerated by the stomach. In three of these cases the amelioration went on to complete restoration. In cases of longer standing I have failed by the same means to obtain the slightest improvement.

Gastric Ulcer.—The use of an exclusively liquid nourishment given sub-continuously, in the manner before indicated, is a well-known and most efficacious mode of treatment in these cases. But since adopting the plan of giving peptonised milk-gruel, I think I have perceived that the results were distinctly better than before, especially in cases associated with epigastric pain. The almost absolute rest procured by this food for the ailing organ appeared to be an additional advantage. I may be permitted to mention one case. The patient had suffered from copious and repeated hæmatemesis, and from severe epigastric pain. The irritability of the stomach was such that the simplest nourishment, given in the smallest quantities, was immediately rejected. Peptonised milk-gruel was, however, tolerated at once; vomiting only occurred two or three times during the first two days of the treatment, and then ceased, as did likewise the epigastric pain. This patient used no other food for a period of six weeks, and took daily from two to three quarts, with steady recovery of flesh and strength.

Pyloric and Intestinal Obstruction.—Peptonised aliment would appear to be especially suitable for use in these cases, but so far I have been somewhat disappointed in the results. The vomiting has generally been effectually controlled, but I have not been able to convince myself, in cases of pyloric stricture, that the fatal event was delayed even a single day. When the obstruction has been temporary, and due to a removable cause, the results have been of course more satisfactory.

I should be glad to see a further trial made of peptonised, or partially peptonised, milk in the gastric and intestinal catarrh of infants. In one severe case of this class a favourable result was immediately obtained; in another case there was greater tolerance of food, and more comfort after it, than with the use of simply diluted milk. It would be interesting also to have experience of the use of peptonised aliment in typhoid fever and in old age. The greater variety which can now be given to this form of food by the preparation of peptonised soups, jellies, and blanc-manges will obviate the monotony sometimes complained of under the continuous use of peptonised milk-gruel.

THE USE OF PANCREATIC EXTRACT AS AN ADDITION TO FOOD SHORTLY BEFORE IT IS EATEN.

The administration of pancreatic extract with, or immediately after, a meal, can, I think, have only a limited utility. On entering the stomach the pancreatic ferments encounter the acid of the gastric juice, and when this rises above a certain point the activity of the ferments is destroyed. Still, a not inconsiderable interval of time must elapse before this point is reached, and during this interval the pancreatic ferments can accomplish a certain amount of work. I have repeatedly administered pancreatic extract in this way, but I am unable to say positively that I have seen benefit from this mode of administration. There is, however, a modification of this plan, which I have lately put in practice, that promises better results. It is to add the extract to the food

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fifteen or twenty minutes before it is eaten. Certain dishes commonly used by invalids—farinaceous gruels, milk, bread and milk, milk flavoured with tea or coffee or cocoa, and soups strengthened with farinaceous matters, or with milk—are suitable for this mode of treatment. A teaspoonful or two of the liquor pancreaticus should be stirred up with the warm food as soon as it comes to table. And such is the activity of the preparation that even as the invalid is engaged in eating—if he eat leisurely as an invalid should do—a change comes over the contents of the cup or basin—the gruel becomes thinner, the milk alters a shade in colour, or perhaps curdles softly, and the pieces of bread soften. The transformation thus begun goes on for a time in the stomach, and one may believe that before the gastric acid puts a stop to the process the work of digestion is already far advanced.

This mode of administering pancreatic preparations is simple and convenient. No addition of alkali is required, and of course no final boiling. The only precaution to be observed is that the temperature of the food, when the extract is added, shall not exceed 150° F. (65° C.) This point is very easily ascertained, for no liquid can be tolerated in the mouth, even when taken in sips, which has a temperature above 140° F. (60° C.) If, therefore, the food is sufficiently cool to be borne in the mouth, the extract may be added to it without any risk of injuring the activity of the ferments.

Pancreatic Extract as an Addition to Nutritive Enemata.—Pancreatic extract is peculiarly adapted for administration with nutritive enemata. The enema may be prepared in the usual way with milk-gruel and beef-tea, and a dessert-spoonful of liquor pancreaticus should be added to it just before administration. In the warm temperature of the bowel the ferments find a favourable medium for their action on the nutritive materials with which they are mixed, and there is no acid secretion to interfere with the completion of the digestive process.

I have now had some experience in this method of alimentation, and have been satisfied with its success. In one case a patient suffering from post-pharyngeal abscess, which entirely occluded the œsophagus, was nourished exclusively for a period of three weeks (until the abscess broke) on enemata of milk-gruel mixed with pancreatic extract.

Clinical Lecture
ON
ERB'S SPASTIC PARALYSIS.

Delivered at Glasgow Royal Infirmary, Dec. 8th, 1879.

BY M. CHARTERIS, M.D.,
PROFESSOR OF MEDICINE, ANDERSON'S COLLEGE.

GENTLEMEN,—I desire to draw your attention to-day to a rare form of spinal disease, which, from the accurate description given of it by Erb, Professor of Electro-Therapy at the University of Heidelberg, is now named after its author. An analogous affection is, by Charcot, designated "amyotrophic lateral sclerosis," and "spasmodic dorsal tabes." These terms seem too vague, and Erb's nomenclature, conveying a certain clinical picture, appears to be the justest and the most likely to be lasting.

You all know in a general way what is meant by the word "paralysis." It conveys the idea to a greater or less extent of loss of motion, inability to perform actions which in health are easy and natural. Clinicists have, in regard to spinal diseases, described certain peculiar gaits. Thus when there is more or less extensive paralysis of the lower extremities before complete loss of motion has been established, it is noted that the patient walks with a shuffling gait, dragging his feet after him, with the tips of the toes pointed to the ground, and the heel raised high. This is called "the paralytic gait."

Again, if there is disturbed conduction of muscular movements in walking; if the patient throws his foot forward and outward with force, and brings it to the ground heel first with a decided stamp; if, further, his eyes are constantly on the ground, and he reels and staggers when this is not the case,—the gait is termed "ataxic."

A further gait is described as the "spastic gait." Here the patient has also a peculiar characteristic walk or run, as it may be termed. For the feet seem to clear the ground, and the tips appear to feel obstacles in every inequality of the surface, so much so as to give rise to a hopping elevation of the whole body, which is slightly bent forward, the legs meanwhile keeping close together, especially at the knees. This gait depends on muscular tension, and reflex contractions in the various groups of muscles, which are set in activity during the process of walking.

In "spastic paralysis" the earlier symptoms in movement are as I have mentioned, and hence the disease I speak about to-day is termed "spastic paralysis."

Before giving the history of the patient before you let me attempt to explain the pathology of the disease. I know that the "ataxic gait" is associated with disease of the posterior columns of the spinal cord. I know that with this "ataxic gait" there is disturbed sensibility; that, to take one prominent feature of the disease, there is an absence of the tendon-reflex; that when I strike the patella smartly there is no response, no reflex contraction takes place, the leg remains as it were dead and lifeless. But in this other form of paralysis, "spastic paralysis," there is great increase in the reflex action of the tendons, not merely the tendon of the patella, but also of the tendo Achillis and of the adductors. If, therefore, as post-mortem evidences show, the ataxic gait means disease of the posterior columns, posterior gray horns, the central gray substance, and probably also a great part of the anterior gray horns, we exclude these divisions of the spinal cord from participating in the disease in question. Of course, also, we must exclude the brain.

Where, then, can we localise this disease? We have only got for this purpose the so-called motor portions of the spinal cord—i.e., the antero-lateral columns, and perhaps also a portion of the gray substance. Still further generalising, and consequently dogmatising from our present physiological knowledge, we exclude the anterior columns proper as being implicated in a disease which, as you will afterwards observe, has paralysis without atrophy of the affected muscles. We reduce our field of observation to the lateral columns of the spinal cord. Here, accordingly, is the seat of the disease. Here, says Charcot, and with him Erb, we have a chronic inflammatory process going on; here, in the posterior divisions of the lateral columns, we have the highly probable anatomical basis of "spasmodic spinal paralysis."

So much having been said for the pathological explanation of this disease—an explanation which in theory seems excellent, but which from the limited number of cases as yet recorded has not been verified by post-mortem examinations—let me now direct your attention to the leading features of the history and present condition of our patient.

You observe as she lies in bed, with her body covered, that her face is full and well-nourished; that her eye is not wanting in intelligence, and that her general expression is, so far as you can see, that of a healthy, contented woman. If you ask her questions, she will give rational and satisfactory replies. She notes everything that is going on, takes a lively interest in other patients in the ward, and reads newspapers and other periodicals with avidity. Take away the bedclothes, and you will see that her legs are drawn up, that they are bent at the knee to such an extent that one of them actually touches with the heel the corresponding hip. You will note further that at the knee they meet, and require force to separate them. Try to extend either leg and you will find you cannot do so beyond a certain point, for the hamstring muscles with their tendons will not allow them to proceed further, and on desisting from your efforts they slowly return to their original position. Test the sensibility and you will readily perceive it is not affected. Tap the patellar tendon, and you will see a quivering movement of the foot in response. Similarly tap the tendo Achillis, and there is passive dorsal flexion of the foot. Tap over the region of the lumbar vertebræ, and you excite the activity of the tendons of the adductors. Note also that the muscles of the leg and thigh, though flabby, are in no way atrophied.

Such is the patient's present condition—a condition which very fully and faithfully illustrates Erb's clinical picture of the disease. What, it may be asked now, was her past history—what her condition when admitted six months

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ago into the wards. Well, the report of her case states that she is thirty-six years of age, that for twenty of these years she has been married, and that she is the mother of ten children. Her confinements were easy, and her health good until she became pregnant with the tenth child, when she experienced an uneasy feeling, but not actual pain, in her back. This uneasy feeling—weakness she terms it—continued during the whole of her pregnancy. When she came to the full term, twelve months ago now, she was delivered of a healthy child after a somewhat lingering labour. The placenta came away naturally, but after that she never "saw anything," not even the ordinary lochia. She kept to her bed for three weeks, the weakness in the back being more apparent. It was not, however, until the expiry of that time that, on attempting to get out of bed, she noticed that, though able to put her feet to the ground, she was unable to walk without her crutches. "I thought," she said, "this would pass away, but it did not, and day by day I noticed I could with greater difficulty put my heel to the ground. I could only place my toes there. Then I became alarmed, and applied for admission to the Infirmary." She continued to suckle her child until the day of admission.

The report goes on to state:—The patient is well nourished, her countenance cheerful, her understanding clear, and speech unaffected. She lies in bed upon her back, with her thighs flexed slightly upon the pelvis and her legs forcibly upon the thighs. The adductor muscles of the thigh are powerfully acting, so much so that the knees are locked forcibly together and cannot be separated, neither can the legs or thighs be extended to any great degree. She has no tenderness about the spine, no giddiness in the head, no sense of constriction round the abdomen; and she states that at the onset of her disease she had no difficulty of walking with her eyes shut or in the dark. Sensation is complete in both her limbs, but the motor power is lost. When the limbs are touched in any part, violent reflex actions are excited in the muscles of the thigh and calf. The cardiac and respiratory systems are normal. With regard to the digestive system, it is noted that the appetite is good, tongue clean, bowels somewhat constipated. She has complete control over the rectum. Under the genito-urinary system it is observed that the urine contains no albumen or sugar, and is slightly acid in reaction. From the day of her admission until this date she has menstruated regularly.

You will observe that there has been little change in the patient's condition now from what it was six months ago. We have tried every remedy which might be considered useful, but without effect. The "constant current" has never been omitted, but though some hope was entertained of it at first, this has had to be abandoned. Under chloroform, it may be added, the limbs could not be extended any further than without it. She now desires to return home, and to this I can place no obstacle in her way, for unfortunately I know of nothing which will tend permanently to benefit her interesting but unfortunate state. This is the first true case of the kind, so far as I am aware, which has been reported from the west of Scotland.

THE DISEASES OF THE EYE OCCURRING IN CONNEXION WITH PREGNANCY.

BY HENRY POWER, M.B. LOND., F.R.C.S. ENG.,
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(Concluded from p. 769.)

THE formation of the white patches in albuminuric retinitis may take place with great rapidity. A case, though not occurring in pregnancy, fell under my care, in which very large patches appeared in the course of three days, the functional activity of the retina being of course abolished in these parts where they existed.

As a matter of prognosis it may be said that hæmorrhages, even of somewhat large extent, will be absorbed. The white spots I am less certain about, but think they also disappear in time, though more slowly than the hæmorrhages.

In regard to treatment I have nothing to say, since it is necessarily the same as that applicable to the renal disease, and no special treatment is required for the eyes.

Mr. Macnamara has recommended the induction of premature labour in these cases, and has (THE LANCET, vol. ii., 1878, p. 842) recorded a perfectly successful case which was under his own and Dr. Potter's care. On this point it would be interesting to obtain the opinions of those who are specially engaged in the practice of midwifery, particularly in regard to the period when premature labour would under these circumstances best be induced.

Passing from these I may now briefly refer to intracranial disease as occurring in pregnancy.

The sudden loss of a large quantity of blood in delivery has been known to produce partial or complete loss of vision. No instance of this kind has come under my own observation, but the following is a good example of it, and I am indebted for it to Dr. J. P. Atkinson of Bampton. "In July, 1874, I attended the wife of a clergyman in her eighth confinement. All went well until the expulsion of the placenta, when frightful hæmorrhage took place, which, however, after some time I succeeded in arresting. I then found she had lost the faculty of sight of her right eye. This, however, returned in a few hours, and she made a good recovery. Last year, when visiting some friends in Norfolk, she had an attack of facial palsy of the right side. The palsy got gradually better, but on her return home I saw her; she was very nervous, vision weak on right side. Upon ophthalmoscopic examination I found the right retina decidedly anæmic, and she assured me her sight on that side had never been so good since her last confinement. She is now better, but still complaining."

In such a case as this I presume the sudden withdrawal of blood from the system either leads the vessels of certain regions of the brain to contract so firmly that the circulation is never again restored through them, and the nutrition of the part fails from defective supply of pabulum, or the sudden diminution of pressure occasions some lesion of the delicate tissue of the central nervous system.

In regard to the intracranial diseases of the eye occurring in pregnancy, I fear they should almost be classed under the head of "anomalous affections." They are cases of more or less complete loss of vision in which we are unable to localise the disease, and are obliged to launch out into the airy regions of speculation to afford an explanation. The difficulty occurs in all those cases in which the patient complains of impaired vision, and in which no disease can be recognised under ophthalmoscopic examination. The part affected being beyond our ken, we guess that some part of the optic nervous apparatus is diseased, using the term in its widest sense, and as including the optic nerve, chiasma and tract, the optic lobes or corpora quadrigemina, the posterior part of the optic thalami, the cerebellum, and lastly, if the localisation of the cerebral functions be a fact and not a theory only, the cerebral centres of vision, which are probably situated in the occipital lobes of the hemispheres.

The discovery of the ophthalmoscope five-and-twenty years ago has enabled us to materially reduce the number of cases that were formerly included under this head, and the inability of the older writers to see beyond the lens renders it impossible to arrive at an absolute conclusion in regard to many of the cases they record.

The following are one or two cases that have fallen under my care, and I think it may be said that, however slight may be the visible change in the disc and retina of the eye or eyes affected in the early period, they almost always pass into white atrophy. We may meet with a perfectly blind eye, or with an eye in which part of the field of vision is perfectly blind; but I believe it will be found that we rarely or never meet with an eye that has been completely blind for some time, say for a few months, without finding atrophy present, the disc being whiter than natural.

Feb. 27th, 1880.—Fanny O——, a delicate-looking woman, aged forty, states that she could see perfectly well with both eyes up to Sept. 1st, 1879, which date was twenty-two days before her confinement. For several weeks previously she had slept badly, and during the earlier months of her pregnancy had experienced continuous pain for weeks together, both night and day. The pain had, however, greatly diminished before Sept. 1st, the date of her attack. On the night of that day, being much exhausted, she went to bed early, and awoke about daybreak with curious sensations in her left eye, which she described as a quivering before her eye, a kind of bubbling "like round bubbles of water, yellow and green, different colours." A darkness then came over the eye, which in the course of two or three

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days became so thick as to obscure all objects, and she was only able to see light with the upper part of the retina—that is to say, she could on looking upwards dimly see things at her feet. By degrees even this amount of vision went, and she was for a time quite blind with the left eye. On Sept. 23rd she was confined of a healthy child still living. Fourteen days after her confinement vision gradually returned in the left eye, but never perfectly. She could see everything in the room, "but there was a flickering about." "It seemed as if the room was in twilight" when she closed her right eye. This state continued for ten days, and she then lost her vision completely and permanently in the left eye. The vision of the right eye was above the average, $\frac{25}{20}$. The tension of both eyes was normal. Ophthalmoscopic examination showed complete white atrophy of the left optic disc, but no other abnormal appearance. She stated that she had had fourteen children, the first six of which were still-born. She has only four living. She had been compelled to lift some heavy furniture in the course of her last pregnancy.

I expected in this case to find the indications of present or past detachment of the retina or of hæmorrhage, but the ophthalmoscopic examination only revealed pure and simple white atrophy, the question of the cause of which is not easy to answer. The numerous deaths amongst her children point to a syphilitic history, but I could obtain no account of the occurrence of any attack. The arteries and veins were too numerous and full to admit of the possibility of embolism. Was it a case of embolism of a vessel supplying one of the corpora quadrigemina, or was there some lesion of the visual cerebral centre? The return of the vision for a short time, though impaired, is a remarkable feature of the case.

Here is a similar case, for the notes of which I am indebted to my dresser at St. Bartholomew's, Mr. Cooper.

J. A——, a moderately well-grown, healthy-looking woman, with fair complexion, brown hair, blue eyes, and some traces of small-pox; admitted into St. Bartholomew's, complaining of loss of vision in the right eye, which has come on rather rapidly in the course of the last two months. The patient had a still-born child twelve months ago, and is now in the sixth month of her pregnancy. About two months ago she had severe headache, which especially affected the right temple. Both eyes then became dim, and ultimately blind, but the left eye soon recovered vision. Her life generally had been regular, and there was no specific history; but she seems to have been poorly fed, as she had been accustomed to drink large quantities of tea. On examination the vision of the right eye was found to be abolished; the cornea and media clear; the iris acting sluggishly. Disc well defined; paler than that of the opposite; probably passing into white atrophy; the outer half whiter than the inner. The whiteness is not so advanced as to attract attention, unless blindness was known to be present, but is perceptible when the two discs are quickly examined one after the other. The arteries are few and small. There is a little pigment along the inner side. Tension normal. — Left eye: Cornea and media clear; iris acting well; the disc rosier than that of the right eye. Tension normal. Vision $\frac{20}{30}$, not improved with glasses. In a good light can read 1½ Snellen.

The following is a case that was under the care of Mr. Mackinlay, who kindly directed her to see me.

C. H——, aged twenty-four, a tall, pallid woman, states that she was married two years and half ago, and in the course of the first year gave birth to a healthy child, which she nursed for eleven months. She lost many of her teeth during this pregnancy, and was feeble. During the last year or two she has been much worried by domestic affairs, and is now in the sixth month of her pregnancy. Her left eye began to fail six weeks ago. Right, amblyopic from birth. The tension of both eyes is normal. She knows that the vision of the left eye has failed because she cannot now recognise objects on the opposite side of the street, which she has always been accustomed to do, and she has to bring work close to her eye. The left: V. = $\frac{20}{40}$, and she can with difficulty read Jäger No. 2 at nine inches. She is not improved with glasses. The refraction emmetropic with the ophthalmoscope. She was a patient at the South London Ophthalmic Hospital eight years ago for her right eye, and some medicine was prescribed for her. With this eye she can only see large objects, and the internal rectus is insufficient, so that there is a permanent external squint. By an effort of the will she can roll the eye inwards. She is a total abstainer. She recognises colour well. The fundus is to all appearance thoroughly healthy. The vessels of the disc are large and numerous. The failure of vision in this instance seemed to me to be attributable to physical exhaustion and to an anæmic condition of the nervous system generally.

In view of these very remarkable and very limited local affections of the eyes, it may be expedient to refer to a condition that is in some respects parallel to it—the not unfrequent occurrence of chorea in pregnancy. (For an excellent paper on this subject the reader is referred to Barnes' "On Chorea in Pregnancy," "Obstetrical Transactions," vol. x., 1869, p. 147.) From the large number of cases adduced by Dr. Barnes it seems probable that this affection owns three causes at least. First (as believed by Drs. Kirkes and Hughlings Jackson) the detachments of small vegetations from the mitral or aortic valves producing embolism; secondly, a shock to the nervous system which is not unfrequently associated with some disease of the central nervous system, such as congestion or pale softening of the nerve-centres, a clot of blood in the velum interpositum, softening of septum lucidum and corpus callosum, or of the spinal cord. Lastly, as Dr. Barnes is disposed to think, it may be due to some alteration in the nature of the blood; or possibly, as Dr. Fitzpatrick in the discussion on the above paper suggests, to anæmia of the nervous centres.

It will be noticed that in many of these cases the disease is progressive, which seems to me to be rather opposed to the embolic theory. I think if the arterial supply to one of the nerve-centres—say to the nates or testes—were suddenly arrested, the function of the part would be abolished permanently unless collateral circulation were established. In that event recovery would take place; but I know of more than one case where partial recovery did take place and yet relapse occurred, ending in total blindness. This is not what we should expect to occur if collateral circulation began to be established.

I think I have now drawn attention to the principal forms of ophthalmic disease that occur in, or that are connected with, pregnancy. It will be seen that whilst some of these conditions are capable of being relieved with facility, others possess exceptional interest in enabling the practitioner to determine the treatment that should be pursued in certain cases of pregnancy that present special difficulties and dangers.

ON MEDICAL CERTIFICATES OF INSANITY.

BY T. N. BRUSHFIELD, M.D.,
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(Concluded from p. 764.)

IN the "statement" appended to the order of admission in present use, the relieving officer in the case of a pauper, and the relative in that of a private patient, is required to give a number of particulars relating to the patient's history, &c., among which are the following:—"Duration of existing attack; supposed cause; whether subject to epilepsy; whether suicidal; whether dangerous to others." It has always appeared to me an anomaly why the statute requires the answers to these to be furnished by the relieving officer (or by the relative in the case of a private patient). They all relate to the medical history of the patient, and have to be investigated by the practitioner before writing his certificate. No one with a shadow of reason could affirm it was the kind of information that ought to be supplied by any other than a medical man. The result is that at present the particulars given are most unreliable and valueless, and are frequently directly opposed to those contained in the medical certificate. The "duration of existing attack," and "supposed cause," are rarely stated correctly; this is especially the case in epileptic mania and general paralysis. It is not to be expected that a relieving officer can be a physician or pathologist, yet in one instance that came under my notice that official assigned the cause to be "paralysis in the brain." Some of the most common entries are "disease of the brain," "inherited," "despondency" (mistaking the

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effect for the cause), "fits," &c. Surely the education a relieving officer has received does not make him competent to supply the proper particulars. No doubt many of them do their best to furnish them, but bad is the best at all times. Again, it is not advisable that the cause of insanity in young females should be investigated by an ordinary lay parochial officer. It ought to be considered entirely out of his province to do so, and yet I have met in the certificate with the entry "irregularity in monthly courses." Amenorrhœa is a common cause; in one instance of this, the mental malady was assigned to "a fall." Cases the intimate causes of which may be associated with syphilis or masturbation require the greatest caution and tact on the part even of a medical man to inquire into. I hardly need cite further examples. Fortunately the relieving officers are able to shelter themselves under the term "unknown"; and many do this to a considerable extent with respect to nearly all the heads of particulars required, and that, too, when the information was readily obtainable.

The condition as to epilepsy is often wrongly stated; its presence being affirmed or denied in direct opposition to the fact. Everything that can be set down to "fits" is assigned to epilepsy, making the latter term a very inclusive one. Within my own knowledge, cases of hysteria, ordinary syncope, convulsions, epileptiform attacks in general paralysis, &c., have been so included. Within the present year two patients have been received into the Brookwood Asylum, both of whom were asserted to be the subjects of epilepsy. Neither of them was epileptic, but in either instance there had been a sudden attack of apoplexy with slight hemiplegia. It is hardly to be expected that a non-medical person could appreciate the difference between the two sets of symptoms. The prognosis in the two diseases being so different, it was of essential importance to ascertain in these cases whether epilepsy was present; fortunately their respective histories were obtained, and the true character of the "fits" was found out. One of the two has been discharged recovered, a very improbable result had epilepsy been associated with the insanity.

The particulars furnished by the relieving officer as to whether the patient be dangerous to himself or to others are often contradictory to those recorded by the medical certifier. "Uncertain" and "scarcely" are the occasional replies. Practical psychologists are well aware that all patients with melancholia should be regarded as having a tendency to commit suicide, but a relieving officer never reports them to be suicidal unless a threat or an attempt has been made, and not always then. In one instance, "whether dangerous to others," was answered in the following remarkable manner, "No, not to humane beings, but cut a cat's head off." I think there can be no reasonable doubt that not only ought all these particulars now supplied by the relieving officer to be furnished by the certifying practitioner as the proper person, but that he is the *only* one who should, and who is competent to, investigate and to record all such matters.[1]

Two important points in the patient's history are rarely mentioned. The first relates to the habits of the patient as to temperance or intemperance, more particularly if the latter manifested themselves after symptoms of insanity set in. The second has regard to any hereditary predisposition. A short time since I noticed the following printed interpolation in the statement accompanying an order of admission:—"Any relation affected with insanity; if so, state relationship." In this particular instance the reply was, "A cousin insane." This would have been of more value if the "cousin" had been stated to be a paternal or a maternal one. But the inquiry should not be limited to any family history of insanity alone, but should be extended to all forms of nervous diseases—epilepsy, paralysis, chorea,—and should even include any marked habits of intemperance in the parents.

One portion of the fourth section should be devoted to the general medical history of the patient, and should include a report of any existing disease, and also the condition of the various organs and functions immediately prior to admission. At present no such information reaches the asylum, there being no place for any in the certificate, and the relieving officer or other person accompanying the patient can rarely give any reliable account.

The condition as to sleep and to the state of the bowels are rarely, if ever, alluded to; and yet disturbance of one or both, forms some of the most common and urgent symptoms for treatment immediately on arrival at the asylum, the medical officers of which have, as it were, to work in the dark.

Disturbance of the uterine functions, and, especially in the case of young females, amenorrhœa, although common symptoms in the insane, are seldom recorded in the certificates. The importance of the knowledge of the latter symptom may be demonstrated by the fact that a return of the menses is so frequently followed by recovery.

The medical practitioner should satisfy himself by personal examination as to the absence or presence of any serious injury, bruises, &c., and, if any be present, report them. In the case of those who have been very violent, bruises are often noticed, arising from the patient knocking himself about, from being held, &c.; in such the chest should always be carefully examined, and (particularly if it has any marks of injury, no matter how slight), if possible, with the stethoscope. Patients have, not unfrequently, been received at asylums with fractured ribs, which were not recorded, most probably from not having been examined for. Within my own knowledge many medical men would have saved themselves much subsequent anxiety and trouble had they adopted this course.

The fitness of the patient to be removed to an asylum should be certified by the medical man on the day of removal.

Other headings of information do not require a detailed notice, but will be found in the tabulated form appended to this paper.

The adoption of some plan such as I have imperfectly sketched would go far to remedy the present unsatisfactory certificates. It would entail extra trouble on the part of the medical man, so far as the written record was concerned. As, however, all the sections of information are only such as ought to form the subjects of investigation of every practitioner who examines an insane patient, the act of recording all the facts should be easy enough.

Before concluding I would briefly refer to one matter which has always influenced the production of imperfect and unsatisfactory certificates, and which has been powerfully alluded to in a recent work.[2] It appears altogether inexplicable why the subject of insanity has been hitherto ignored, or not been insisted upon by the various medical examining boards. Disease of the brain, as the instrument of mind, is more likely to be attended with disastrous results to the patient and his family, than disease of any other organ; none yields more readily to early and proper treatment, and yet it forms no recognised portion of the ordinary curriculum of medical studies. I am very strongly of opinion that if a knowledge of insanity were made as compulsory as that of any other disease, the early symptoms would be discovered by medical men long before the patient became, to the outside world, palpably insane, and whilst in the early stage would be treated successfully. A better knowledge of insanity among the profession at large would, I believe, ultimately result in fewer cases requiring asylum care and treatment.

[1] I drew attention to this subject in the Report of the Brookwood Asylum for the year 1870, and from which I extract the following:—"It is very evident that these particulars ought to fall to the province of the medical practitioner to answer and to embody in his certificate; and, although he may require to be assisted in this respect by the relieving officer, yet whether the entries be matters of fact or of opinion, they are essentially of a medical nature. Under the present legal form the replies to these important questions are too often erroneous, and calculated to mislead those who have the subsequent care of the case, and not unfrequently are directly opposed to the facts contained in the medical certificate." An asylum superintendent of great experience suggested to me that the present statement should be made out, and signed by the medical certifier. From the form I have appended it will be seen there are many other suggested headings additional to those now required, and which I think would better form a portion of the medical man's own certificate.

[2] "The requirement of certificates, given separately, after independent examination, by two medical men wholly unconnected, and neither having any interest in the fate of the patient, would seem a judicious precaution. .... When, however, it comes to be explained that the medical man signing the certificate may have never seen a lunatic, read a page of any work on insanity, heard a lecture on the subject, or been asked a question relating to it at any examination, the complexion of the case undergoes a change which is not reassuring. .... Not one in twenty of the average practitioners one meets is either qualified to form an opinion on a case of insanity, or justified in filling up a certificate."—Dr. Mortimer-Granville, "The Cure and Care of the Insane," vol. ii., pp. 150, 151.

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Suggested Form of Medical Certificate.

1. Facts indicating insanity observed by myself on the day of examination:—
   - Appearance, especially facial aspect, attitude, peculiarities of dress.
   - Delusions. (If any, describe them.)
   - Coherency or incoherency.
   - Condition of the memory.
   - Any change in the higher emotions.
   - Condition of the habits and propensities, especially as to change.
   - General demeanour: restlessness, excitement, exaltation, or depression.
   - Other abnormalities.
2. Facts indicating insanity observed by myself on days other than that of the certified day of examination.
3. Other facts (if any) indicating insanity communicated to me by others.
4. Statement of other particulars not contained in the foregoing:—
   - Probable duration of insanity.
   - Supposed cause—exciting, predisposing.
   - Is the patient temperate or intemperate?
   - Any relative known to have had insanity, epilepsy, paralysis, any nervous diseases, chorea. Give details, and state relationship.
   - Any defect at birth or in early infancy.
   - Any severe infantile diseases, convulsions during teething, tapeworm, &c.
   - Whether subject to epilepsy; state frequency and character of attacks.
   - Whether dangerous to others; state how, and whether exhibited towards a particular individual.
   - Whether dangerous to self—from non-suicidal motives, or from suicidal motives. Describe any attempt.
   - If of mischievous, destructive, uncleanly, or objectionable habits of any kind.
   - Condition as to sleep.
   - State of the bowels.
   - If known to have had any disease of the brain or spinal cord, sunstroke, or injury to head.
   - Any existing or recent bodily illness. Give details.
   - Present condition of thoracic and abdominal organs.
   - Any recent injuries, or marks of any. State how received, and give description.
   - If a female, report the condition of the uterine functions.
   - Any special diseases or disorders connected with the puerperal condition. The number of children, and age of the youngest.
   - Fitness for removal to asylum (to be certified on the day of removal).

HUMAN AND ANIMAL VARIOLÆ: A STUDY IN COMPARATIVE PATHOLOGY.

BY GEORGE FLEMING, F.R.C.V.S.,
ARMY VETERINARY INSPECTOR.

(Continued from p. 886.)

HORSE-POX.

I HAVE casually and repeatedly alluded to horse-pox, and it is necessary to again refer to it; as if what transpired at the Vaccination Conference is to be taken as evidence of our state of knowledge with regard to this kind of variola, we would deserve to be accused of unpardonable ignorance. If for no other object also than to rescue the reputation of Jenner from the charge of error preferred against him in this matter, it would be more than worthy of our attention. It is well known that Jenner expressed himself as of opinion that cow-pox was derived from horses affected with what was then, and is even now, popularly termed "grease." But for very many years, and also at the recent Conference, it has been denied that there was any relationship between the disease of the horse and cow-pox; and on the latter occasion it is reported that one of the speakers, in remarking that "all who were acquainted with the subject were well aware that there were some erroneous views originally held by Jenner with respect to the conveyance of that particular disease (cow-pox) from one animal to another—from the horse to the cow, and that it was in consequence of that conveyance that the cow became affected with a disease that he called cow-pox," added: "In the present day, perhaps, it was unnecessary for him to say that among veterinary surgeons who were acquainted with the lower animals, that opinion had always been negatived. He was of opinion that Jenner saw the disease of the animal, and that it was of a repetitive nature, which by his own observations he was well aware did not possess any particular quality." It is scarcely necessary to remark that intelligent students of veterinary medicine do not negative Jenner's opinion, but know for a well-established fact that he was justified in that opinion; inasmuch as horses suffer from a malady closely resembling the so-called "grease" (which is simply a kind of catarrhal inflammation of the sebaceous follicles of the skin at the lower part of the limbs), and that this malady is transmissible to the cow and to mankind, producing a train of symptoms so exactly like vaccinia that no material difference can be discerned between the two maladies.

Jenner was too serious a philosopher and exact observer to make light assertions or superficial examinations, and he only erred when he stated that the one source of cow-pox, and even of small-pox, was to be found in the horse. He was absolutely correct as to a particular cutaneous disease of the horses' limbs being transferred, by means of human hands, to the cow's udder, and there producing cow-pox, which again could be communicated to people and protect them from small-pox. The facts, accidental and experimental, upon which he bases his assertion are unmistakable and indisputable, and the "sore heels" or "grease" he describes as affecting horses and infecting the farriers who shod, or the grooms who attended to them, was nothing more or less than "equine variola" or "horse-pox," a disease which appears to have been far more frequent then than now, probably owing to the insanitary condition in which horses were kept in those days. Reference to his work[1] will show that Jenner knew more of the variolous diseases of animals than many more recent authorities, and that this "sore heel" disorder, or "grease," was eruptive in character, and could produce cow-pox. Jenner's discovery—for discovery this really was—was confirmed by Dr. Loy, of Pickering, who, in a little pamphlet which appears to be now quite unknown,[2] is much more explicit than Jenner with regard to the nature of this inoculable "grease," and he resorted to direct experimentation to prove the relations between it and cow-pox. His earlier experiments failed, in consequence of his not being able to distinguish between the ordinary and the specific malady. At last, he states, he had the good fortune to find a horse on whose heels the matter was much more limpid than in all the preceding ones—on the fourteenth day of the disease, the seventh of the discharge from the heels. Four cows inoculated with this matter showed the usual symptoms of cow-pox, and a child also inoculated with it on the arm on the third day had a papule surrounded by slight inflammation; on the fourth day the papule was very elevated, and on the fifth day there was a purple-tinted vesicle; on the sixth and seventh days the vesicle had increased and was darker. At the same time there was fever, headache, quickened respiration, frequent pulse, white tongue, &c., which symptoms declined towards the ninth day. On the sixteenth day after inoculation from the horse, the child was inoculated with small-pox matter without result. Loy alludes also to a farrier and a butcher of Pickering, who, in applying dressings to the heels of a horse affected with "grease" became inoculated. Desirous of ascertaining whether the pustules which were on the hands and forehead of the butcher could communicate the disease by inoculation, he inserted some of the matter from one of them into the arm of his brother, who had never had small-pox. The result was exactly the same as inoculating with cow-pox virus. Loy recognised two kinds of "grease"—one merely local and non-infective, the other local and constitutional (eruptive), which gives the disease to those who groom or handle the affected horses. With the first kind there was no general disturbance, but with the second at the commencement the horses exhibited symptoms of fever, "from which they were relieved as soon as the disease appeared at

[1] An Inquiry into the Causes and Effects of the Variolæ Vaccinæ, a Disease discovered in some of the Western Counties of England, particularly Gloucestershire, and known by the name of Cow-pox. London, 1798.

[2] Account of some Experiments on the Origin of the Cow-pox. 1802.

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the heels, and there was an eruption on the skin. The horse, the matter from which communicated the disease by inoculation, was very unwell until the appearance of sore heels, which was, as in all the other cases, accompanied by an eruption over the greater part of the body." The fact that inoculation from the "constitutional grease" was a protection from small-pox, and that the rather severe effects of direct transmission from the horse to the human species were modified by passing the virus through the cow, or through mankind, was fully recognised by this enlightened observer; as well as the other important fact, that the matter was only certainly effective when perfectly limpid, which was in an early stage of the disease. Loy likewise remarked that neither the original nor the communicated disease was infectious through the medium of the atmosphere.

The observations of this contemporary of the illustrious Jenner are extremely interesting, while they are decisive as to the intimate relationship existing between horse-pox and cow-pox. Though his pamphlet consists of only a few pages, it contains facts of great moment with regard to our subject, and there is perhaps nothing more astonishing in the whole range of medical literature, and especially that of vaccination, than the oblivion into which the record of his observations immediately fell. The opinion so strongly expressed by Jenner, based as it was on well-observed facts, and the convincing demonstrations (clinical and experimental) of Dr. Loy, do not appear to have availed much in establishing the existence of such a malady as horse-pox. Very long ago a few experimenters, medical and veterinary (among the latter of whom was Coleman)—in order, I suppose, to test the correctness of Jenner's view—attempted to transmit the "sore heels" or "grease" to horses and cattle, but failed, as Woodville and Simmons (mentioned by Loy) had previously done, and for the same reason—they inoculated from the local non-constitutional malady, overlooking the distinction which had been so well drawn by the Pickering physician with regard to the simple cutaneous disorder and the specific eruptive one. Consequently, Jenner was set down as having made a mistake; the existence of horse-pox was denied, and even at the recent Vaccination Conference the same speaker who asserted that veterinary surgeons had always negatived Jenner's opinion, said that Jenner saw the disease of the animal ("grease"), "and that it was of a repetitive nature [*sic*], which, by his own observations, he was well aware, did not possess any particular quality. ..... With the exception of the sheep, he knew of no other animal that was affected with variola. There was an equine variola which was produced from the cow (?), but he had never seen variola in the horse. He knew it had been stated of late that cases of that disease had occurred in France, but all he said was that our observations had been extensive and minute, and they had seen nothing approaching to it in a horse or dog, or any other animal except the sheep." Five years before these words were spoken, the horse-pox had been carefully described in English veterinary literature, and the malady had not only been observed on the Continent, but in England and America, and its existence proved over and over again beyond a doubt.

Dr. Loy's pamphlet was translated into French by Dr. Carro, soon after its appearance in England, and published in the *Bibliothèque Britannique* in the year X. (vol. xxi.) Carro was a great admirer of Jenner, and he dwelt with much force on the clearness and precision of Loy's experiments, as furnishing indubitable proof of the justness of the opinion of the introducer of vaccination. But Carro, in his eulogistic comments on Loy's work, remarks that the French vaccinators had experienced great difficulty in understanding what the English term "grease" really meant, some thinking it was *javart* (fistula of the foot from injury), or *eaux aux jambes* (simple inflammation of the sebaceous follicles—*vulgo*, common "grease")—"an uncertainty," adds Carro, "which shows how little care the English have observed in describing the *grease*, and is probably the cause of the small progress this interesting portion of the veterinary art has made among them." The French veterinarians and medical men who tried Loy's experiments had no better success than those in England who did not have recourse to the eruptive disease for inoculating material; consequently, in France, also, Jenner and Loy were believed to be in error, and nothing more was thought of horse-pox or "constitutional grease."

But it is curious, in the midst of this incredulity, to find Carro himself adducing most valuable confirmatory proof of the correctness of Jenner and Loy's statements, in a letter addressed to Professor Pictet, of Geneva, in 1803, and published also in the *Bibliothèque Britannique*. In this letter Carro writes:—"Les maréchaux-ferrants de Salonique distinguent trois sortes de javart: *l'écrouelleux, le phlegmoneux, le variolique*. Ce dernier paraît être le même que le *grease* constitutionnel du docteur Loy, car il est accompagné d'une éruption semblable à la petite vérole. Aussi, d'après le rapport des bergers Albanais, les vaches sont elles sujettes dans ce pays à une maladie qui paraît avoir une grande ressemblance avec le cow-pox des Anglais; et ce que décide la question, c'est que le docteur Lafont, établi depuis longtemps à Salonique, en Macédoine, a réussi à produire la véritable vaccine sur deux enfants inoculés avec le virus pris sur les jambes d'un cheval atteint de cette troisième espèce de javart, quoiqu'il ne produisît aucun effet sur une vache soumise aussi à cette inoculation; et cette vaccine s'est propagée de ces enfants à d'autres par l'inoculation, avec ses caractères et sa bénignité ordinaires."

In every country to which Jenner's views had penetrated, the same uncertainty prevailed with regard to the nature of the disease termed "grease" or "sore heels;" and therefore disappointment followed attempts to transmit it to the cow, and so to produce cow-pox.[3] In Italy, for instance, the term was translated into *giardone*, pedal fistula; and the possibility of producing such a disease as cow-pox from this condition placed the reputation of Jenner very much at the mercy of captious critics. In 1840 Dard saw the disease among horses in France, and called it *rhinite pemphigoïde*; in 1843 it was again observed in that country by Bouley, now director of the French Veterinary Schools, who designated it *herpes phlyctenoïde*, to distinguish it from glanders and farcy, which it somewhat resembles. But it was not until 1860 that the discovery of Jenner and the researches of Loy received further confirmation, and scientific attention was seriously directed to it. In the spring of that year the horses in the commune of Rieumes, not far from Toulouse, were attacked with a disease which assumed an epizoötic form, and in less than three weeks more than a hundred had become affected. M. Sarrans, the district veterinary surgeon, reported the disease as commencing with slight fever, soon followed by local symptoms, the chief of which were hot and painful swelling of the hocks, with an eruption of small pustules on the surface of the tumefied parts. In three to five days a purulent kind of discharge took place in the pastern, which continued for eight to ten days, during which the inflammatory phenomena gradually subsided; then the pustules desiccated, and towards the fifteenth day the crusts began to fall off, carrying the tufts of hair with them, and leaving more or less perceptible cicatrices. The eruption appeared not only on the limbs, but on other parts of the body, particularly on the nostrils, lips, flanks, and vulva. There was no cow-pox present in the locality, and the extension of the disease seemed to be due entirely to contagion. No fewer than eighty mares were infected from being sent to the Government stallions at Rieumes, the ropes with which their hind limbs were secured (passing round the pastern) being impregnated with the discharge from the heels of some diseased mare. Only three mares and two stallions escaped attack. One of the animals exposed to infection chanced to be sent to Toulouse, and not appearing so well as usual it was left at the Government Veterinary School. It was not until it had been there for eight days that Professor Lafosse observed the mare to be dull, suffering from inappetance, and lameness in both hind limbs, with difficulty in flexing the fetlocks, and a hot, painful swelling confined to the left fetlock, extending higher on the right leg. On these swollen parts small tufts of hair were erect here and there, and at these places there were what appeared to be pustules, from which exuded a fluid matter possessed of an ammoniacal odour, but less fetid than that of stearrhœa ("grease"). Lafosse thought at first that it was only the latter disease in an acute form; and he was happily inspired to inoculate a cow, in order, once more, to submit the Jennerian doctrine to an experimental test. The experiment was made eight days after the manifestation of the eruption on the mare, and was perfectly successful. Papules, then pustules, formed on the cow wherever the matter obtained from the mare had been inserted with the lancet—large, flat, firm, and round pustules, with a central umbilicus, which caused the borders

[3] In the nomenclature of disease drawn up by a joint committee of the Royal College of Physicians, and published in 1869, I find "grease" named *Equinia mitis*, and defined as "a pustular eruption produced by the contagion of matter from a horse affected with the grease."

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to appear raised—they were the vaccine vesicles, in fact. Another cow was inoculated from this one, and had a very fine cow-pock, from which a child and a horse were vaccinated, and these had a magnificent vaccinal eruption. A second child, inoculated with the matter from this horse, had, in its turn, a well-developed pock. Comparative inoculations were then made on children and horses with the equine virus and the ordinary humanised vaccine, and it was found that the former produced larger and finer pustules than the latter, though their evolution was slower. Lafosse designated the disease the *maladie pustuleuse vaccinogène* of the horse.

Bouley, then professor of clinic at the Alfort Veterinary School, not quite satisfied with what had been done in this direction by Lafosse and others, resolved to inoculate the cow with all the eruptive maladies of the horse which his daily routine of professional duty brought before him; and singular to relate, the very first case (1863) was a successful one, and produced a beautiful cow-pox. The horse presented the following symptoms:—On the inner surface of the lips, on the inferior aspect and free portion of the tongue, on the buccal and gingival membrane, and on the floor of the mouth—particularly along the Whartonian ducts,—were infinite multitudes of small vesicles about the size of a pea, some circular, others elongated, and whose opaline tint was in marked contrast to the bright-red mucous membrane on which they were seated. These pearl-tinted vesicles were smooth on their surface, had no depression, and felt rather tense; pain was evinced when they were pressed upon. In some places they were confluent, in others discrete. When they had been ruptured, there were small, lenticular, very red sores, with sharply-defined borders. A very abundant saliva, rendered frothy by the incessant movement of the tongue, filled the mouth, and escaped in long masses from its commissures. With the exception of not eating so well as usual, the horse appeared in good health. The symptoms were so different from those described by Loy and Lafosse, that Bouley thought it was an aphthous stomatitis, and that therefore, like the foot-and-mouth disease of bovines, it must be contagious. True to his resolve, he inoculated a cow to see what the result would be, and produced veritable cow-pox, from which children were most successfully vaccinated. For some months other horses were admitted to the clinic of the school suffering from the same disease, which varied in its symptoms only with regard to the seat of eruption, which was in some instances as in the first case, and in others as in Jenner's, Loy's, and Lafosse's cases. From these multiplied observations and experiments, most carefully watched and discussed by the most eminent medical and veterinary authorities in Paris, there could no longer exist the shadow of a doubt as to the nature of the disease, which was accordingly designated "equine variola" by Depaul and "horse-pox" by Bouley himself. Bouley confesses that for years he had met with the disease among horses from time to time, but until Lafosse's experiments at Toulouse he had not suspected its variolous nature.

So long ago as 1853 I witnessed, in Manchester, a case of inoculation of a farrier who had shod a horse affected with "grease." The vesicle was situated on the chin, and there was great constitutional disturbance. From time to time outbreaks of the disease have been recorded in France, where it appears to be most prevalent in Paris and its neighbourhood. In *Veterinary Sanitary Science and Police* I have devoted a chapter to it, and in the periodical edited by me, the *Veterinary Journal*, I have alluded to it frequently (particularly in vol. v., p. 81; vol. vii., p. 371; vol. ix., p. 204). A translation is also given of an interesting report by Professor Ellenberger of the Berlin Veterinary School of an outbreak of what he describes as "stomatitis pustulosa contagiosa," but which was really horse-pox. In this respect the ready communicability of the disease and its vaccinogenous character is well shown. In a recent number of the *Deutsche Zeitschrift für Thiermedicin* Professor Friedberger of the Munich Veterinary School furnishes an excellent account of an outbreak in that city, and a record of successful experiments. In German and Italian veterinary literature similar outbreaks are described. For the past two or three years there has prevailed widely among horses in England, Ireland, and Scotland a pustular exanthem, very contagious in its character, and known among grooms and others as the "boil disease," the "American boil disorder," &c., which, in some of its features, if not in all, somewhat resembles horse-pox. The eruption in the majority of cases is mainly confined to the trunk. From England it has been carried to Belgium, where it has attacked a large number of horses. Horse-pox has prevailed as an epizoöty for two years, and is now prevalent, at Montreal. Many persons have been accidentally inoculated, and the vacciniferous character of the disorder has been established by medical and veterinary authorities. The outbreak is described in the *Veterinary Journal* for August, 1877. Last October, immediately before leaving my late regiment, the Second Life Guards, I had four cases of the disease among young horses just joined, and my farrier-major was accidentally inoculated on the finger. Surgeon Hensman of the regiment considered the case one of severe vaccination. The details are recorded in the *Veterinary Journal* for March, 1880.

So that since 1864, when the nature of horse-pox was for ever settled by the observations and experiments of Bouley, and the discussions that ensued thereon at the Paris Academy of Medicine, the history of the malady has been largely supplemented by contributions from observers and experimenters in Europe and America, and Jenner's statement has been admitted by all who have studied the subject to be true except in one particular—the "horse-pox" or "constitutional grease" being the source of cow-pox. In this only was Jenner in error. The two diseases are perfectly independent of each other. Cow-pox appears where there are no horses, or possible contact with horses, and where the men who attend upon these do not milk cows. It has frequently been observed that horse-pox prevails on a farm or in a locality, and no cow-pox is seen there; while the last-named disease may affect a number of cows in a dairy, and the horses be entirely free from horse-pox. In none of the recorded outbreaks of horse-pox has anything ever been said as to the existence of cow-pox, and no attempt has ever been made to establish a relationship between the former and human variola, from which it differs as widely as the latter does from cow-pox. Horse-pox prevails entirely independently of small-pox or cow-pox. In some countries it is often present as an epizoöty—as in Lower Canada; while in other regions, where it is enzoötic, it will be more common in one part than another—as at Paris, where it is well known, and at Lyons, where, according to Chauveau, it is not seen.

(*To be continued.*)

ON LITHOTRITY:

WITH A STATISTICAL TABLE OF THE OPERATIONS FOR STONE IN THE BLADDER PERFORMED IN THE HOSPITALS OF GLASGOW.[1]

BY GEORGE BUCHANAN,
PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF GLASGOW.

THE following *résumé*, though stated in a very few figures, represents an amount of labour which I had no idea of when I began, and which I could not have accomplished without the kind assistance of the house-surgeons in the Royal and Western Infirmaries, and particularly of Drs. M'Lachlan and Harkness.

The figures till 1859 are copied from a paper which I laboriously compiled, and published in the *Glasgow Medical Journal* for April, 1859.

From that date till 1870 the figures are taken from the printed annual reports of the Glasgow Royal Infirmary, the tables of which contain the numbers, sexes, and results, but not the ages. The ward journals and operation books during the period referred to are most imperfect; many have been lost; in others, cases are omitted or not completed.

From 1870 to 1880 I have been able to make an accurate table. I first got all the cases collected from the hospital records, and submitted them to the surgeons themselves (except one who died in 1875), so that we have a clear starting-point for future statistics from Jan. 1st, 1870.

From the opening of the Royal Infirmary in 1795 till 1859 accurate records have been found of 159 cases of lithotomy in the male, with 23 deaths, or 1 in about 7 operations. Of these, 95 were under fifteen years of age, with 6 deaths, or 1 in 15⅞ operations. There were 64 above fifteen years of age; of these 13 died, or about 1 in 5 operations.

From 1859 till Jan. 1st, 1870, there were 84 cases of litho-

[1] Sequel to page 558. The information contained in Prof. Buchanan's present little article was embodied in the proof of the last part of his former paper; but the proof was received too late. Hence the necessity of this addendum.

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tomy in the male, but the ages cannot be accurately ascertained; of these 8 died, or 1 in every 10½ operations.

From Jan. 1st, 1870, till Jan. 1st, 1880, the records of the two hospitals of Glasgow contain 95 cases of lithotomy in the male; of these 15 died—a mortality of 1 in every 6⅓ operations. Of these, 33 were under fifteen years of age, with 2 deaths; while 62 were over fifteen years of age, with 13 deaths.

The total number of lithotomies in the male, without reference to age, in hospital practice in Glasgow, is 336, with 46 deaths, or 1 death in 7⅓ operations.

Lithotrity.—The total number of cases of lithotrity in the male performed in the hospitals is so small, and the particulars up to 1875 have been so carelessly recorded, that it is unnecessary to give the meagre information which the records afford.

CASES OF NEURALGIA TREATED WITH TONGA.

By W. J. H. LUSH, M.D., F.R.C.P.Ed., M.R.C.S.E., &c.

CASE 1.—W. H——, aged thirty-one, had been suffering from most severe neuralgia in the right superior maxillary division of the fifth pair of nerves for nearly ten days, the neuralgic pains darting over the lower eyelid, the cheek, the upper lip, and side of the nose, the paroxysms, lasting from ten minutes to half an hour, occurring six or eight times in the twenty-four hours. The teeth in both the upper and lower jaw were in a very decayed condition. One teaspoonful of the alcoholic extract of tonga (prepared by Messrs. Allen and Hanburys, 37, Lombard-street, E.C.) was ordered to be taken in half a wineglass of water every six hours till the pain was relieved. The paroxysms entirely ceased after the *fourth* dose.

CASE 2.—Mary B——, aged fifty-four, suffering from severe sciatica, was ordered a wineglass of the infusion of tonga (from the bag) every six hours. After taking the infusion for four days it was discontinued, as no benefit was derived.

CASE 3.—A woman, aged twenty-nine, in a very weak, anæmic state, with inflamed axillary glands, had suffered from supra-orbital neuralgia for six or seven days. Was ordered a wineglass of the infusion (from the bag) every six hours. The pains lessened in severity after the eighth dose. She was then placed on a liberal diet, and a tonic of the iodide of iron ordered. The pains, however, returning in great severity, she was ordered one teaspoonful of the alcoholic extract three times a day. The paroxysms ceased and did not return after the fifth dose had been taken.

CASE 4.—A young woman, aged nineteen, had severe neuralgia of the right inferior dental nerve. Her teeth were very much decayed, and several stumps were extracted. She was ordered a wineglass of the infusion (from the bag) every six hours. The pain still continued after taking it for three days, although in a less severe degree. I did not see her again after the third day.

CASE 5.—Wm. P——, aged thirty-two, had suffered greatly from neuralgia for nearly two years. He considered the original cause of the attacks to be a blow received about that time. The paroxysms, which occurred periodically about every month or six weeks, varied in severity and duration, and were for the most part confined to the inferior dental nerve on the left side, although occasionally the right was also the seat of pain. The patient had been under my notice for nearly a year and a half, and during that time attacks incapacitating him from following his occupation were of frequent occurrence. Sulphate of quinine alone, and in combination with bromide of potash and chloral hydrate, as a rule, relieved the pains in three or four days. He was ordered one teaspoonful of the alcoholic extract in water three times a day. The pain very much decreased after the fourth dose, and entirely ceased after the sixth dose of the extract had been taken. In my case-book I find the following note on April 15th on this case:—"Had another bad attack, though less severe than the last. The neuralgic pain entirely disappeared after the third dose." This patient complained of dryness of the mouth and fauces after each dose of the extract had been taken, the dryness continuing for nearly an hour, and the return of saliva being characterised by a "pricking" sensation along the gums.

These five cases have been taken as they came under notice in the ordinary course of my practice, and, being few in number, may not be considered of much value as a proof of the efficacy of tonga as a remedy for neuralgia; but, as with every new remedial agent, it is only by the unbiased report of a large number of unselected cases that a correct estimate of the value of tonga in the treatment of neuralgia and allied nervous affections can be obtained. As in the cases reported in THE LANCET, March 6th, by Drs. Ringer and Murrell, no toxic symptoms were produced by the administration of the drug in any of these cases except the fifth, in which case each dose was undoubtedly followed by a decrease in the amount of saliva.

Fyfield, Hants.

SEVERE INJURY TO FOOT; ANTISEPTIC TREATMENT; RAPID HEALING.

By ANDREW LANG BROWNE, M.D.,
SURGEON, ARMY MEDICAL DEPARTMENT.

SAPPER M——, Royal Engineers, aged twenty-seven years, a strong, healthy man, was brought to the Cambridge Hospital, Aldershot, on the afternoon of the 23rd March last, suffering from a severe injury of the left foot. On admission he stated that, while engaged in removing a stove from one of the huts in camp, a piece of the iron piping which formed its chimney dropped from the roof on to his foot. On examination it was found that the edge of the pipe had cut right through his strong ammunition boot and sock deeply into the foot, almost dividing the outer side of the foot, together with the four smaller toes, from the rest of the limb. The wound was more or less curved, and extended across the foot from about the middle of its outer side to the metatarso-phalangeal joint of the second toe. I passed my finger into it, and found the metatarsal bones of the fifth, fourth, and third toes smashed through, the head of the second metatarsal bone crushed and splintered, and also dislocated from its phalanx.

Treatment.—The wound was simply washed out thoroughly with carbolic lotion (one to forty), the bones placed in position, and the edges of the wound drawn together by four silver sutures. A piece of lint moistened with carbolic lotion was then laid over it, and the foot and ankle completely enveloped in a piece of gutta-percha tissue, and the limb placed on a splint. I dressed the wound morning and evening with carbolic lotion and lint. On the fifteenth day after admission the sutures were removed, and by the twenty-first day the wound had quite healed, and the patient was allowed up.

Remarks.—This case is remarkable, not only as regards the rapidity with which the wound healed (twenty-one days), and the complete union which took place after so severe an injury of bone and tissue, but also on account of the entire absence of pus, the dressings at no time being soiled by any.

Cambridge Hospital, Aldershot.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo ratio ad veritatem et ad cognoscendum idonea, nisi ea quæ in singulis artibus versantur, et dissectionum historiæ, tum aliorum, tum propriæ collectæ habeæ, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

OPERATION FOR UNUNITED FRACTURE OF THE OLECRANON BY OPENING THE JOINT, AND WIRING THE FRAGMENT TO THE ULNA; BONY UNION.

(Under the care of Mr. WILLIAM ROSE.)

FOR the following notes we are indebted to Mr. John Phillips, house-surgeon.

W. M——, aged twenty, was admitted into the Fisk ward on March 31st. Early in January he fell down on to his left elbow. Great swelling followed, and he was treated

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by his medical attendant for a simple sprain. He noticed, however, that as the pain and swelling subsided he could not extend the forearm. In the beginning of March he attended King's College Hospital as an out-patient under Mr. Rose. A fracture of the left olecranon was detected with about half an inch separation between the broken surfaces. The forearm was extended and bandaged upon a splint in order to relax the triceps, so as to bring the olecranon down into position. As this was followed by no marked improvement, Mr. Rose operated on April 3rd.

A longitudinal incision three inches in length was made over the seat of fracture, and the joint opened. The olecranon was freed with a few touches of the knife from its lateral attachments, and drawn down to the ulna without difficulty. The fibrous tissue which had formed between the broken surfaces was carefully dissected away, and the opposing surfaces of bone were scraped with a chisel till they were quite bare. A hole was then drilled obliquely in the ulna, and another exactly corresponding to it was made in the olecranon, care being taken to bring out the point of the awl on the rough surfaces just outside the articular cartilage. A strong silver wire loop was then passed through the holes thus made, and drawn tight. The broken fragments were thereby brought closely and firmly together and the wire was entirely outside the joint. Horsehair drainage was used, and the wound was closed with carbolised silk sutures. Gauze dressings were applied, and the limb was put up on a splint with the forearm extended. Strict antiseptic precautions were observed throughout.

The after-progress of the case was highly satisfactory. The joint remained perfectly quiet, the patient complained of no pain, and the temperature never rose above 99·4°, nor his pulse above 84.

The antiseptic dressings were changed only seven times in the five weeks which elapsed before the silver wire was removed. The joint was moved on the tenth day, and on the seventeenth day from the operation the patient was able to extend the forearm. After this the action of the triceps steadily improved, and the patient left the hospital on May 13th with evidently firm bony union.

Mr. Rose remarked that he was led to undertake this operation of opening the joint and wiring the fragment, not because the fracture was ununited, but because the arm had lost all power of extension in consequence of the complete laceration and displacements of the lower attachments of the triceps muscle. He would not recommend the operation in every case of fracture of the olecranon. It was not an uncommon occurrence to find a considerable amount of extension in such cases. This was to be explained by assuming that, though the olecranon had been detached, the fibrous insertion of the triceps had not been entirely severed.

NEWARK HOSPITAL.

CHRONIC VESICAL CATARRH; GONORRHŒA; ACUTE CYSTITIS; SURGICAL KIDNEY.

(Under the care of Mr. JOD.)

FOR the following notes we are indebted to Mr. Reckitt, house-surgeon.

William P——, aged fifty-nine, a labourer and widower, was admitted on Oct. 3rd, 1878. He stated that his father died of gravel, and that one son was troubled with the same complaint. He stated that with the exception of being troubled slightly for thirty years with "gravel," he had enjoyed very fair health, had had occasional difficulty in micturition during this period, but never complete retention. Ten years ago he passed per urethram a small white calculus, the size of a pea, and his urine had frequently deposited a whitish sediment. For several years there had been frequent desire to micturate. He was not a very sober man.

A month before admission he contracted a gonorrhœa, for which he was treated as an out-patient with alkalies and sulphate of magnesia. No injections were used. The discharge stopped in a few days, but there remained considerable pain in the perineum and over the pubes, the desire to micturate becoming more and more frequent, and the deposit in the urine so abundant and viscid that there was often extreme difficulty in voiding it. For three nights he had passed a large quantity of bloody urine, with a thick and sticky muco-purulent deposit, and one evening he expelled from the urethra a small phosphatic calculus the size of a pea.

On admission he was considerably emaciated, with an anxious, nipped, and painful expression of countenance. His tongue was very red and glazed, and he complained of aching pains in the abdomen and loins, and in the supra-pubic region, with frequent desire to micturate. Suspecting a stone in the bladder, Mr. Reckitt tried to pass a No. 8 silver catheter, but the pain and spasm were so great that he desisted. The surface of the body was cold on admission. Temperature 97·4°; pulse rather feeble and 90. The urine was very ammoniacal, with a strongly alkaline reaction, and contained a large amount of viscid muco-purulent matter, and microscopically triple phosphates of a beautiful character, and squamous epithelium were found. To have milk and beef-tea, warm bath, half an ounce of brandy every two hours, and hot bottle to feet during the day and night; and nitro-hydrochloric acid, tincture of hyoscyamus, and infusion of buchu, every four hours. Evening temperature, 99·6°.

On Oct. 6th, suspecting a stone, Mr. Job passed a sound, the patient being under chloroform, but with a negative result. The bladder was washed out with a solution of nitric acid (1 to 100), and a morphia suppository was introduced. He had a better night. Next morning the urine dribbled away, and only two ounces were passed voluntarily. A No. 10 silver catheter was passed, but no urine escaped. Slight twitching set in in the afternoon. The patient gradually became comatose, and died at 3.40 P.M. Free vomiting had taken place in the morning.

Autopsy.—Fundus of bladder considerably hypertrophied; interior sacculated; mucous membrane ulcerated in various places, forming "bridges of veins"; a considerable quantity of muco-purulent matter present; prostate gland much enlarged, and at one side of the prostatic portion of urethra was lodged a small, and apparently very old, phosphatic calculus. The left kidney was very much atrophied, and no larger than a crow's egg. The right kidney was twice its normal size; the capsule was readily detached. The pelvis was much dilated, and contained a very small phosphatic calculus and about two ounces of pus. Ureter dilated on this side. Other organs healthy.

Remarks.—Although vesical catarrh had probably existed for many years, as evidenced by the history, yet the attack of gonorrhœa was undoubtedly the main factor in producing an acute cystitis, with extension of the inflammatory action to the right kidney, resulting in suppuration of that organ, and consequently almost complete suppression of urine, the left kidney being apparently useless and the other disorganised, as the post-mortem showed; hence the convulsive twitching, vomiting, and ultimate coma.

HITCHIN INFIRMARY.

NECROSIS; PYÆMIA; AMPUTATION; ALBUMINURIA; RECOVERY.

(Under the care of Mr. C. J. GRELLET.)

FOR the following notes we are indebted to Mr. Mason.

Walter W——, aged sixteen, of Stotfold, Beds, was admitted into this infirmary on Aug. 26th, 1879, in a very low prostrate condition. Previous to his admission he had been confined to his bed for a fortnight with a supposed rheumatic attack, for which he was seen at his own home by Mr. Grellet on Aug. 24th, who found him suffering from a diffuse abscess extending from the inner ankle half way up the right leg. Removal to the infirmary was advised and adopted.

On admission it was found that during the journey the abscess had broken, and about one pint of bloody matter had escaped. The lad was put at once to bed, and on further examination extensive necrosis of tibia, fibula, and astragalus was discovered. The cavity was washed out with carbolic lotion, and a drainage tube was inserted. Ordered beef-tea two pints, milk diet, wine eight ounces, and to take every four hours two grains of the sulphate of quinine with fifteen drops of the solution of perchloride of iron in water. On Aug. 30th he was put upon meat diet.

His health steadily improved up to Oct. 19th, when in the afternoon of that day he complained of great pain in the stomach, and had a slight rigor. He confessed that he had eaten two hard pears. Linseed-meal poultices were applied to the abdomen, and some warm carminative medicines were

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administered, from which he obtained relief. On Oct. 22nd, however, his appetite failed and diarrhœa set in, rigors supervened, and another collection of pus formed over the tibia above the original one.

After consultation, amputation was performed by Mr. Grellet at the middle third of the thigh on Oct. 24th, 1879. Very little blood was lost during operation, but the patient was very weak after it, and remained on the table for an hour and a half. He was then put to bed and given an opium draught. He was very restless during the night.

From Oct. 25th to the 29th the stump did well, and the patient was better and took nourishment well; but on the 29th there was effusion into the left knee and ankle joints, which were wrapped in cotton-wool. On Nov. 1st the stump was healthy, the joints were better, but the scrotum was œdematous. The urine was albuminous (about one-sixth). Next day the scrotum was larger, hot, red, and painful, and the boy had diarrhœa. Kino and bark mixture was given night and morning, and linseed-meal poultices were applied to the scrotum. On the 4th the stump was healthy-looking, though the granulations were indolent; the scrotum was less painful. On the 5th the scrotum was smaller and less painful, but sloughing; diarrhœa persisted; the albumen in the urine was less. The patient was slightly improved on the whole. On the 6th, in addition to the quinine-and-iron mixture, carbolic-acid capsules (one minim) were given thrice daily. On Dec. 1st the stump was healed and quite sound, the scrotum was better, and the urine was less albuminous than at first. The diarrhœa was restrained by liquid extract of bael and compound tincture of chinchona in decoction of logwood. On the 9th the scrotum was healed, and the urine was slightly albuminous. The patient got up for the first time since his admission. Diarrhœa ceased on the 20th; and on the 23rd the urine was free from albumen.

On Feb. 12th, 1880, the patient was discharged cured.

STRATFORD-ON-AVON INFIRMARY.

GUNSHOT WOUND OF LEFT KNEE-JOINT, WITH LONGITUDINAL AND TRANSVERSE FRACTURE OF FEMUR; AMPUTATION.

(Under the care of Mr. LUPTON.)

THOMAS R. B——, aged twenty-four, theological student, was admitted on Feb. 12th with a gunshot wound of the left leg and knee. In company with a friend he was shooting rabbits, when a hitch occurred with the ferrets, and the friend stooping down to set the hitch straight, dropped his gun from the point of his shoulder, which exploded as it fell, and shot the patient. Three-quarters of an hour elapsed between the receipt of the injury and the patient's arrival at the infirmary, during the whole of this time he was bleeding freely.

On admission he was blanched and faint, and was not in a favourable state to bear either chloroform or the shock of a severe operation. The knee-joint was fairly "blown open" by the discharge, and about a couple of inches of the top of the tibia carried away by it; the patella with its ligament, the crucial ligaments, the articular cartilage of the head of tibia, and the semilunar cartilages were all blown away; the femur was split longitudinally from the joint about two inches upwards; and at a point about two inches and a half above the termination of the longitudinal fracture it was fractured transversely. The popliteal artery and the head of the fibula had escaped injury.

Under the circumstances amputation was urgent, and was done forthwith, the femur being sawn through just above its transverse fracture. Only two vessels required ligature.

On the following day hæmorrhage occurred, and it was necessary to reopen the stump and secure a vessel which had escaped observation at the time of the operation. Eight days after this the patient struck the end of his stump, and bleeding again occurred, which became so severe that it again became necessary to open the flaps to secure the bleeding point.

It is worthy of remark that on this occasion, the emergency being sudden, and proper assistance not being at hand, the patient *himself* assisted the nurse to steady the stump, while Mr. Lupton broke down the union of the flaps, and searched for and tied the bleeding point.

As the bone was unduly prominent on the face of the stump, Mr. Lupton very reluctantly judged it better to remove another inch of bone with a frame-saw, the patient meanwhile calmly steadying the stump.

The ligature on the femoral artery came away on the 15th day, and the patient left the infirmary ten weeks after the operation with a sound stump.

The case remained under observation, and some three weeks after leaving the hospital there was evidence of pus forming under the fascia lata; this ultimately made its way out at about the centre of the cicatrix. Discharge from this point continued, and at the end of July it became evident that a portion of the femur had separated; this was shortly after divided with a pair of bone nippers, and the two portions twisted out of the orifice. The case did well afterwards.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Section of Femur above Trochanter for Angular Anchylosis of Hip.—Salicin and Salicylate of Soda in Acute Rheumatism.

THE ordinary meeting of this Society was held on the 14th inst., the President, Dr. Greenhow, F.R.S., in the chair. In spite of the small attendance, a well-sustained debate arose upon the subject of the treatment of acute rheumatism by salicin and salicylate of soda, introduced in two exhaustive papers by the President, summarising his own experience, which was somewhat adverse to these drugs. Drs. H. Weber, Silver, Sanderson, Cavafy, and others, took part in the debate.

Dr. STEPHEN MACKENZIE exhibited a case of Anterior and Posterior Poliomyelitis following Small-pox. The patient was a man about forty years of age, who presented marked paralysis and wasting of the scapular muscles on the left side, and a well-defined area of anæsthesia over the opposite shoulder. The symptoms had come on since an attack of variola about four months ago. Dr. Mackenzie also showed a child with Urticaria Pigmentosa.

Mr. BARWELL read notes of a case of Section of the Femur above the Small Trochanter, for Angular Anchylosis of the Hip. William D——, aged twelve, had, when five years old, severe hip-disease and many abscesses about the joint. After several years he got about on crutches, but the result was a thigh flexed at right angles to the pelvis, and somewhat adducted. The deformity was extreme. The altered state of parts about the neck of the bone rendered section at that place inadmissible; section below the trochanters was rejected because Mr. Barwell considers such operation must produce very considerable shortening, equal in amount to the distance from the centre of the head of the bone to a point below the small trochanter—viz., from two to three inches. The operation of Rhea Barton and that of Louis Sayre—viz., the removal of a wedge of bone from about the junction of the femoral neck and shaft—appears to him as an unattainable result, since an artificial joint at this part of the body, even if it could be secured, could not be relied on to support the weight of the trunk. A review of the results obtained by these surgeons shows that of the two successful cases—one of Barton's and one of Sayre's—motion at the place of section was either never attained or soon ceased. In the case of William D—— all such intention was, therefore, discarded. Mr. Barwell endeavoured simply to secure a straight limb without further shortening than that already produced by the loss of growth which accompanied the original disease. The operation was performed antiseptically on Oct. 30th, by making a crucial incision on the outer aspect of the great trochanter down to the bone, peeling off the periosteum all round, finding the small trochanter and the tendon of the ilio-psoas muscle, passing above this latter part an armed needle, and drawing with the thread round the bone a chain-saw, with which, obliquely upward and outward, the section was made. Barely twenty drops of blood were lost. The patient was taken to bed, and a weight suspended to the foot. No suppuration followed, nor indeed any other bad symptom, the temperature being

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good throughout. Union of soft parts by first intention, except where the drainage-tube was inserted, and that channel healed as soon as the drain was withdrawn.—*Result:* The boy stands upright and straight; the limb parallel with the other; the shortening is barely an inch, and that appears due to lack of growth in the bone, not to the operation. He walks almost perfectly, and without sway of the body. Mr. Barwell especially directed attention to the fact that this end was attained by an operation which, being subperiosteal, secured so rapid a union of bone that the boy was in bed only thirty-three days. The temper and the small size of surgical needles gave rise to a little difficulty in getting a thread round the bone. An instrument devised on the principle of Belloc's sound was exhibited by Mr. Barwell, the use of which renders the operation quite easy.—Mr. HEATH said that in cases where it could be applied Mr. Adams's plan could not be improved on; but there were some cases where Mr. Barwell's method was advantageous—e.g., in a woman he has now under care, who has had chronic hip-disease from early childhood, and in whom it is impossible to define the neck of the femur. Division between the trochanters is better than Mr. Gant's method of section below them, owing to the tilting of the bone by the psoas muscle. When in London, Dr. Sayre showed a model of the preparation from his case, but it hardly seemed an accurate representation, so perfect was the joint. Besides, it is doubtful whether a stiff limb be not preferable to a joint in that situation.—Mr. BARWELL briefly replied.

Two papers contributed by the PRESIDENT were then read by the medical secretary (Dr. F. Taylor). The first was an account of "Ten Cases of Rheumatic Fever treated with Salicin." The author states that for some years past he has been in the habit of testing carefully and methodically in a series of cases the several remedies from time to time proposed for the treatment of rheumatic fever. During the last three years he had treated in the Middlesex Hospital ten cases with salicin, and fifty with salicylate of soda. All the patients were confined to bed until the fever had entirely subsided. The diet consisted of milk, beef-tea, and sometimes eggs; stimulants were sparingly given; the affected joints were wrapped in cotton-wool, and when pericarditis or endocarditis was present, belladonna and iodide of potassium ointment was applied over the præcordia. In most cases simple effervescing medicine was prescribed on the day of admission, and aperients and occasionally sedatives were given, but the latter as seldom as possible. In all the cases treated with salicin, and in many of those treated with salicylate of soda, the urine was examined the day after beginning the medicine, and found invariably to yield the characteristic reaction with perchloride of iron. In order to exclude cases of mild type which, especially in young subjects, rapidly improve under any kind of treatment, the salicin or salicylate was not prescribed until the patient had been from twenty-four to thirty-six hours in the wards.—Case 1. First attack. Incipient pericarditis. Salicin in full dose on day after admission. Temperature began to fall on third day, became normal on sixth. Pains abated on second day, and ceased on fifth. The salicin taken every two hours for six days, then for two days every four hours, and for nine days every six hours. A mild relapse occurred whilst taking the drug. Epistaxis occurred in this case, and the heart's action became feeble, requiring stimulants. Discharged on sixty-sixth day.—Case 2. Sixth attack. Admitted on fourteenth day. Mitral disease and pericarditis. Pain diminished on second day of treatment, ceased on sixth day. Temperature fell on third day, and became normal on fifth. Salicin given every two hours for six days, then every four hours, but a relapse occurring the frequency was again increased to two hours. Vomiting and headache became so severe that at the end of ten days more the drug was discontinued. Pleurisy and a second attack of pericarditis occurred. Discharged on 107th day.—Case 3. First attack. Ailing several weeks. Pericarditis. Pains rapidly subsided and temperature became normal on the fourth day of taking the drug, but cardiac failure was very marked, and the salicin was discontinued on the eighth day. Discharged with an apex systolic murmur on twenty-fifth day.—Case 4. Third attack. Old mitral disease, and a recent basic murmur. Pericarditis supervened two days after salicin commenced. The temperature soon fell to normal, but pains and vomiting did not subside with it. A mild relapse occurred after the salicin was discontinued; iodide of potassium was given, and patient discharged on fifty-eighth day.—Case 5. Third attack; relapse; pericarditis. Temperature normal, and pains greatly subsided on fourth day. Epistaxis supervened, and pulse became small and feeble on the third day. Discharged on twentieth day.—Case 6. First attack. Temperature fell to normal, and pains subsided after two days' treatment, but pericarditis developed. Pulse became very feeble; vomiting and epigastric pain occurred nine days after commencement of treatment, unrelieved by reduction in frequency of the drug, which was discontinued on the eleventh day. A relapse occurred, but salicin was not prescribed again. Discharged on forty-sixth day.—Case 7. First attack; third day. Temperature fell to normal on third day of treatment. Pains and vomiting subsided more slowly. Salicin continued till twenty-third day, and patient discharged on forty-fifth day.—Case 8. Second attack; tenth day. Temperature fell to normal, and pains subsided within thirty-six hours from commencing to take salicin, which, at first given every two hours, was afterwards reduced owing to feebleness of pulse, and omitted on the twelfth day. Discharged on twenty-third day.—Case 9. Second attack; third day. Complicated with pneumonia. Temperature became normal on tenth day; pains continued a day or two longer. Sounds and impulse of heart became very feeble on twelfth day. Discharged on thirty-third day.—Case 10. Second attack; sixth day. Double pneumonia and hæmaturia; endocarditis and pleuro-pericarditis. Pains in joints disappeared on the seventh day of treatment, but temperature remained high until after the salicin had been discontinued, on account of persistent and uncontrollable sickness. Chloral and morphia were required frequently at night, and stimulants were freely given on account of the dyspnœa and feeble and irregular action of the heart. Twenty grains of salicin were given every two hours for seventeen days. It caused sickness at a very early period, and after a few days dryness and soreness of throat. Discharged on fifty-eighth day. Thus the effects of the drug were not very satisfactory. The temperature appeared to be reduced and the pains to subside in the uncomplicated cases; but in Cases 1, 2, 4, and 6 relapses occurred when the salicin was either discontinued or the frequency of the dose diminished. Case 5, one of relapse, had already been laid up some time, and recovery might have been as rapid under simple rest and diet; while in 9 and 10, complicated with pneumonia, the salicin did not appear to exert any influence on their progress. On the other hand, salicin appeared to produce some inconvenient consequences. In one case epistaxis, which recurred when the dose was increased; in four cases marked cardiac depression; nausea and vomiting in two cases. Lastly, the detention of the patients in hospital was not shortened by the treatment; for, except Cases 2, 5, and 8, two of which were approaching their close when admitted, the patients treated with salicin recovered more slowly than is common in cases of similar severity under other modes of treatment.

The title of Dr. GREENHOW'S second paper was "Cases of Rheumatic Fever treated with Salicylate of Soda." These cases were fifty in number, and abstracts of a few of them were read. It would be impossible to reproduce these abstracts here, but we may give the conclusions arrived at by the author. He discusses, firstly, the physiological, and then the therapeutical, effects of salicylate of soda. One of the most obvious effects of the treatment in the majority of cases was a speedy fall in temperature, sometimes within a few hours from commencing the treatment, and, save in a few cases, within two or three days. The pulse usually, but not invariably, came down in frequency with the fall of temperature. In forty-five of the fifty cases certain well-marked physiological symptoms attended the reduction of the fever. There were effects on the nervous system, such as deafness, vertigo, headache, noises in the ears, delirium, and hallucinations. Deafness often occurred early, and was noticed in twenty-seven cases. Sometimes it was very intense. Vertigo occurred in fourteen cases. Very intense headache, chiefly frontal, though less frequent than deafness and vertigo, was, when it occurred, a much more distressing symptom. It was complained of in nine cases, and in some recurred with the resumption of the medicine. Delirium was present in eight cases, hallucinations in four. Great depression of pulse and action of the heart was the most important effect produced on the circulation, more or less weakening of the pulse, calling for stimulants in almost every case, great weakening of the impulse of the heart, and in ten cases almost complete obliteration of the first sound; in some, an irregular or dicrotous pulse. Vomiting occurred in twenty-two cases;

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great injection of the tongue in many cases; soreness of the fauces in three, and an aphthous state of the tongue in three cases; diarrhœa in two cases was evidently referred to the salicylate; epistaxis occurred in seven cases; in two transient albuminuria was observed; in two others tremor of the hands and tongue, which may not have been due to the drug. Speaking of the therapeutical value of salicin and salicylate of soda in acute rheumatism, Dr. Greenhow said that his experience led him to regard these as the most powerful antipyretic agents with which he was acquainted. The temperature soon falls under their use; the pulse commonly falls at the same time, and the pains soon abate very considerably, and in most cases entirely cease within a few days. But the improvement in the symptoms only takes place coincidently with the development of one or more of the physiological phenomena already described; and in all the most acute cases the relief derived from the medicine passed away soon after the treatment was intermitted, and a relapse—in some cases several relapses—took place. On this ground these agents cannot be regarded as in any respect specifics in the treatment of rheumatic fever. Excluding two cases, which passed into the state of hyperpyrexia whilst under the physiological influence of salicylate of soda, two other cases, which proved fatal, and about fourteen very mild cases, from which no conclusions could be drawn, there were relapses in twenty-one out of the remaining thirty-two cases. In seven of these twenty-one cases there was only one relapse; in nine there were two; in two there were three; in other two four; and in one five relapses. A proportion of twenty-one out of thirty-two was a large one for relapsing cases, and in most of the cases the relapse was due to the passing off of the influence of the medicine. The paper concluded as follows:—"Fully admitting, therefore, the great immediate relief that appears to follow the use of those agents in the treatment of rheumatic fever, there still remains for consideration the further question whether, upon the whole, the treatment is successful. The answer to this question must depend upon whether the complications which are apt to arise in rheumatic fever are less frequent under this treatment; whether the condition of the patient after recovery is better or worse than under other modes of treatment; and lastly, whether the length of time during which the patient is disabled is shorter or longer under this than under other modes of treatment. To all these questions my experience leads me to reply in the negative. We might have, perhaps, expected that hyperpyrexia at least would have been prevented by the use of such a powerful antipyretic agent, but the first two cases I have recorded negative this expectation, for hyperpyrexia was developed in both of these after the proper physiological influence of the salicylate of soda had become manifest. Pericarditis was present in many cases before the treatment was commenced; but, in several instances, it supervened afterwards. In three cases pneumonia, and in four others pleurisy supervened, when the physiological effects of the medicine had become manifest. On the other hand, several cases that were admitted with either pleuro-pneumonia, broncho-pneumonia, or bronchitis ran very much the course we are accustomed to witness in similar cases under other treatment. Patients treated with salicylate of soda appeared to me to become unusually anæmic and to regain health and strength very slowly. They are long in becoming fit to resume their occupations, and their recovery has appeared to me more tedious than has been the case with patients treated on other methods. Excluding the two cases of hyperpyrexia, the two fatal cases and nine very mild cases, which were on the average less than twenty days in the hospital, and, perhaps, recurred neither more quickly nor more slowly than such cases commonly do, I find that the remaining thirty-seven cases were on an average fifty-seven days each in the hospital. This period, however, by no means represents the duration of their disabling illness, for all had been at least a few days ill previous to admission, and probably none was discharged in a condition to resume work, many having been sent to convalescent hospitals, and others to their friends in the country to recruit. If now we examine into the duration in hospital of the cases treated with salicin, a very similar result is shown. Two cases which were admitted in an advanced stage of their illness being excluded, the average residence in hospital of each of the remaining eight cases was fifty-five days. With regard, therefore, to the treatment of rheumatic fever with salicin and salicylate of soda, we must, I think, come to the conclusion that most physicians did with regard to the treatment with blisters—viz., that the pain and distress of the patients are undoubtedly for a time greatly assuaged, but that the duration of the illness is not shortened. Of the two plans, I am of opinion that blisters applied in the vicinity of all the painful joints are by far the most efficacious and speedy in the relief they afford, and have the advantage of not producing so much subsequent debility. Another question now presents itself for our consideration,—namely, whether it is not possible that some injurious consequence may result from the powerful action of the medicine upon the heart; and I am bound to express my fears that the marked weakening of the first sound of the heart present in so many cases indicates the exertion of an influence upon the muscular structure of that organ, which may not always pass entirely away when the treatment is suspended, and more particularly when either inflammation of the endocardium or pericardium or of the muscular structure itself exists during the treatment."

Dr. SILVER in cordial terms thanked the President for his paper, in which he had stereotyped our knowledge of the action of these medicines with a rare accuracy of detail. He himself could corroborate the view there taken. As a rule, within three days the temperature is reduced, pains disappear, but the patient is not much better. His present impression was that the drugs were of great value in reducing the temperature and pain, but once the dose was diminished the disease recurs again and again. The best plan was, he thought, to give salicylate of soda for a day or two till pain has disappeared and the temperature has fallen, then to discontinue it and to prescribe quinine or alkaline bicarbonates.—Mr. H. DAVY said that having himself been thrice the subject of rheumatic fever his experience might be acceptable. He believed that it is a very difficult matter to rightly estimate the value of various kinds of treatment, and he could not help thinking that many physicians had arrived at different conclusions from those of the President. When house-physician at Guy's Hospital he had carefully watched some twenty or thirty cases, and from this experience he believed that although these drugs do not prevent complications arising, they relieve pain and pyrexia, and that cases so treated are more free from complications and relapses than appeared from Dr. Greenhow's experience, nor had he seen any serious vomiting occur. After Dr. Maclagan's statement as to the superiority of the salicin over the salicylate, he had prescribed the former, and although hallucinations, light-headedness, deafness, &c., were frequent, they were of small importance in comparison to the amount of relief given to the patient. Relapses were quite as much due to a too early return to fish, diet, as to the drugs. In his own three several attacks he had been under different treatment; the first time—a mild attack—he was treated by a country practitioner with opium and bleeding; the second time, when the rheumatism was complicated by scarlet fever, he was treated by a London physician with alkalies and without milk. The attack was brief, but he was anæmic for some months after. The last time he prescribed for himself under Dr. Taylor's supervision. He took fifteen grains of salicin every two hours, and in two days the temperature had fallen from 103° to normal, and in ten days he was out of bed; whilst taking the drug he had slight deafness and hallucinations.—Dr. H. WEBER said that the results arrived at in his previous paper were indifferent, but the conclusion he came to was that the treatment was on the whole more successful than any treatment he had formerly applied. Since that time he had given these drugs in many cases, and his results had not been so unfavourable as the President's. He had found that among forty-four patients treated with salicylate of soda, the average number of febrile days, including relapses, were fourteen; whereas in seventy cases otherwise treated the average number of febrile days were nineteen. He had not included the number of days in hospital, because in the German hospital most of the patients, being homeless, were retained longer than usual to prevent relapses. He thought that complications were not so frequent in cases treated by the salicylate, and since he had employed it he had not seen any cases of hyperpyrexia. As a rule, the urine yielded the perchloride of iron reaction on the first or second day of treatment by salicylic acid, but not by salicin. The author had not endeavoured to explain how salicylate of soda acts; he seemed to imply that it acted merely by reducing the heart's action. He himself (Dr. Weber) admitted this effect on the heart; but suggested that these drugs may act by a process of fermentation in the blood; for salicylate of soda diminishes the

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amount of sugar in diabetes. And he had found in cases where there is a rapid formation of bacteria in the urine, that the salicylate of soda diminishes this tendency. —Dr. CAVAFY said that his own experience of these drugs in acute rheumatism dated from 1876, and he had frequently observed the effects of salicylate of soda given in considerable doses—e.g., half a drachm every two hours at the beginning, with a subsequent diminution in dose and frequency. In some particulars his experience was not in harmony with Dr. Greenhow's; for instance, that improvement only occurs coincidently with the development of toxic phenomena. Only a small percentage of his cases showed toxic effects. Nor did he think too much importance should be given to those unpleasant symptoms of deafness, tinnitus, delirium, &c.; they were distressing, but did not result in permanent harm; and they could be controlled by remitting one or two doses, or they subsided when tolerance was established. The proportion of cases of albuminuria out of fifty was a small one, and probably due to some accident, rather than to the drug. The relapses depend much upon the time during which the drug is continued in small doses. After saturation with the drug, if its administration be continued in small doses for a longer time than usual, relapses may to a considerable extent be avoided—especially if the diet is kept low. To be sure, in some cases recovery was tedious, but that is often the case in rheumatism. Still, in cases which are moderately severe at the onset, it was possible to get the patient out of bed in five days. He had met with a case of a lady who had previously had two attacks of rheumatic fever, of long and tedious duration, confining her to bed for many weeks. On the third or fourth day of her third attack, temperature 102·8°, swelling of several joints, and turbulent cardiac action. She was placed upon salicylate of soda in twenty-grain doses, and within a week was up and about. There was no relapse. Dr. Greenhow's cases included two fatal ones. Had the drug any share in this result? The weakening of the first sound of the heart may be due to the pyrexia.—Dr. HEWAN said that he took a personal interest in the subject of remedies for rheumatism. Being intolerant of salicin and salicylate of soda, which produced sickness at the onset, he took salicylate of quinine in a recent attack of rheumatic fever, having heard of the drug a short time previously. The result was most satisfactory, and he had since prescribed it in rheumatic fever and gout. One lady who had been confined to a chair for a year with rheumatic gout was enabled to walk about in two or three weeks after commencing to take the salicylate of quinine.—Dr. BURDON-SANDERSON said it was impossible not to have derived great pleasure and instruction from the paper and the debate that had arisen upon it. It was satisfactory that the experience of other members of the Society was more favourable to the drugs than that of the President. In reference to Dr. Weber's remarks, he would remind the Society how these drugs came into use. They were earliest employed in 1872 in Germany on grounds based on experimental therapeutics. Binz had shown by his experiments that quinine prevented septic fermentation, as well as having an antipyretic action. Then Kolbe showed salicylic acid to be a more powerful antiseptic agent than any other agent, and from this the inference was made that probably it, too, would be antipyretic. This was confirmed by experiments on animals and in hospital practice. Dr. Sanderson remarked that he believed he was the first to speak of this action in his lectures on the Febrile Process at the University of London in 1874.—Dr. DUCKWORTH believed the drugs to be of very great value, not properly speaking specific, but capable of relieving the urgent symptoms. Tinnitus, deafness, &c., were not of great consequence. Pain was diminished; the febrile process itself was curtailed, and the duration of illness limited provided that the influence of the drug was kept up and the diet regulated. He had now given up the alkaline treatment, in which he had much confidence, in favour of salicylate of soda.—Dr. DOUGLAS POWELL remarked that one of the most important questions was what is the minimum dose at which the result could be obtained? He would reluctantly give thirty grains every two hours, and his impression was that fifteen grains sufficed. Dr. Sanderson's remarks reminded him of a fact he had noticed—viz., that the urine of patients on salicylate remains much longer unchanged than in ordinary circumstances.—Dr. F. TAYLOR reminded the Society that rheumatism sometimes recovers of itself—e.g., such cases as those mentioned by Dr. Silver, which get well in two or three days,—recoveries which could not be put to the credit of the salicylate treatment. He was not himself much impressed with the value of the drug; he had seen many prolonged relapses under its use. He thought the subject would have to be worked out by comparison of cases so treated with other cases.—The PRESIDENT, in reply, said that his paper was only a contribution to the subject, in which he had stated honestly the result of his experience. As a hospital physician he had tried several plans for the treatment of rheumatism from time to time. He had started on his inquiry with no preconceived idea; for although he had some impression of the results of the treatment, he had no definite grounds. He should be glad if his experience proved to be exceptionally bad, for he had come to think that drugs were of little use in rheumatic fever, rest and diet being the chief things. He invariably kept his cases on milk diet for a long time, knowing that too early a return to fish or meat diet caused a relapse. He had not attempted to explain the action of the drug. It reduces the action of the heart; and its effect is therefore injurious in the presence of myocarditis, &c. Certainly it reduced temperature and pain in three or four days; but these good effects were neutralised by the unsatisfactory results in the after-history. The reaction with perchloride of iron on urine occurs both in cases treated by salicin and those by salicylate. He had concluded that small doses frequently repeated were better than large doses—e.g., half-drachm,—owing to the rapidity with which toxic effects appeared in the latter case. Relapses could not be obviated unless the patient were thoroughly saturated with the drug; a diminution in the frequency of administration often led to a relapse. He concluded by thanking the Society for the attention with which his paper had been received.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting of the Society held at Adam-street, Adelphi, on April 16th, Dr. Bristowe, President, in the chair, Mr. A. Wynter Blyth read a paper on the "Prevention and Propagation of Diphtheria." After stating that diphtheria appears to belong to a group of six diseases—viz., scarlet fever, erysipelas, croup, quinsy, and puerperal fever, and that its prevalence appeared to be irrespective of sanitary condition, households in a good sanitary state being equally affected with those exhibiting sanitary defects, and enumerating the chief causes of ordinary spread, the author asked, What is the most probable cause of the outbreak of the so-called spontaneous or sporadic cases in which there has been no known contact, in which it breaks out in a haphazard manner in spots having no discoverable connexion? He believes we have fairly strong evidence to accuse the atmosphere, and that such cases may be fairly ascribed with some degree of certainty to the wafting of the specific poison by currents of air. The idea of propagation by the air has been too hastily thrown aside, a rejection probably due to the classical writings of Bretonneau,[1] who held that although the disease was caused by dustlike diphtheritic atoms impacting themselves on the mucous membrane, he yet distinctly states "that the Egyptian malady is not communicated by volatile invisible emanations susceptible of being dissolved in the air, and acting at great distances from their point of origin; it no more possesses this property than the syphilitic disease." A comparatively recent study of the diphtheritic epidemics, which have occurred in the county of Devon, have, however, convinced the author that this utter denial of the possibility of aerial infection is going too far; indeed, he believes that the chief carrier of the infection is the air. This opinion he has mainly adopted from two remarkable cases occurring in the practice of Dr. C. Budd, of North Tawton, the course of which, and his ideas as to its origin, as well as the measures he successfully adopted to prevent its further extension, Dr. Blyth gives in his own words:—"On the 26th of March, in the present year, out of a household of about thirty persons, all in perfect health, two, a governess, aged twenty years, and a child of seven

[1] Bretonneau's fifth Memoir.

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years, walked in the afternoon for an hour or more in the grounds of the mansion in the teeth of a bitter east wind. In the same night both of these persons complained of malaise, and the child had in consequence a grey powder given to her. On the day following both complained of sore-throat, and early in the morning of the 28th I was sent for to visit them. I found the throats of both presenting all the characteristic appearances of diphtheria; in fact, the cases were typical. The left tonsil of the little girl was covered with the diphtheritic membrane, which before night extended to the right tonsil affecting the posterior surface of the uvula in passing. The malady rapidly assumed alarming proportions, affecting the whole of the pharynx and the posterior nares. For many days the child was in imminent danger; after a while the acute symptoms subsided, and she appeared to be approaching convalescence. During the whole of this period the intellect was perfectly clear, all the functions of the body were natural, the temperature was little, if any, above the normal standard; as far as I am capable of judging there was not the slightest evidence of blood contamination. The case of the governess was similar in every respect with the exception that it was far less severe, and was followed by no sequelæ. Then came the question of the origin, knowing how in all infectious disorders mild cases not unfrequently pass unnoticed, I was most particular in my inquiries as to the preceding state of the household. I could learn of no symptom of a preceding case in the house. I made inquiries of the neighbouring medical men, and could learn of no case in the neighbourhood. It was clear to me that both of these persons were struck simultaneously, and the idea then presented itself that the air was the vehicle of the poison, and that the spores of some fungus implanted on the mucous membrane of the fauces might probably afford an explanation of the malady; the analogy of the rust on wheat about which I had interested myself years before, appeared to me to strengthen this view. Upon it I based both treatment and preventive measures; the former consisted in keeping the fauces saturated by means of syringe and spray producers with solutions of carbolic acid and borax in glycerine and liquor sodæ chlorinatæ. As there was great difficulty in swallowing, the child was nourished mainly by enemata; the extreme restlessness was subdued by repeated doses of morphia, from which marked benefit was derived. The preventive measures were as follows:—The patients were isolated, the mother and three nurses were detailed to attend upon them, all the vessels, glasses, plates, &c., used by the patients were disinfected in the rooms, and were not allowed to be sent to any other part of the house. All the linen was immersed in a solution of Condy's fluid in water, rags used in wiping the discharges from nostrils and fauces were burnt, but the precautions upon which I most relied to prevent the spread of the disease to the attendants was the keeping their throats, including my own also, saturated with the same solutions. All escaped with the exception of the mother, who had two or three small patches on the left tonsil which would have been scarcely noticed but for the daily examination of the throats. Such, then, is an imperfect description of what I will call the acute stage of the disorder, and if this were all, all would be well; but about the 18th of April the child, apparently convalescent, was taken out without my sanction in an open carriage for two consecutive days. The temperature of the air being very low for the time of year, then followed sequelæ of the most terrible kind, albuminuria, endocarditis, paralysis of the superior laryngeal, with aphonia and complete inability to swallow, every attempt to do so being followed by violent convulsions and coughing, induced, doubtless, by particles of food passing into the trachea; after a second long and distressing illness, however, the child recovered." The author then related several other cases which appeared to support the theory of aerial infection, and entered very fully into the history and present condition of the fungus theory of the disease. He then proceeded to state—"Aerial infection does not, however, require that the elements of contagion should be fungoid; all that the theory requires is the emanation of material—excessively minute particles evolved from the affected mucous surfaces. Probably it is only when this contagion falls on a moist surface that it can develop, and even when it does attach itself to the pharynx in many cases it is unwittingly got rid of by the mere mechanical mechanism of swallowing, &c." The author concluded by expressing a hope that the method of keeping the throats of the diphtheritic, as well as the throats of those in contact with them, frequently disinfected will be fairly tried.

Reviews and Notices of Books.

Water Analysis for Sanitary Purposes, with Limits for the Interpretation of Results. By E. FRANKLAND, Ph.D., D.C.L, F.R.S., &c. London: Van Voorst. 1880.—Professor Frankland has rendered another valuable service to sanitation by the preparation of this little manual. Much of the matter has appeared before in scientific journals, in the admirable reports of the Rivers Pollution Commission, and elsewhere. But such sources of knowledge are not universally available, and are inconvenient for constant use, and everyone interested in public health will therefore be grateful for this succinct and intelligible account of the present state of our knowledge of the chemistry of water. A short introduction points out the objects to be attained by water analysis, and the chief constituents to be determined, and gives directions for the collection of samples and for the highly-important study of the previous history of the water. This study commonly falls within the province of the medical man, who is often able, by a careful examination of the surroundings of a well or river, to form a very good estimate of the character of the water, even without an analysis. Part I. is devoted to "Water Analysis without Gas Apparatus." The observation of colour, taste, and smell, the estimation of total dissolved to suspended matters, of ammonia, of chlorine, of hardness, of nitrogen present as nitrates to nitrites, and of poisonous metals, come in here, as do the gravimetric methods of Dittmar and Robinson, and of Dupré and Hake, and the well-known Forchammer, or permanganate, process for the approximate estimation of organic matter. The last has long been used, and the recent papers of Dr. Tidy have satisfied most chemists that it is, within certain limits, trustworthy. Griess's method for the estimation of nitrites by the use of meta-phenylenediamine, is commended as delicate and accurate. Part II., on "Water Analysis requiring the use of Gas Apparatus," contains a full account of the methods devised by the author and Dr. Armstrong, with all the latest improvements. This method is now well known. It requires apparatus which is expensive to those who are not skilful enough to make it, some familiarity with the methods of gas analysis, extreme care in manipulation, and, above all, a good deal of time. But it is in good hands very trustworthy, and gives results which can be obtained by no other process. The difficulties are, moreover, not greater than those which every trained chemist is accustomed to conquer. Valuable standards of purity and contamination are given in this and other parts of the book, and an appendix contains an account of the reagents required for the various processes, many useful tables, typical analyses, and, lastly, the conclusions and recommendations of the Rivers Pollution Commissioners. It will be seen that, on the whole, the book is one which can be neglected by no chemist, and, above all, by no medical officer of health.

The Lay of the Bell (*Das Lied von der Glocke*), *and other Ballads by* SCHILLER. Translated into English metre by ANDREW WOOD, M.D., F.R.S.E., Fellow of the Royal College of Surgeons of Edinburgh, member of the General Council of Medical Education and Registration of the United Kingdom. Edinburgh: William P. Nimmo & Co. 1879.—Dr. Andrew Wood continues to devote his leisure moments and his literary abilities to the work of translating classic writers, and in a small and finely printed volume he offers the public a rendering into English metre of Schiller's famous "Song of the Bell," and other ballads. It would scarcely be correct to say that Dr. Wood has succeeded in giving us a perfect representation of these ballads of Schiller. It is always a safe thing to say of an author, as of an artist, that he would have succeeded better if he had

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taken more pains, and had our translator bestowed more labour on his task there would have been less ruggedness, angularity, and inelegance of expression than we find, and more of the flowing musical cadence that distinguishes Schiller, especially in "The Song of the Bell." For example, in the few lines beginning "Von dem Dome," the translator might have made the sound more thoroughly harmonise with the sense, as Schiller does. In the introduction Dr. Wood gives a brief notice of each ballad, telling the story in his own way, the more clearly to illustrate and explain the ballad.

The Journal of Psychological Medicine. New Series, Vol. VI., Part I.—The articles in the current number are for the most part of a popular rather than of a scientific character. Dr. Winn discusses the Collapse of Scientific Atheism in an article the spirit and tone of which will probably be regretted even by those who sympathise with its object. Mad Artists is a readable sketch of the lives of James Barry, William Blake, Benvenuto Cellini, Haydon, Edwin Landseer, George Morland, Gottfried Kund, J. M. W. Turner. The sketches have been written with care, but it seems scarcely justifiable to designate every artist whose death may have been occasioned by a chronic brain disease, a "mad artist." Psychological physicians are sensitive when they are called "mad doctors," but this is turning the tables with a vengeance. The Curability of Insanity, by Dr. W. A. F. Browne, is an expression of scepticism as to the exactness of the so-called "cures." Mr. Major Greenwood contributes a paper on Psychology in relation to Medicine. The only article of scientific aspect is a paper by Dr. A. E. Macdonald, of New York, on General Paresis, which is merely an account of the facts of the disease, known to every student, with the particulars of four ordinary cases.

Surgical Emergencies, together with the Emergencies attendant on Parturition and the Treatment of Poisoning. A Manual for the use of General Practitioners. By WILLIAM PAUL SWAIN, F.R.C.S., Surgeon to the Royal Albert Hospital, Devonport. Third Edition. London: J. & A. Churchill. 1880.—Mr. Swain's useful little book is now well-known in the profession, and the third edition, which has in several respects been improved, will no doubt maintain the reputation of the author. Lister's antiseptic treatment is of course carefully described, but we fail to find any mention of the proper treatment of carbolic-acid poisoning which has of late years become so common. In a manual so small as this much that some of us would think of importance must necessarily be omitted, and this may account for some of the more recent improvements in surgery being unnoticed—such, for example, as Davy's lever and Roussel's transfusion apparatus. The author does not advance any original views, and there is therefore no scope for criticism.

Contributions to Cardiac Pathology. By JOHN COCKLE, A.M., M.D., Physician to the Royal Free Hospital, &c. London: Baillière & Co. 1880.—In a small work of eighty pages Dr. Cockle has collected six papers in relation to cardiac pathology which he has contributed to medical journals. They are certainly of sufficient interest and merit to justify their publication in the present form, and although in many points we are not quite prepared to agree with the author, we must give him credit for the clearness with which his views are expressed, and the knowledge of the literature of the subject which is everywhere shown. Everyone who is specially interested in cardiac cases would do well to peruse Dr. Cockle's small memoir.

Brain. April, 1880. Macmillan and Co.—The first place in the current number is given to a paper by Dr. Dyce Duckworth, entitled a Plea for the Neurotic Theory of Gout. The various arguments which can be adduced to support the view that gout is a primary neurosis, and not a "humoral" disease, are skilfully marshaled. The idea is of course an old one, dating from Stahl and Cullen; and Dr. Duckworth received it, he tells us, from his old teacher, Dr. Laycock. M. De Watteville discusses, in the next paper, the conditions of the Unipolar Stimulation in Physiology and Therapeutics. The next two articles are on Paraplegia: the one by Dr. Duncan, of Edinburgh, on the Paralysis which results from Caries of the Spine; and the other, to which we have already called attention, by Dr. Buzzard, on some varieties of Cervical Paraplegia. The last article is a brief but careful account of the Arteries of the Spinal Cord, by Dr. Ross of Manchester. The "Clinical Cases" are of much interest, especially one by Messrs. Bastian and Horsley on the association of a small Parietal Convolution with arrest of development in the Left Hand.

Practical Chemistry. The Principles of Qualitative Analysis. By WILLIAM A. TILDEN, D.Sc. Lond., F.C.S., Professor of Chemistry in Mason's College, Birmingham, late Lecturer on Chemistry in Clifton College. London: Longmans. 1880.—A good and simple little manual. It presents some few points of originality, but we fail to see that it is better than several other similar text-books already in use. The fact seems to be that no two teachers of any real power have exactly the same ideas as to the details of a course of practical chemistry, and each naturally prefers his own system, and is anxious to leave a book by which his pupils may follow his instructions. Hence the almost infinite multiplication of books of this class.

Analytical Records.

CHRISMA: A NEW BASIS FOR OINTMENTS.

(ALLEN & HANBURYS, PLOUGH-CT., LOMBARD-ST.)

THE remarkable series of hydrocarbons, now known as the paraffins, which extends from hydrogen and marsh gas up to the hardest varieties of solid paraffin, are among the most stable of carbon compounds. They are found in all the many kinds of natural and artificial petroleum and paraffin oil, but their complete separation is a matter of the greatest difficulty. They are not liable to oxidation, and resist even the most potent of chemical agents in a perfectly wonderful manner. Their volatility varies between very wide limits. Some, under ordinary conditions, are gaseous, some liquid, and some solid; the solids having various degrees of consistency. The substance now before us seems to consist of the softer solids of the series. It has about the consistency of lard, is absolutely free from taste and smell, and is beautifully pure. It is almost as cheap as lard, and, as it cannot possibly get rancid, is not affected by any ordinary admixture; it is beneficial in its action on the skin, and is perfectly adapted for pharmaceutical and general family use. There is now no excuse for the use of lard in pharmacy, and the new agent will be found an excellent lubricant, especially where brass or copper is concerned, as it cannot become acid, and therefore cannot corrode the metal.

GREGORY'S DIGESTIVE MEAL.

(C. W. GREGORY, TEMPLE, BRISTOL.)

A smooth, highly nutritious, and easily digestible meal, well adapted for infants and invalids, who will often be able to take this when they reject other food. It is easily cooked, and makes excellent light puddings. We have, indeed, tried it successfully in several forms, and have no hesitation in recommending it.

TOWER HAMLETS DISPENSARY.—The new building of this institution, situate in White-horse-street, Stepney, was opened on Monday last by the Bishop of Bedford. The dispensary was established in 1792 for affording medical relief to the poor.

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THE LANCET.

LONDON: SATURDAY, MAY 29, 1880.

THE Fifteenth Annual Report of the Sanitary Commissioner with the Government of India is of interest from the anomalous position which it represents the supreme authority of our great dependency to have taken in medico-sanitary matters, as they affect the vast populations under its rule. The report refers to the year 1878, and elsewhere in this number of THE LANCET we give an abstract of the arithmetical data it contains indicating the health-state of the European and Native Forces in the peninsula, and of the Civil Population during the year. Here we propose to refer to certain fundamental differences which obtain between the principles of sanitary administration in India and in this country, not new to our readers, but which chance to be emphasised in the present report of the Sanitary Commissioner. Commenting upon the inutility of "quarantine" as a measure for the arrest of the spread of cholera, Dr. CUNINGHAM observes, "As has been frequently pointed out, the only real effective weapon against cholera consists of sanitary improvements. In this point of view the time and trouble so often devoted by medical officers in endeavouring to find out the source of supposed importation and infection might be spent to better purpose." Then follows a paragraph from certain recent Orders of the Government of India with reference to the Berar Sanitary Report for 1878, in which it is said:—"The chapter on cholera is occupied too much with the statements and opinions of civil surgeons on the importation-doctrine. *Little or no practical good can be expected from such inquiries, and it is therefore of great importance that the time of the medical and other officers should not be spent on them.* [The italics are ours.] If it were demonstrated that cholera is spread by human intercourse alone, nothing could be done to prevent such intercourse. Even those who are most strongly in favour of the contagion-theory admit that local conditions determine whether the disease, supposed to be introduced by travellers, or pilgrims, or others, is to become epidemic or not, and it will be much more likely to lead to useful results if in future inquiry attention is more directed to an examination of what these conditions are, and how they may best be improved." In other words, the Government of India in the year of grace 1878, with regard to the medical controversy on the conditions which promote the prevalence and spread of cholera, revert to and adopt opinions similar to those which were held by the Poor-law Commissioners in 1842, and which Mr. EDWIN CHADWICK expressed in the famous report on the Sanitary Condition of the Labouring Population of Great Britain, with regard to the medical controversy then in progress on the causes of fever, to wit, that it "does not appear to be one that for practical purposes need be considered, except that its effect is prejudicial in diverting attention from the practical means of prevention." And this reference to an official opinion of thirty-eight years ago is all the more suggestive because it is obvious from Dr. CUNINGHAM'S report that the same attitude is assumed by the Government of India towards what it is pleased to call "the importation doctrine" in certain sorts of "fever" as in cholera.

Mr. CHADWICK'S opinion was expressed on the eve of those great discoveries in the discrimination of fevers and their causes which have revolutionised our knowledge of them and of their preventive treatment throughout the civilised world, but which as emanating from a barrister who had stepped outside his functions when he entered into the field of medical controversy, exercised little or no influence on medical research. The opinion of the Government of India is expressed after it has been shown in this country and on the Continent of Europe that an intelligent adaptation of practical sanitary measures to the prevention of cholera is proved to be impracticable, except the "importation doctrine"; in other words, the doctrine of the communicability of the disease from the sick to the well be accepted; and, further, the opinion amounts virtually to a prohibition of the line of research as to cholera within the limits of its home, which has proved to be of incalculable advantage to communities outside its home, and which, moreover, is believed to be called for as much in India as elsewhere by the greater number of Indian medical officers. The revival at the present day of the crude official pathology and etiology of this country in 1842 as the official pathology of the Government of India, is a remarkable anachronism. Now, moreover, that the Government of India has taken the course of at least discountenancing certain lines of investigation in the etiology of cholera, and it may be added of "fevers" also—of the two forms of epidemic disease, in fact, which prove most fatal to the army and population of India,—the attention of the Imperial Government may perhaps be directed to the strange anomaly and to the stultification by India of the teachings of Netley.

An appendix to Dr. CUNINGHAM'S report contains a memoir by Dr. D. D. CUNNINGHAM, one of the special assistants to the Sanitary Commissioner "On the Development of Certain Microscopic Organisms occurring in the Intestinal Canal." When these organisms were first noticed in Europe they were thought to have some special relation to cholera. The opportunities for studying them in India, not only with regard to cholera, but with regard to other morbid conditions affecting the intestinal canal, are much more numerous and favourable than in Europe, and Dr. D. D. CUNNINGHAM has submitted the organisms, and the conditions under which they are found, to a very elaborate examination. He thinks that they represent a rudimentary form of the myxomycete group, and that the organism may be conveniently distinguished as *Protomyxomyces coprindrius*. He has found them very frequently in the human subject, both in health and disease. They appear to have no special relations with cholera or other form of malady, but are observed in cases where the excreta have passed through the initial processes of decomposition and become alkaline. After exit from the body the usual series of fermentative changes through which human excreta often pass insure the complete destruction of the parasitic elements, but this is not the case with the excreta of certain of the lower animals, especially cows and horses. The changes undergone by the former, and the development of the

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parasite outside the body, serve as a constant source for its reproduction and diffusion, which, so far as man is concerned, is effected chiefly through the air. The memoir throughout will be studied with great interest.

IN criticising last week Mr. MARSHALL'S proposal to institute at the Royal College of Surgeons a compulsory examination in elementary Anatomy and Physiology at the end of the first year of professional study, we threw out the hint that one of the reasons why the medical student does not make better use of his time during the first year of his curriculum is that his preliminary education is usually insufficient and defective. As an illustration of this we cited the instance of the College's own preliminary examination, at which the subjects for examination in French, German, and Greek have not been changed for many years. The gravamen of our allegation is in no way affected by the disclaimer of "Examiner" published in another column. This communication merely corrects a widespread misapprehension, and shifts to some extent the responsibility from the College of Preceptors to the Council of the College of Surgeons. So far it is satisfactory, and will doubtless serve a useful purpose. The speedy removal of this long-standing evil, repeatedly complained of, may, we think, be confidently left to Mr. MARSHALL. When this is accomplished, and the intellectual tone of the medical novice improved, it will be time, if need be, to think of coercive measures to make students who are wilfully lazy work.

Meanwhile there are many objections to Mr. MARSHALL'S scheme. The time is singularly inopportune for its introduction. At the very meeting at which Mr. MARSHALL revived his proposal it was recommended by a considerable majority that the Council should withdraw from the projected Conjoint Scheme. There was, it must be confessed, less to be said against a Conjoint Examining Board holding an elementary examination at the end of the first year, but for one of several Boards to think of doing so is, to say the least, supremely selfish. If the Royal College of Surgeons be free to force all candidates for its diploma of member to pass an elementary examination in Anatomy and Physiology at the end of the first year, there is no reason why the Royal College of Physicians and the Society of Apothecaries should not separately and individually compel candidates for their licences to pass at the same period an examination in Chemistry, Practical Chemistry, Botany, and Materia Medica. It would likewise be equally competent for the University of London or any other examining Board to refuse to accept any of these examinations as adequate, and each to insist on a separate and distinctive examination by their respective Boards in any or all of these subjects of the first year's curriculum. Such an absurd consummation may not be probable, but on Mr. MARSHALL'S mode of reasoning there would be no logical objection to it. But allowing the time for reviving the proposal to be suitable, we must once more protest against the inadequacy and inapplicability of the remedy which Mr. MARSHALL wishes to use for correcting the medical student's defects. The evil is not to be cured by patching and tinkering expedients. Nothing short of complete and radical reform will suffice. We have no present intention of going into the details of such a measure, but we are convinced that when the fitting time and opportunity arrive attention will have to be directed chiefly to improving the methods and character of the instruction and training supplied by the schools.

THE symptoms of poisoning by arsenic have been well studied and often observed. It is rare, however, that the opportunity occurs of ascertaining their character in a large number of cases of slight degree, and of similar and simultaneous origin. Such an opportunity has lately occurred at St. Denis, near Paris, where a large number of persons have been poisoned by eating bread containing arsenic. In none of the cases was the quantity of the poison sufficient to cause death. So many persons suffered that one physician, Dr. FELTZ, had under his care no less than eighty cases. His account of their symptoms, communicated to the Paris Clinical Society, constitutes a valuable contribution to toxicology. How the poison was introduced into the bread or flour is still undiscovered.

The nature of the outbreak of illness was early ascertained. Dr. FELTZ was called one morning to a family who presented signs which indicated clearly the action of an irritant poison, but the vehicle by which it had been introduced was only ascertained by the discovery that a dog, which had taken only sopped bread, suffered in the same way. In a number of families who had taken the bread, the same symptoms were observed, and arsenic was found in it on analysis.

Most of the persons attacked presented similar symptoms. Soon after the meal a sense of weight at the epigastrium and general malaise were experienced. Vomiting occurred in from one to four hours after the meal, and the first vomited matters were of food. Several patients presented diarrhœa at the same time as vomiting, but in more than half there was no early diarrhœa. The latter ceased in all cases in six or eight hours, while the vomiting continued for twenty-four or even thirty-six hours, and was frequent, of greenish-yellow mucus, and bilious matters. In some patients, who had no immediate diarrhœa, a slight attack occurred in the course of the first day. Others had no diarrhœa at any time. Two patients, who had eaten the bread for two days, had no vomiting, but suffered from diarrhœa for about twelve days, their other symptoms being the same as those of the rest. There was a burning pain in the throat behind the sternum, and in the epigastrium, and at the latter spot a very painful sense of weight. The pulse varied between 90 and 110, and was regular; the skin was dry; headache was severe, with an acute sense of constriction in the temples. Most patients complained of noises in the ears, and of slight vertigo. There was prostration, and a sense of extreme feebleness in the legs, with severe pains in the loins. The latter symptom was invariable. The urine, however, was normal. In some patients during the period of vomiting and diarrhœa, very little urine was passed. In no case was there any excessive urinary secretion. On the third day these symtoms lessened in intensity, but without a single exception there appeared at the end of the second or beginning of the third day a swelling of the eyelids, accompanied by conjunctivitis. In some the whole face was swollen; in some there was an eruption of urticaria; in two women this eruption was scarlatiniform in character. One man suffered only from urticaria of the scrotum and herpes

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labialis. Almost all the patients, even those who had no eruption, suffered from irritation of the skin, and, in some, scratching caused a transient eruption similar to urticaria. In eight patients who had eaten of the bread during two days there were visual troubles. Three had a sensation of light in the outer angle of the eyes, others that of flames darting forwards, these sensations being present only when the eyes were shut or in the dark. On the third day there was a sensation of great thirst. The mucous membrane of the throat was red. Many of the patients presented herpetic vesicles on the lips, and one man had herpes on the prepuce. These symptoms continued, lessening, until the seventh day. The appetite was then still deficient, the patients complained of a metallic taste, and the throat was still red. The swelling of the face and the skin eruptions had disappeared, but there was still some muscular weakness, and a sense of weight and burning at the epigastrium. By the tenth day all these symptoms had disappeared, with the exception of anorexia and heat in the throat. A woman who had a scarlatina-like eruption presented also an enormous œdema of the legs, but without albuminuria. Analysis showed that the arsenic was very unequally distributed in the bread, and thus the variations in the symptoms were explained.

Of these symptoms, certain were so uniform that they were together almost pathognomonic of slight poisoning by arsenic. These were the acceleration of the pulse, the vomiting, the sense of constriction at the temples, the lumbar pain, the weakness in the legs, and the burning in the throat and at the epigastrium. Several symptoms which have found a place in book-descriptions of poisoning by arsenic were not observed, although carefully searched for. There was neither salivation nor continuous spitting, nor hiccough, nor irregularity of pulse. Another local surgeon observed jaundice in one case. The treatment consisted in the administration of magnesia, of milk, and of albuminised water.

A last fact to be mentioned relates to the period of elimination. Little is known on this subject. The period during which the poison is excreted no doubt varies with its dose. Most authors assert that in the dog the elimination is finished in twelve or fifteen days. In one of Dr. FELTZ'S cases, the urine, on the thirteenth day, contained no trace of arsenic.

Annotations.

"Ne quid nimis."

"CRUELTY TO WOMEN."

THE retail shopkeepers of the metropolis and others, who conduct the discipline of their establishments on the principle of wilful disregard for the health of their *employées*, are mistaken if they suppose we shall content ourselves with simply drawing attention to the urgent need of seats for shopwomen, and the *cruelty* of keeping these young persons standing "for the sake of appearances." It is our determination to press the demand for this reform until the claims of common humanity are recognised. Customers visiting many of the large houses of business of the metropolis are impressed with the seeming impossibility of finding time for rest. If the subject of this "cruelty to women" is raised, the shop-walkers and managers of departments, both male and female, in the interest of their employers, point to the evidences of their pressure, and aver that, while there is every disposition on their part for the young women to rest, they are unable to do so owing to the stress of business. This is not true. Much of the seeming "business" consists of packing and unpacking, putting things in drawers and taking them out again, to make-believe; and if the shop-walkers saw any of their staff resting—even leaning against the counters,—they would be reprimanded, and even threatened with a fine or dismissal, because they did not, at the expense of health and at the cost of life-long disease and misery, help to keep up the semblance of ceaseless toil. We are watching these establishments very closely, and shall continue to do so until the matter is taken into serious consideration by their proprietors, and seats are provided. Nor will this suffice unless orders are given that the young persons *may* sit, and shop-walkers and managers of departments are forbidden to give contrary orders in private. Ladies will help us by declining to patronise establishments where the cruelty of keeping young women persistently standing during long and weary hours is practised. We have reason to know that some customers who appear to be ladies, but who lack the first quality of their sex—namely, sympathy for evident suffering,—not only support the evil we are trying to put down, but in some instances actually create it by mistaking the pretence of business for the reality, and by needless and even wanton worrying. Such persons discredit humanity. We urgently ask the assistance and personal influence of practitioners in London and throughout the country to put an end to this cruelty to women. During the last week a death has occurred. A young girl committed suicide while in a state of mental derangement—partly, no doubt, induced by standing long hours in a shop. Her hours of work were from 8 A.M. to 9.30 P.M. The master of the establishment in which this girl was employed states that he permits his *employées* to sit or leave the shop "when business allows that indulgence." That means nothing. Business *must* allow such "indulgence," as health, and even life, requires it; and no young female can stand eight or ten hours daily without suffering for it in after-years. The names of the firms from which we have already received intimations that seats are provided are the following: Messrs. Farmer and Rogers, of Regent-street; Mr. Peter Robinson, of Oxford-street; H. Hoadley, of Buckingham-palace-road; and Messrs. Gowans and Goodlet, of Edinburgh. We appeal to the friends of humanity, to ladies who would not be false and cruel to their sex, to support these establishments instead of others, and, we may add, to see that the seats provided *are* used; because it is one thing to put up seats behind the counter on the American system, or to provide chairs, but quite another to sanction or even encourage their use. We venture to hope that during the present season, if all legitimate influences are brought to bear on shop-keepers, the obligations of humanity may be at length, though tardily, fulfilled. We continue to invite communications from firms willing to make the concession, and shall publish their letters and names as they come in.

DIMINISHED DRINK AND ITS SIGNIFICANCE.

OUR contemporaries have all commented on the very pleasing fact of a diminution in the sum spent in 1879 as compared with that spent in 1878 to the extent of fourteen millions, or of nineteen millions as compared with the sum spent on drink in 1876. In 1876 the drink bill was £147,238,760; in 1879 it fell to £128,143,864. Mr. Hoyle, whose statistics are generally accepted, points out that while the consumption of alcoholic liquors in 1879 fell off 9·8 per cent., the consumption of tea increased 2·3 per cent. Mr. Hoyle notices that the judges in Manchester and Liver-

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pool have within the last few days congratulated the juries on the great decrease of crime. Manchester and Liverpool are both places where there is an enormous amount of drink taken by all classes, apparently with some belief in its "strengthening" virtues. It is gratifying to see signs of a better state of things. If depressed trade has such beneficial effects, it is almost desirable that it should continue a little longer. It cannot be doubted, however, that increased intelligence as to moral and physical injury done by alcohol is having some effect, and will have more and more. For ourselves we regard the diminished expenditure on drink with unmixed satisfaction, and would like to see it carried much further. We look upon the 128 millions spent on drink as 100 millions worse than wasted. These might be spent on meat, milk, bread, tea and coffee, clothing, and additional cubic space in the poor man's house, with enormous positive advantages in its healthiness and its comforts. When they are spent in drink they are not only not available for such vital purposes, but they go to promote various diseases, notably hepatic and renal disease, gout, tubercle, rheumatism, and dyspepsia. If this Government is not profoundly to disappoint expectation, it will develop boldly and vigorously the legislation initiated by Mr. Bruce (now Lord Aberdare), which, by the concurrent testimony of magistrates, police inspectors, and house-surgeons of hospitals throughout the kingdom, was doing great good. Meantime it will be the wisdom and advantage of every man to make some contribution to the credit of the nation by a judicious consideration of the quantity that he drinks.

STRANGULATED HERNIA.

ALTHOUGH the symptoms of a strangulated hernia are well and generally known, and the correct line of treatment agreed upon by all good practical surgeons, there are one or two points in connexion with the condition on which our knowledge is not so definite or so general as it ought to be. To many, we fear, the main facts appear to be that the hernia when strangulated is irreducible, and that there is obstruction to the onward passage of the intestinal contents. It ought to be hardly necessary to observe that the essential feature of a strangulated hernia is the nipping of the contents of the tumour, with obstruction of the circulation and compression of the nerves of the part. Many attempts have been made to explain the mode of production of the strangulation, and from their language some authors might be supposed to hold that the neck of the sac was the efficient agent; thus "the stricturing neck of the sac" is a phrase we are familiar with. In truth, the neck of the sac is entirely passive, and never really strangulates the hernia. Strangulation is invariably due to the too great bulk of the hernia at the neck, and although a good deal has been written on this point, the simple and true explanation is certainly not generally forthcoming. A hernia may be strangled when first formed, but as a rule it results from some sudden increase in the size of an old rupture. Now, what takes place in the neck of the hernia when from a cough or strain more gut is forced down? It is not that another coil of gut is forced into the sac, and so two coils of intestine are plugging the aperture in which one formerly lay, but that more of the coil of gut originally in the sac is forced down, and what leads to the strangulation is the additional mesentery lying in the neck of the hernia. The size of the ascending and descending gut is the same after as before the strain, but in addition to these, between them at the neck lies the mesentery attached to the herniated gut, and as the length of gut increases, the bulk of this mesentery must also increase, and thus the tightness—the strangulation—is produced. In some cases it is the increased thickness of the pedicle of omentum that causes the strangulation, and there may be other cases again besides those already mentioned, where at its first formation the hernia is strangulated, in which this explanation does not hold good; but we have no doubt that it is true in the large majority of instances. Further, it is the nipping of the pedicle of mesentery that causes the congestion of the whole coil of intestine in the hernial sac, for in it run the vessels. The gut is of course also constricted, the passage of its contents arrested, and then later on ulceration of its walls may ensue. But our present object is to point out that the cause of the tightness is most often the mesentery, and that it is its compression that leads to the interference with the circulation in the whole length of the herniated intestine.

REST AND REPAIR.

IT may be safely assumed that those have been mistaken who supposed that physiological rest consists in inaction, and that repair goes on during quiescence. Nutrition—and, therefore, repair—is the concomitant of exercise. Appetite is one thing, the power to digest food another. A man may feel ravenous, and consume large quantities of material containing the elements of nutriment, but be unable to appropriate the supply furnished, or, in other words, to nourish himself. It is so with rest. Mere inaction may be secured without *rest*, and idleness without the restoration of energy. The faculty of recovery and recuperation after exercise is in direct proportion to the vitality of the organ rested. This faculty is not to be called into action by inactivity! It follows that relief and recovery from the effects of what is improperly called "over-work" cannot be obtained by simply "going away for change" or by indulgence in idleness. A new form of exercise is necessary, and the mode of action chosen must be one that supplies moderate exercise to the very part of the system which it is required to "rest" and restore! Health-seekers often err in trying to recover their powers by simple diversion of energy. It is a popular error to suppose that when the brain is over-worked the muscular system should be exercised by way of counteraction. The part itself must be worked so as to stimulate the faculty of nutrition; but it should be set to fresh work, which will incite the same powers to act in a new direction.

HOSPITAL ADMINISTRATION IN INDIA.

WE have received from the Secretary to the Government of Bengal some additional documents relative to the hospital reforms in Calcutta. These consist of a resolution recorded by the Lieutenant-Governor on the report on the Calcutta Medical Institutions, a letter addressed to the editor of the *Englishman* by Surgeon-General Irving on the retired list, and circulated among the native teachers of medicine in the form of a pamphlet, and a memorandum by Surgeon-General Payne commenting upon that letter. It is unnecessary again to notice in detail the comments made by the Lieutenant-Governor on the extravagant and unsatisfactory manner in which certain of the hospitals appeared to have been conducted. The papers now before us confirm the conclusions at which we arrived from a careful study of the previous papers. Dr. Irving has not, in our opinion, fully made out a case against the authorities, and has, in some respects, placed himself in an unfavourable light. In his letter in the *Englishman* he says: "If it is said that as Surgeon-General I countersigned all contracts in token of approval, I simply retort that I informed superintendents of hospitals to do as they thought best in the matter, they being most really interested in the matter, and that I should agree to what they proposed." Could the Lieutenant-Governor have penned any more severe comment on an officer holding a high administrative appointment than he has done himself? He then adds: "Had I said anything to show that I was not an advocate for rigid economy in the interest of the

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tax-payer, I should have been put down as 'disloyal' (a favourite Bengal term), and I should have got into a controversy, for which I had no wish." This explanation does not accord with the line of argument previously adopted by Dr. Irving in defending himself from imputations which he conceived were cast upon him by the committee. He then said: "But if I did 'not put on the screw' and enforce 'rigid economy,' I do not understand the meaning of these words." It is difficult to see how the two statements can be reconciled. But the most extraordinary part of Dr. Irving's last letter is the statement it contains that he never read the report of the committee, though he had to read the resolution of Government upon it. It might have been expected that he would read carefully a report which he seems to have thought unjustly cast blame upon him. Surgeon-General Payne has, in compliance with instructions from the Lieutenant-Governor, answered, we think satisfactorily, the statements in Dr. Irving's letter, and has appended documents in support of his opinion. We cannot approve of an officer, who has held the important position which Dr. Irving did, circulating among the native teachers of medicine a document calculated to bring the authorities into contempt, and to produce dissatisfaction among these teachers and their patients, more particularly when a careful examination of the facts might have created considerable doubts in his own mind as to the accuracy of his conclusions.

EXTRACTING TEETH AND PUTTING THEM BACK IN THE JAW.

WE invite opinions—of course, from qualified surgeons who are engaged in the practice of dentistry—on the subject of tooth extraction and replacement. Under what conditions is it possible to extract the stump of a broken tooth, affix a new crown to it, or otherwise manipulate the structure, perhaps under antiseptic precautions, and to return it to its socket? Of course the nerve connexion must in any such case be destroyed. The question is, we take it, one of vitality in the periosteum of the tooth. Can this be kept alive, say for half an hour; and when the stump is returned will union take place—we mean such union as shall render the replaced tooth practically again part of the organism? or is it simply from this time a foreign substance, which may be tolerated for a considerable period, but will perhaps suddenly become the seat of irritative processes, and need to be removed? If members of our profession—with whom alone we can discuss a question of surgery and physiology—will favour us with concise statements of their opinions on this interesting subject we shall be glad.

SECONDARY HÆMORRHAGE.

THE term "secondary hæmorrhage" is so universally adopted that no change in it would be either desirable or possible; but it is a term which has no clear natural significance, and its exact application is not always so precise as might be wished: thus quite lately we read of so-called "secondary" hæmorrhage occurring a few hours after an operation. When a vessel is wounded or ruptured the loss of blood is at first stopped either naturally or artificially by a means which is merely temporary—a clot of blood or a ligature, for example; this is called the "temporary arrest of hæmorrhage"; but the real cure of the injury is brought about by quite another process, the same in all cases, which leads to the obliteration of the injured vessel—the "permanent arrest of hæmorrhage." If these facts, well known to all, are clearly kept in view, the proper classification of hæmorrhages becomes easy. There never can be any difficulty about the use of the term "primary hæmorrhage." We should restrict the term "intermediary" to hæmorrhages resulting from interference with, or failure of, the temporary arrest of hæmorrhage, as when a ligature slips, or a clot becomes displaced by movement of a part, dilatation of the vessel, or the increased force of the heart's action. And then all hæmorrhage due to failure in the final process—the permanent closure of the vessel—should be called "secondary." This classification is important not only because it is scientific and clearly distinguishes things that differ, but because the treatment of intermediary hæmorrhage differs from that of secondary hæmorrhage in most important particulars. Hitherto surgeons have spoken of bleeding occurring before or after a certain time as intermediary or secondary, apparently ignoring the essential distinction between them, which is not one of time, but of the nature of the efficient cause. So distinct is the difference that in any given case intermediary hæmorrhage does not predispose to, or point to the danger of, secondary hæmorrhage; and the means which is the most certain to prevent intermediary hæmorrhage—a well-applied ligature—is just the one hæmostatic that of all others is attended with secondary bleeding. Such being the case, our distinction is not fanciful, but real; happily, also, it is very simple, and makes the meaning of these well-known terms far more definite and intelligible than that which would make them refer to time only.

FILTHY FROZEN WATER.

THE heat incites to the use of ice as a component part of our daily diet. It will be well to take the precautions necessary to avoid the consumption of filthy frozen water under that name. The difficulty lies in the fact that the freezing process has a tendency to destroy or disguise the familiar tokens of dirt, and, as we know well, the worst forms of filth—namely, the products and propagating materials of disease—are the least recognisable! For purposes of general cleanliness ice should be tested by a strong transmitted light at an oblique angle to the cleavage or stratified structure of the mass. Some specimens thus inspected will be found to bear the appearance of a highly-coloured Cape diamond, and will be readily eschewed.

NOTES OF CLINICAL PRACTICE.

THE ultimate practical purpose of professional journalism is to give those engaged in the daily exercise of the calling represented information which shall be helpful in their labours, and, therefore, conducive to the public good. What can advantage this cause more than the prompt and rigidly accurate noting of the facts observed, knowledge acquired, and experience gained in actual practice? If busy men will jot down the little points that strike them, in their own way, without waiting to elaborate formal papers, and send them direct to this office, we shall be happy to have them collated and presented in a form available for general information. The amount of clinical and pathological material wasted for want of this saving process must be very considerable. It is practically impossible for the great majority of practitioners to write lengthy reports of their cases. They have neither the leisure nor the inclination to do this. Nor are they always able to make the local Societies the medium of communication with the profession, because the reading of a paper necessitates the trouble of first writing it, and then of attending to submit it. There is not opportunity for this performance, and many men shrink from it. Letter-writing is only less troublesome. Our suggestion is that practitioners should simply jot down a note of their observations in any rough fashion that occurs to them, and forward it duly attested. What more may be necessary we will do, in the hope of rescuing a large mass of valuable material from loss, and securing for patient and persevering observers the professional publicity to which their labours justly entitle them.

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ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE annual election for office-bearers will take place on the 7th proximo, when Mr. McClintock will be appointed president, Mr. Chaplin vice-president, and Mr. Colles secretary. For the Council all the outgoing members are candidates for re-election, and in addition five Fellows have come forward for a seat on the Council—viz., Messrs. John Andrew Baker, Austin Meldon, F. Alcock Nixon, Henry Macnaughton Jones, and James Good Curtis.

HORSE-POX.

WE learn that an outbreak of horse-pox (*Variola equina*) has occurred at the west end of London, the nature of the malady having been recognised by Mr. Fleming, who has described it in his "Veterinary Sanitary Science and Police." The affection derives its interest from the fact that it was supposed by Jenner to be the source of cow-pox, and also that it is communicable to mankind, and some other species, by inoculation, producing effects somewhat analogous to those of vaccinia. In the present outbreak several animals have been successfully inoculated; and medical men may be interested to know that the attendant on the diseased horses has accidentally contracted the complaint. Last year, in the Second Life Guards, there was an outbreak of horse-pox among the troopers; and the Farrier-Major was infected, the symptoms resembling those observed in vaccination, as appears in the report of the case published in the *Veterinary Journal* for March. We hear that experiments are being conducted at the Brown Institution with material obtained from the diseased horses in London.

SUNSHADES FOR HANSOMS.

THE inconvenience of holding an umbrella or a sunshade in front of a hansom is very great. Why should not these vehicles be fitted with a light projecting shade like that worn by little children on their bonnets, or the screens sometimes attached to the front of bathing machines, and so worked that it may be under control of the "fare"? Nothing would be easier than to devise such an apparatus. The hood should stand flat back against the front of the hansom when not in use, and it need add nothing to the difficulties of ingress, while it could be made to fall forward at will, sheltering the eyes from the sun in bright weather, or affording protection in rain.

THE summer classes this session at Edinburgh are even more largely attended than last year, and the overcrowding in the botanical class-room once more compels Professor Dickson to lecture twice daily. Over two hundred students took part in the first botanical excursion, and visited the Fife coast between Aberdour and Burntisland. Professor Alleyne Nicholson is acting for Sir Wyville Thomson, who is not yet able to undertake the class-work. In the extra-mural school two new lecturers have qualified—viz., Mr. Geddes in Zoology, and Mr. McAlpine, B.Sc., in Botany.

THE death of Pershouse W. L. Langley, M.D. Q.U.I., M.Ch., of Liverpool, has been announced, under circumstances of more than ordinary sadness. Dr. Langley was but twenty-three years of age, and died of typhus fever contracted in the discharge of his duties as senior resident medical officer of the West Derby Union Hospital. The deceased was the only son of Inspector-General Langley, who held an official post in the Crimea during the war in 1854.

SUMMONSES have been issued for a meeting of the Executive Committee of the General Medical Council on Tuesday, June 15th, 1 P.M.

DR. G. A. KEYWORTH has proposed the application of hot air as a remedy for cancer. By means of a foot-bellows, he drives air through chloride of lime and hot iron tubes, and then forces it against the surface of the diseased growth. The *New York Medical Record* states that the effect is the relief of pain with considerable desiccation of the parts.

THE annual meeting of the Fellows of the Royal College of Surgeons, for the election of four members into the Council of the College, is fixed to be held on Thursday, July 1st, at 2 o'clock P.M. The circulars announcing the meeting are now about being delivered to all the Fellows whose addresses are known at the college.

HIS Excellency the Lord-Lieutenant of Ireland has made the following appointments: — Surgeons in Ordinary: Edward Dillon Mapother, Robert McDonnell. Physicians in Ordinary: George Hatchell, Thomas Nedley, Christopher Nixon. Dentist: Daniel Corbet.

THE managers of the Edinburgh Royal Infirmary will shortly proceed to elect a third assistant physician, in order that the work in the out-patient department and elsewhere may be somewhat lightened, and the teaching power of the staff increased.

PROFESSOR W. H. FLOWER, F.R.S., will distribute the prizes and deliver an address in connexion with the University College Faculty of Medicine, on Wednesday, June 2nd. The Earl of Kimberley will take the chair at 4.30 P.M.

IT is rumoured that during the present session a Bill will be introduced into the House of Commons to grant a Parliamentary representation to the newly-constituted University of Ireland.

THE annual session of the American Medical Association commences on June 1st, at New York.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Bradford, Yorkshire (estimated population in 1879, 191,046).—The report of the medical officer of health (Mr. Harris Butterfield) for this important borough during the year 1879 is, for numerous reasons, of peculiar interest. Bradford is the capital of the Yorkshire worsted and stuff district, and it had grown to be a great and densely-populated town before public-health legislation and administration had emerged from their rudimentary state. As a consequence, the sanitary evils and defects which characterised our towns thirty years ago—defects of drainage, defects of water-supply, defects of excrement-disposal, defects of house-accommodation—were to be witnessed in Bradford, and this indeed in a most aggravated form. Bradford at the period referred to was, in respect to one evil only, a hideously-offensive Cyclopean midden-privy fenced in with inhabited dwellings; and its sanitary deficiencies made their unwholesome influence ghastly apparent in its swollen mortality. But things sanitary have changed and are still changing for the better, especially since the appointment of the present able health officer, and a transformation has already been effected in the sanitary conditions of the town which redounds to the credit of the Corporation, and which is of the most gratifying nature, whether regarded in the interests of its population or as encouraging the sanitary authorities of other towns which have to contend with similar difficulties. Last year

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the death-rate of Bradford (21·1 per 1000 of population), Mr. Butterfield tells us, was "the lowest ever recorded in Bradford, and 3·1 below the average of the six preceding years." Moreover, none of the large manufacturing towns had a death-rate so low as that of Bradford. The diminution of mortality was particularly noted in the disease most likely to be influenced by sanitary and social causes. Infantile mortality, calculated on the proportion of deaths to births, has declined from 20·5 in 1873 to 15·2 in the present year, while there is a marked diminution in the number of deaths from tubercular diseases, the convulsive diseases of infants, and from "fever" and diarrhœa. Glancing at the particular subjects dealt with in the report in the order they are given, we note first an outbreak of *small-pox*, which is of interest on two accounts, first with reference to its particular source, and next with reference to the measures by which it was extinguished. The person first attacked was engaged in sorting rags, a large portion of which had come from London, and it is believed she contracted the disease from infected portions among them. Other persons engaged in the same occupation were also attacked with the disease. These persons were at once removed to the infectious-disease hospital of the borough, vaccination and revaccination, with disinfectants, diligently used in the infected families, and the spread of the disease beyond a few scattered cases stayed. This was not a solitary instance during the year of the arrest of small-pox infection by the Corporation having at command, in the fever hospital, the means for immediate isolation. *Measles*, as usual, from the early stage of its infectiousness, and the trivial light in which it is too commonly regarded, foiled the efforts of the sanitary authority in endeavouring to arrest its spread; but in respect to *scarlet fever* Mr. Butterfield is able to make the following important and encouraging statement:—"The most hopeful circumstance in the preventive treatment of the disease is the increasing popularity of the Fever Hospital, which last year admitted 157 cases, many of them being private patients." The following is, moreover, of much practical interest:—"In many cases where mothers were unwilling to part with their children at the outset of the disease, the patients have been sent to the hospital when convalescence was established. Instead of being isolated in one room for three or four weeks during the process of desquamation they are allowed at the hospital to play in the grounds, and have companionship and amusement, as well as medical supervision, careful nursing, wholesome diet, and abundant ablutions." Mr. Butterfield recounts an interesting outbreak of diphtheria, in which the disease appears to have been determined by the use of milk from a dairy where diphtheria existed. The conditions under which the milk was exposed to infection deserve quotation. The milk-cans, which were found dirty, "were kept in a scullery or wash-kitchen, in which was a sink with an untrapped pipe. Under this sink was a chamber utensil containing excreta. Near the milk-cans was a washtub half full of dirty water, and resting on the milk-cans were two bundles of dirty linen from the bed and person of the infected child." The report gives most interesting information as to the diminution of "fever" and diarrhœa in the town following upon improvements in drainage and privy arrangements. During the period 1870-74 the deaths from "fever" and "diarrhœa" were respectively 689 and 1106. During the period 1875-79 they had fallen to 323 and 830. But if much has been done to improve the sanitary condition of Bradford in respect to water-supply, drainage, and excrement disposal, much detailed sanitary work still remains to be done. But we may take assurance that a Corporation which has done so much will not halt in its course until it has done all that is needed.

East Grinstead (estimated population, 16,500).—Dr. Fussell, reporting to the Rural Sanitary Authority of this district, gives a birth-rate of 36·0 per 1000 population, and a death-rate of 17·21 for the year 1879, in the combination of which it forms a part. The death-rate ranged in the different parts of the combination from 0·4 per 1000 population (Lindfield Urban) to 19·2. No very noteworthy health-disturbance chequered the course of the year, and the sanitary administration had a pretty even path throughout. Scarlet fever did little mischief, and there were but three or four cases of typhoid fever throughout the district. Several cases of small-pox occurred among a body of excavators engaged in railway construction, which was successfully combated and confined to this body of labourers by isolation. The contractors for the works provided huts for the hospital accommodation and isolation of the men seized with the disease. Dr. Fussell notes another instance of the value of having hospital accommodation at hand for the isolation of first cases of infectious disease—an imported case of small-pox, which it was possible to deal with immediately by isolation, and which did not give rise to any other case. Dr. Fussell adverts to a communication from the Local Government Board asking for information as to the hospital accommodation possessed by sanitary authorities in his district for isolating cases of infectious diseases. He appears to think that the accommodation possessed by the Board of Guardians at the workhouse is amply sufficient for the wants of the district, but we imagine that Poor-law hospital accommodation will not be held by the Local Government Board as meeting the wants of sanitary authorities. He mentions the great advantages which have been derived by the district from the access had to the *fever wing* of the County Hospital in Brighton through subscribers. A system of drainage is nearly completed in East Grinstead, and schemes of drainage are under consideration for other parts of the district.

Scarborough (estimated population, 30,000).—Dr. Taylor's report on the health of this important seaside-resort as yet has only reached us in abstract, as given in the local journals. Is it possible that a town of this importance does not print the annual report of its medical officer of health? The abstract, with the comments of the abstracter, gives a highly favourable report of the health-condition of the place during 1879, but we are unable to form an independent judgment of the subject in the absence of the detailed report. The Corporation has not the highest reputation for the exercise of care in attention to the health-requirements of the town in the interest of its population and visitors, and that no little leaven of apathy in these matters still exists with the local authority is to be inferred from certain comments of Dr. Taylor. He speaks of "many" back-roads, lanes, and semi-public thoroughfares presenting "Augean nuisances that require Herculean determination to remove"; and he tells of nearly twenty back-passages that were reported to be in a filthy condition so far back as the year 1875, and which, although they have been reported to the Corporation annually since that time, remain filthy still. "Surely," writes Dr. Taylor, "the sanitary committee must wink at the reports of their officers, or there could not be room for such a statement." The death-rate for 1879 is stated to have been 20·17 per 1000 population.

THE HOUSING IN SUBURBAN LONDON.

"We find vast numbers of houses being built with drainage into cesspools, the drains themselves utterly unventilated and unprovided with any means for preventing the entry thereto of cesspool-air or sewer-air; soil-pipes unventilated, sink-pipes directly connected with drains, foundations hopelessly damp, and so forth. We find the majority of the sewers are unventilated, and the ditches and watercourses turned into vast receptacles for decomposing filth." We quote these words from a letter printed in the columns of the *Willesden Chronicle*, and signed "P. Gordon Smith,"—in other words, we surmise, the Architect of the Local Government Board. The words refer to the dwelling-houses springing up "by leaps and bounds" in the north-western suburbs of London, but they apply equally to new houses in other suburbs where bye-laws for the regulation of certain structural details of new buildings are not in force. The statements quoted come with particular force from Mr. Gordon Smith. He has written them in warning to the Local Board of Willesden, the district in which he lives, of the sanitary evils they are permitting to grow up around them, and which must prove increasingly dangerous to the community. The mischief already done can only in part be undone; but the sanitary authority may, if it think fit, put a stop to the further creation of evils of the sort referred to, if it adopt and put in force bye-laws for the regulation of the structural arrangements of new buildings, as the law provides—that is to say, if they proceed to lock the door after the first horses of the stud have been stolen. Mr. Gordon Smith's letter is intended for the special enlightenment of a particular suburb; but it conveys a much wider and, we may say, graver lesson, which we have often had to urge upon our readers. It furnishes another and most striking illustration of that feature of sanitary legislative policy to which we gave particular notice in THE LANCET of the 15th instant, under the name of "Partingtonianism"—a policy which does not interpose any effectual barrier to the growth in new centres of population of the very evils which it is the

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express purpose of the public-health law to remove. Sanitary law is too generally powerless in these new centres until the evils which it was devised to obviate have been first created. It substitutes for the adage "Prevention is better than cure," the maxim "Cure is better than prevention." Mr. Dodson and the present Government have an enviable chance of purging sanitary law wholly of this mischievous absurdity, and of getting it into a straighter course.

THE REGISTRATION OF DISEASE: PROSECUTION.

On the 10th inst. Dr. David Robertson, of Moldgreen, Huddersfield, was charged with having, contrary to the provisions of the Huddersfield Waterworks Improvement Act, 1876, failed to report a certain case of infectious disease in a habitation where there was not sufficient accommodation for enabling the case to be properly attended to, so as to prevent the spread of the disease and the proper treatment thereof. The case, one of scarlet fever, happened to be in the house of a milk-dealer, who sold in bulk, not in retail. A first case was followed by a second in the dealer's house, both being children of his, and were attended by his wife. No question appears to have arisen as to the sufficiency of space in the house for the isolation of the children from the family; but the medical officer of health and the sanitary inspector for the borough tendered evidence to show that milk sold from the house, under the circumstances of the treatment and attendance upon the cases there, was liable to become infected with the contagion of scarlet fever. Dr. Robertson observed in his defence that he should have reported the first case had he thought it necessary to do so; but if he had to report every case of contagious disease where he thought there was a deficiency of accommodation nine out of ten of the cases in Moldgreen would have to be taken to hospitals. The magistrates adopted the view of the medical officer of health, and inflicted upon Dr. Robertson a nominal penalty of five shillings and the expenses.

As this case is reported in the local journals it does not give the impression that the action of the Corporation was judicious. Either the Corporation should take the entire responsibility of determining whether infectious cases are properly or improperly lodged, and cause every case to be reported to them; or they should issue definite instructions as to what they are prepared to consider proper or improper lodgment to be. It is intolerable that the judgment of the medical man, who is responsible for the treatment of a case, should be subject to being traversed unexpectedly and unpleasantly, as Dr. Robertson's has been. This is not the first time, if we mistake not, that the Huddersfield Corporation has been brought into collision with the medical profession there by its ill-considered administration of the provisions of their Improvement Act relating to infectious diseases. Has Huddersfield any hospital provision for infectious diseases? Or is it one of those local authorities which shows itself active in imposing duties upon others while neglecting to fulfil a primary duty as to the limitation of infectious diseases within its own limits?

"EXECRABLE" HOUSE DRAINAGE IN THE METROPOLIS.

"The execrable drainage arrangements" of many of the new houses built within the metropolitan area are, so to speak, a standing theme of animadversion among Londoners; but the subject, notwitstanding its importance, has never induced among the populations of the different sanitary districts of the metropolis such an amount of interest as would lead to concerted action for its amendment. Mr. Charles Campbell, of Cromwell-road, Kensington, has recently endeavoured to arouse public attention to it by recounting his experience of the subject, as a resident and vestryman of the district in which he lives, and he has done so in a fashion which ought to awake sounder thought on the matter than is too commonly the case. He justly regards the careless, ignorant, and scamping doings of the builders in regard to house-drainage as simply an indication of a deeper and more serious evil; he finds that the sanitary authorities in the metropolis have no lack of power to remedy the mischief of which he complains, so far as legislation is concerned; and he justly seeks an explanation of the whole matter in the apathy and carelessness of the authorities referred to with regard to this subject. The large powers which the Legislature has given to the metropolitan sanitary authorities in reference to the drainage arrangements of houses have been and are being, suffered to remain very largely a dead-letter. They are powers which experience has long taught cannot be efficiently exercised without bye-laws, and we are unaware of a single sanitary authority in the metropolis which has framed a code of bye-laws regulating these arrangements in definitive terms. The exclusion of the metropolitan sanitary administration from the general public-health legislation of the kingdom, and its freedom from all proper supervision as to the mode of performance of its health-functions by being placed in relation with the Home Office (which has no health-functions and no means of supervising them), instead of with the Local Government Board (which has health-functions and the means of supervision), have exercised and still exercise a disastrous influence on the health-welfare, present and future, of the metropolitan population. Until the sanitary administration of the metropolis is more closely approximated to that of other urban districts of the kingdom, anomalies of the nature pointed out by Mr. Campbell will continue to exist, and the metropolitan populations to suffer from them.

GOVERNMENT CONTROL.

Recent writers in *The Times* have been making known their griefs as to the interposition of Government control in affairs concerning local administration. Their complaints relate wholly to matters which come under the control of the Local Government Board, and betray a painful degree of irritation with the mode in which the inspectorial functions of that Board are carried out. The writers, unfortunately, do not distinguish between the *manner* in which control is exercised by the Local Government Board, and which solely concerns that Board, and the *matters* to which that control refers, which are appointed by the Legislature, and which can alone be dealt with by the Legislature. It would be an ill day for England and for the English ratepayer if local authorities were permitted to exercise that unchecked freedom in local government for which these writers contend. Taking sanitary matters alone there is too good reason to believe that money borrowed on easy terms from the Government for the purpose of executing sanitary works has, notwithstanding existing checks on expenditure by the Local Government Board, been wastefully expended both in a pecuniary and in a sanitary sense; while the plea that a local authority can best appreciate and has the completest knowledge of what is needed for its own district, too often proves to be a plea for the exercise of local ignorance, uncontrolled by the wider knowledge which may be obtained by comparing the experiences of various localities. But considerations of this sort apart, the indications are too numerous and significant of a widening discontent against the inspectorial and general system of the Local Government Board, which cannot fail to be seriously detrimental to the influence that Board ought to exercise upon local authorities, and which must operate most prejudicially against the "educational" functions of the Board. We predicted this result when Mr. Stansfeld determined at all hazards to frame the administration of the Local Government Board upon the traditions and practice of the old Poor-law Board, and we regret to find that this prediction is being fulfilled. The subject deserves the grave attention of that Board.

INFECTIOUS DISEASES HOSPITALS AND ZYMOTIC FATALITY.

The medical officer of health for the City of Bristol, in his Quarterly Return for the past three months of this year enunciates that scarlet fever is "of all the zymotic diseases the most intractable," and adds, "sanitary authorities and their officers may fight with it, postpone its visitations, gain victories in skirmishes with it, but in the long run it holds its own sway, deriving its strength from the ignorance and the fatalistic beliefs of the public." We would not wish to deny that there is much truth in Mr. David Davies's remarks; but when we read in his report that during last quarter only one patient was admitted to the Fever Hospital we beg leave to doubt whether the sanitary authority and their officers in Bristol have done their best to fight scarlet fever with the weapons they have at command. In the Bedminster sub-district of Bristol 45 fatal cases of scarlet fever were recorded during the last quarter of 1879, and in the first three months of this year 41 more fatal cases were recorded. Thus during six months scarlet fever has held its sway in Bedminster, and no successful efforts have been made to control the prevalence and fatality of the disease by turning the city hospital accommodation to account for isolation purposes. It would be interesting if

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Mr. Davies could explain to us why hospital isolation of scarlet fever is comparatively a dead letter in Bristol, whereas in London, Birmingham, and Salford the medical officers of health have been able to turn the hospital accommodation provided for the isolation and treatment of zymotic diseases to excellent account. Dr. Hill, the medical officer of health for Birmingham, in his report for the first quarter of this year records the fact that 45 cases of scarlet fever were admitted into the Birmingham Borough Hospital, while the number of cases of this disease admitted to this institution during 1878 and 1879 were 424 and 184 respectively. Bristol is well provided with hospital accommodation for infectious diseases, but this accommodation will be powerless to control the prevalence of such a disease as scarlet fever unless its value be recognised and the hospital utilised.

LONDON STINKS.

Attention has at length been drawn in the daily press to the disgusting smells pervading many of the principal London streets at the present moment. A correspondent likens the smell in Victoria-street, Westminster, to that of a charnel-house, and the smell in the Quadrant, Regent-street, on Friday and Saturday last was so like that of carrion, that we heard the question debated whether it did not come from some open windows in the houses near the spot where it was felt, and might not arise from some, perhaps unknown, carrion there. But this is not the only part of Regent-street which has recently been distinguished by a foul smell. The stench (arising from stagnant sewage according to some, from foulness of the roadway according to others) has been specially obvious to the passer-by about the centre of the street, and between Oxford-circus and Margaret-street. In the latter place it was particularly disgusting on Saturday evening. Other streets in the West of London have, and are, suffering from persisting stink. It has been suggested that this offensive state of things has arisen from the long spell of dry weather, and consequent insufficient flushing of the sewers or streets or both. But are the sanitary authorities of the metropolis so wanting in ingenuity, energy, and means that the effects of absence of rain upon the sewers and streets at this time of the year cannot be counteracted.

The first prosecution under the section of the Blackburn Improvement Act, which requires every medical practitioner within the borough to report to the local authority certain specified infectious diseases under a penalty in default thereof, came on for hearing before the magistrates on the 12th inst. Mr. Cort, the medical man against whom the prosecution was instituted, was charged, upon the evidence of a death certificate given by him, with having neglected to comply with the section referred to. The certificate related to a patient—a child—Mr. Cort had been called to five days before it died, and when, we are given to understand, it was suffering from laryngitis. There had been previous illness, it seems, before Mr. Cort saw the case, extending over nine days, for which medical aid had not been sought, and which he came to the conclusion had been scarlet fever. The state of the case when he first saw it was such that he did not consider it necessary to report to the local authority; but holding the laryngitis as a sequel to the scarlet fever he certified that disease as a cause of death. The magistrates convicted Mr. Cort, and imposed upon him a fine of ten shillings with costs. Mr. Cort was not represented in court by a solicitor. The case has caused a good deal of irritation among the members of the profession in Blackburn. A correspondent writes to us: "If the Corporate authorities of Blackburn wish to have the cordial co-operation of the medical men in the town, they will have to administer their newly-acquired powers in a very different spirit to that shown in this prosecution of Mr. Cort; the more especially as there have already occurred cases in which the authorities and the medical men of the town have been brought into antagonism. One medical man who has hitherto reported all cases referred to in the Act has determined that he will report no more, holding that prosecution and fine will be a source of less irritation and annoyance than reporting as it now has to be carried out."

As an example of the state of things which exists in Willesden, and of the sort of intelligence (?) which governs sanitary proceedings there, we may mention that at a recent meeting of the local board complaint was made of an "abominable stench" issuing from a sewer ventilator. The surveyor attributed this to stagnant sewage in some of the house drains connected with the sewers—in other words, complained that the house drains were polluting the sewer and the sewer-air. Whereupon a member of the board stated that, after standing over the grating of the offensive ventilator for a minute or two, he had had to keep in-doors for two days suffering from a bad throat, and he added "he thought the ventilator should be at once stopped up." To this the Board's surveyor immediately responded "It is" (!). One voice only appears to have protested against this course, and the Board constituted for the sanitary safeguard of the population seems to have assented to a measure which would subject the inhabitants of the houses connected with the section of sewer where the offensive ventilator existed to the imminent risk of poisoning by sewer-air forced back from the sewer and drains into their dwellings.

It may be useful to note that at a recent meeting of the Hayton-with-Roby Local Board, a claim was made upon the Board for £10, as the cost of a bed ordered to be destroyed by the medical officer of health. The bed, a new feather one, had been occupied for a month by a patient suffering from scarlet fever, and the medical officer of health, in the exercise of a discretion given to him by the Board, ordered its destruction as the only feasible means of disinfection. The bed was the property of a well-to-do ratepayer, and the Board took exception to a claim from such a source as well as to the amount claimed. The clerk of the Board thought that the medical officer of health had perhaps been a little hasty in ordering the destruction of the bed, but he held that compensation must be given to the proprietor; and it was decided that an endeavour should be made to come to an arrangement with him which would be less heavy upon the ratepayers.

A committee was appointed at a meeting of medical men held in the Perth Infirmary last week to wait on the police commissioners to advise with them on the whole subject of the public health. From the statement of several gentlemen present at the meeting, the sanitary condition of Perth would appear to be far from satisfactory. Excessive sickness and a high death-rate were attributed to pollution of the water-supply and serious defects in the drainage of the city.

The Town Council of Oswestry have determined to oppose the Bill introduced into Parliament by the Town Council of Liverpool for supplementing the water-supply of the latter town with water taken from the river Vyrnwy, unless clauses are included in the Bill which would permit Oswestry and other towns along the course of the Liverpool main to have water from it.

The report of the medical officer of health for Plymouth for the week ending the 22nd May records only two deaths from measles. This would indicate that the epidemic of this disease which has been so severe in this district is coming to an end.

The Runcorn Rural Sanitary Authority has received the sanction of the Local Government Board for borrowing the sum of £2921 for sewerage works in the township of Appleton.

Scarlatina has been very prevalent in New Swindon and its neighbourhood, but is now declining.

VITAL STATISTICS.

HEALTH OF LARGE ENGLISH TOWNS.

THE death-rate in our large towns continues to decline, and was lower last week than in any week since the middle of October last. In twenty of the largest English towns, estimated to contain in the middle of this year seven a half millions of persons, or nearly one-third of the entire population of England and Wales, 4760 births and 2949 deaths were registered last week. The births were 425, and the deaths 326, below the average weekly numbers during 1879. The deaths showed a further decline of 80 from the numbers returned in recent weeks, and were equal to an annual rate of 20·5 per 1000, against 21·2 and 21·1 in the two preceding weeks. During the past seven weeks of the current quarter the death-rate in these towns averaged only 21·5 per 1000, against 24·0 and 24·4 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 14·4 in Portsmouth, 18·1 in Leicester, 18·5 in London, 18·5 in Brighton, and 18·6 in Bristol. The

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rates in the other towns ranged upwards to 23·7 in Sunderland and Plymouth, 24·9 in Norwich, 26·6 in Manchester, 29·8 in Salford, and 29·9 in Liverpool. The high rate in Salford was mainly due to zymotic fatality, while that in Liverpool was in great measure caused by excessive infant mortality.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 443 and 439 in the two preceding weeks, further declined to 400 last week, and were fewer than in any week since July last; they included 128 from whooping-cough, 96 from scarlet fever, 69 from measles, and 44 from fever, principally enteric. The annual death-rate from those seven diseases averaged 2·8 per 1000 in the twenty towns, and ranged from 1·5 in Birmingham, and 1·6 both in Portsmouth and Leicester, to 5·8 and 6·5 respectively in Sunderland and Salford. Measles showed the largest proportional fatality in Sunderland, Hull, and Nottingham; this disease caused but two deaths last week in Plymouth, whereas the number of fatal cases in the six preceding weeks had averaged 20. Scarlet fever showed excessive fatality in Salford and Norwich; and fever (mainly enteric) in Manchester, Salford, and Sunderland. Fever caused 18 deaths in London last week, against 26 in the nineteen large provincial towns, which have an aggregate population differing but slightly from that of the metropolis. Ten fatal cases of small-pox were recorded in London and one in Birmingham, but not one in any of the eighteen other large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 186 and 193 at the end of the two preceding weeks, further rose to 196 on Saturday last; 45 new cases were admitted to these hospitals during last week, against 43 and 36 in the two previous weeks.

The fatality of lung diseases showed a decline last week. The deaths referred to diseases of the respiratory organs in London, which had been 260, 280, and 286 in the three preceding weeks, declined to 241 last week, and were 27 below the corrected average for the corresponding week in the past ten years; 131 resulted from bronchitis, and 66 from pneumonia. The annual death-rate from diseases of this class did not exceed 3·4 per 1000 in London last week, whereas the rate from the same diseases was equal to 6·8 in Liverpool, and 7·9 in Manchester.

HEALTH OF LARGE SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 23·7 per 1000, against 24·8 in the preceding week; it exceeded, however, by 3·2, or nearly 16 per cent., the average rate in the twenty large English towns. The ratio in the eight Scotch towns last week ranged from 18·6 and 21·6 in Aberdeen and Greenock to 37·2 and 48·7 in Paisley and Perth. The deaths referred to the seven principal zymotic diseases in the eight towns were 127 last week, of which 49 resulted from whooping-cough, 24 from fever, and 22 from diarrhœa. The annual death-rate from these diseases averaged 5·1 per 1000 in the eight towns, whereas in the twenty English towns it did not exceed 2·8; the zymotic death-rate, which was but 1·9 and 3·0 in Greenock and Paisley, ranged upwards in the other towns to 7·8 and 10·6 in Perth and Paisley. Most of the deaths from whooping-cough occurred in Glasgow, Edinburgh, and Paisley; fever was proportionally most fatal in Glasgow and Paisley, but the deaths from this cause in Glasgow showed a marked decline from those in the previous week. The excessive fatality of diarrhœa is a noticeable feature in the zymotic death-rate of the Scotch towns. The 23 deaths referred to this cause in the eight Scotch towns last week was equal to an annual rate of 0·93 per 1000, while in the English towns it did not exceed 0·28, or little more than a quarter of the rate that prevailed in the Scotch towns. In Perth diarrhœa has been prevalent in an epidemic form for some weeks. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 131 and 118 in the two preceding weeks, further declined to 103 last week, and were equal to an annual rate of 4·2 per 1000, against 2·9 from the same diseases in London.

INFANT MORTALITY IN SUNDERLAND.

Most medical officers of health now devote a portion of their annual reports to the consideration of infant mortality. It is, however, much to be regretted that a greater uniformity does not prevail in the statistical treatment of the subject. In the first place the term "infant mortality" is used by most medical officers to signify the death-rate of infants under one year of age, while some others apply it to the rate of mortality among children aged under five years. There is a manifest convenience in applying the term "infancy" solely to the first year of life, and this use of the term is now so general in mortality statistics that we venture to suggest its uniform adoption. Dr. Yeld, in his Sunderland report for the year 1879, uses the term "infant mortality" with reference to the death-rate of children under five years of age, and appears to give no statistics of true infant mortality—namely, of children in the first year of life. Dr. Yeld, moreover, does not treat the mortality of children under five years of age in a scientific manner. The only true and satisfactory method of calculating the rate of mortality at any group of ages is to give the proportion of deaths to persons living at such group of ages. Dr. Yeld, however, attempts to measure the death-rate among children under five years of age in Sunderland by stating their proportion to persons living at all ages. This method yields entirely fallacious results on account of the variations in the birth-rates (and hence of the proportion of children in the population) in the several registration sub-districts of the borough. Thus, by this method, Dr. Yeld arrives at the conclusion that infant mortality (meaning the deaths of children under five years of age) was lowest in Sunderland parish, and highest in North Bishop-Wearmouth sub-district; whereas the rates correctly calculated would show an exactly opposite result, and the close connexion which he notices between the high birth-rate and a correspondingly heavy death-rate amongst children has no real existence. The proportion of deaths under one year to births in Sunderland parish last year was 190 per 1000, whereas it did not exceed 115 in North Bishop-Wearmouth. True, infant mortality is low in Sunderland, and during 1879 the proportion of deaths under one year to 1000 births did not exceed 133, whereas it averaged 151 per 1000 in twenty of the largest English towns; the lowest rates of infant mortality among these twenty towns last year were 113 and 129 per 1000 in Portsmouth and Brighton, whereas they ranged upwards to 170 and 185 respectively in Salford and Leicester.

PORTUGUESE MORTALITY STATISTICS.

Spain and Portugal have hitherto been behindhand in the matter of vital statistics, which is the more to be regretted since such information as is available points conclusively to high rates of mortality in both these countries, and trustworthy mortality statistics are almost necessarily the first steps in the direction of sanitary progress. Very recently, however, both countries have showed signs of following the example of the rest of civilised Europe in the publication of official mortality returns. Spain began last September to issue a monthly return of vital statistics for the entire kingdom; we have, however, only seen the first three of these returns, and we are unaware whether their publication has been continued. We hear, moreover, that a system of weekly and monthly statistics for the whole of Portugal has been inaugurated. We have been, however, up to the present time unable to obtain a copy of any of these returns. We have received a copy of a carefully compiled diagram of the mortality in the city of Lisbon during the forty-five years 1834 to 1878. Marginal notes to this diagram show that at the first official census in 1864 the population of the city was 155,346 persons; while at the second enumeration on 1st Jan., 1878, the population had increased to 203,681. From the recorded number of burials in the two city cemeteries, it appears that the average annual number of deaths in Lisbon during the fifteen years 1864 to 1878 was 6401; and taking the mean population of the city during these fifteen years to be 179,514, it follows that the annual rate of mortality in the city was equal to 35·7 per 1000 during that period. Such a death-rate affords conclusive evidence of low sanitary condition. We also have before us monthly returns for the city of Oporto relating to the first eight weeks of this year, ending on 21st February. The population of the city and its suburbs is stated to be 108,346 persons, and the 725 deaths reported in this period of eight weeks were equal to an annual rate of no less than 43·6 per 1000 of the population. Judged by its mortality statistics (although those available relate to the winter season, when the death-rate usually shows a marked excess) it appears improbable that the sanitary condition of

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Oporto is in any way superior to that of Lisbon, where the annual death-rate has averaged 35·7 per 1000 during the past fifteen years. We doubt not that the publication of these mortality statistics, if continued, will soon lead to sanitary reforms, as has been the case in most of the other European cities in which similar returns are published.

THE HEALTH OF DUBLIN.

The 206 deaths in Dublin last week showed a further decline from recent weekly numbers, but were equal to the annual rate of 34·2 per 1000. In the three preceding weeks the rate had been equal to 38·3, 36·5, and 35·0. The deaths included 40 which were referred to the seven principal zymotic diseases, against 57 and 43 in the two previous weeks; 14 resulted from scarlet fever, 9 from small-pox, 9 from whooping-cough, 6 from fever, and 2 from measles. The annual death-rate from these seven diseases was equal to 6·6 per 1000, against 2·8 in London, and 6·6 in Edinburgh.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

ON THE DISSEMINATION OF SMALL-POX AND OTHER INFECTIOUS DISEASES FROM HOSPITALS.

The discussion as to the influence of hospitals specially designed for small-pox in determining an exceptional prevalence of the disease in dwellings in their neighbourhood, which has so long agitated the population of London, is now beginning to occupy the attention of the population of Paris. In London the discussion arose out of the fears of the people living in the neighbourhood of our small-pox hospitals, and from the belief, not without some warranty, that small-pox was unduly prevalent in the neighbourhood of the hospitals, and that this prevalence arose from a diffusion of the contagion from the hospital through the atmosphere. This belief has not been accepted by the members of the profession best able to judge of the facts of the case, and any exceptional prevalence of small-pox in the vicinity of a hospital has been explained in a way very different from that which was in popular favour. Strange to say, the subject has been given prominence in Paris not by the people, but by members of the medical profession, and in regard to it they have adopted not the medical view of the matter commonly held in England, but a view which is the counterpart of the popular one here. This curious anomaly demands some consideration, especially with the object of ascertaining how the medical profession on both sides of the Channel come to be so strangely at cross-purposes on a subject which ought not to permit of a radical difference of opinion. The question was raised by Dr. Bertillon, in a paper read at the last meeting of the French Society of Public Health on the 28th ult., and which was entitled "On a Mode of Propagation of Small-pox and Diphtheria (diffusion of diseases in the neighbourhood of hospitals)." Dr. Bertillon has had recent occasion of studying the distribution of the mortality for small-pox in Paris. In the course of this study he found an exceptional grouping of the mortality in the vicinity of the Sorbonne, and subsequently discovered that this grouping was contiguous to an *annexe* in the Hôtel Dieu devoted to small-pox. Acting upon this hint he studied the grouping of the small-pox mortality in relation to other hospitals, Saint-Antoine and Sainte-Eugénie, receiving small-pox cases, and found a like grouping round about Saint-Antoine as he had found about the Hôtel Dieu, but not about Sainte-Eugénie. But although he did not find an excess of mortality from small-pox round about Sainte-Eugénie, he found an excess of deaths from diphtheria, and this hospital has a special service for that disease. Dr. Bertillon assumes as a mere matter of course, not calling for particular inquiry, that an excess of infectious disease in the vicinity of a hospital receiving wholly or chiefly cases of the special infection must be due to diffusion of the infection through the atmosphere from the hospital to neighbouring houses. He does not stop for a moment to examine whether such diffusion of the contagion through the atmosphere is the ordinary or even an occasional mode of the dissemination of small-pox under circumstances of closer relation of the disease to the uninfected than can well obtain in the relation of hospitals to houses in their neighbourhood. He has not held it necessary to endeavour to eliminate the part which the circumstances ordinarily concerned in the dissemination of small-pox have played in the particular local prevalence he refers to, before attempting to estimate the part (if any) the hospital may have played in it, but simply jumps at the conclusion. He does that, indeed, which popular feeling in this metropolis has done in respect to small-pox, and his conclusion has no higher value. Seeking to explain the different incidence of the small-pox mortality in the vicinity of the Hôtel Dieu and Saint-Antoine, he speaks of the overcrowded and ill-adapted wards set apart for small-pox in the former, and the tall, crowded houses hemming them close in, packed with a miserable population, and the greater space with the wealthier population, about the latter. He notes also the still wider space about Sainte-Eugénie, and the single-storied buildings devoted to infectious diseases there. But from beginning to end he gives no indications of those detailed inquiries into the spread of infection, which should alone be accepted as of value in a discussion of this sort. He does not even tell us whether small-pox began in the hospitals first, or in their neighbourhood—he gives no indication, in fact, whether the hospitals infected the neighbourhood, or the neighbourhood the hospitals, not seeing apparently that the question is cardinal in the discussion. Curious to say, in the discussion which followed the reading of the paper, and in which Dr. Brouardel, Dr. Vidal, Dr. Léon Colin, and Dr. Blondeau took part, the fallacies we have referred to were not even mentioned. Dr. Bertillon's observations as to diphtheria have no greater value than his observations as to small-pox.

VACCINATION IN SCOTLAND IN 1878.

The Registrar-General of Scotland has just issued his fifteenth annual report on vaccination; it relates to children born in Scotland during 1878. It appears that during that year 88 per cent. of the 126,854 children whose births were registered in Scotland during 1878, were successfully vaccinated in accordance with the Act. In 1·3 per cent. of the cases the children were either pronounced by the public vaccinators to be "insusceptible," or vaccination was postponed on the production of medical authority. In 2460, or 1·9 per cent. of the cases, the children had removed with their parents or guardians from the district in which their births were recorded. Dr. Robertson estimates that rather more than two per cent. of the children born in Scotland during 1878 "are possibly still unvaccinated." During the periods when small-pox is not prevalent these unvaccinated children are accumulating in numbers from year to year, and constitute a source of danger to each other and to the country at large. The desirability of assimilating the laws of vaccination in England and Scotland is urged by Dr. Robertson; especially is it recommended that the period during which parents and guardians are at present permitted to postpone the vaccination of their children should be abridged so as to correspond with that which prevails in England. Notwithstanding, however, the increased difficulties in the way of carrying out the vaccination laws in Scotland, due to the period allowed for vaccination being six months instead of three as in England, the proportion of successfully vaccinated children is larger in Scotland than in England. This success of the vaccination laws in Scotland is attributed by Dr. Robertson "to the happy exemption from the delusions of anti-vaccinators which Scotland enjoys." The deaths from small-pox in Scotland during 1878 and 1879 were but 6 and 8 respectively; in the six preceding years the deaths from this disease declined from 2446 to 35. The influence of vaccination as a protection from small-pox may further be inferred from the fact that during the ten years—1855 to 1864—no less than 75 per cent. of the deaths from small-pox occurred among children under five years of age, whereas in the ten years 1865 to 1874, under the operation of the Vaccination Act, the percentage of fatal cases under five years of age declined to 28 per cent.

FEVER PATIENTS.

The Times has given place to another spasmodic outcry for provision for the isolation of fever cases among the well-to-do classes. The writer draws the usual picture from imagination of the numerous people who would gladly hail such provision and willingly pay for it, and suggests that a block of St. Thomas's Hospital might be set aside for the purpose. The trustees of St. Thomas's, we apprehend, will be guided by experience in such a matter, and not by fancy; and experience teaches that even the modest, but admirable, accommodation for paying patients at the London Fever Hos-

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pital is more than even the vast well-to-do population of the metropolis is prepared, at present, to make use of. Although *The Times* itself and the greater number of the London daily journals have exerted themselves to make the merits of this institution known, in the sense in which the recent correspondent of *The Times* writes, it is obvious from his letter how little impression their advocacy has made upon the dense ignorance of the educated people of the metropolis in the matter. Less than five years ago so unpromising was the look-out of the Fever hospital with regard to the appreciation of its objects by the very class of persons now represented as craving for such an institution, that it was seriously proposed to close it and sell the property. This ending was obviated in some way or other, and since then there have been indications that the objects of the hospital, particularly in respect to its offering immediate means of isolation in infectious diseases for people able to pay for treatment there, are being better understood. But the fact still remains that this admirable institution, officered by a distinguished medical staff, offers more accommodation for fever cases for the class of well-to-do persons in the metropolis than has yet been called for.

HEALTH OF CALCUTTA.

Surgeon-Major Dr. K. M'Leod, who succeeded Dr. Payne as health officer for Calcutta, has been called upon to prepare the annual municipal health report for the Corporation, under the difficult circumstances of having taken office only towards the close of the year for which he has to report. He has brought together the data relating to the meteorology and vital statistics of the year, and commented upon them so as to leave no break in the series of annual reports, and to keep the reader acquainted with the main sanitary events of the year. A brief reference to *beri-beri*, which has recently shown itself in Calcutta, constitutes a novelty in the report, but Dr. M'Leod defers treating of the subject in detail until a future report. He tells us, however, that the disease was first observed in the southern suburbs of Calcutta in the rains of 1877. It disappeared during the cold and hot seasons of 1878, and broke out again in the southern and eastern suburbs over a more extended area, and towards the close of the rains of 1878. The disease again subsided, and reappeared in its old haunts and in some parts of Calcutta in November and December, 1879. "No cases occurred in the town up to this time, and the localities where it showed itself are contiguous to those parts of the suburbs where it existed in the two preceding years. The malady did not attract much attention until after the close of the year." A detailed investigation has been made of the circumstances attending this outbreak, and a report prepared for the information of the Government. It may be useful to mention here that an account of *beri-beri* will be found in the volume of the *Practitioner* for 1877 from the pen of Sir Joseph Fayrer, K.C.S.I. The chief facts of the year in relation to the health of Calcutta were an uneventful meteorology, a death-rate above the decennial average, but below that of the two preceding years, a "lamentably high" rate of infant mortality (unhappily as usual), a diminished mortality from fever, from cholera, from small-pox, and generally from bowel complaints.

Dr. Cameron has given notice that on the House of Commons going into Committee of Supply (Friday, June 11th) he will call attention to the practice of animal vaccination, and move a resolution; and Mr. Samuelson has given notice that, as an amendment to Dr. Cameron's notice on animal vaccination, he will move, "That, inasmuch as it has been shown that vaccination, as performed by certain public vaccinators, has caused the propagation of other diseases, as the reliance on vaccination as a protection against small-pox has been diminished by differences of opinion amongst medical authorities, and as the penalties for non-compliance with the law have in some cases been enforced in an oppressive manner, it is expedient that an inquiry into the whole subject by a Royal Commission should be instituted." Sir Harcourt Johnstone will move the repeal of the Contagious Diseases Act; Mr. Hibbert, the Parliamentary Secretary of the Local Government Board, has several notices on the motion paper relative to Provisional Orders regarding sanitary and other matters in various localities; Mr. Meldon proposes to introduce a Bill into Parliament amending the laws in Ireland relating to the registration of births and deaths; and Mr. Redmond will introduce a Bill to amend the Public Health Act (Ireland).

HEALTH OF THE EUROPEAN AND NATIVE TROOPS AND CIVIL POPULATION IN INDIA, 1878.[1]

THE report of the Sanitary Commissioner for 1878 shows it to have been a very unhealthy year, as measured both by the sickness and the mortality, and to have been so in all classes—European troops, native troops, gaol population, and the civil population. A high death-rate prevailed all over India, and was due to an increase in nearly all the chief diseases. We shall bring under the notice of our readers a few of the leading facts noted in the Report. And first as regards the European troops. The admissions into hospital amounted to 1651, the deaths to 21·46, the invaliding to 44·98, and the mean daily sick to 67 per 1000 of mean strength. These ratios were much higher than in 1877, which was a remarkably healthy year, and, except the invaliding, were considerably above the average for the five years 1871-5, which was: admissions 1394, deaths 17·62, invalided 43·09, and mean sick 57 per 1000. The results in 1878 for the three Presidencies separately were as follows:—

	Admissions.	Deaths.	Invaliding.	Mean Sick.
Bengal .	1675 ...	21·63 ...	40·52 ...	68
Madras .	1392 ...	21·82 ...	47·80 ...	65
Bombay .	1848 ...	20·46 ...	58·12 ...	67

This shows the sickness and invaliding to have been greatly in excess in Bombay, the mortality to have been highest in Madras, and the proportion constantly sick in Bengal. The class of diseases which gave rise to the greatest amount of sickness was that of fevers, which occasioned upwards of two-fifths of all the admissions into hospital; and of this class two-thirds of the cases were of the intermittent type. Next in frequency to fevers stand venereal diseases, amounting to nearly one-sixth of the whole. The principal causes of mortality were fevers, diseases of the digestive system, and cholera, the deaths by them respectively being in the proportion of 5·07, 4·09, and 4·00 per 1000 of the strength. The admissions and deaths by fevers in the three Presidencies were in the following proportions:—

	Per 1000 of Strength.	
	Admissions.	Deaths.
Bengal . . .	698 ...	6·28
Madras . . .	362 ...	2·91
Bombay . . .	910 ...	3·67

The prevalence of fevers in Bombay and the mortality in Bengal were excessive, while Madras enjoyed a comparative immunity. In Bengal, they were in considerable excess at Jullundur, Mooltan, Amritsar, Lahore, Attock, and Peshawar, while the mortality was highest at Bareilly. In Madras, Bellary alone showed a very high ratio of cases: while in Bombay the only stations which enjoyed a comparative exemption from them were Indore and Ahmednagar. The report goes at some length into the question of the prevalence of enteric fever (so called), the deaths by which were 4·69 per 1000 of the strength in Bengal, 1·20 in Madras, and 2·55 in Bombay. The low rate, however, in Madras is believed to have arisen partly from cases having been returned as continued and remittent, instead of enteric, in consequence of the strongly expressed doubts of the Principal Medical Officer, Dr. C. A. Gordon, as to the existence of true enteric fever among soldiers in India. In connexion with this, it is remarkable that the proportion of deaths to cases returned under this head was 61·90 per cent. in Madras, 35·36 in Bombay, and 40·68 in Bengal. The facts detailed in the Report confirm the opinion that the so-called enteric fever is especially a disease of young soldiers during their early years of Indian service, and furnish no evidence of importation.

Diseases of the digestive system, which, next to fevers,

[1] Fifteenth Annual Report of the Sanitary Commissioner with the Government of India, 1878. Calcutta, 1880.

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were the cause of the greatest mortality, were distributed in the three Presidencies as follows :—

	Per 1000 of Strength.	
	Admissions.	Deaths.
Bengal ...	152 ...	3·44
Madras ...	230 ...	6·75
Bombay ...	154 ...	3·56

This shows the admissions by these diseases in Madras to have been one-half higher than in the other Presidencies, and the deaths to have been nearly double.

The deaths by cholera amounted to 4·16 per 1000 in Bengal, 2·77 in Madras, and 4·79 in Bombay; so that Madras enjoyed a very marked exemption from this disease. It was not general as an epidemic among the troops in any of the Presidencies. It prevailed, however, in Bengal in that form at Morar in May, and at Fyzabad and Lucknow in August and September; in Bombay, at Nusseerabad in August, and Neemuch in November; and in Madras, at Secunderabad in July and August. The formidable nature of the disease is shown by the deaths having amounted to 226 in 305 cases, or 74 per cent.

The admissions into hospital for venereal diseases amounted to 271 per 1000 of the strength, and were about one-sixth of all the cases. They were most prevalent in Bengal and least in Bombay; the proportion in the three Presidencies respectively was 289, 250, and 231 per 1000. This is a considerable increase upon preceding years, and the question of the best means of reducing it deserves the serious consideration of the Indian authorities, the more so as the proportion of cases of primary syphilis is very large, amounting to 95 per 1000, or one-third of all the venereal admissions.

The mean daily sick of the European troops amounted to 68 in Bengal, 66 in Madras, and 67 in Bombay, and the mean sick time to each soldier to twenty-five, twenty-four, and twenty-five days in each respectively. These results are most unfavourable, the mean sick in Bengal and Bombay being now 12, and in Madras nearly 8 per 1000 above the average of preceding years.

The returns of the Native Army in India do not furnish more satisfactory results than the European. The admissions into hospital were 1460 per 1000, the deaths 21·02 and the mean sick 43, all very much higher than in the preceding year. The great excess of admissions occurred in the Punjab Frontier Field Force, the Bombay Native Army, and the Bengal Native Army, and of deaths in the Punjab Force and the Bengal Army. The relative sickness and mortality of the different forces constituting the Native Army of India were as follows :—

	Ratio per 1000 of Strength.		
	Admissions.	Total Deaths.	Mean Sick.
Bengal Native Army . . .	1644 ...	25·57 ...	49
Madras Native Army . . .	841 ...	15·49 ...	29
Bombay Native Army . . .	1701 ...	17·95 ...	45
Central Indian Regiments .	1177 ...	18·09 ...	34
Punjab Frontier Field Force .	2246 ...	28·25 ...	64
Hyderabad Contingent. . .	1055 ...	16·80 ...	37
Total, Native Army .	1460	21·02	43

The great excess of admissions in the Punjab Frontier Force was caused by fevers, dysentery, wounds and accidents, abscesses and ulcers, and respiratory diseases; in the Bombay Army by the prevalence of fevers in the Northern Division, and in the Bengal Army by the same class in the Punjab, and in Agra and Central India. The chief causes of mortality in the Bengal Army were diseases of the respiratory system, fevers, diseases of the digestive system, and cholera; in that of Bombay fevers, respiratory diseases, cholera, and diseases of the bowels; and in Madras cholera and fevers. Compared with the other two Presidencies, Madras furnished a low rate of deaths by respiratory diseases. In all of them the mortality by phthisis is remarkably low. In Bengal three regiments appear to have had an enormous death-rate. The 36th, at Barrackpore, lost 264 men per 1000 of the strength, the chief causes being fevers, dysentery, and diarrhœa, stated to "have been due to malarious poisoning consequent on residence in Lower Bengal and the occupation at Barrackpore of unhealthy, badly-drained lines." In the 14th Regiment, at Peshawar, the death-rate was 128 per 1000, chiefly from fevers and diseases of the respiratory organs; and in the 41st, at Morar, it was 97 per 1000, two-thirds of the deaths being from cholera in a treasure escort marching between Agra and Gwalior. There was no general outbreak of cholera among the native troops. In Bengal the escort alluded to was the only corps in which it prevailed to any extent; 109 cases occurred in it on that occasion, of which 58 died. In Madras 24 cases, with 14 deaths, occurred at Secunderabad; 28, with 19 deaths, at Bellary; and 11, with 5 deaths, at Kamptee. In Bombay there were 17 cases and 9 deaths at Rajkot; 15 cases and 9 deaths at Ahmedabad; 14 cases and 8 deaths at Indore; and the Hyderabad Contingent had 18 cases and 7 deaths at Hingoli, and 15 cases with five deaths at Bolarum. It is noteworthy that while the deaths from enteric fever were 3·64 per 1000 among the European, they amounted only to 0·5 among the native troops.

An interesting supplementary table is given in the appendix, showing the sickness and mortality of the native troops sent to Malta and Cyprus. The force, 5332 strong, embarked in May, and the last portion of it returned in November. The admissions into hospital in it amounted to 4116, the deaths to 28, and the mean daily sick to 157·4. These numbers, calculated on the average strength, give the *annual* ratios of 2031 admissions, 13·82 deaths, and 61·7 constantly sick per 1000; the admissions and mean sick are higher, but the deaths considerably lower than the average in India. More than half the admissions were for paroxysmal fevers; seven deaths were caused by the same diseases and seven by dysentery and diarrhœa.

As the Afghan expedition did not start till near the end of November, all the details respecting the health of the men composing it are reserved for the next report.

The unfavourable results which have been shown as regards the sickness and mortality among the troops have been still more marked in the gaol population, of which the death-rate has been lamentably high. The average strength of prisoners was much greater than in the preceding year, having been 127,914 as against 110,147. This increase is attributed to the famine and distress under which the people suffered, "both directly and indirectly, from the high prices of food, and the consequent privation which was so widely spread over the country." The proportion of admissions and deaths was as follows :—

	Per 1000 prisoners.		
	Admissions.	Deaths.	Constantly sick.
Bengal	1181 ...	65·85 ...	40
Madras	941 ...	125·92 ...	52
Bombay	1327 ...	118·27 ...	43
India	1198 ...	81·31 ...	46

Compared with 1877 there has been a marked increase in all three, particularly in Bengal and Bombay, and in the mean sick in Madras, but a slight decrease in the admissions and a marked one in the deaths in the latter Presidency. While this excessive sickness and mortality have been in a great measure due to the circumstances above noted, we fear that it has also been to some extent caused by the unfavourable influence of the overcrowding of the gaols with the unfortunate prisoners in a very low state of health, and therefore unusually susceptible of disease. The chief causes of death were dysentery and diarrhœa, which furnished a ratio of 32·76 per 1000, fevers 9·74, atrophy and anæmia 8·68, respiratory diseases 7·89, and cholera 5·90. The mortality by fevers in Bombay, however, was far in excess of the average, the ratio having been as high as 32·57, while in Madras it was only 3·61, and in Bengal 7·40 per 1000. It is stated in the report that the form of fever in Bombay was the relapsing or gaol fever. In Madras, again, the deaths from dysentery and diarrhœa amounted to 54·8 per 1000, being much above the average. In that Presidency 402 deaths are recorded from general debility, being in the ratio of 18·86 per 1000, and 232, or 10·88 per 1000 from ulcer, both very much higher than in either of the other Presidencies.

A table in the appendix shows the death-rate of each gaol in India, and the results for some are appalling. For instance, in Bengal, among an average of 99 prisoners at Jalpaiguri, the death-rate was 414 per 1000, and at six other gaols in the Presidency it was over 200 per 1000; in Bombay, at Belgaum, in an average of 185 prisoners it was 492 per 1000, and in the Gokak Gang, 732 strong, 402; two other prisons exceeded 200 per 1000. In Madras, at the Coimbatore District Prison 463 prisoners gave a ratio of 384 deaths per

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1000, and at Kurnool temporary prisons 519 furnished 360 per 1000. In all these gaol returns a most important element is wanting to enable us to make any comparison either with other prisons, with each other, or with other classes of the population. There is no information as to the ages of the prisoners and the proportion at each age. We have, however, considered the information, imperfect as it is, to be sufficiently interesting to bring some of the leading facts before our readers.

There is a considerable amount of information in the report relative to the vital statistics of the civil population, but the system of registration is so very imperfect, and so unequally imperfect in different districts, that we refrain from going into detail on the subject. A tabular summary is given of the "measures adopted or suggested during the year for improving the sanitary condition of the cantonments" in the Bengal Presidency. We observe with much satisfaction that the military authorities have at last taken steps to diminish the temptations held out to soldiers to indulge in alcoholic drinks. This has been done by making arrangements for the supply of good malt liquor at a moderate price in the canteens, and allowing the men to have it in small quantities, and by increasing the price of rum, and limiting the quantity allowed to be purchased by each man to half a drachm twice a day.

The information given respecting the civil sanitary works is very general. We infer from it that appreciable progress is being made, though very slowly, and that there is still an immense amount of work to be done before the health-conditions of the country can be deemed satisfactory. We observe with pleasure that in Assam great improvements have been effected in the tea gardens, and that the planters have taken much interest in the health of their labourers. We have more faith in the good results of individual exertion in this respect in India than in the acts of the Government, especially when, as at present, their attention is devoted, perhaps too exclusively, to economy to be effected by reduced expenditure. Sanitary works are then very apt to be considered as of secondary importance.

THE SERVICES.

EXCHANGES IN THE ARMY MEDICAL DEPARTMENT.

WE regret to learn that a step has been taken by the War Office which cannot fail to rekindle in the Army Medical Department that feeling of distrust which exerted so powerful an influence in rendering the service unpopular. It is stated in the *United Service Gazette* that "It has been decided that in an exchange which involves a change of station the officers shall forfeit all claim to pay for the period they occupy in travelling." Our contemporary states that "This new mark of ignominy is actually attributed to the volition of his Royal Highness," and, in exonerating the Duke, attempts to throw the blame on the Director-General. So far as we can learn, however, neither of them is responsible for this unwise measure, the arrangement having emanated from the financial department of the War Office. We believe that the question was in the first instance raised by the Indian Government, who objected to the loss of the services of medical officers during the time the exchange was being effected. If this objection be valid, however, in the case of medical officers, it must be equally applicable to all other classes, and as the Secretary of State announced that exchanges between medical officers were in future to be allowed under the same regulations as for the rest of the service it appears manifest that Government is bound either to cancel this new regulation as regards them, or to extend its operation to all classes in the service. We trust that one of the members of our profession in the House will ask for an explanation of the circumstances under which, and on whose recommendation, this rule has been made. We can only say that if this system of class legislation is followed out by the War Office the beneficial effects of Colonel Stanley's warrant will soon be completely nullified.

THE WAR IN AFGHANISTAN.

OUR Cabul correspondent, writing in April, gives us the proposed arrangements for the hospitals, and the medical care of the troops, in view of the approach of the hot season. During March convoys of sick and convalescents, in parties of fifty and one hundred strong, were despatched weekly to India; after the 25th of that month the Principal Medical Officer, Dr. Hassard, did not think it wise to start invalids back to the base hospital at Peshawur, on account of the intense heat along the Khyber route. But camps had been formed at Barakat, Luttabund, Seh Baba, and Jugdulluck, and the parties of sick and wounded were conveyed successfully by the "staging system," which had been found most useful in economising transport and carriage. During March the climate of Cabul is described as having been very pleasant—a bright warm sun by day, with hard frost at night. Pneumonia, from which the troops suffered so severely in the winter, had disappeared with the advent of warm weather. Venereal disease was reported very prevalent, otherwise the sick list was very small. Great improvements had been made in the cantonments of Sherpur, at one time a thousand coolies being employed making roads and surface drains. The field hospitals of the 1st and 2nd Divisions of the Cabul Field Force have been amalgamated into a Field General Hospital, established in the Bala Hissar, and supervised by Deputy Surgeon-General Hanbury, Surgeon-Major S. B. Roe, and Surgeon-Major G. Farrell, of the 5th Ghoorkas, being placed respectively in charge of the European and native sections. In the Khyber Division (General Bright's) the hospitals for the summer months are established on a platform over the Safed Sung, the heights of which are 7000 feet above sea-level. Small sections of the field hospital will be located at Gufaid Sung and Paiwan, but all serious or protracted cases will be sent up to the main hospital. As far as is consistent with military necessities, the troops will be concentrated at Safed Sung; there is plenty of room for a camp of 10,000 men on these heights; water, too, is good and abundant. For shelter, both in the mountains and in the low-lying plains, mud huts with thick mud roofs are considered far and away the best protection from sun and rain; wooden or iron huts are not to be obtained in any quantity, and are expensive and less comfortable than the mud hut of the country.

ARMY MEDICAL DEPARTMENT.—Deputy-Surgeon-General George Augustus Frederick Shelton, M.B., to be Surgeon-General, vice W. G. Watt, granted retired pay; dated 27th March, 1880. Brigade Surgeon Herbert Taylor Reade, V.C., to be Deputy Surgeon-General, vice G. A. F. Shelton, M.B.; dated 27th March, 1880. Surgeon-Major James Doran, M.D., is granted retired pay, with the honorary rank of Brigade Surgeon; dated 26th May, 1880.

BENGAL MEDICAL ESTABLISHMENT.—Surgeons to be Surgeon-Majors: Surgeon David Douglas Cunningham; dated 1st April, 1880. Surgeon Henry Whitwell; dated 1st April, 1880. Surgeon Archibald Cameron, M.D.; dated 1st April, 1880. Surgeon Benjamin Evers, M.D.; dated 1st April, 1880. Surgeon James Charles Gordon Carmichael, M.D.; dated 1st April, 1880. Surgeon Alexander Gibb Grant; dated 1st April, 1880. Surgeon Warwick Jackson; dated 1st April, 1880. Surgeon George Gilbert McLaren; dated 1st April, 1880. Surgeon Joseph Johnstone Monteath, M.D.; dated 1st April, 1880.

DEPUTY SURGEON-GENERAL G. A. F. SHELTON, M.B., who was promoted to the rank of Surgeon-General in the last *Gazette*, has been appointed Principal Medical Officer at Aldershot.

GUY'S HOSPITAL MEDICAL SCHOOL.

AT the meeting of former students of Guy's Hospital, held on Friday last at Willis's Rooms, an hour before the Guy's Biennial Festival Dinner, the following resolution, proposed by Dr. W. F. Cleveland, seconded by Dr. A. Evershed, was unanimously passed:—

"This meeting, consisting of former students of Guy's Hospital Medical School, desires to express its very warm sympathy with the present members of the medical and surgical staff of the school, in the extra anxiety which has been associated with their tenure of office during the past few months, and at the same time to record its conviction that in the hands of the present staff the past pre-eminence of the school of Guy's Hospital will be most worthily maintained."

Over one hundred gentlemen at once subscribed their names to the resolution.

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Correspondence.

"Audi alteram partem."

"OVER-EXAMINED AND UNDER-TAUGHT."

To the Editor of THE LANCET.

SIR,—In a leading article of THE LANCET last week you say, *à propos* of the subject of the preliminary examinations of the Royal College of Surgeons, that the College of Preceptors, to whom the "charge and management" of these examinations are entrusted, "shows its appreciation of the educational requirements of the medical student in French, German, and Greek, by never changing the subject for examination in these languages." After enumerating the books prescribed for examination, you add, "the College of Preceptors have not changed any of their subjects for ten or fifteen years!"

I am sure that nothing is farther from your intention than to do an injustice to this body, and therefore make no apology for asking you to allow me to state, for the information of your readers, what is its real relation to the preliminary education and examination of medical students. The College of Preceptors is one of the general bodies whose examinations are recognised by the Medical Council as guarantees of a good general education. In the case of the College this recognition is limited to its "first-class certificates," and by referring to the published regulations for this examination and to the papers actually set for it (both of which will be found in its calendar for the present year, herewith sent), you will find that no books whatever are set in either French or German, the attainments of the candidates being expected to be such that they can translate *an unprepared passage from any ordinary author* in those languages. In Greek, Xenophon's "Anabasis" is only one of *three* books from which candidates can make their selection, but in all cases "short and easy passages for translation from authors not specified," as well as "prose composition of a simple kind," are required in addition. It must be obvious that no "committing to memory" can cover such an examination as this.

It is true that the work of the College of Preceptors is not confined to the examination for its own certificates. Like the Universities of Oxford, Cambridge, and London, it is open to applications for the examination of students of schools, colleges, and public bodies connected with education generally; and its board of examiners are prepared to pronounce and report upon the efficiency or attainments of candidates who come before them to be tested on a prescribed programme of studies. Amongst other bodies who have applied in this way to the College are the Royal College of Surgeons, the Royal Veterinary College, and the Pharmaceutical Society of Great Britain; but the schemes of examination of those bodies have been framed in each case by the Councils of those institutions themselves, who must be held to be the best judges of the course of education most suitable for their own candidates, and not by the College of Preceptors, which has no power either to select the subjects of examination or to alter them.

I take it for granted that you could not have been aware of these circumstances when you spoke of the College "showing *its* appreciation of the requirements of medical students" by not changing its text-books for so many years. Having been connected, as an examiner, with the College for more than twenty years, I can state from personal knowledge that, so far as relates to its own examinations, it has never, during that time at least, examined from the same French or German author two half years consecutively; and as regards Latin and Greek, while it has, by prescribing certain books, secured on the part of the candidates some acquaintance with *the best authors*, it has provided an effectual remedy against any attempt at *cram*, by the expedient I have described of not limiting the examination to translation from the books selected.

I am, Sir, yours obediently,

May 24th, 1880. EXAMINER.

*** We willingly insert our correspondent's disclaimer, which fixes on the Council of the Royal College of Surgeons the chief responsibility of the discreditable state of things commented on last week. We use the words "chief responsibility," because we cannot hold the College of Preceptors wholly blameless in this matter. As "Examiner" is careful to point out, whenever the College of Preceptors conducts its own examinations it adopts effectual precautions against "cram," but when taking charge of the College of Surgeons' examination it seems never to have remonstrated with the Council of the College on the imbecility of never changing the subjects for examination in French, German, or Greek. It may be well to state that whenever the matter has been brought before the notice of the Council of the College of Surgeons this body has always encouraged the belief that the management of its preliminary examinations and the regulations pertaining thereto, were entirely in the hands of the College of Preceptors. Henceforth, we shall know exactly where to affix the blame, though, as we have said, we cannot acquit the College of Preceptors of neglect of obvious duty in the past. We would, in parting, suggest to the examiners for the College of Preceptors that in the examinations which they undertake for the other bodies, they should try the experiment of occasionally leaving out, without indication, a sentence from the passage given for translation. We shall be surprised if they do not sometimes encounter an accurate translation of the missing sentence.—ED. L.

To the Editor of THE LANCET.

SIR,—In the interest of teachers and pupils alike, it is to be earnestly hoped that Mr. Marshall's scheme for the introduction of a further examination, and that an inquisitorial one, into the curriculum of the College of Surgeons, will not be carried out. The fact that the proposed examination will differ in character and aim from any other yet instituted, ought to necessitate the very fullest discussion of the plan before its adoption, while it is currently believed that Mr. Marshall's proposal was agreed to by the Council of the College of Surgeons without any such discussion. My object, however, in addressing to you this letter is to call attention to what I believe to be at any rate some of the most efficient causes of the number of rejections at the Primary College of Surgeons' Examination, which would be in no way affected by Mr. Marshall's scheme. And, first of all, I would deny the charge so often brought against first-year students, that they are thoroughly idle. I believe that nothing is farther from the truth; the idleness of medical students is acquired, and, to a large extent, enforced. In his study of anatomy every student has two difficulties, which the very strongest among them often fails to overcome. The first is the long time that frequently elapses before he commences dissection, or between the completion of one "part" and the commencement of a second. Men learn their bones by the beginning or middle of November, while it frequently happens that they are not provided with "parts" until Christmas, or even later. The necessary result is that at the end of March they cannot know very much of the anatomy of the limbs even. And what happens then? We might suppose that the summer session would be utilised in remedying the deficiencies of the winter, but not so; they are then told to lay aside anatomy altogether and devote themselves to botany, materia medica, and practical chemistry, which in actual practice is the Derby and cricket. After a six months' interval they are recalled to the dissecting-room, and great astonishment is expressed at their having forgotten nearly all of the little they had learnt the winter before. I feel confident, Sir, that two reforms urgently needed are a larger supply of "subjects" for dissecting, so that men can get to work as soon as they know their bones, and keep at work, and that the study of anatomy and physiology should be continued through the first summer. If it is said that the summer session is already fully occupied, I can only reply that students at the Westminster Hospital find abundance of time for dissecting during the summer, and that it is essential for those preparing for the degree of the University of London.

If we turn to the study of physiology, the student's difficulty in it is as great, for at present the lectures are either

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too simple for the senior students, or too elaborate for the juniors. I could instance a case in which men new to the whole subject were first of all introduced to a careful and complete description of the intricacies of embryology. Physiology, as now studied, is not so simple that it can be well taught in one course of lectures. I would say that if students were first of all grounded in the main principles—the broad established facts of physiology—there would then be some possibility of the richly-elaborated lectures now delivered at some schools being understood and useful; at present we dare not hope that they are to a large extent anything but a waste of strength. Could these simple reforms be carried out, I think we should cease to hear of the idleness of first-year men, and of the large percentage of failures at the Primary Examination.

I am, Sir, your obedient servant,

Queen Anne-street, W. A. PEARCE GOULD.

ANALYSES OF CHIAN TURPENTINE.

To the Editor of THE LANCET.

SIR,—The results of some recent analyses of samples of genuine and spurious Chian turpentine may be of interest at the present time.

The first sample I examined was probably at least ten years old; and it is possible, though not certain, that it was a portion of the very sample reported on in Flückiger and Hanburys' "Pharmacographia." If this is not the case it came from the same source of supply. I need not repeat the description given in "Pharmacographia," for this drug corresponds accurately to it, except that from age it appears to have become somewhat more brittle, though without losing its plastic character.

The specific gravity at 60° Fahr. is 1·050. When a small fragment is heated in water to the boiling-point it melts, and becoming lighter than water, floats as a clear film. It dissolves freely in hot alcohol of 60 overproof, but a portion of one of the resins separates on cooling. A small sediment of insoluble earthy matter was left. This amounted to 7·3 per cent. on the sample, and consisted almost entirely of sand, not of silica, which had been in a state of combination. A 20 per cent. solution in a tube 200 millimetres long gave a + rotation of 9° 12′ for the sodium ray. It contained two different resins, one of which appears to be identical with the *Alpha* resin of mastich; the other is readily saponified, and is identical in its general characters with the *Gamma* resin of benzoin. The *Beta* resin of mastich is certainly absent. For convenience in stating the results I assume these resins to be what they appear to be.

This sample gives the following quantitative results:—

Volatile oil	9·20 per cent.
Alpha resin	79·00 ,,
Gamma resin	4·00 ,,
Benzoic acid	Traces ,,
Impurities	7·30 ,,

A 20 per cent. solution of the volatile oil separated by distillation was polarised separately, and gave a + rotation of 1° 54′ in the 200 millimetre tube. The quantity at my disposal was insufficient to test the boiling point or specific gravity. This volatile oil had a very marked and pleasant aromatic smell, the odour of fennel was perceptible though very faint.

I gave a portion of this to a medical man, who was treating two cases of uterine cancer with Chian turpentine (so-called), but without effect. He used this sample instead of his own, and reports a very favourable improvement after eighteen days' use.

The second sample was purchased in London. In general appearance it was similar to the last, though somewhat less brittle. Its specific gravity was 1·043 at 60° F. The rotation in the polariscope was practically identical with the last sample, and the rotation of the distilled volatile oil was exactly identical. The analysis showed a larger proportion of volatile oil—namely, 12·1 per cent.—and barely a trace of ash. This sample was evidently a newer one, but had been collected with greater care, so that there were smaller proportions of mineral impurities.

The third sample was also purchased in London from a wholesale firm, and was obviously spurious. In appearance it closely resembled Canada balsam. The smell was less pleasant, and the odour of fennel much more marked. It had an unpleasant taste. It was perfectly transparent, of a yellowish tint, and just sufficiently fluid to drop from the end of a glass tube. Its specific gravity was 1000, or identical with water at 60° F. A 20 per cent. solution gave a + rotation of 6° 15′ in a tube 200 millimetres long for the sodium ray—i.e., about two-thirds of the rotation of the genuine sample.

There was no difference worthy of note as to its solubility in alcohol, ether, chloroform, petroleum-spirit, naphtha, bisulphide of carbon, or turpentine, which would serve to distinguish it from the genuine sample. The proportions of volatile oil, &c., were, however, very different. This gave—

Volatile oil	26·00 per cent.
Alpha resin	70·00 ,,
Gamma resin	3·00 ,,
Benzoic acid	None
Ash	Trace
Impurities, woody fibre, &c. ...	,,

The *Alpha* resin in this case, although separated in precisely the same way, was obviously a different resin. In appearance it very closely resembled common colophony resin, and from my examination I am of opinion that, at any rate, it contained a very large admixture of that resin, which had probably been dissolved in, or mixed with, one of the fluid turpentines. The volatile oil of this sample was entirely different in character, offensively rank instead of pleasant in smell. In the polariscope it gave a + rotation for a 20 per cent. solution of 3° 36′, or nearly double that of the genuine samples. This volatile oil appeared to consist of at least two entirely distinct oils.

The fourth sample was a new supply just sent to this country, of which I obtained a few ounces. It is evidently a much more recent specimen, but, though from this cause softer and more plastic, the brittle character is as strongly marked as in the old sample. Its optical rotary power is, under the same condition as before, 7° 46′, or lower than the old sample, and the rotary power of the volatile oil is precisely the same. Its specific gravity is 1·052, or higher than the old sample. It is very free from mineral impurities. This, when analysed, gave—

Volatile oil	9·20 per cent.
Alpha resin	81·00 ,,
Gamma resin...	6·00 ,,
Benzoic acid	Traces
Impurities, ash	1·40 ,,
Insoluble	2·00 ,,

From its general characteristics and the source from which it was procured, I have no doubt of the genuineness of this sample, and the difference between the analysis and the first will show what may be the natural variations of the turpentine itself or the changes it undergoes by lapse of time.

A fifth sample, also a recent importation, proved to consist of 60 per cent. of Chian turpentine and 40 per cent. of Canada balsam and turpentine resin. This sample had a specific gravity of 1025, and contained 16·3 per cent. of volatile oil, a large proportion of which was not the true volatile oil of Chian turpentine.

The practical test which results from all these facts is the specific gravity. Genuine Chian turpentine should float in a solution containing 8 per cent. by weight of concentrated sulphuric acid, and should sink as soon as this is diluted. On the other hand, the adulterants used being lighter than water, the spurious samples will float in this acid even after it has been diluted, say to three times its volume, and will sometimes even float in pure water. This test is perfectly easy to apply.

I trust Professor Clay will be able to say which of these is identical with that he has been employing, especially as it is noteworthy that although he quotes the description in "Watts' Dictionary," one word appears to have escaped his notice. Watts calls Chian turpentine *viscid*. Now this would correspond with the spurious sample, but not with the genuine ones, which are brittle.

I am, Sir, yours obediently,

G. W. WIGNER.

Laboratory, Great Tower-street, May 19th, 1880.

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ENTERIC FEVER IN ASCENSION.

To the Editor of THE LANCET.

SIR,—I enclose a letter just received from Staff-Surgeon Maclean, R.N., on the subject of Enteric Fever in Ascension. Will you give it, like others on the same subject, a place in THE LANCET.

Yours faithfully,

J. FAYRER.

Granville-place, Portman-square, W.

Royal Naval Hospital, Ascension, 22nd March, 1880.

SIR,—I think my experience of enteric fever, as it has prevailed in this isolated spot since my arrival in June, 1878, may be considered of sufficient interest, in connexion with the views expressed by you in your presidential address at the Epidemiological Society, to excuse my addressing you on the subject.

During this period cases of the disease have occurred from time to time without any discoverable connexion with each other, and in the great majority of cases in the persons of new-comers. In every instance the disease was clearly marked by the usual characters, and could not possibly be mistaken for any other. If enteric fever, according to the commonly accepted theory of its origin, is always associated with defective sanitary arrangements, then Ascension, of all places with which I am acquainted, ought to be exempt from it. There is no such thing as a sewage-drain or cesspool in the island, all sewage and other filth being removed daily, and thrown into the sea to leeward of all dwelling-houses. The water (partly collected from the roofs of buildings during rain, and partly condensed) is stored in iron and cemented stone tanks, removed from all possible source of contamination, with the exception of the summit of Green Mountain, where there is a soil resulting from the decomposition of grey trachyte (the fundamental rock of the island), giving rise to a feeble vegetation. The island is a mass of volcanic rock and ashes, incapable of supporting any vegetable life whatever. My investigations have utterly failed to connect the fever with any of the conditions commonly believed to be essential to its production. The idea of a climatic origin did indeed occur to me, but it seemed like heresy to suggest such a thought; and I was obliged to be contented with the fact of the existence of the disease without pretending to explain its origin.

After reading your address at the Epidemiological Society, I am encouraged to send this communication to you, in the hope that it may in some degree contribute to the establishment of the view there expressed, that under certain, as yet unknown, meteorological conditions a disease indistinguishable in its symptoms and pathology from enteric fever may arise independently of a specific cause.

I am, Sir, your obedient servant,

G. MACLEAN,
Staff-Surgeon, R.N.

Sir Joseph Fayrer, K.C.S.I., F.R.S. &c.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on the 20th inst.:—

William Laird Cox, Abbey-gardens.
John Chislet Culling, L.S.A., West Lydford, Somerset.
Donald Douglas Day, Blackheath.
William George Evans, Sutton, Shropshire.
Walter Gray, Old Charlton, Kent.
Walter Augustus Hume, L.S.A., Hounslow.
H. J. Dempster Innes, Barnes, Surrey.
Hubert Montague Murray, Haverstock-hill.
John Michael Nicholls, Hayle, Cornwall.
Wallace Petherick, Exeter.
Benjamin Poulton, M.B., Melbourne, Victoria.
Henry Rees, Swansea.
James Benjamin Rusher, L.S.A., Pershore, Worcestershire.
Horatio S. R. Sparrow, Southsea, Hants.
Francis Tichborne Wilkinson, Lewisham.

Of the 87 candidates examined, 46 passed to the satisfaction of the Court, and obtained their diplomas; 4 passed in Surgery, and when qualified in Medicine will be admitted Members; the remaining 37 failed to reach the required standard, and were referred for six months' further professional study. Five candidates who had passed in Surgery at previous examinations, having subsequently obtained a medical degree or licence recognised by the College, were also admitted Members.

The following gentlemen passed the Primary Examination in Anatomy and Physiology for the Fellowship of the College, at Meetings of the Board of Examiners during the week:—

Samuel D. Chippendale, Aberdeen and London Hospital; Basil W. Walker, London Hospital; Henry Briggs, Edinburgh and Manchester; Robert H. Perks, Guy's Hospital; Frederick Bass, St. Bartholomew's Hospital; Charles J. Pike, University College; George J. H. Steinthal, Manchester; John A. P. Price, Guy's Hospital; A. Fraser, Glasgow and Manchester; G. J. Lloyd, Birmingham; John Waldy and William Robinson, Newcastle-on-Tyne College of Medicine; Paul F. Moline and Sidney H. Cox Martin, University College; William B. Paterson and Charles A. Morton, St. Bartholomew's Hospital; Edward H. Booth, William S. N. Shorthouse, and Frederick Eastes, Guy's Hospital; Edgar M. Crookshank and St. Clair Thomson, King's College; James O'M. McDonnell, Dublin and St. Thomas's Hospital; Herbert H. Back, Henry B. Tait, and Charles F. Bailey, St. Bartholomew's Hospital; F. Hewkley, London and Newcastle-on-Tyne College of Medicine; Walter C. Dendy and Henry Blathwick, Guy's Hospital; Charles S. Evans and William T. Crick, St. Thomas's Hospital; Robert H. S. Spicer, St. Mary's Hospital; Thomas H. Pounds, Charing-cross Hospital; Charles Wray, London and Newcastle-on-Tyne College of Medicine.

At the last meeting of the Council the following member of the College was elected a Fellow, viz.:—

William Lees Underhill, Tipton Green, Staffordshire.

The half-yearly examinations for the Fellowship of the College took place on the 21st inst., when sixty-eight candidates presented themselves for the Primary, or Anatomical and Physiological, examinations—viz., forty-nine from our metropolitan schools, twelve from the provincial, and seven from the combined schools. Of these gentlemen nine were members of the College. With the exception of four candidates the others had all passed the primary examinations for the membership.——The annual course of lectures delivered at the Royal College of Surgeons, which were suspended on account of the great number of candidates for examination, will be resumed on Wednesday, the 2nd prox., when Professor Butlin will deliver the first of three lectures on the Relations of Sarcoma to Carcinoma, on the completion of which Mr. B. T. Lowne will deliver three lectures on the Development of Sensory Organs, and on the 14th the concluding course will be commenced by Professor Hutchinson, who will deliver six lectures, four on Some of the Surgical Bearings of Gout and Rheumatism, and two on the Etiology of True Leprosy.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on May 20th:—

Rees Thomas Edward Davies, Millfield-park, Aberdour.
Charles John Carrol Otway, Kennington-park-road.
Alfred Edgar Wigg, Adelaide, South Australia.

The following gentleman on the same day passed the Primary Professional Examination:—

Arthur Longman, St. Thomas's Hospital.

COLLEGE OF PHYSICIANS IN IRELAND.—The following were admitted members of the College on the 7th and 14th instant:—

D. F. Buckley, John Joseph Crean, Arthur Croker, William H. Elmes, William Hartigan, Richard Alfred O'Brien, Patrick Magennis Rice, James H. Scott, John Wood, Edward Wellington Wrightson.

A CONCERT held in the Corn Exchange on the 20th instant, in aid of the funds of the Herts Convalescent Home, realised a sum of about £50.

THE PRINCESS OF WALES has consented to lay the foundation stone of the new Hospital for Women, to be erected in the Fulham-road. The ceremony will, it is expected, take place early in July next.

THE annual meeting of the members of the Devon and Exeter Benevolent Medical Society was held on the 13th inst. The funds of the Society appear to be gradually increasing. The amount distributed since the year 1859 was £1132 10s.

A COTTAGE HOSPITAL, to contain ten beds, is to be established in Newmarket under the auspices of the Rous Memorial Committee. The institution is intended primarily for the benefit of the racing community; but it is understood that discretionary power will be given to the officials with reference to other applicants for admission.

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THE salary of Dr. Turtle, medical officer of the second division of the Hackney Union, has been increased by £20 per annum.

A NEW HOSPITAL, St. John's, was opened at Twickenham on Tuesday by the Duchess of Teck. The building has been erected and largely endowed by the munificence of Miss Twining. A garden party was afterwards given by Dr. Benthall, the resident surgeon, and his wife, in the grounds adjacent to the hospital.

MEDICAL MAGISTRATES.—The late Lord Chancellor, Earl Cairns, before resigning office ordered the name of Mr. J. W. Teale, M.A. Oxon., F.R.C.S., to be added to the Commission of the Peace for the Borough of Scarborough.—Dr. Joseph B. Gilbertson has been placed on the Commission of the Peace for Preston.

ON the 19th inst. the foundation-stone of Kitching's Memorial Cottage Hospital, Milnthorpe, was laid by Mrs. Wm. Bindloss, daughter of the late John Kitching, Esq., M.R.C.S. Eng., L.S.A., when most of the doctors, clergy, and gentry of the neighbourhood were present. Mr. Eli Cox, of Kendal, is the architect. The style of the building is what may be termed modernised domestic Gothic, of a neat but plain description. The front is divided into three wings; the central one will be the residence of the matron; the side wings are wards for men and women, each twenty-one feet long by seventeen feet wide, and fourteen feet high. In the upper part of the central wing there are also two wards for each sex, twenty-seven feet long by eight feet six inches wide; behind the central wing are the kitchens, surgery, mortuary, &c. The hospital will accommodate about twenty patients, and will be built and supported solely at the expense of Mrs. Wm. Bindloss, as a memorial to her late father.

ZYMOTIC DISEASES IN DUBLIN.—During the March quarter the deaths from zymotic diseases amounted to 650, against an average of 476 for the corresponding quarter of the previous ten years. The deaths included 129 from scarlatina, 113 from whooping-cough, 90 from measles, 83 from fever, and 61 from small-pox. As regards the last-named disease the deaths registered have been less than those recorded during any quarter of 1879. Measles was prevalent; and although the deaths from scarlatina were 32 less than those of the preceding quarter, yet the mortality was considerably above the average (79) of the March quarter for the past ten years. There was an epidemic of whooping-cough, 113 deaths having been registered, as compared with 38 in the previous quarter.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Glasgow Royal Infirmary and the Glasgow Western Infirmary have each become entitled to £500 upon the death of the widow of Mr. Alexander Reddoch. Sir Theodore Henry Lavington Buncknan, Bart., of St. Leonards, near Windsor, bequeathed £100 to the Windsor Royal Dispensary and Infirmary. Mr. William Cobbett, of Frimley, bequeathed £100 to the Surrey County Hospital at Guildford. The Duke of Westminster has given £100 to the Westminster Hospital. Mr. G. S. Hayes has given fifty guineas to the Sussex County Hospital at Brighton "in memoriam." Mr. Mark Firth has given £50 to the Ophthalmic Department of the Sheffield General Infirmary. The Corporation of the City of London have given fifty guineas to the City Provident Dispensary and Surgical Appliance Association.

CANINE CONTRIBUTION TO A CHARITY.—The treasurer of the Glasgow Eye Infirmary (says the *Herald and Weekly Free Press*) has just received a contribution from an extraordinary source. Messrs. J. and A. Caldwell, glaziers, Charlotte-street, are the possessors of a retriever dog, "Sankel," of unusual sagacity and very varied accomplishments. Almost everyone who entered the workshop was laid under contribution by the animal, and lately the pence and halfpence so collected, on being counted, were found to amount to the sum of £1, which was accordingly handed over to the institution which "Sankel" had taken under his patronage. Some time ago, Mr. Caldwell having observed a newspaper notice of another canine collector, gave "Sankel" a few lessons in practical charity, and put a contribution box under his care. The lesson was learned at once, and "Sankel" became an unwearied collector, even putting into the box some of the halfpence he had been accustomed to expend in biscuits for his own use.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

ADCOCK, H., M.R.C.S.E., has been appointed Medical Officer for the Corby District of the Kettering Union.

AVERILL, A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Longton District of the Stoke-upon-Trent Parish.

BARBOUR, J. M., M.B., C.M., has been appointed Medical Inspector of Seamen at Bombay, vice Dr. F. W. Doolittle, deceased.

BAYNES, Mr. J., jun., has been appointed Public Analyst for Beverley, vice Procter, deceased. £2 2s. per annum, and fees.

BECK, J. H. M., M.B. & C.M., has been appointed a Resident Surgeon to the Royal Infirmary, Edinburgh.

BENSON, A. H., M.B., has been appointed Assistant-Surgeon to St. Mark's Ophthalmic Hospital, Dublin, vice Story.

BOUCHER, A. H., M.B., C.M., has been appointed Junior Resident Medical Officer to the West Derby Workhouse.

BROWN, Mr. W., has been appointed a House-Physician to the Glasgow Royal Infirmary.

CASTLE, H., M.R.C.S.E., L.S.A.L., has been appointed Resident Accoucheur to St. Thomas's Hospital.

COX, F., L.R.C.P. & L.R.C.S., has been appointed a Resident Surgeon to the Royal Infirmary, Edinburgh.

DAVISON, J. T. R., M.B., has been appointed a Resident Physician to the Royal Infirmary, Edinburgh.

DAWSON, J., M.D., M.R.C.S.E., L.S.A.L., has been appointed Surgeon to the Yarmouth Police Force.

DOWNIE, Mr. J. W., has been appointed a House-Physician to the Glasgow Royal Infirmary.

FLINN, D. E., L.K.Q.C.P.I., L.R.C.S.I., & L.M., has been appointed Medical Officer and Public Vaccinator for the Ogley Hay District of the Lichfield Union, vice G. H. Lilley, resigned.

FORD, A. V., L.K.Q.C.P.I., M.R.C.S.E., has been appointed one of the Surgeons to the Out-patient Department of the Royal Portsmouth Hospital, vice Turner, resigned.

FRASER, D. A., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Weston-super-Mare Hospital and Dispensary, vice R. Clapp, M.R.C.S.E., L.R.C.P.L., resigned.

GREVES, E. H., M.B. & C.M., has been appointed Non-resident Surgeon's Clerk to the Royal Infirmary, Edinburgh.

HARRIES, A. J., M.R.C.S.E., L.R.C.P.Ed., has been appointed Assistant Medical Officer (for Home Visitation) to the Upper Holloway Branch of the Holloway and North Islington Dispensary.

HARRIS, F. W. H. D., M.R.C.S.E., has been appointed House-Surgeon to the West Kent General Hospital, Maidstone, vice Parish, resigned.

HODSDON, J. W. B., L.R.C.P. & L.R.C.S., has been appointed a Resident Physician to the Royal Infirmary, Edinburgh.

HUGHES, Mr. T. W., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

JACKSON, Mr. W., has been appointed a House-Physician to the Glasgow Royal Infirmary.

JAMIESON, F., M.B., has been appointed Assistant to Professor Struthers, to the end of the year, vice Needham, resigned.

JONES, Mr. J. E., has been appointed a House-Physician to the Glasgow Royal Infirmary.

LINDEMAN, S. H., M.R.C.S.E. & L.S.A.L., has been appointed a House-Surgeon to the West London Hospital, Hammersmith, vice J. Blamey, M.R.C.S.E. & L.S.A.L., resigned.

LUNN, J. R., M.R.C.S.E., L.R.C.P., L.S.A.L., has been appointed Assistant House-Physician to St. Thomas's Hospital.

MCCALL, Mr. J., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

MCFARLANE, Mr. W., has been appointed a House-Physician to the Glasgow Royal Infirmary.

MACKIE, J., L.R.C.S.Ed., L.S.A.L., has been re-elected Medical Officer of Health for the Darlington Rural Sanitary District.

MILLER, H. L., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed House-Surgeon to the Oldham Infirmary, vice Booth, resigned.

MORGENROOD, W. G., L.R.C.P. & L.R.C.S., has been appointed a Resident Physician to the Royal Infirmary, Edinburgh.

O'BRIEN, R. J., M.B., C.M., has been elected Assistant House-Surgeon to the Liverpool Dispensary (in the vacancy caused by the promotion of Dr. O. E. B. Limrick), vice Dr. J. B. J. Brady, House-Surgeon, resigned.

OCHELTREE, Mr. E. G., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

OZANNE, F. N., M.R.C.S.E., has been appointed Resident Clinical Assistant at the Hospital for Consumption and Diseases of the Chest, Brompton.

PECK, J. H., L.R.C.P.Ed. &c., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

PHIBBS, R. F., M.R.C.P.Ed. &c., has been appointed Visiting Physician to the Infirmary for Consumption and Diseases of the Chest, Margaret-street, W.

PRICE, R. G., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer for the Ystradyfodwg Upper District of the Pontypridd Union.

ROBERTSON, Mr. J., has been appointed a Clinical Assistant to the Glasgow Hospital and Dispensary for the Diseases of the Ear.

ROSS, R. A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Sheffield District of the Romsey Union.

SAVILL, T. D., M.R.C.S.E., L.S.A.L., has been appointed Assistant House-Physician to St. Thomas's Hospital.

SMITH, H. A., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Middlesex Hospital, vice W. C. Jones, resigned.

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STEEDMAN, P. A., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer to the Harewood District of the Wetherby Union.

STORY, J. B., M.B., M.Ch., has been appointed Surgeon to St. Mark's Ophthalmic Hospital, Dublin, vice Rainsford, deceased.

SUFFERN, A. C., M.D., M.C.Q.U.I., has been appointed Assistant Medical Officer at the Workhouse, Birmingham.

TEMPLEMAN, C., M.B. & C.M., has been appointed a Resident Surgeon to the Royal Infirmary, Edinburgh.

THOMAS, H. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Marston-green Cottage Homes, Birmingham.

TIDY, C. M., M.B., M.R.C.S.E., has been reappointed Analyst for the County of Herts for one year.

TILL, G. W., L.R.C.P.Ed., L.F.P.S.G., has been appointed House-Surgeon to the Kidderminster Infirmary, vice Salter.

VIOLETTE, Mr. W. B., has been appointed a Clinical Assistant to the Glasgow Hospital and Dispensary for the Diseases of the Ear.

WALKER, Mr. J. M., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

WALTERS, F. R., M.R.C.S.E., L.S.A.L., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

WELLS, A. P. L., M.R.C.S.E., has been appointed a Resident Surgeon to the Royal Infirmary, Edinburgh.

WILLMOTT, J. J. E., M.D., has been appointed Honorary Consulting Physician to the West of England Sanatorium, vice F. Gourlay, M.D., deceased.

WOOD, Mr. A. F., has been appointed a Resident Physician to the Fever Hospital of the Royal Infirmary, Edinburgh.

YARROW, G. E., M.D., L.R.C.P.L., &c., has been appointed Public Vaccinator for the Parish of St. Luke, Holborn Union, vice E. G. Pottle, deceased.

Births, Marriages, and Deaths.

BIRTHS.

FARMER.—On the 19th inst., at Hexham, the wife of Cottenham Farmer, L.R.C.P.Ed., of a son.

FRASER.—On the 15th inst., at Melville-street, Edinburgh, the wife of Dr. Thomas R. Fraser, F.R.S., Professor of Materia Medica in the University of Edinburgh, of a son.

GARDINER.—On the 21st inst., at 6, Granville-terrace, Merchiston-park, Edinburgh, the wife of T. Senior Gardiner, of a daughter.

MACKENZIE.—On the 24th inst., at Finsbury-square, the wife of Stephen Mackenzie, M.D., F.R.C.P., of a son.

ORMEROD.—On the 18th inst., at Upper Wimpole-street, Cavendish-square, the wife of Joseph Arderne Ormerod, M.B., of a son.

RAYNER.—On the 20th inst., at Tiviot Dale, Stockport, the wife of Edwin Rayner, M.D., F.R.C.S., of a son.

SCHAFER.—On the 18th inst., at Boreham Wood, Elstree, Herts, the wife of E. A. Schafer, F.R.S., of a daughter.

SPENCER.—On the 17th inst., at Albion-road, Stoke Newington, the wife of E. R. Spencer, L.R.C.P.Ed., M.R.C.S.E., &c., of a daughter.

THOMSON.—On the 24th inst., at Westgate, Peterborough, the wife of William Thomson, M.D., F.R.C.S.Ed., of a son.

WILKINS.—On the 6th inst., at Brixton-road, S.W., the wife of G. H. Wilkins, M.R.C.S.E., L.S.A.L., of a son.

MARRIAGES.

LANG—COLMAN.—On the 22nd inst., at St. Mary Magdalene's, Munster-square, Henry Charles Lang, M.D., F.L.S., of Berners-street, W., to Rose Gertrude, youngest daughter of George Augustus Colman, Esq., of Adelaide-road, South Hampstead.

SELF—CORSER.—On the 19th inst., at the Parish Church, Stepney, by the Rev. J. E. Symns, M.A. (brother-in-law of the bride), assisted by the Rev. J. Bardsley, Rector, James Self, Esq., M.D., to Robertina Corser, youngest daughter of the late Robert Corser, Esq., of Redhill.

DEATHS.

DASHWOOD.—On the 15th inst., at Norwich, Charles Burton Dashwood, M.R.C.S.E., formerly of Great Yarmouth, in his 73rd year.

EDWARDS.—On the 16th inst., at Tower-street, King's Lynn, John May Edwards, Surgeon, aged 62. Friends, please to accept this intimation.

FARNFIELD.—On the 26th inst., at his residence, 3, St. Saviour's-road, Brixton-rise, Walter Edmund Farnfield, Surgeon (formerly of Fir Grove, 206, Brixton-road), in the 34th year of his age, one week after returning from Australia, whither he had been in the hope of restoring his health. Friends will please accept this intimation.

GREATREX.—On the 8th inst., at Bradeshall, Christopher John Greatrex, Surgeon, in practice before 1815, aged 90.

HILLS.—On the 24th inst., at 34, Bridge-road, West Battersea, London, S.W., George Hills, M.D., F.R.C.S.E., &c., late of Arundel, Sussex (eldest son of the late George and Charlotte Hills, of Arundel and Slindon, Sussex), aged 78.

IMLACH.—On the 14th inst., at Abercromby-square, Henry Imlach, M.D., aged 64.

MILLER.—On the 20th inst., at Sussex-terrace, Cambridge, W. H. Miller, M.D., Professor of Mineralogy in the University of Cambridge, aged 79.

PAYNE.—On the 21st inst., at The College, Northfleet, Charles William Payne, M.R.C.S.E. & L.S.A.L., late of Hoxne, Suffolk, aged 74.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

SEA-SICKNESS.

THE *New York Post* describes an arrangement devised by a steamship company with a view to mitigate, if not to avert, the horrors of sea-sickness. The device consists of the fitting-up, in steam vessels, of self-leveling berths. These berths are of ordinary size. They are attached both above and below to universal joints, and are weighted underneath by crescent-shaped cylinders of iron. This arrangement is designed to keep the berths perpetually level, no matter what angle the vessel herself may take. To further maintain the berths in their orbit, and prevent sudden changes of position, they are provided with spiral springs. The efficacy of the plan for the purpose designed has, however, yet to be proved.

Mr. G. P. Field.—The report will be published shortly.

GENERAL LYING-IN HOSPITAL.

To the Editor of THE LANCET.

SIR,—As a member of the committee, consisting of an equal number of physicians and laymen, which has been appointed to inquire into the state of the hospital, and to investigate the complaints of the late medical officers, I ask you to refrain from any further statements, such as that which appears in your last issue, until the committee have made their report. I also ask you in common fairness to allow me to state that many of the allegations contained in the article to which you have given publication are illusory and untrue.

The paragraph which by implication reflects on the eminent physician whose assistance in the emergency the governors were fortunate enough to obtain, is, to say the least, calculated to mislead. The physicians to the in-patients having resigned, and having intimated their wish for an early release from their responsibilities (although it should be stated that one of them offered to continue his attendance upon such of his patients as might require it), it became the duty of the committee of management to provide some medical attendance for the patients in the hospital, pending the inquiry which is to take place.

It will hardly be suggested that these patients should have been left to the care of the nurses, against whom your article appears to be mainly directed, and that the physician who was asked to undertake these duties should not have been offered a fee for his attendance. The phrase "induced by payment" is hardly appropriate to a process with which most professional men must be familiar.

I am, Sir, your obedient servant,

Savile Club, May 26th, 1880. HENRY OWEN.

*** W.E. *also* are investigating the case from a strictly professional standpoint.—ED. L.

ARTISANS' DWELLINGS.

THE plans of the projected buildings to be erected by the Peabody trustees in Whitechapel have been criticised severely by one of the guardians of the Board as unsuitable and unhealthy, being deficient in the matters of light and ventilation. We trust the subject will receive proper attention.

Dr. Allan Jamieson.—Soon.

G. B. had better apply to the Secretaries of the various institutions named.

TREATMENT OF GOUT.

To the Editor of THE LANCET.

SIR,—In your issue of May 22nd, a correspondent asks if the hypodermic injection of morphia has been tried in gout. I am happy to answer him in the affirmative. It acts as a palliative, especially when it induces profuse diaphoresis. Yours obediently,

Harley-street, May 22nd, 1880. J. M. WINN, M.D.

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A HUGE CALCULUS.

THE *Boston Medical and Surgical Journal* reports the removal by Dr. Hodgen, of St. Louis, of a vesical calculus, weighing one pound six ounces avoirdupois. The stone was spherical, and measured eleven inches and a half in circumference, and four inches in diameter. Removal was effected by the supra-pubic operation, and the calculus was necessarily broken. The patient's age was sixty-two. Fifteen years previously he had had two stones extracted from the bladder by Dr. Pope, after which he had enjoyed good health, with the exception of occasional vesical irritation and incontinence, until the time of undergoing the first-mentioned operation.

Multiplex takes a view of the relations of the medical profession with hospital work which is wholly at variance with the facts, and which we must leave him to expound elsewhere.

Dr. Sinclair, (Dundee.)—We shall be glad to receive the paper; but it should be as concise as possible.

MEASLES FATALITY IN PLYMOUTH.

To the Editor of THE LANCET.

SIR, —I have read your remarks in THE LANCET of April 17th on the above subject, and I think a reply is required from me as medical officer of health of this borough.

As regards the cause of the present epidemic in this locality ("the three towns," Plymouth, Stonehouse, and Devonport), it is directly traceable to the landing of infected persons from a troopship which arrived in Plymouth Sound about a year ago. The battalion, I am informed, was marched "direct into barracks" at Devonport without undergoing quarantine, and not long afterwards the disease manifested itself in all parts of that town, sweeping off children wholesale. By degrees the infection spread into Stonehouse, and such was the hold it took in that town that the general death-rate at one time rose to above 80 per 1000. About the middle of last November the disease carried off its first victims in Plymouth. For a few weeks the deaths were not very numerous, but eventually it became evident this town was also to become a hot-bed of measles. For the four weeks ending the 1st of the present month, 186 deaths were registered in Plymouth, and of these, 73, or about two-fifths, were from measles. During the present week 44 deaths have been registered, of which 23 were from measles, thus leaving but a small mortality from other causes. Of persons under five years of age there were 33 deaths, or three-fourths of the whole. Having shown the origin of the present epidemic is not due to sanitary defects, it may still be asked, How can the persistence and fatality of the disease be accounted for? The answer is easy. The greater portion of old Plymouth consists of large houses, once occupied by well-to-do merchants and tradesmen, but now by the working classes, and, in the majority of cases, each room of a house contains an entire family. This evil also exists in other parts of the town. It is evident that if infection make its appearance in such overcrowded dwellings, it spreads with alarming rapidity, and the disease, as in an ordinary fever hospital, frequently assumes a severe type, and consequently is more fatal than under opposite conditions. Cold and damp have also materially affected the sufferers from measles by producing lung complications.

I am informed, on good authority, that Her Majesty's troopship *Malabar* arrived at Portsmouth from Bombay about the middle of last month, having measles infection on board. My informant states that about four days after leaving Bombay an epidemic of measles appeared in the ship, from which six or more children died, and that at the termination of the voyage, among those who disembarked, were a widow and family, who were allowed to go straight from the infected ship by train to the Raglan Barracks at Devonport! Three days afterwards one of the children was laid down with measles, and thus may be the means of infecting all those children who have escaped the recent epidemic in that town. It would thus appear that whilst the Local Government Board employs an able staff to watch over the health of the community, another branch of Her Majesty's service is sowing infection broadcast. Why during many years the average death-rate from measles was higher, and that from scarlet fever was lower, in Plymouth than in Portsmouth I cannot say. Certainly the one fact is no more discreditable than the other.

As regards the high infant mortality in Plymouth, the overcrowding of families, causing an impure atmosphere in the houses of the working classes, and facilitating the spread of infection, is quite sufficient to account for it. With respect to general death-rates, I have shown elsewhere they are a most unreliable means for comparing the health of one district with that of another, unless the two districts can be judged by the same standards, density of population being most important. It is on this account the Registrar-General's Weekly Returns, as published without explanation in the public press, convey such a false impression as to the health of a given district. A large portion of the best part of Plymouth lies outside the municipal boundary, and its low death-rate, therefore, cannot be used as a set-off against the higher rate of the crowded parts within the boundary. I believe, also, the next census will show in a marked degree there is a much larger population in this borough than is generally supposed, the influx from other places having been very great. I do not mean to assert that overcrowding is the only fault in this town, but it is certainly the chief, and I fear it is of such magnitude that it can only be successfully dealt with by the granting of special powers to the local Corporation.

I am, Sir, yours obediently,

Plymouth, May 15th, 1880. HENRY GREENWAY.

SUICIDES.

THE director of an asylum for inebriates in Germany has collected statistics of suicides in different countries of Europe. His data go to show that the fewest cases of self-destruction occur in Norway. In most German countries the number of suicides has increased by from 90 to 100 per cent. For each million of inhabitants there are now on an average every year in Saxony 300 cases of suicide, in Denmark 280, in Würtemburg 180, in Mecklenburg 167, in Baden 156, in Prussia 133, in Austria 122, in Bavaria 103, in Sweden 81, in Belgium 73, and in Norway 40.

Birmingham.—We quite agree that insufficient attention is given to these maladies; hence sufferers are left to be the prey of quacks.

Dr. Sturges.—The paper has been received.

THE TITLE OF "DOCTOR."

To the Editor of THE LANCET.

SIR,—I should be glad if you would allow the enclosed space in your journal, my desire being to ascertain the opinion of yourself and others.

I enclose my card. Yours &c.,

May, 1880. ——— ———.

May 11th, 1880.

DEAR SIR,—I should wish to ask you the question if the College of Physicians of Edinburgh allow their licentiates to assume and place upon their door-plates the title of "doctor." In this place Mr. —— resides, a licentiate of your College, who has on his plate Dr. ——, and is commonly called Dr. ——. I am also living in the same place, and have on my plate —— ——, M.D., and am commonly called Mr. ——. I must say I do not like such turning of the tables. I am also a member of your College, but never understood that I was entitled to call myself Dr. previous to taking my M.D. If your College do not allow, and have not the power of granting, such a designation, it would only be fair of you to acquaint your offending licentiate that he is assuming a title which renders him amenable to the law.

I am, dear Sir, yours faithfully,

——— ———.

To this I received the following reply:—

Royal College of Physicians, Edinburgh,
May 14th, 1880.

DEAR SIR,—I am afraid the College cannot interfere in the case you refer to. The College has never encouraged its licentiates to assume the title of Dr., as they believe that that title legally belongs only to graduates of the Universities who hold the degree of M.D.; but there is no law of the College forbidding the licentiates to use the title.

Yours faithfully,

——— ———.

Mr. W. A. Wynne.—1. Chemistry and Microscopy: Beale on Urinary Deposits, and H. Vandyke Carter on the Microscopical Structure and Mode of Formation of Urinary Calculi.—2. Surgery: Sir Henry Thompson's Clinical Lectures on Lithotomy and Lithotrity.

M.B.—Dr. Macpherson's.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—I shall feel obliged if you will insert in your next impression a correction of the paragraph which appeared in your issue of the 22nd instant.

I am, and have been for the last fourteen years, the medical officer of health, and since the passing of the Adulteration of Food Act the public analyst, of St. George-in-the-East. These appointments I hold under the Vestry, and not under the Board of Guardians. It was in thanking my Board for their kindness when I tendered, and when I was permitted to withdraw, my resignation that I alluded to my long connexion with the parish, and to the fact that two out of my three predecessors had broken down at the head. It was then very feelingly proposed, and unanimously agreed to, that I should have two months' leave of absence.

Yours faithfully,

JOHN JAMES RYGATE, M.B. Lond., &c.

Cannon-street Hotel, May 26th, 1880.

Querist says:—"A patient of mine is invariably the better for two grains of opium at bedtime. No other narcotic suits him so well. Unfortunately the opium always produces constipation and clay-coloured stools." He asks, How can these latter be best prevented?

Mr. F. S. Coombe.—Thanks.

A QUERY.

To the Editor of THE LANCET.

SIR,—Kindly allow me to ask information as to the following case through the medium of your journal:—

A lady, aged forty-five; menses ceased two years since; confirmed dyspeptic; suffering now for the last three weeks from an eruption, answering in all respects the description given of lichen planus by Tilbury Fox—i.e., papules discrete at first, afterwards grouping into patches, which become red, infiltrated and slightly scaly, in which latter respect they somewhat resemble psoriasis; itching and smarting intolerable. If any of your readers will be good enough to give me a few hints as to the probable duration of the eruption, treatment local and constitutional (diathesis distinctly rheumatic), I shall consider it a favour.

Yours &c.,

May 18th, 1880. H. G D

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SOCIETY FOR PROVIDING NURSES FOR THE SICK POOR OF BELFAST.

IT is gratifying to learn that sympathy with the aim of this charitable Society is steadily increasing. During the past year nearly 700 sick persons were attended at their own homes by the nurses, under the supervision of the ladies, at the cost of some £600. This sum includes the wages of nurses, nourishment for patients, medical appliances, and other expenses. The Society is non-sectarian, and its principal object is to relieve the suffering and help the destitute.

THE publication of *Dr. Stephen Mackenzie's* letter is unavoidably postponed until next week.

EXPERIMENTAL INQUIRY INTO HABITUAL TOBACCO-SMOKING (TOLERATED NICOTISM).

To the Editor of THE LANCET.

SIR,—It seems to me that in the vexed question of tobacco-smoking and its effects the proper line of investigation has not yet been followed, and that only vague and general surmises have found their way to publicity. I beg to send a modicum of experimental inquiry, which was interrupted, it is true, but which I conceive will indicate the only practical method of arriving at anything like an elucidation of the tobacco mystery.

The pulses of some gentlemen having been carefully noted after dinner and before smoking, a comparison was made with their character after a cigar. All were, as most Indians are, free smokers, in whom tolerance had long been established, and all experienced the wish to smoke. Two were rather free drinkers, and one was a water-drinker. The pulse of the water-drinker rose nine beats per minute after smoking, and a general sense of comfort was felt. In the case of the free drinkers there was no perceptible alteration of the pulse. In the other four individuals the pulse rose, without exception, from three to five beats per minute, and a feeling of comfort (?) was experienced by all.

Tobacco, when tolerance is established, differs *toto cœlo* in its action from itself when administered to persons accustomed to its use, and it is only when a long series of experiments on the lines above shadowed forth shall have been made, including sphygmographic tracings (?), temperature, and subsequent behaviour of the pulse, that anything like a satisfactory conclusion will be come at.

In the above series the pulse of those who did not indulge after dinner in brandy and soda-water returned on going to bed to its former state—most markedly that of the water-drinker, which from childhood had been slow (average 68 to 70); but he declared that it was always slowest in the morning after compulsory abstinence during sleep. Tea, coffee, or a "gallop" on horseback produced the same sense of comfort that a pipe did, and, unlike alcohol, were followed by no unpleasant reaction, save a desire for rest (natural after all healthy stimulation). The craving for tobacco was most marked after meals.

Conclusions.—Tobacco would appear, after tolerance is established, to be a cardiac stimulant (objectively), and a nervous sedative (psychologically and subjectively). The smoker thinks he is only being soothed. It will be found that he is vascularly stimulated in almost every case where excess of alcohol has not already produced the maximum of cardiac beats. But with alcohol the pulse becomes generally weaker, and often more rapid afterwards. After tobacco it would appear to return to its normal state. I found my symposium intractable. Gentlemen would not submit to a repetition of the experiment, nor give me a record of their pulse on going to bed, nor regulate the quantity of alcohol taken. The inquiry, however, is not difficult. The very different behaviour of tobacco, after tolerance is established, in comparison with its nauseating and depressing effects on the uninitiated, is not a solitary fact. Confirmed opium-eaters have in India frequently informed me that they would be awake all night if they took opium after 5 P.M. or so. *I have seen bromide of potassium cause waking dreams, and chloral produce delirium (in two cases very markedly).* They had to be abandoned.

Yours obediently,
C. MACDOWALL, F.R.C.S.E., &c.,
Fifeshire, May, 1880. Indian Army.

*** We call special attention to this letter for the sake of the remark at the close about chloral and bromide of potassium, which we have printed in italics. It is in accord with many other expressions of opinion and experience with which we have been favoured, and is worthy of full consideration.—ED. L.

Dr. Harvey.—Dr. J. C. Reid, of Newbiggen-by-the-Sea, lately gave an account of a visit to a Home for Inebriate Ladies—Mrs. Theobald's, Tower House, Leicester—to a conjoint meeting of the North of England and Border Counties Branches of the British Medical Association, held at Gilsland. This account seems to show that good can be done by seclusion, accompanied with absolute abstention from alcohol and all apologies for it, such as eau volatile, eau de Cologne, camphor, &c. The plan adopted would appear to consist chiefly in good food, very punctual meals, cheerfulness and encouragement, pleasant occupations, work, music, &c. &c. The system is entirely voluntary, subject to one month's notice. Dr. Reid says "the many saved by kind restraint have been to Mrs. Theobald a comfort and a stimulus."

Mr. J. Ganett Horder.—Dr. Morell Mackenzie's.

HARICOT BEANS.

MR. JAMES MULLAN, L.F.P.S., has called attention in the *Glasgow Herald* to the danger attending the ingestion in any considerable quantity of uncooked haricot beans. Mr. Mullan was called to visit a man in Oatlands, suffering from severe vomiting and purging, with cramps in the lower extremities. A little girl in the house was also suffering from the same symptoms. On inquiry both patients were found to have partaken freely of haricot beans in the raw state.

SCIRRHUS OF THE BREAST.

To the Editor of THE LANCET.

SIR,—I infer from the report of the discussion on the case of cancerous tumour of the breast at the meeting of the Pathological Society, as it appears in your last issue, that I could not in my reply have expressed my meaning very clearly, and I shall be much obliged if, in order to prevent my views being misunderstood, you will allow me to state that when I say that adenomas of the breast do not exist, I mean to imply that the growths usually designated by this name are not, in my opinion, composed of gland-tissue. By saying that if the growth is circumscribed it is called an adenoma, and when infiltrated it is called a scirrhus, I mean that the specific growths, of which the tumour I had described was an instance, are so named, respectively, by surgeons, according as they are circumscribed or infiltrated. The great majority of tumours diagnosed as scirrhus belong, in my opinion, to another variety of epithelial tumour, which histologically has specific characters. The term scirrhus is therefore, I believe, ambiguous, as it is made to cover two kinds of epithelial growth; and the term adenoma is also ambiguous, as, by long usance, it has been restricted to the most common form of the tumour to which it refers, but would not be willingly extended by surgeons to the rarer and more maligant types of which Mr. Lister's case was an example, although by no means an extreme one.

I am, Sir, your obedient servant,
Queen Anne-street, May 24th, 1880. G. THIN, M.D.

Ad meliora tendo.—Our correspondent is thanked for his communication, which we regret we cannot insert. We have nowhere advocated "the admission of the medical officers of the Guards to the administrative ranks on the same scale as has been granted to officers of the A.M.D. by the Warrant of 27th November, 1879." Several of the advantages he refers to are imaginary, and his proposed scheme of organisation, if not impracticable, would at least have no chance of being adopted.

SUPRA-PUBIC PUNCTURE OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—At page 750 of your journal Mr. Marsh writes thus: "For a brief but complete vindication of this operation (of supra-pubic puncture of the bladder in obstinate retention) and my own originality in adopting it, allow me to refer your readers to the *British Medical Journal*, January, 1879. I cannot understand how it is that the operation is so little known or practised." If Mr. Marsh will turn to the *Medical Times and Gazette*, September, 1852, p. 269, he will there find a paper by Mr. Maund, criticising Mr. B. Cooper, who spoke adversely of the operation in a valuable clinical lecture upon Retention. Further, if Mr. Marsh will refer to section 1051 of the "Medical Digest," he will find that Sir James Paget, Messrs. Hulke, Dittel, Fleury, and others have written upon the subject, and since the publication of that work Mr. Howse read notes of a case at the Clinical Society (THE LANCET, November, 1878, p. 623); while Sir Henry Thompson at the Royal Medical and Chirurgical Society read a paper on the Treatment of Enlarged Prostate, leading to retention, by the insertion of a supra-pubic tube *on permanence*, which was followed by an interesting discussion (THE LANCET, July, 1879, p. 809).

Yours truly,
RICHARD NEALE, M.D. Lond.
Boundary-road, South Hampstead, May 22nd, 1880.

F.R.C.S.—A very strong dose of coffee administered shortly before the distressing head symptoms come on might prevent the paroxysm, and enable the injection to be gradually withdrawn. We will hold the letter over until hearing the result of this experiment.

"CRUELTY TO WOMEN."

To the Editor of THE LANCET.

SIR,—In reference to your annotation of last week, I beg to inform you that seats are provided in my shops and show-rooms for the female assistants, and no restriction is placed on their use when they are not serving customers. I am under the impression that this is the case in most of the West-end drapery houses, and should be very glad if it were general in both large and small "houses" throughout London.

I am, Sir, yours respectfully,
Oxford-street, May 22nd, 1880. PETER ROBINSON.

To the Editor of THE LANCET.

SIR,—For the past three years I have had seats behind my counters, on which the young lady assistants have full liberty to sit when not engaged in serving customers.

Yours obediently,
Buckingham Palace-road, May 20th, 1880. H. HOADLEY.

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COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Peacock, London; Dr. Thin, London; Dr. F. de H. Hall, London; Mr. Teevan, London; Professor Buchanan, Glasgow; Mr. Thornton; Dr. Neale; Mr. Isbister; Mr. Hartill, Willenhall; Messrs. Harman and Matthews; Mr. Ablett; Mr. Custance, London; Mr. Wood, London; Mr. Wynne, Brigg; Messrs. Griffin and Co., London; Dr. Williamson, London; Dr. Rayne; Mr. Howley, London; Mr. Baird, Syston; Mr. Larkin; Mr. Malcolm, Birmingham; Mr. Egan; Mr. Barnard; Dr. Sinclair, Dundee; Mr. Hoadley, London; Dr. Bowles, Folkestone; Mr. Tovey; Messrs. Bertram and Roberts; Dr. Gillespie; Dr. Richardson, Newhaven; Mr. Ranking, Kingsbridge; Mr. Moore, Cavan; Mr. Manby, Cannock; Mr. Horder, Crockherbtown; Mr. Meadows, Hastings; Messrs. Eisler, Barnard, and Co.; Mr. Massingham; Mr. S. Watson; Mr. Mann; Dr. Nedley; Dr. Raymond, Brooklyn; Mr. P. Robinson; Messrs. Wookey and Co.; Mr. Callender, Dunscon; Mr. Dewdney, Chepstow; Dr. Potter; Mr. Havers, Berkhampstead; Dr. Day, London; Mr. Brett, Watford; Mr. Phipps, Edinburgh; Mr. Whiteley; Dr. Young, Malton; Dr. Ewart, Brighton; Messrs. Fidler and Co.; Mr. Wokey; Mr. Godlee, London; Mr. Stewart, London; Mr. Wigner; Mr. F. Jordan, Birmingham; Mr. Hollins, Eastbourne; Dr. Newman, Stamford; Dr. Macewen, Glasgow; Dr. Cooper Rose, Hampstead; Mr. J. Collins, London; Dr. Jacobs; Mr. W. J. Coulson; Dr. Cousins, Southsea; Mr. Eli Cox; Mr. Sothern; Dr. Godson; Mr. G. H. Rigby; Mr. Swinhoe; Dr. Philipps; Dr. A. L. Browne; Mr. Whittingham; Dr. Harvey; Mr. J. S. Smith, Worthing; Dr. Christie; Dr. Dutrieux; Mr. Armstrong; Mr. Coombe; Mr. England, Kettlewell; Mr. Field, London; Messrs. Kerby and Endean; Mr. Harrison, Sunderland; Dr. Berkart, London; Messrs. Mottershead and Co., Manchester; Dr. Thomson, Peterborough; Mr. Thomas, London; Mr. Arrowsmith, Bristol; Messrs. Watson and Co., London; J. G. X., Buenos Ayres; A Medical Officer of a Metropolitan Workhouse; G. B.; M.D., Kells; Anacharis; 54; Umano; H. G.; Kilogramme; A. L. F.; St. J. B., Clapham; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Kennedy, Dublin; Dr. Meadows, Leicester; Mr. Tring, Lechlade; Mr. Young, Chilton Polden; Mr. Morgan, Whitnash; Mr. Gibbons, Edinburgh; Mr. Davison, Whitehaven; Mr. Howell, Carmarthen; Mr. Randall, Bridgend; Mr. Kinder, Leicester; Messrs. Swithenbank and Co., Bristol; Messrs. Grace and Co.; Dr. Ridge, Enfield; Dr. Franklyn, London; Dr. Meadows, London; Mrs. Gee, Knutsford; Mr. Rutter, Notting-hill; Mrs. Ravenhill, Aylesbury; Mr. Luxton, Tavistock; Mr. Bottomley, Ashton-under-Lyne; Messrs. Macniven and Cameron, Edinburgh; Mr. Shirtliff, Kingston-on-Thames; Dr. Wright, Wellingborough; Dr. Drysdale, London; G. C. T., Alresford; A. B., Macclesfield; Alpha, Coleman-street; Medicus, Chesham; Quid pro Quo; Alpha, Aberdeen; Photo, Littleborough; J. M., Barnsley; Surgeon, Kent-road; H., Sherburn; H. P., Bowness; M. B., Aldborough; F. C.; H. P. N., Newcross; Physician, Coventry-street; Confidential; B. H., Pimlico; J. E. B., Lowestoft; A. B., Holloway; Sister, Winchester; H. M., Holsworthy; G. C. H.; Montague, Paddington; M.D., Packington-street; &c.

Insurance Guardian, Bazaar, Canada Lancet, Student's Journal, Darwen News, Republican, Morningside Mirror, Freemason, Mayo Examiner, Philadelphia Medical Times, Glasgow Herald, Leeds Express, Oracle, El Jurado Médico-Farmacéutico, Boston Medical and Surgical Journal, Medical Record, Cowkeeper and Dairyman's Journal, Capital and Labour, Northern Evening Express, L'Union Médicale, Philadelphia Medical Times, Brighton Guardian, Canadian Journal of Medical Science, La Independencia Médica, Worthing Intelligencer, &c. &c., have been received.

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, May 27th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
May 21	30·23	S.W.	60	56	110	77	51	..	Fine
,, 22	29·87	W.	60	52	81	63	51	..	Cloudy
,, 23	29·91	W.	59	53	88	66	52	..	Cloudy
,, 24	29·85	W.	60	54	91	65	51	..	Cloudy
,, 25	30·07	W.	59	54	107	75	50	..	Cloudy
,, 26	29·98	W.	68	59	115	85	58	..	Cloudy
,, 27	29·68	W.	68	61	114	74	62	..	Cloudy

Medical Diary for the ensuing Week.

Monday, May 31.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, June 1.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. Fiske, "On American Political Ideas."

Wednesday, June 2.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M. — 5 P.M. Mr. Osman Vincent, "On Genu Valgum and Rachitic Deformities."
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Butlin, "On the Relations of Sarcoma to Carcinoma."
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Chalmers, Dr. Galabin, and others.—Papers: Dr. Chas. Carter, "On Extra-uterine Fœtation."—Dr. Grailly Hewitt: "Report on Sixty-seven Cases of Uterine Distortion or Displacement, treated during seven years at All Saints' Institution."
EPIDEMIOLOGICAL SOCIETY.—8 P.M. Annual General Meeting: Election of Officers; Report of the Council.—Surgeon-General C. R. Francis, "On Endemic Plague in India."

Thursday, June 3.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. T. W. R. Davids, "On Buddhist Sacred Books."
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Butlin, "On the Relations of Sarcoma to Carcinoma."

Friday, June 4.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Butlin, "On the Relations of Sarcoma to Carcinoma."
ROYAL INSTITUTION.—8 P.M. Evening Meeting.—9 P.M. Mr. H. H. Statham: "An Analysis of Ornament."

Saturday, June 5.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor H. Morley, "On the Dramatists before Shakespeare."

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Lectures
ON SOME
RECENT INVESTIGATIONS
INTO THE
PATHOLOGY OF INFECTIVE AND CONTAGIOUS DISEASES.

Delivered in connexion with the Brown Institution, at the University of London, Dec. 1879,

BY W. S. GREENFIELD, M.D. LOND., F.R.C.P.,
PROFESSOR SUPERINTENDENT OF THE BROWN INSTITUTION, ASSISTANT-PHYSICIAN AND LECTURER ON PATHOLOGICAL ANATOMY TO ST. THOMAS'S HOSPITAL.

LECTURE III.—PART I.
ANTHRAX AND ANTHRACOID DISEASES.

GENTLEMEN,—The disease known as anthrax, charbon, splenic fever, mal de rate, splenic apoplexy, or Milzbrand must next claim our attention. Some of the principal points in the pathology of anthrax were stated by Dr. Burdon-Sanderson in his lectures in this place, but enough work has since been done upon the subject to justify me in returning to it. In addition to the form of anthrax which especially affects the spleen (whence the name splenic fever), there are a number of other forms of disease which are allied to this, but the precise relation of which is at present uncertain. As I have been especially engaged in studying some of these diseases, I shall endeavour to deal with "anthracoid" diseases in general. And with regard to splenic fever, whereas it has been generally supposed that its especial interest in relation to human diseases lay in the fact of the bacterial nature of its virus as a clue to the general pathology of contagion, I hope to show you that it has other points of immediate and practical interest, and that the study of its intimate pathology affords us other valuable lessons.

Splenic fever in this country is a disease which mainly affects bovine animals, but sheep are also liable to be attacked, as are also horses, and it may be readily communicated to most known animals by inoculation, especially to rodents. For a description of the general symptoms of the disease, and the various forms which it is apt to assume, I must refer you to the able article of Böllinger, and to Dr. Sanderson's report.

In addition to this more common form, there are even in this country other diseases conforming in some respects to the type of anthrax, but apparently distinct both in the conditions of their occurrence and their common phenomena, especially the disease known as quarter-evil, or black quarter.

But when we consider anthrax in its general history as seen in other countries, we find that there are a large number of diseases which are so closely allied to anthrax that they are provisionally called "anthracoid." These are widely distributed over the world in Asia, Africa, and Europe. In India we find two or three of these forms which are more or less distinct. As affecting horses in the northern part of India, is the disease known as Lodiana fever, and a similar disease is highly fatal to elephants and camels in various parts of India, as recent experience has shown. Another disease, known as Pali plague, which is prevalent in some parts of India, occurring at times epidemically, and affecting also human beings and rats, appears to be of this nature. In Siberia a similar disease, which affects not only cattle but also men, and is known as the Siberian plague, extends as far as Russia and southwards to the shores of the Caspian. In many parts of Germany and Austria the disease is very fatally prevalent among cattle, both as an epidemic and endemic, and often attacks sheep as well as oxen in large numbers. In some parts of Italy it is of the utmost virulence. In South Africa attention has been specially drawn to the subject by the enormous losses of horses and oxen from these diseases during the Zulu war, in some places the horses dying at the rate of over 50 per cent. a week.

I shall describe later some of the differences between these several forms, but let me now glance at the general conditions under which they may occur, so far as they are known. It would appear both from general considerations, and from the description of various localities, that the situations in which these diseases are endemic are what we may call malarial districts, a point of considerable importance. Heusinger, in 1850, stated that he considered anthrax to be a malarial neurosis; and Virchow, in 1855, agreed as to its malarial nature.

In this country some of the forms are almost limited to low-lying pastures; in Italy an intensely fatal form prevails in the Pontine and other marshes, and in Africa and in India the same is the case. But so highly contagious are these diseases that some forms spread both sporadically and epidemically to even high altitudes.

Speaking generally, all these diseases are characterised by a rapid blood-poisoning, either with some local swelling and œdema, or scattered hæmorrhages, and other conditions, not unlike those of acute septicæmia. In the human subject there is often a peculiar carbuncle, hence the name charbon.

Of the common anthrax or splenic fever we now know that its poison consists in a bacterium, so-called bacillus anthracis, or bacteridium, as it was called by Davaine, to distinguish it from bacteria which had the power of motion.

Of the other forms it is uncertain whether they are but modifications of the same disease, or whether they only resemble it in certain characteristics, and whether a number of distinct diseases are not erroneously classed together.

This point will be more evident when I have described the general characteristics of ordinary anthrax and its pathological anatomy.

A large number of known vertebrate animals, or rather those in which the inoculation has been attempted, even frogs, have been found capable of infection with the anthrax poison, which seems to thrive under the most diverse conditions. It is stated by some that the pig is not capable of inoculation; but, on the other hand, feeding swine with flesh or blood from animals dying of anthrax is by some stated to produce an analogous disease, by others to give rise to a disease something like diphtheria. But that certain effects—although not necessarily the specific effect—are produced in swine by subcutaneous inoculation of blood from anthrax has been clearly demonstrated, this action being the production of intense local inflammation, and sometimes of swelling, or even suppuration of the lymphatic glands. In some experiments the dog has also proved refractory to the poison, only a large local inflammatory swelling being set up, but in other cases the typical phenomena have been produced. It is well known that M. Pasteur has recently shown that fowls may be made to take the disease by reducing their temperature—a fact of considerable importance in its general bearing on transmission of contagion.

It is now generally regarded as an established fact that the contagium of anthrax resides in the organism discovered by Delafond, and later by Pollender, and called by Davaine bacteridium, by Cohn bacillus anthracis. All the recent work which has been done upon this subject is confirmatory of this view, and the apparently negative results seem to be explicable in accordance with it.

I have already described the general characters of this organism, and the changes which it undergoes in development, and have pointed out that none of these are absolutely peculiar to it, but only the fact of producing the disease when inoculated. In what way the bacillus acts in causing the disease, and its fatal result, will best be considered after describing the phenomena of anthrax when artificially produced.

Certain differences have been observed, according as the bacilli are directly injected into the blood, or are inoculated in the subcutaneous tissue. In the former case, if the animal is one liable to the disease, the symptoms are developed more or less rapidly according to the quantity introduced; in the latter, there is usually more or less swelling, which may be merely a slight local œdema, or a large red swelling, which may even suppurate. The intensity of the swelling is apparently proportional to the resistance of the animal to inoculation, and may perhaps be regarded as in some measure protective.

This fact of local inflammatory swelling is of great importance in relation to the other diseases so-called anthracoid; and it moreover shows that there is in connexion with anthrax bacillus some irritant property, dependent either on some substance formed in its growth or some direct action on the tissues. That it is due to the production of some

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irritant is indicated by the fact that the inflammation is more intense when the blood has been in contact with the bacilli for some hours, and that without the occurrence of putrefaction (Toussaint).

The channel by which the poison enters the system, or rather the blood, is variously stated: some holding that the bacilli pass directly into the blood-stream; others, that they are first taken up by the lymphatics, and conveyed by them into the blood—in the latter case, of course, first passing through the lymphatic glands. M. Colin has shown that this is the case in some animals; that tumefaction of the glands adjacent to the source of infection occurs, and that in the glands are to be found the bacteridia. M. Colin has endeavoured to show that some poison introduced into the blood is the cause of the symptoms, the bacilli remaining in the glands. But on this point his observations are absolutely contradicted by Toussaint, who has shown that the symptoms are coincident with their entrance into the blood. My own observations lead me to believe that in mice and guinea-pigs the bacilli pass almost directly through the capillaries into the blood-stream, after having undergone some development in the serous exudation which is caused by the direct irritant action of the material shown by Pasteur and Joubert to be secreted by the bacteridia, which M. Pasteur considers allied to diastase. In those animals in which there is more local reaction—even in the rabbit—the glands are swollen, and contain bacilli; but their entrance into the blood takes place in the glands, not after completely traversing the whole system to the thoracic duct.

The symptoms of anthrax, whether spontaneous—i. e., accidental—or inoculated, are extremely variable. In some animals, e. g., the mouse and guinea-pig, and even the rabbit, the symptoms are practically *nil* until near the moment of death. During the time preceding the actual entrance of the poison into the blood there is practically no symptom whatever. After this there is rise of temperature in the rabbit of 2° or 3°, and usually a fall of 1° or 2° before death. There are febrile symptoms, accelerated pulse and respiration, and refusal of food.

Until very near the time of death one may hardly be able to find any bacilli in the general blood, or only one or two on examination of several slides, but towards death the number very greatly increases—in fact, may equal or exceed the number of red blood-corpuscles. This fact is a very important one, in reference to the observations on the presence of micrococci in the blood in pyæmia; for if we kill the animal we find the blood in some organs swarming with bacilli, whilst that of the general circulation contains scarcely any. The blood also contains an excessive number of white corpuscles.

The condition of the organs after death is also very variable. In most animals we find swelling of the spleen, but not usually in guinea-pigs. In those animals which, like horses and dogs, resist the entrance of the poison, and also in cows, there are often large hæmorrhages, and local serous exudations.

The enormous rapidity of the production and multiplication of bacilli may well be illustrated by the following experiment:—A guinea-pig having died of anthrax, some fluid was taken from the peritoneum in a capillary tube shortly after death. This on microscopical examination appeared to be free from rods. A quantity not more than $\frac{1}{100}$ of a cubic millimetre was inoculated in the tail of a mouse. Twenty-four hours later the mouse died with the usual symptoms. The blood and spleen were examined immediately after death, and were found to be simply swarming with rods. At first sight it might seem that this was a proof that the presence of rods was unnecessary either for the carriage of the contagium or the production of the bacilli. But this would no doubt be an error. For although I could discover none in the inoculated fluid I could hardly doubt that there were some, seeing that all the other tissues swarmed with them and I only examined a portion of the fluid. On the other hand, I think it must be allowed that they are more irritant in their action, and cause death more rapidly when directly inoculated in the fluid from an animal just dead of the disease, than when cultivated, at least such is the conclusion from my own observations.[1]

[1] Further experiments, completed since the delivery of this lecture, have led me to the conclusion that the poison becomes progressively less virulent in successive generations of artificial cultivation. I have thus been able to obtain a modified virus, which when inoculated produces much less severe symptoms, and appears to be partially protective against future more severe attacks.

Condition of the Blood.—In some cases, especially when the number of bacilli is small, we find but little change, at most some increase in the number of leucocytes, the coagulation taking place naturally. But when the number of bacilli is great, the power of coagulation is greatly impaired, partly, I believe, mechanically; partly, it may be, by their chemical action. It is sometimes erroneously stated that the bacilli disappear from the blood after the commencement of putrefaction, and that the contagious property is always lost when putrefaction has occurred. The decision of the first question is very important, because if they so disappear, those bacilli discovered after putrefaction is complete may be supposed not to be specific; and the second, because, if so, when putrefaction sets in, contagion ceases. The first point was found to raise so much difficulty in investigations into diseases supposed to be anthracoid, that I found myself compelled to try to solve it. A guinea-pig, having died from inoculation with anthrax-spores, was examined shortly after death, and the blood found to be swarming with bacilli. It was then left in a warm room in the laboratory for a fortnight, and the blood and spleen examined from time to time. The bacilli were found to persist in their ordinary state for about nine days, although putrefaction had of course set in. By the fourteenth day the spleen had become a mass of decomposing filth, but on examining it I found it still swarming not now with rods, except some pieces containing spores, but with abundant spores, some with pieces of rod attached. There were also abundant micrococci and bacteria of common kinds. With a very minute quantity of this matter I inoculated a guinea-pig. Forty-eight hours later there was a scarcely perceptible swelling at the seat of inoculation, containing only serum in small quantity, in which were a few bacilli. In the blood from the ear were only seen one or two, but these were very long, and perfectly characteristic. Subsequently the animal died on the third day, with the usual morbid appearances, and its blood was found to swarm with bacilli. On the sixteenth day the spleen of guinea-pig No. 1 was still more decomposed, but still swarmed with the spores, mingled with abundant micrococci.

The view generally entertained as to the mode of action of bacillus anthracis is, that it removes the oxygen from the red blood-corpuscles, being, as Pasteur has shown and as has been confirmed by many others, dependent on the presence of oxygen for its free growth, belonging to his class of aerobiæ, as do other organised ferments. Now, although, in the case of an organism which we know may grow in twenty-four hours in the blood in such a way that the number of rods equals or exceeds that of the red blood-corpuscles, the amount of oxygen thus absorbed must be large, the precise determination of this must be a matter of difficulty, for, as I shall show, the enormous obstruction to circulation in the lungs must cause great increase in the amount of carbonic acid and relative diminution of the oxygen. No sufficient analyses of the gases in the blood have as yet been made to determine this point. Another factor must come into play—viz., some irritant property—in order to account for the rise of temperature observed in cases of cure.

Distribution of Bacilli in Anthrax.—One of the most striking points in the morbid anatomy of anthrax is the enormous number of bacilli, and the way in which sometimes they crowd the blood and tissues. One might indeed imagine, from the way in which the blood sometimes swarms with them, that they would be found equally in nearly all the organs. This, however, so far as my obervations go, is not the case. Nor are they always especially abundant in the spleen in those cases which I have examined. In the heart they are often found in very great abundance crowding the vessels, appearing alongside the vessels in the inter-muscular spaces, and forming here and there masses which completely plug the small vessels, and lead to extravasation of blood, which, of course, also contains bacilli. In the lungs they are well seen, owing to the arrangement of the capillaries in the alveolar walls, but they more rarely lead to infarction. They do not usually appear in any great number in the pleura. The liver is sometimes very free from them; when found they are especially in the hepatic veins and their intralobular tributaries. The kidneys usually contain them in very large numbers, chiefly in the glomeruli and their afferent and efferent arterioles, and in the parts of the vessels in immediate continuity with them. Many of the afferent arterioles are almost completely plugged by masses of them; in the glomeruli themselves, especially near the surface of the organ, they lie in parallel

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bundles in such a way that the capillaries appear to be striated, and sometimes they form a mass which may occupy a considerable portion of the glomerulus. I have in some of these masses seen the formation of spores—a fact I believe of great importance. Rupture of the glomerulus may occur, and the bacilli, accompanied, of course, by blood, escape into the convoluted tubes, where they may grow to a considerable length. Koch states that they do not pass beyond this position, and that he has never seen them in any part of the straight tubes. It must, however, be remembered that he is speaking only of rabbits and mice.

There are many indications which lead me to believe that either bacilli or spores must in the majority of cases pass into the urine and be voided with it, and that this may serve as one of the most important carriers of contagion. I shall, therefore, consider it a little more in detail. First, with regard to the glomeruli. It is quite possible that after rupture of the capillary network has occurred, and a quantity of blood has been extravasated, that very few of the bacilli may traverse the tortuous channel and reach the bladder; but what we know of the passage of blood in the urine under analogous conditions leads me to believe that some small quantity must pass. Again, I have frequently observed that individual bacilli can pass through the capillary wall, and even through the walls of large vessels. Some may therefore pass into the urine whilst the network is as yet unruptured.

Again, we know that the urine is an excellent nutrient fluid for bacilli, and that they can go on to the formation of spores. Once escaped into the urinary tract, one or two bacilli may serve to contaminate the whole of the urine.

Apart from the glomeruli, the relations of the vascular supply of the pyramids may explain a more direct mode of entry of bacilli by rupture of the capillaries, or of course they may escape into the bladder; but the importance of the other method is, I think, especially in the possibility of the acquisition of a more stable form and of spore formation.

Anthrax has been communicated by Feser and others by means of the inoculation of urine of animals suffering from the disease. When we consider the very numerous ways in which the poison thus excreted may, having acquired a stable form, become dried in fodder or hay, or spread on the ground in manure, and subsequently be introduced by various channels into the system, especially of animals which, like cows and sheep, are apt to have their food more or less mingled with excreta, we need seek for no more ready mode of preservation and conveyance of the contagium. This fact, if it leads to more rigorous sanitary precautions (such as to the thorough destruction of all litter, &c.), may prove of great value in limiting and controlling this most terrible scourge.

The widespread distribution of the bacilli in the capillaries of all the organs which are concerned in the most important functions of animal life is suggestive of other modes in which they may cause death than by their direct action on the blood. Unquestionably they must interfere with oxygenation by taking from the red corpuscles their needful amount of oxygen, and appropriating it to their own growth; but their mere mechanical effect must also be considered, impeding, as it must, the action of the heart, the circulation and air-absorption in the lungs, the excretory function of the intestines and kidneys, and so on, of nearly all the organs. And in corroboration of this view are the often observed facts of preservation of intelligence and some power of action till very shortly before death, of the lowered temperature which precedes death, and of the frequent absence of the ordinary symptoms of septic poisoning, properly so called. So far as I have seen, there are but slight changes in the blood taken from a large vessel, the defective coagulation depending on the mechanical presence of bacilli, whilst the capillaries of the organ are crowded with bacilli, and the phenomena associated with early decomposition are much less frequent than in many forms of blood-poisoning. I shall be able to show you these organs, so need not further describe them now.

Koch states that he has found the bacilli especially in the lungs, liver, kidney, spleen, intestine, and stomach, least abundant in brain, skin, muscle, and tongue. He does not mention the heart. With regard to the brain, Koch's statement is directly opposed to that of E. Wagner, who found them in greatest abundance in that position.

In a valuable work by Toussaint, which has just appeared, he not only corroborates these observations as to the distribution of the bacilli in anthrax, but has much extended them. He believes that the action of the bacilli is mainly due to their obstruction of the general circulation by impaction of the bacilli in the capillaries.

SOME NOTES ON SURGICAL FEVER AFTER OPERATIONS.

(WITH TABLES.)

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IN the progress of surgical as of medical cases, the propriety of making thermometric observations is now recognised by all classes of practitioners, and although their precise value may not be yet fully understood, there can be no question as to the facts, that a high temperature maintained for many days is strongly suggestive of grave constitutional trouble, and a low one consecutively registered, or any very rapid fall of temperature means a failure of power. At the same time it is not to be doubted that in certain subjects any mental emotion, the slightest injury or operation, or even a constipated condition of the bowels, may be followed or accompanied by a higher temperature, and that a high temperature for a day in the course of a surgical case is not a point to excite alarm. In the present communication I propose, however, to confine my observations to the question of high temperatures after operations, or to what is known as "surgical fever," for I want to show that the immunity from such fever which the advocates of the "spray system" claim so persistently to belong to their practice, and to theirs alone, is shared with others, and that the practice which I adopt, and which I believe other surgeons adopt, is not followed in the majority of cases submitted to operation by any persistent elevation of temperature, or even by any at all after the first day or so, and that the constitutional disturbance associated with the rise in the temperature is rarely severe.

With the view of demonstrating these points—with the kind assistance of Mr. Everard Row—I have taken from my note-books ninety cases of large operations, the majority of which have occurred during the last two years, and have tabulated them in three classes. The *first*, including 33 operations for tumours of soft parts, as of breasts, &c. The *second*, 37 operations on bones and joints. The *third*, 20 operations, involving cavities such as the abdominal or pelvic. Under the heading "Temperatures" I have quoted from the case-book the highest point which had been registered during the day, and in saying this I am bound to admit, and with regret, that had the morning and evening temperatures been systematically taken in all the cases the tables would have been of great value. But such was not the case. Still, I am disposed to think that if the accuracy of observation demanded for scientific deduction be absent, there is enough to support, if not to prove, the view I wish to bring forward.

Analysis of Tables.

The *first* class (Table I.), that of tumours of soft parts, includes 33 cases, 21 being tumours of the breast. In 11, or one-third, of these it may be said that the temperature never rose to fever-point; it never reached 100°. In 13 it rose to 100° or 102° on the first day after the operation, to fall in 10 cases to the normal point during the next two days, and in the remaining 3 within the week. In 5 cases the temperature rose to 100° or more on the second day, when on the first it had not been high, but in all to sink within a day or so to the natural standard; and in 4 it rose on the third day to the higher point, but to decline in two or three days. In only two cases out of the whole number was the temperature of 100° maintained for more than two or three days.

The *second* class (Table II.) includes operations on bones, excisions, amputations, &c., and numbers 37 cases; 34 of these recovered, and 3 died. One of the three fatal cases sank from gangrene (Case 31), the thigh having been amputated high up for gangrene, following a rupture of the femoral artery. The second sank from broncho-pneumonia (Case 32) after an amputation for cancer of the forearm, the patient being

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sixty-one years of age. And the third case from diphtheria, after excision of the elbow (Case 37). In all of these the temperature became high within three days, and never sank. Of the 34 cases which recovered, in 10 the temperature never rose to 100°, or, indeed, above normal. In 13 it reached 100° to 102° on the first day, but in all to fall the next, and not to rise again. In 8 the temperature rose to 100° on the second day, when it was low on the first, and in all subsequently to decline. And in 3 cases the temperature rose on the third, fifth, and seventh days respectively, but in all to fall. In some five or six of the cases the temperature rose again during their progress for one or two days, but never to last, the temporary elevation being usually explained by some bowel condition or retention of fluid in the wound. In most of, if not in all, the cases the course of the wounds may be said to have been aseptic.

The *third* class (Table III.) includes operations on the abdominal and pelvic cavities, and numbers 20 cases, two of which died; one of kidney disease following stricture of long standing (Case 4), the other of exhaustion following gastrotomy (Case 16). In 9 cases the temperature never rose; in 4 it rose on the second, fourth, fifth, and sixth day respectively, but only for a day; in 7 it rose on the first day to 100° or 102°, falling in 6 of the cases to normal during the next two days, and rising again in only 3 on one or two occasions.

Summary.

If we take the whole 90 cases together, excluding the three fatal cases in Table II., it will be seen that in 30, or one-third, the temperature never rose to fever-point or up to 100°; in 33, it rose on the first day to 100° or 102°, falling during the next two days; in 14, it rose on the second day to 100°, when it had been low on the first; and of the remaining 10, it reached 100°; in 6 on the third day, in 2 on the fourth day, in 1 on the fifth day, in 1 on the sixth day, and in 1 on the seventh day, but only for the day.

I may state that in all these cases submitted to operation, the mode of dealing with the wound during, and of dressing the wound after, the operation was alike. In every case I either twisted the bleeding arteries, or, in exceptional cases, secured them with the carbolised gut ligatures. In all I washed the wound after the operation with warm water containing about two drachms of the compound tincture of iodine to a pint of water, bringing it to a light sherry colour, and used sponges washed in the same, employing a hot sponge in a large proportion of the cases to check completely capillary hæmorrhage. In all, when possible, I brought the edges of the wound carefully together by means of silk or wire sutures, alternating with some strips of waterproof strapping, and made free provision for effective drainage, and in all I covered the wound with lint saturated with a solution of terebine in olive oil in the proportion of one part to five. In most I fixed over the wound a firm pad of cotton-wool, lint, gauze, or sponge, with some moderate pressure applied by means of strapping or a bandage, and where limbs or joints were involved, kept the parts in absolute rest upon a well-padded splint.

In the majority of cases the wound was not dressed till the third day, and then only when there was the slightest suspicion of any retained secretion or elevation of temperature. In dressing the wounds the greatest care was observed not to disturb the parts more than was absolutely necessary for purposes of cleanliness. In the majority of cases a good result was obtained; and let me add that in no instance during 1879 did pyæmia occur, or was there any trace of blood-poisoning, and in no case was erysipelas recorded.

TABLE I.—OPERATIONS ON SOFT PARTS, TUMOURS, ETC.

No.	Name.	Age.	Disease.	Operation and Date.	Result.	Date of Discharge.	Temperatures after Operation.								
							1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	8th day.	9th day.	10th day
1	H. P.	40	Carcinoma of breast	Excision, Jan. 14th, 1879	Cured	Feb. 19th	101°	..	..	..	..	..	99°	*		
2	E. P.	36	Adenoma of breast	Excision, Jan. 21st, 1879	Cured	Feb. 14th	100	98°	98°	98°	..	..	..			
3	H. A.	70	Ulcerating cystic cancer of breast	Excision, Jan. 31st, 1879	Cured	March 17th	100	99	98·4	99	99·8	99·4	98·6	98°	98·4	98°
4	B. O. P.	42	Cancer of breast	Excision, Feb. 4th, 1879	Cured	Feb. 26th	102	100·2	99·2	98	98·4	98·6	98·6	99·2	99·2	98
5	E. P.	38	Cancer of breast	Excision, March 18th, 1879	Cured	June 15th	100·8	102	102·4	100·6	101	100·8	99			
6	L. P.	57	Cancer of breast	Excision, April 6th, 1879	Cured	July 17th	99	99	99·4	99·2	97	98·4	98			
7	J. L.	60	Cancer of breast	Excision, June 27th, 1879	Cured	July 23rd	100	98·8	98·4	98·8						
8	M. W.	50	Cancer of breast	Excision, July 22nd, 1879	Cured	Aug. 14th	100·2	99·6	98·4	97·8						
9	L. S.	26	Adenoma of breast	Excision, July 22nd, 1879	Cured	Aug. 10th	98·9	97·4	97·8	98						
10	M. A. T.	35	Sarcoma of breast	Excision, Aug. 12th, 1879	Cured	Oct. 8th	100	100	97·8	98						
11	E. W.	47	Cancer of breast	Excision, Nov. 7th, 1879	Cured	Dec. 8th	100	100·6	100·2	100	98·4					
12	S. J.	44	Cancer of breast	Excision, Nov. 11th, 1879	Cured	Dec. 1st	102	101·1	101·5	103·8	100	99	99·2	98·4		
13	L. N.	46	Cancer of breast	Excision, Nov. 11th, 1879	Cured	Dec. 21st	98·8	99·8	99	99·2	98					
14	E. B.	62	Cancer of breast	Excision, Nov. 28th, 1879	Cured	Jan. 6th	98·6	101·8	99·6	98	99	99	98·7	97·4	97	98·4
15	M. A.	44	Sarcoma of breast	Excision, Feb. 7th, 1880	Cured	Feb. 16th	99·4	99·2	98·4	98·4	97	99·2	99·2	98·4	98	
16	A. G.	22	Adenoma of breast	Excision, July 22nd, 1878	Cured	July 28th	98·4	99·4	98·4	98·4						
17	J. L.	45	Cancer of breast	Excision, Jan. 3rd, 1878	Cured	Jan. 28th	98·2	101	102	101·8	98·6	98·6	98·2	98		
18	M. A. W.	50	Cancer of breast	Excision, June 18th, 1878	Cured	July	102	100·2	99·4	99	98·8	99·2	98·6	97·8	98·2	98·2
19	M. P.	46	Cancer of breast	Excision, Feb. 6th, 1878	Cured	Feb. 28th	97·2	100	100·3	102·1	100·1	99·5	99·1	98·6		
20	E. B.	24	Adenoma of breast	Excision, July 20th, 1878	Cured	Aug. 20th	98·6	98	98·6	98						
21	C. P.	33	Adenoma of breast	Excision, Dec. 12th, 1879	Cured	Jan. 3rd	99·4	100·5	99	98·6	98·4	98·4				
22	M. B.	27	Sarcoma of thigh	Excision, March 1st	Relieved	March 24th	101·8	101·6	100·4	98·4	98·4	98·6	98			
23	A. C.	60	Large sebaceous tumours in head	Excision, Jan. 3rd	Cured	Jan. 16th	98·7	99	99	98·6						
24	S. B.	29	Large hygroma over knee	Excision, Dec. 2nd	Cured	Dec. 17th	98·8	98	98	97·2	97·2	98·5				
25	G. H.	48	Cancer of penis	Amputation, Jan. 10th	Cured	Feb. 10th	99	98·6	98·5	98·6						
26	J. H.	40	Cancer of penis	Amputation, Feb. 14th	Cured	Feb. 29th	98·5	98·5	98·5	98·2						
27	W. W.	44	Large lipoma	Excision, Feb. 7th	Cured	March 11th	99·1	100	98·4	100	98·9	98	98	98·4		
28	L. G.	43	Sarcoma of thigh	Excision, March 10th	Relieved		100	100	99·3	98·6	98·6	98·8	98·8	99·6	99·2	
29	R. N.	39	Cancer of hip	Excision, Aug. 1st	Relieved		100·2	100	97·6	98	98·4					
30	S. S.	60	Hæmatoma of calf	Incisions &c., Nov. 19th	Cured	Aug. 8th	99	100	100	101·2	100·6	99·8	98·6	98·6		
31	J. T.	28	Hæmatoma of calf	Incisions &c., Nov. 13th	Cured	Dec. 17th	98·6	99	98·8	98	98	98	98			
32	E. W.	24	Large varix of saphena vein	Excision, May 14th	Cured	Dec. 2nd	99·4	99·4	100	99·4	99·2	98	98	98		
33	R. C.	55	Parotid tumour	Excision, July 17th	Cured	July 3rd	98·2	100·4	99·8	99·8	98	100·9	99·8	99·8	98·4	
						Aug.										

* Wound healed rapidly. † Wound healed on third day.

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TABLE II.—OPERATIONS ON BONES AND JOINTS.

No.	Name.	Age.	Disease.	Operation and Date.	Result.	Date of Discharge.	Temperatures after Operation.												
							1st day	2nd d.	3rd d.	4th d.	5th d.	6th d.	7th d.	8th d.	9th d.	10th d	11th d	12th d	13th d
1	W. D.	15	Disease of elbow	Excision, April 24th, 1878	Cured	..	100°	98·6°	97·6°	98°	98·6°	97·6°	98·5°						
2	S. S.	43	Disease of wrist	Remov. necrosed (semilun. bone),	Cured	...	98·9	98·6	98·6	97·6	98	98	98						
3	W. H.	9	Disease of elbow	Excision, August [Feb. 22nd	Cured	..	98·4	100	99	98·4	98·6	98·4	98·6	98°					
4	A. B.	5	Disease of knee	Excision, Jan. 18th	Cured	..	98·1	102·8	102·1	101	102·2	98·8	99·7	99	98·6°	98·4°			
5	H. P.	19	Disease of knee	Excision, Jan. 30th	Cured	..	99·2	100·4	100·3	100·4	101·1	99·4	98·6	98·5	98·4				
6	M. T.	18	Tarsal disease	Removal of bone, June 26th	Cured	..	101	100	97·1	97·6	97·8	98·4	98·4						
7	W. S.	6	Disease of elbow	Excision, July 10th	Cured	..	98	99·5	99·6	98·5	98·6	98·2	98·4	98·4	98·4				
8	L. M.	6	Disease of hip	Excision, June 13th	Cured	..	98	98·4	99·6	98·6	98·2	98	98·6	98·4					
9	G. D.	15	Disease of elbow	Excision, April	Cured	..	98	101·2	100	99	100	99	98·5	98					
10	G. D.	19	Disease of elbow	Excision, June 27th	Cured	..	99·2	99	102	98·4	99·2	99	99·3	98·4	98·3				
11	E. J.	12	Disease of elbow	Excision, August	Cured	..	99	98·6	98·6	99·3	98·4	98·6	98·4	98·6	98·6				
12	E. D.	11	Disease of hip	Excision, December	Cured	..	99·2	98·4	99·3	99·6	100·2	99	100	99·8	98·2	98·2	98°		
13	E. R.	4	Disease of hip	Excision, Feb. 11th	Cured	..	100·2	99·8	99·2	99·3	99·6	98	98·4	98·4	98·4				
14	A. H.	15	Abscess in head of tibia	Trephining bone, March 11th	Cured	May 21st	101·2	99·4	98·8	98·6	98·4	100·8	100·9	97·8	98	98·5	98		
15	E. C.	3	Necrosis of tibia	Sequestrotomy, March 2nd	Cured	June 23rd	99·6	99·6	98·6	99·1	98·5	98·5	98·5						
16	H. W.	38	Necrosis of femur	Sequestrotomy, May 21st	Relieved	..	99·4	99·4	98·2	99	99	98	98·6						
17	S. T.	33	Necrosis of tibia	Sequestrotomy, July 8th	Cured	Aug. 28th	100·6	98·8	98·5	98·6	98								
18	E. F.	7	Necrosis of tibia	Sequestrotomy, July 8th	Cured	Aug. 13th	100·6	98·8	98·5	98·6	98								
19	C. R.	1½	Abscess in tibia, with necrosis	Incisions, Jan. 13th	Cured	June 28th	98·6	100·3	99·9	99·2	99·8	98·4	98						
20	R. K.	47	Necrosis of humerus	Sequestrotomy, Nov. 6th	Cured	..	98·2	102·6	100·2	99·6	99	98	98·5						
21	H. P.	19	Genu valgum	Osteotomy, Feb. 17th	Cured	..	99·8	99·6	99·4	99·2	98·5								
22	L. W.	5½	Disease of hip	Excision, June 15th	Cured	June 22nd	100·7	100·2	99·3	99·4	98·6	99	100·6	99	98·4	98·4			
23	W. B.	25	Extensive disease of carpus	Amputat. of forearm, March 21st	Cured	April 22nd	101	100·6	99·6	99·8	98·2	98	98						
24	R. W.	21	Disorganised knee and ankle joint	Amputation of thigh, Jan. 27th	Cured	Aug. 7th	101	100·8	99	98·2	98								
25	H. N.	9	Disease of ankle	Pirogoff's amputation, July 25th	Cured	Nov. 6th	100·3	100·6	99·4	99·6	98·5	99·2	98·4						
26	W. N.	4½	Disorganised knee and necrosis of tibia	Amputation of thigh, Oct. 16th	Cured	Nov. 5th	102·7	100·1	101·6	99·6	100·8	101·9	99	98·6	98·5	98			
27	W. B.	2¾	Extensive disease of knee	Excision, April 18th	Cured	September	99·4	99·6	98·6	99·6	99	98	99·4	99	98·4	97·6			
28	I. A.	19	Disease of elbow	Excision, May 2nd	Cured	July 3rd	101	100·2	98	99·6	100·2	98							
29	J. O.	11	Disease of hip	Excision, Jan. 31st	Cured	Nov. 10th	99·2	100	101·1	98·8	101·6	100	99	98·6	97·8	97·9	98·3		
30	W. G.	19	Gangrene of foot from crush	Amputation, Oct. 16th	Cured	Dec. 10th	106	98·2	100·4	99·6	100	99·2	101·1	99	100·2	99	100·8	99°	98·2°
31	W. J.	33	Gangr. of leg following ruptured feml.	Amputat. thro' thigh, Jan. 31st	Died	March 3rd	102·6	102·8	103·2	102·8	99·8	102·4	99·8	100·6					
32	W. L.	61	Cancer of forearm	Amputation, Jan. 10th	Died*	Feb. 1st	98·4	103·5	104	104									
33	A. W.	15	Enchondroma of great toe	Excision, May 20th	Cured	June	98·6	98·4	98·6	98	98	98·4							
34	W. F.	10	Disease of hip	Excision, Aug. 22nd	Convalescent	..	98·4	101·2	98·6	98·7	98·4	99·2	99·2	99·2	98·6				
35	R. B.	52	Disease of knee	Amputation, Aug. 24th	Cured	Jan. 6th	99·4	99·1	98·4	98·4	99	99·2	101·6	98·2	100	98·4	99·3	99·6	97·9
36	G. S.	30	Tumour of lower jaw	Removal of bone, May 30th	Cured	..	99	99·8	97·8	97·7	97·4	97·2	97·6	96	96·7	97			
37	G. H.	11	Disorg. elbow w. acut. periostitis of ulna	Excision, June 7th	Died	Jan. 7th	99·8	98·6	100·3	100·7	100·9	101·2	100·3	100·2	100·8	102	100		

TABLE III.—OPERATIONS INVOLVING CAVITIES ETC.

No.	Name.	Age.	Disease.	Operation and Date.	Result.	Date of Discharge.	Temperatures after Operation.											
							1st day.	2nd d.	3rd d.	4th d.	5th d.	6th d.	7th d.	8th d.	9th d.	10th d	11th d	12th d
1	J. B.	5	Stone in bladder	Lithotomy, Nov. 11th	Cured	Dec.	98·4°	98·3°	98·4°	98·5°	98·5°							
2	S. S.	38	Broken catheter in bladder	Median lithotomy, April 1st	Cured	April 26th	98·8	98	97·8	97·8	97·6	98°	98°	98°				
3	T. H.	40	Calculus on broken catheter	Median lithotomy, June 24th	Cured	July 8th	98·6	98·5	98·5	98	98·6	98						
4	R. W.	39	Bougie in urethra behind stricture	Perineal section, Dec. 9th	Died†	Jan. 3rd	102	99·6	98·6	99	98	98	98·6	98				
5	J. G.	57	Stricture and extravasation	Perineal section, Oct. 9th	Cured	Nov. 6th	101·2	101·6	100·6	98·8	99	98·2	98·4	98·2				
6	R. C.	31	Ruptured urethra	Perineal section, Jan. 30th	Cured	..	102	100·2	98·8	99·2	99	100	99·8	98	98·6°			
7	J. L.	28	Vesico-vaginal fistula	Plastic operation, Aug. 5th	Cured	Sept. 17th	98·7	97·8	99·3	98·4	97·8	98·2	98·3					
8	M. A. T.	59	Stricture of rectum	Colotomy, Dec. 5th	Convalescent	Jan.	101·1	98·8	99·7	99	101	101	98·4	98·5	98·6			
9	E. C.	29	Stricture of rectum	Colotomy, Feb. 5th	Convalescent	..	99·2	99·6	100	100	98·6	98	98	98·4				
10	C. H.	28	Stricture of rectum	Colotomy, May 10th	Convalescent	..	104	99·2	98·3	98·1	98·5	98	98·5	99	98·5			
11	W. B.	25	Stricture of rectum	Colotomy, July 10th	Convalescent	..	99	100·8	100·2	99·1	98·4	98·7	98·3	98				
12	J. B.	39	Stricture of rectum	Colotomy, June 22nd	Convalescent	..	101·8	99·9	99	97·7	97·4	98·7	98	98				
13	H. H.	25	Wound in abd.; with protrud. oment.	Reduction &c., Dec. 7th	Convalescent	Dec. 17th	98·8	98	98·6	97·2	97	97						
14	J. R.	28	Charbon on forearm	Excision, Feb. 4th	Cured	Feb. 13th	‡											
15	T. N.	12	Talipes equinus varus	Tenotomy, Jan. 12th	Cured	..	102	102·5	99·7	100·7	100·3	99·4	101·7	101	100·8	99·8°	100°	98°
16	R. W.	48	Stricture of œsophagus	Gastrostomy, Sept. 9th	Died	Sept. 16th	98·8	99·2	99·2	98·3	100·3	97·2						
17	C.	9	Imperf. rect., with recto-vag. fistula	Op. for artif. anus in perin., May 15th	Relieved	..	99	99·8	98·4	98·8	97·8	101·8	98·5					
18	J. S.	33	Ovarian disease	Ovariotomy, Dec. 7th	Cured	..	99·4	98·4	98·6	99	98	98·2	98·2	98	98	99	98·6	
19	C. H.	26	Ovarian disease	Ovariotomy, June 18th	Cured	..	100·4	101·4	100·2	99·6	99·6	99·2	98·6	98·2	98·4			
20	G. S.	51	Prostatic calculi	Median lithotomy, Nov. 12th	Cured	..	98·4	98·8	98·9	100	99	99·3	98	98·4	98			

* Of broncho-pneumonia. † Of kidney disease. ‡ Temperature never rose.

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With these hard suggestive facts before us, we may fairly conclude that in one-third of the cases of operation performed in my wards at Guy's Hospital there is no surgical fever after operation; in another third it appears on the day following the operation, to disappear on the second or third day; in one-sixth it appears on the second day, to disappear on the third or fourth; and in the small remainder the temperature may rise for a single day during the first week and then subside. When the temperature remains high for many days consecutively after an operation, the prognosis is bad.

My object in bringing forward the present brief paper has been to disprove the oft-repeated assertion of some British surgeons, that it is after the "spray system," and that system alone, that a non-febrile course of convalescence is met with, and I trust I have succeeded in my intention; but in concluding it, I cannot forget how closely my own figures accord with those of Volkmann[1] who, differing from the assertions of British surgeons, tells us that after some operations performed with true Listerian precautions, one-third will recover without any fever at all, one-third will have moderate fever, and one-third high fever; his proportions being very like my own, except that in his cases the number of instances in which high fever existed was apparently greater than it was in my own. He moreover calls this fever "aseptic," and probably correctly, but I presume I have the same right to use a like term, since in my own cases putrid elements were completely excluded or guarded against, and they rarely if ever existed, and this result was brought about by such simple means as are open to every practitioner in this country.

In conclusion, I would say that I am quite alive to the weak points in this paper, but if it be the means of obtaining from others some absolute well-observed facts connected with the temperatures of patients subjected to operations and treated in different ways, and of raising the question of temperatures after operations out of the region of assertion, and of placing it on the solid basis of facts, my object will have been attained.

ANTISEPTIC NEPHRECTOMY FOR HYDRONEPHROSIS OF THE LEFT KIDNEY IN A YOUNG CHILD; RECOVERY.

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AND
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THE thinness of the abdominal parietes in children renders the examination of abdominal tumours comparatively easy, but the diagnosis is often difficult, if not impossible. The physical signs of different kinds of growth are sometimes so puzzling that they cannot be distinguished. The commonest abdominal tumours in children are enlarged liver or spleen, or hypertrophied mesenteric glands. Rarer growths are ovarian or renal cysts.

As the following case is almost unique, we feel that it is a duty to publish it in full.

A. B——, aged seven, a healthy-looking girl, was admitted into the Dorset-street branch of the Samaritan Hospital, under the care of Dr. Day, on Oct. 21st, 1879, suffering from an abdominal tumour, which was first noticed when she was two years of age. No accurate history could be obtained, as the mother was dead, and the child for the last two years had been away from the father. She had three sisters and one brother living, and they were all healthy. The child had had whooping-cough and scarlet fever, but no bad effects followed either disease. At no period had she complained of any pain or discomfort in her body.

On examination there was an abdominal tumour of irregular outline, and freely movable, rather firm in some places, but elastic in others. It was particularly elastic and prominent between the umbilicus and pubis, where fluctuation was detected. The outline was not unlike that of a large multilocular ovarian cyst, and on deep inspiration it could be seen extending an inch above the umbilicus. The superficial veins were enlarged over the whole abdomen, and there was a considerable quantity of free fluid in the peritoneal cavity. There was no enlargement of the spleen or liver, which occupied their normal position. Traced backwards towards the left renal region, the tumour seemed as though it might spring from the left kidney. A coil of intestine crossed it from left to right crosswise, and then from right to left. Midway between the umbilicus and pubis there was a soft elastic fluctuant swelling to the right of the umbilicus, and between it and the right anterior spine of the ilium the note was tympanitic (cæcum). The lower ribs, especially on the left side, were much pressed outwards, and the percussion note was very resonant over both hypochondriac regions. The girth at the umbilicus was 26½ in.; on the right side it was 12¾ in.; on the left, where it was most prominent, it was 14 in. There was no pulmonary or cardiac disease. The urine was normal. It was stated that for a long time before admission the patient had only passed urine once a day, and that the quantity was small.

Many opinions were expressed with regard to diagnosis:—(1) Mr. Spencer Wells thought there was distinct hydatid fremitus in the prominent part of the tumour below and to the left of the umbilicus; he thought it might be removed. (2) Dr. Champneys expressed a similar opinion. (3) Dr. Greenhalgh and (4) Dr. Granville Bantock regarded the case as of ovarian or hydatid origin. (5) Dr. Savage considered the tumour renal. (6) Mr. Thornton also thought the tumour renal, but the question of hydatid of mesentery or omentum ought not to be excluded. He was in favour of a careful antiseptic tapping with a fine trocar in order that the fluid might be examined. (7) Mr. Meredith considered the tumour was due to hydronephrosis, or to hydatid disease; he also advocated tapping with a fine aspirating needle. (8) Mr. Doran thought it an ovarian cyst, with the transverse colon adherent along its upper portion, but was doubtful, and advised an exploratory incision.

Nov. 4th.—The bowels having been freely emptied by an enema, the child was narcotised with bichloride of methylene, and under the carbolic acid spray, Mr. Knowsley Thornton introduced a fine trocar into the fluctuating part of the tumour, midway between the umbilicus and the anterior superior spine of the ilium, when six pints and a half of a brownish-coloured fluid were drawn off, having an acid reaction and urinous odour. The puncture was dressed with carbolised gauze, and a flannel bandage applied.

On the following day the patient passed three pints of clear, normal urine, and the next day forty-four ounces. The general health was undisturbed. After this the quantity diminished to nine ounces in the same space of time, till three weeks before the operation for removal of the cyst, when twenty ounces of clear, non-albuminous urine were passed daily. On the 13th the cyst was fast filling up, and there appeared little doubt that it would be necessary to remove it.

On Dec. 14th the cyst had refilled, and the circumference of the abdomen was again twenty-six inches.

On Jan. 2nd, 1880, the child was transferred to the surgical wards in Lower Seymour-street, and on the following day, bichloride of methylene having been administered by Dr. Day, Mr. Thornton, assisted by Mr. Meredith and Mr. Doran, removed the tumour by abdominal section. An incision commencing an inch above the umbilicus was carried down to its left side to three inches and a half. When the peritoneum was reached it was caught up by artery forceps and carefully divided; the cyst was exposed, and slight adhesions round the tapping puncture were easily separated by the finger, great care being necessary, as the cyst-wall was very thin. The small ovarian tapping trocar was used to empty it, and no difficulty was experienced in performing this part of the operation without the escape of any of the fluid into the peritoneum or over the incision. The cyst was found to be enclosed between the layers of the descending meso-colon, the descending colon having been pushed forward and to the right as the cyst enlarged; the sigmoid flexure was also much displaced, and lay across the lower part of the cyst, and between it and the bladder; the latter was distended with urine, and rose considerably above the pubes. Great care was required in enucleation, which was performed through an opening made in the capsule to the inner side of the descending colon. No distinct ureter could be found, but a thin cordlike structure passed downwards from the lower part of the cyst, and, becoming intimately connected with the parietal peritoneum, was lost in its reflec-

[1] Med. Times and Gazette, June 22nd, 1878.

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tion on to the fundus of the bladder. The cyst having been thoroughly enucleated to its base, was turned down, and the renal vein could then be *seen* and the artery *felt* pulsating behind it. A blunt aneurism-needle was passed between them threaded with a double ligature of No. 1 Chinese silk, and they were tied separately about an inch from the aorta. Another ligature of No. 2 Chinese silk was then tied round the whole pedicle on the distal side of the first ligatures, and the cyst cut away a good half inch from the ligatures. There was very little sponging necessary, even in the sac out of which the cyst had been enucleated, and none of the general peritoneum. After the sponging the parts fell very nicely together, so that on looking into the abdomen there was nothing to indicate where the cyst had been removed. Two small shreds of capsule were ligatured and cut away; all the other bleeding points were merely squeezed for a time in Wells' artery forceps. The incision was closed with No. 1 Chinese silk sutures, and the usual gauze dressing without protective applied.

The operation was prolonged by the little patient taking the anæsthetic badly, and retching a good deal, and by the care required in the enucleation. It occupied an hour and a half. From first to last every detail was carried out strictly according to Lister's method. At 9 A.M., half an hour before the operation, the patient's temperature was 99·4°, and twenty minutes after she was placed in bed it was 97·8°, pulse 116, respiration 28. At 11.45 six drops of laudanum were injected into the rectum, and the same quantity again at 2 P.M. At this hour three ounces of clear, pale urine were drawn off by catheter. It was exactly like that examined the day before the operation, and deposited white urates. She was sick at 2, 3.30, 4.20, 4.30, 5.30, 8, 8.30 P.M., and at midnight. At 3.30 P.M. the pulse had risen to 136, and at 9.30 to 150; respiration 32; temperature 101·6° (the highest point reached at any time during the case). At 3.30 P.M. about an ounce of urine was drawn, dusky in colour, and containing some small black clots. From this time till 3 A.M. on the following morning about an ounce was passed without the aid of the catheter every hour and a half, each specimen being bright-red, as if almost pure blood. At 5.30 P.M. a large linseed-meal poultice was applied over the right kidney. At 11 P.M. two ounces of beef-tea were injected into the rectum, with six grains of bromide of potassium; as the little patient was very restless, a similar injection was given every two or three hours during the next thirty-six hours. At 3 A.M., after the operation, rather more urine was passed quite free from blood, and containing urates as before the operation; and from this time onwards a fair quantity of healthy urine, quite free from albumen, was passed, generally from a pint and a quarter to a pint and a half, or more, in the twenty-four hours. During the first twenty-four hours the total quantity, including the bloody urine, was twenty ounces.

The patient was sick at intervals till the morning of the second day, when it ceased, and she began to take bread and milk, and milk and lime-water, freely. After the urine became normal, eight drops of laudanum were given occasionally per rectum, instead of the bromide. At 9 A.M. on the first day the temperature was 98·8°; pulse 140; respiration 26. At 10 P.M., temperature 99·6°; pulse 132; respiration 16. At 10 A.M., second day, temperature 99·4°; pulse 120. At 9 P.M., temperature 100·4°; pulse 114. The bowels moved on the fourth day. All the sutures were removed on the sixth day, when the wound was found well united by first intention. From this time the temperature was normal and the pulse about 96. She was moved into the convalescent ward on the ninth day, and was soon after up and running about. She would have left the hospital for a convalescent home at Brighton on the twenty-third day, but her departure was delayed by an attack of ringworm.

Remarks.—On the day following the tapping the patient passed three pints of urine, and two pints on the second day. This shows that there was some sympathetic irritation of the right kidney. The excessive congestion of this remaining kidney after the major operation may then have been to some extent due to the same cause. The bloody urine was, however, highly charged with carbolic acid, and remained for some days free from putrefaction, while some of the clear urine standing beside it was putrid in twenty-four hours. Both specimens were in similar open vessels, and both were tested from time to time by odour and microscopic examination for bacteria. The ordinary urine was highly offensive, and swarmed with bacteria; the bloody urine got gradually darker in colour, but remained free from odour, and several days later contained no bacteria, but some penicillium.

It seems to us probable that the extreme congestion of the kidney was due rather to the carbolic acid than to the sympathetic irritation. It is obviously difficult to assign to each factor its share, but we know that there is often considerable congestion of the kidneys after ovariotomy, and that this has been decidedly increased in severity since the introduction of Listerism in abdominal surgery.

The cyst was shown at the Pathological Society as a fresh specimen, and we therefore reserve all description of it for the "Transactions." The patient was shown in good health some weeks after the operation, at a meeting of the Medico-Chirurgical Society. The extremely thin condition of the front of the cyst wall seems to us fully to justify our decision that the time for operation had arrived; a very slight accident would have been sufficient to cause extravasation of the cyst contents into the peritoneum.

There are three very important points worthy of special attention:—1. The safety of the antiseptic exploratory tapping, evidenced by the absence of all subsequent constitutional disturbance. 2. The rapid and satisfactory convalescence after so prolonged and serious an operation on a young child, also greatly due to the antiseptic precautions. 3. The speedy disappearance of blood and albumen from the urine after such a severe congestion. The urine was frequently examined during convalescence both by tests and the microscope, and was always quite normal.

ON "WOOLSORTER'S DISEASE."

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THE occurrence of several deaths from "woolsorter's disease" within a short time in Bradford and its neighbourhood, although not unfrequent, has recently excited more attention than usual. This may be owing in part to repeated inquests which have been held on some who have fallen victims to it, and also to the growing public opinion, guided by the local press, that these deaths might easily be prevented.

The following paper, recently read before the Bradford Medico-Chirurgical Society, and since revised, will give an account of the disease as it occurs here, and perhaps assist others in its detection in those towns where wools and hairs are used for manufacturing textile fabrics.

The sorting of wool is generally considered a healthy occupation. The sorting of hairs, which are classed with wools, such as alpaca and mohair, has long been known to be attended with considerable risk to life. During my inquiry into the causes of this, I have found sufficient reason to include with them as similarly dangerous, all wools and hairs which are characterised by being dry, dusty, and more or less filthy from contamination with decomposing animal matter, and particularly if they contain "fallen fleeces" from diseased animals. Among these are, all kinds of alpaca, goat's hair, camel's-hair, low-class East Indian, Persian, and such like wools. The sorting of these is injurious to health: first, from the dust and fine short hairs which arise from them, exciting chronic diseases of the lungs, as bronchitis and consumption; second, from the amount and virulence of poison from decomposing animal matter which is liberated, producing a low form of pneumonia, which I may call septic pneumonia; third, from a specific blood-poison, derived from the fleeces of animals which have died from anthrax, producing the rapidly fatal disease called "woolsorter's disease."

I have tried to ascertain the comparative health of persons sorting different kinds of wool, and find that the annual amount of sickness of the alpaca, mohair, and camel's-hair sorter, is almost double that of the British and Colonial woolsorter.

The number of deaths from diseases of the lungs, excluding phthisis, in the Bradford registration district of males aged twenty years and upwards for the ten years 1851–60, was 17·4 per cent. of the total deaths at these ages. In the Shipley sub-district, where alpaca and mohair are largely used, the proportion for the five years 1872–6 was 68·2 per

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cent. This excess of deaths from lung diseases (nearly four to one) does not apply to sorters of wool in other sub-districts where these dangerous hairs are not used.

Alpaca and mohair were introduced into the Bradford district as textile materials about the year 1837. It was not until some years had passed that a suspicion arose among the workpeople that they were injurious to health; this was confirmed by time, and the disease, which could not be accounted for, was found to be confined to the sorters, and became known as "sorter's disease." At places where these materials are used in large quantities, sudden deaths of sorters are frequent. When these occur singly, and at some weeks' interval, little notice is taken of them; when, however, several men working together in the same room die from this mysterious disease within a short time of each other, considerable disquietude and alarm are caused among the workpeople; but only for a short time; the excitement soon subsides, and the work is continued. Men are willing to run the risk without complaint, and submit quietly to what they consider to be inevitable, although scarcely a month passes without the record of some death within the district from this disease.

At various times, eminent medical and scientific men have been consulted by different firms; post-mortem examinations, investigations, and reports have been made over and over again, without satisfactorily explaining its cause and nature, or lessening its frequency. It has now prevailed and been recognised in this neighbourhood about forty years, and notwithstanding all that has been done to prevent it, by ventilation, the use of respirators and other means, it still continues, as severe and frequent as it ever was, overclouding the life of the sorter with a mysterious shadow, and threatening him daily with death.

As years of increased fatality and alarm may be mentioned 1846, when it was first observed at Queensbury by Mr. Corrie of Thornton, and Mr. McLachlan of Shelf; 1853, when reported upon by Mr. William Field and Mr. Samuel Lodge of Bradford; 1854, again by Mr. Field and Mr. Lodge, who published a "Report of the Post-mortem Examination of the body of Henry Clarkson of Queensbury;" 1867-8, at Saltaire, when investigated by Mr. Rhind and Mr. Ellis of Shipley, and Mr. Marsden, F.R.C.S., of Bradford (now of Eastbourne); 1874, at Saltaire, when Mr. Ellis published "A Few Observations on so-called Sorter's Disease," in which are included chemical and microscopical examinations of various samples of hairs and dust, by Professor Frankland, F.R.S.; 1876, outbreak at Queensbury, reported upon by Dr. Britton and Mr. Bramley of Halifax, Mr. Meade of Bradford, and Mr. Boynton Lee (Hookmondwike).

The sorting of inferior, dry, and damaged wools and hairs, if it does not cause illness, produces in most men "difficulty of breathing," "heavy oppression at the chest," "tightness," "dizziness," "alarming drowsiness," "drop to sleep any time," "cough," "sore-throat," &c. These effects are not due to the amount of dust, but are felt more particularly when bad bales are opened which contain fallen fleeces. The discomfort increases as the day advances, so that when they leave work they have little life or energy left, and are glad to get home. Many live several miles from their work, as they think the walk to and from the mill relieves the oppression of which they complain, and has a beneficial effect upon their health.

CASE 1.—R. N——, aged fifty-eight years, married, strong, stout, and healthy-looking; had been a sorter over forty years. His previous health had been good, not subject to cough even in winter, and was always very regular and temperate in his habits. For the last fourteen years he had worked at Saltaire, sorting alpaca, and had resided two and a half miles from his work, walking the distance night and morning. On June 25th, 1877, when he got home he said he had opened a bad bag, and had some very nasty and offensive work. He slept well through the night, was up early the next morning, had his breakfast, and did not say a word about feeling unwell. It was noticed that he perspired much at his work, but did not complain; and although he was not well he continued at his "board" till 10 o'clock A.M., when he left, saying he should fall if he did not go. He had great difficulty in walking home, so complete was his exhaustion. He perspired very much, and went to bed. As his breathing was rather oppressed, a mustard plaster was applied across his chest, and he took an emetic of mustard, salt, and warm water. He continued to get worse, and allowed me to be sent for. When I saw him at 7 o'clock P.M. he was in bed, on his back, perspiring freely. He had not shivered or felt chill; there had been no vomiting, thirst, or pain, tongue moist, slightly furred, and felt cold; some wheezing in trachea, very little cough, no expectoration, respiration 34, expiration prolonged; no dulness on percussion, some dry cooing sounds over right lung posteriorly, no moist sounds, pulse 100, very weak and irregular. Temperature, armpit 97·6°, under tongue 98·1°, within rectum 102·2°. At 11.30 P.M. his aspect was anxious, the face pale, with a slightly leaden hue. He said he felt "very poorly," "completely done," but had no pain, vomiting, purging, cough, or expectoration. No dulness on percussion of chest, respiration 40, laboured, long expiration, considerable dry sounds on right side, no moist sounds; temperature, armpit 96·6°, rectum 102·5°, pulse very rapid, irregular, and uncountable; hands, knees, face, and tongue cold, perspiring freely, mind clear. Urine, specific gravity, 1040. He died three hours afterwards. Duration, seventeen hours. No post-mortem examination.

CASE 2. (Attended by the late Mr. LAWBIE).—J. R——, aged fifty-five years, a sorter of alpaca and mohair at Saltaire twenty-five years, was always healthy, temperate, and regular in his habits. On Jan. 26th, 1876, he worked and ate as usual, walked home after work (two miles and a half), and did not complain of being tired, was cheerful during the evening, read the paper, had some oatmeal gruel, and went to bed at 10 o'clock. He slept two hours, when he awoke and complained of a pain in his back. A hot brick was applied, and after some time he got to sleep again. The breathing was not rapid; he had a slight cough, but not worse than it had been for about a fortnight. During the morning he complained of a pain in his chest, going through to the back, for which, about 9 A.M., a mustard plaster was applied, and a mustard and warm-water emetic given. During the forenoon his breathing was quicker. He had no rigor, pain, thirst, purging, or expectoration, but perspired moderately. At 1 P.M. he submitted to have the doctor sent for. At 3 P.M. he was more restless, his breathing more laboured, and he could not bear the weight of a poultice on his chest. Complexion pale, mind clear, and feet cold. He died at 7 P.M. Duration, nineteen hours.

The cause of death of another case was registered "congestion of lungs; fifteen hours." These are examples of death during the stage of collapse. If not so severe, reaction comes on, and is followed by pulmonary congestion and pleural exudation. These cases are very dangerous, being often fatal within four days. If the patient survives a week he generally recovers.

CASE 3. (Attended by Mr. LODGE, Bradford.)—R. M——, aged fifty-four years, a sorter of camel's hair and Persian wool. Previous health good; occasionally got "fresh." On Saturday, Oct. 27th, 1877, worked as usual. On Sunday did not feel very well, got up, but did not go out; slept well the following night. On Monday got up, and dressed at 11.30 A.M.; felt poorly. During the day he got worse; went to bed again, and was seen by Mr. Lodge's assistant at 3.30 P.M. He had no thirst, nor vomiting; the bowels had been moved, and there was some pain in abdomen; cold perspiration, not much cough or expectoration, but complained of oppression at the chest and great weakness. The symptoms rapidly became more severe; he had no sleep, continued sensible, and died at 8 P.M., before Mr. Lodge could see him. Duration, two days.

CASE 4. (Notes by Mr. LODGE.)—J. S——, aged thirty-seven years, was sorting Persian wool on Feb. 15th, 1877. Mr. Germain, my assistant, saw him on the 16th; I visited him several times daily. On the 17th I find this note:—"8.15 P.M. Respiration 42, pulse 120, weak and uncertain; temperature in the groin, 96°. Recommended application of external heat, and gin with hot water to be given. At 11.15 P.M. the temperature had risen to 99°, but at 3.20 A.M. on the 18th it had fallen again; respiration 38, and somewhat sibilant; thirst extreme. At 10 A.M. some lividity of extremities. He died shortly afterwards. Duration, two to three days.

Post-mortem examination.—February 19th, 8 A.M.: The right side of the chest was full of fluid of a pale straw colour; the left side contained a considerable quantity of sanguinolent serum. Both pleurae were inflamed, also the left lung in patches, most advanced at the base and likewise the bronchial tubes. The heart was somewhat enlarged, and fat; but firm. I searched in vain for any appearance of hairs or dust in the tubes, and a careful microscopical

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examination by Mr. Roberts, house-surgeon, Bradford Infirmary, failed to detect in them any foreign matter whatever.

CASE 5. (Notes by Dr. GOYDER, Bradford).—On Sunday afternoon, February 10th, 1878, Dr. McLeish, my assistant, visited T. K——, a woolsorter, who had lately been on "Van" (low-class mohair). His father brought the message, and said he did so on his own responsibility, as his son did not think himself ill enough to require medical aid. The patient was a strongly-built man, who never had any previous illness worthy of mention, and had a good family health history. During the week he had been "out of sorts," and occasionally had spat small quantities of blood, but thought very little about it, and continued his work. He had also taken his part as a cornet player at the theatre the previous night. He was in bed, and complained of cough, difficulty of breathing, and pain across the loins, tongue coated; appetite bad; pulse not indicative of serious disease, although there was some slight dulness posteriorly over bases of both lungs. He passed a restless night. On the following day he was much worse; cough incessant; sputum rusty; breathing difficult; dulness posteriorly well marked, with coarse crepitation over right base. Pains in joints and legs; profuse perspiration. Pulse 130; temperature 104·5°. Third day: Entire absence of pain; dyspnœa increased; sputum bloody; pulse increasing in frequency and diminishing in force and regularity. Temperature 103·7°. Fourth day: Pneumonia progressive, involving the apices of both lungs; dyspnœa increasing; breath excessively foul; almost like what is observed in gangrene of the lungs; pulse 140; temperature 101·5°. He died at 1 A.M., February 14th. Duration, four days.

This case, taken by itself, might be looked upon as a common form of pneumonia due to some specific cause not arising from the man's occupation; but it must be considered in conjunction with the following facts:—He was one of nine woolsorters who worked in the same room, three of them, who had been previously healthy men, and resided miles apart, died within about a month, each after a few days' illness, from apparently the same disease. The room in which they worked is the attic floor of a small warehouse, the ground floor being used for stabling, and the middle one for sorting. It has nine windows on one side, and ten on the other, with ten open fanlights for ventilation. Its capacity is 20,125 cubic feet. Bales of mohair are piled up along the middle of the room, but allowing one-third of the space (the maximum amount) for stowage purposes, 13,417 cubic feet remain for nine men.

CASE 6 (one of the three men above referred to; notes by Mr. MCKENZIE, Bradford).—W. R——, aged twenty-three years, a woolsorter, lately on "Van." On Jan. 21st, 1878, he had worked all day; on the 22nd, not feeling very well, he stayed at home, on the 23rd I visited him. His previous health had been good; he did not complain of anything in particular, but said he felt poorly; had no rigor or vomiting; bowels moved; mind clear; pulse regular and feeble; some cough, with slight frothy expectoration. Examination of the chest did not reveal anything abnormal; indeed, his condition did not present features of any urgency. At my visit the next day I found him pulseless; extremities cold, bathed in perspiration; face and hands livid; breathing accelerated; perfectly sensible, said he felt all right, and wished to be removed to his own home, eight miles off. He was taken in a cab against my advice, and died on the way. Duration, three days.

CASE 7 (another of the three men above referred to, attended by Mr. Whitteron and Mr. Rawson, Low Moor).—Sergeant E——, aged twenty-seven, a woolsorter, never ailed anything before his present illness. He had been a sorter ten years, generally on Scotch and English wools, but during the last three months on grey mohair, "Van," and alpaca. He resided two miles from his work. On Feb. 19th, 1878, when he got home in the evening, he said he was not "half well," and went to bed early. He took some peppermint-tea and whisky, after which he perspired freely.—Feb. 20th: He worked as usual; when he returned home, said he was "right finished," had some tea and whisky, and went to bed, shivered, was burning hot, but did not perspire.—21st: Got up at noon for a few minutes, but felt so weak he returned to bed, and sent for the doctor. He complained of slight pain in the chest, and a troublesome cough. The phlegm was of a yellowish colour, never rusty.—22nd: Pain gone; cough no better.—23rd: Cough left him during the afternoon; had cold perspiration; complained of being "smoored" (overheated, could not get sufficient air).—24th: In the morning said he felt well, and thought he could get up; had no pain or cough. I saw him at 7 P.M. with Mr. Whitteron. His aspect was anxious; cold perspiration; quite sensible; breathing 48; slight rattling of phlegm in trachea; percussion, both sides, front and back, clear. Left lung: moist sounds posteriorly, and at lower part anteriorly; upper part free. Right lung: sounds absent about base posteriorly; mucus râles in front; no vesicular murmur. Heart inaudible; pulse very feeble, uncountable. Temperature, under tongue 96·6°; within rectum 100·6°. Hands and forearms cold, purple; blood stagnating. Died at 11.45 P.M. Duration, five days.

By the courtesy of Mr. Whitteron I was present at the post-mortem examination, made by order of the coroner, sixty hours after death. The body was well nourished; rigidity moderate; sides of chest livid; skin of exposed scrotum and penis of a bright and dark-red colour; under parts of scrotum not discoloured; finger-nails blue-black. The pericardium contained about an ounce of sanguinolent serum. There was a sprinkling of light-coloured thin blood-spots under the epicardium of the left ventricle. Both sides of heart contained dark semi-fluid blood. The auricular septum was of a black-red colour from extravasation. The internal surface of the aorta was of a bright cherry-red colour. Two of the corpora Arantii of aortic valve were black from ecchymoses. Several points of attachment of the cords to the muscular columns of the mitral valve were similarly discoloured. Other parts of heart natural. Each side of the chest contained twelve to sixteen ounces of sanguinolent serum. The lungs floated in water. When cut into the structure appeared very close and full of black blood, but a small portion of the worst part, when removed, floated. No spots of ecchymoses beneath pleuræ, lining walls of chest, or peritoneum, on internal surface of abdominal walls, bowels, and diaphragm. The spleen, kidneys, and mucous membrane of stomach and bowels were not examined. Blood from the heart was added to a solution of sodic sulphate (one ounce to two ounces of water). When settled, the fluid was of a bright ruby colour, indicating change of corpuscles, and partial solution in liquor sanguinis.[1]

(To be concluded.)

ON SOME

PERIODICAL CHANGES WHICH OCCUR IN FIBROID TUMOURS OF THE UTERUS, AND THEIR SIGNIFICANCE.

BY JOHN WILLIAMS, M.D., F.R.C.P.,

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(Concluded from page 765.)

CASE 4.—A. H——, aged forty-two, was admitted to University College Hospital in September, 1878. She has been married twenty-three years, and her husband is still living. Her mother died at the age of forty-eight—just "at the change of life." Flooding had occurred on more than one occasion, and after she had recovered somewhat it recurred and "took her off in a single day." The patient began to menstruate in her twelfth year. She was regular every four weeks from the first, the flow lasting four or five days, and accompanied with slight pain. She has had one child at full term. She did not nurse it in consequence of mammary abscess; she has had no miscarriage; she had rheumatic fever when thirteen, and a slighter attack two years afterwards. She had small-pox fifteen years ago, and from that time she has continued to grow stouter. She says that it is now three years since she enjoyed her usual health. She feels tired and is easily fatigued; has a dragging sensation, and a bearing down in the lower part of the abdomen. The periods are irregular, being more frequent and more abundant than previously, and they are accompanied with a gnawing pain. These symptoms have been present for three years. She complains besides of pain in the

[1] Lectures on the Infective Processes of Disease, by Professor Burdon-Sanderson, Brit. Med. Jour., Dec. 29th, 1877.

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pelvis—worse on the left than on the right side. It is unlike labour pain, and of a gnawing character. The pain is worse when the bleeding is greatest.

When first seen a large tumour was found rising out of pelvis, and reaching nearly to the umbilicus. She was given a hypodermic injection of sclerotic acid. After this she bled profusely. She continued as an out-patient until she was admitted into the hospital in May, 1879. During this time variations in the size of the tumour were noted; but she was seen at irregular intervals only. Occasional injections of sclerotic acid were given, but she got no better.

She was admitted into the hospital on May 15th, and said that the last menstruation began on May 2nd, and lasted till the 12th; very profuse and clotty; she had no serious pain with it, but she had a "waving" sensation in the stomach, with great backache. She added that the swelling in the abdomen was "monstrously large and hard" before the menstrual flow, much more so than it was at the time of examination (four days after its cessation). She complained of sharp pain in the left ovarian region, going through to the back. On palpation, a smooth pyriform tumour was found in the hypogastrium, extending rather more to the left than the right of the middle line of the body. It was freely movable. In the middle line it reached 6¼ in. above the pubes; two inches above the pubes it measured 5½ in. from side to side. The cervix of the uterus was hard, large, and longer than usual. Bimanual examination showed the body of the uterus to be large, and harder than normal, and that there was a globular mass in the right border, close to the fundus, causing a large prominence at that point. The uterus with the growth was freely movable. The sound was introduced for nearly five inches, somewhat to the left, so that the prominence which was subsequently found on the left was the fundus uteri, that on the right a fibroid tumour. Hypodermic injections of sclerotic acid were ordered to be given on alternate days.

On the 19th there was a decided increase in the size of the tumour. It reached to the same point in the middle line above the pubes, but it measured 6⅛ in. transversely. On the 21st it reached 6½ in. above the pubes, and measured 6⅜ in. across. On the 23rd it measured 6¾ in. transversely, and reached within ¾ in. of umbilicus. There was some yellow discharge at this time. On May 26th the broadest cross measurement obtainable, which was 2 in. below the umbilicus, was 7⅜ in.; but 2 in. above the pubes the measurement was 6⅛ in. From the top of the pubes to the highest level of the tumour was 6⅜ in. The increase was more noticeable on the right side than elsewhere, so that the asymmetry of the tumour could be made out by palpation alone now; and the parts of the tumour on both sides of the middle line reached higher than the part in the middle line itself; so that on the 26th it was found that the tumour had not increased in the middle line, but on the right side it reached ¾ in. above the umbilicus. The patient complained of various uncomfortable feelings at this time, such as cold shivering in the head, fluttering and throbbing in the hypogastrium; but she had no actual pain. On the 29th the tumour reached in the middle line to the umbilicus, and about ¾ in. above that point on each side. At 8 o'clock in the evening the catamenia appeared, the discharge being pale and scanty. On the 30th the upper border of the tumour on the right side was 1 in. below the level of the umbilicus; on the left it was somewhat lower; in the median line ¾ in. On the 31st it measured 6 in. above the pubes in the median line. The widest measurement across was 5½ in., about the same size as on admission. On June 6th the tumour was within 1 in. of the umbilicus; the broadest measurement was 6 in. The catamenia ceased on June 9th. The loss was much less than usual. After the commencement of menstruation, however, there appeared little or no diminution in the size of the tumour. Since her discharge from the hospital the catamenia have been regular, and not excessive.

This case is valuable, inasmuch as the transverse measurements were taken, and the increase and diminution in them are not subject to any objection that may be taken to the vertical measurements.

CASE 5.—M. T——, single, aged thirty-six, became an out-patient of University College Hospital in June, 1879. It was noted then that she had a fibroid tumour reaching to within three fingers' breadth of the umbilicus. During the time the hospital was closed she said the uterus had been dilated with tents, with a view to the removal of the tumour, but this was not found possible. She became an in-patient of University College Hospital on Dec. 2nd. She was born in the country, but had lived in London as a servant for the last eleven years. She had not had any serious illness except "low fever" about fourteen years ago, after which she was very weak, but she soon picked up her strength, and never again complained of weakness until three years ago. She began to menstruate about sixteen, and was until her present illness regular "to the day." The flow was moderate, and used to last three or four days, with some bearing-down pain. Five or six years ago the flow began to increase in quantity, became very profuse, and lasted a week or more. It was also clotty. Lately it has become still more abundant; the last two or three periods have lasted a fortnight, the discharge being more profuse during the first few days. She had but slight bearing-down pain with it, but she complained of pain in the side at the margin of the ribs, of nausea and sickness, especially at the menstrual epochs. She was very anæmic though stout. The heart and lungs were healthy, but the heart's impulse was very feeble, and the pulse small and compressible. In the hypogastric region was felt a smooth, hard tumour rising out of the pelvis, almost median and symmetrical, but, if anything, larger on the right side. It had the shape of the enlarged uterus, it was not tender or lobulated, it was freely movable and dipped down into the pelvis and reached upwards to within 1¾ in. of the umbilicus. On vaginal examination the cervix was found long, softish, and the os patulous. The upper part of the pelvis was filled by a hard, smooth tumour, continuous with the cervix, larger on the right than the left side, movable and not tender. The sound entered 3¾ in., and a little to the left of the middle line; its introduction gave no pain. This was on Dec. 3rd, and the last menstruation ceased Nov. 28th.

On Dec. 5th the distance between upper part of tumour and umbilicus was 1 in. On the 11th it was also 1 in. On the 14th the tumour reached to the umbilicus. On the night of the 14th menstruation set in. The flow was not profuse, and she had less pain in the abdomen. The patient had been complaining of pain in the belly for a week. On the 15th the tumour reached within 1½ in. of the umbilicus. This was about twelve hours after the flow began. On the 16th the flow was very profuse. A hot-water bag was applied to the lumbar region, and the discharge became very much less. The use of the bag was continued during the period. On the 19th the patient felt faint and the discharge became again profuse. After this the discharge diminished in quantity, and ceased on the 22nd. From the 15th to the 20th the distance from the upper border of the tumour to the umbilicus was 1½ in. On the 22nd it was ½ in. The observations of the case during the next fortnight were not carefully made or recorded, but it is noted that the distance was 1 in. on Jan. 1st, and 2 in. on the 12th, and that menstruation began on the 15th, that it was very profuse, and that the patient felt faint and complained of dragging pains in the pelvis. She was ordered hot-water vaginal injections twice a day, but they were only used for a few days, and hypodermic injections of sclerotic acid twice a week. On the 16th the flow was less and the fundus reached the umbilicus. On the 21st the distance was 2½ in., and the discharge had almost ceased. The loss during this epoch was much less than during the previous one.

On Jan. 25th, the distance between the upper border of the tumour and the umbilicus was 2½ in. On the 26th, the distance was 1¾ in. On the 27th, the distance was 1 in. On the 29th, the distance was 1 to 1½ in. On Feb. 2nd, the distance was ½ in. On the 4th, the distance was nearly 1 in. On the 5th, the distance was ¾ in. On the 6th, the distance was 1½ in.; tumour much harder than usual. On the 7th, the distance was 1½ in. On the 8th, the distance was ¾ in. On the 9th, 9 A.M., the distance was about ¾ in.; at 9 P.M. the distance was 2¼ in. An injection of sclerotic acid was given after making the last measurement. The patient says that she thinks the tumour is always smaller in the morning about 7 A.M. On the 10th, at 10.30 A.M., the distance was 1 in. On the 11th, at 11.30 A.M., the distance was 1 in.; at 10 P.M. ⅞ in. The nurse and patient state that the tumour was smaller this morning after a copious stool than it was last night. On the 12th, the distance was, at 10 A.M., 1 in.; at 9 P.M., 1⅛ in. On the 13th, at 10 A.M., the distance was 1 in. I thought on the 12th that the tumour enlarged and diminished during examination. There was no question of this on the 13th; for while the hand was on the tumour it decreased and became harder until the upper border was rather more than 2 inches from the umbilicus, and it relaxed

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and increased until the upper border was about 1 inch from the umbilicus. On the 13th, at 8.30 P.M., the distance from umbilicus was ¾ in. On the 14th, at 10 A.M., 1¾ in.; at 4 P.M., 1¼ in.; at 9.30 P.M., 2 inches. Patient began to menstruate at 8 this morning, but the flow was extremely slight until 8 P.M. On the 15th, at noon, the distance from umbilicus was 1 in. The tumour was markedly tender; patient has had colicky pains all the morning; the flow was rather free. At 11 P.M. the distance from umbilicus was 2 in.; the tumour was harder than usual. On the 16th, at 10 A.M., the distance from umbilicus was 1¾ in.; the flow was profuse. On the 17th, at 4 P.M., the distance was 1¾ in.; at 9 P.M. 2 inches. On the 18th, at 2 P.M., the distance was 2 inches. I am able to give these figures through the assistance given me by the resident obstetric assistant at the hospital, Mr. Dawson Williams, M.B., who watched the case carefully, and took most of the measurements. No hypodermic injection was given after the 9th until the 17th, but owing to the profuse flow one was then administered.

The variations in the size of the tumour in this case are somewhat curious, and are, perhaps, partly dependent on the use of sclerotic acid, but yet many of them appear to be independent of that. The tumour appeared to increase somewhat in size during the nineteen days following the cessation of the flow until Feb. 9th, five days before the appearance of the next flow, when a sudden decrease of 1¼ in. took place in it; then the tumour again increased in size and reached to a distance from the umbilicus varying between ¾ in. and 1¼ in. until the day on which the catamenia appeared, when the tumour diminished and the distance increased to 2 in. The contractions of the organ were also observed and measured just before menstruation; they were well marked.

The number of cases recorded in this paper are few, and only sufficient to point out that some very interesting and important changes do occur periodically in some fibroid tumours of the uterus. The number is not sufficiently large, and the cases have not been observed with sufficient detail, nor for a sufficiently long period, to throw light upon a number of questions that one would like to have answered. There are, however, some remarks I wish to make upon these cases.

The tumours were all of such magnitude as to have ascended out of the pelvis, and to have occupied the abdominal cavity in part. Observations could not be made with such care and accuracy in such growths when small and occupying the pelvis as when large and projecting above the pelvic brim; indeed, such observations may be impossible in the former conditions. I endeavoured to discover by weekly examinations if any changes occurred in one case in which the tumour was small, and in the pelvis, but I was unable to arrive at any conclusion.

The tumour was in each case lodged in the wall of the uterus; it was in no case pedunculated, though in two of the cases it formed a distinct prominence under the peritoneum on the outer surface of the uterus. In the other three the whole of the posterior wall of the body of the uterus seemed to have been involved in the growth, so that the organ appeared to be symmetrically enlarged when examined bimanually. I do not know whether subperitoneal fibroids undergo monthly changes or not, but they do alter during gestation. In one case in which a fibroid about the size of a small walnut was found on the right side, attached to the uterus by a pedicle so short that it might almost be characterised as sessile, I found that it increased in size as gestation advanced, and about the seventh month it could be felt to the right of the umbilicus spread out like a softish cake about the size of the palm of the hand. Some weeks after her confinement the patient came to see me again, and I found the tumour, but it was smaller than when I examined her first, about the third month of pregnancy, and in the course of a few weeks I could find no trace of it.

The next point common to all the cases is that there was in all of them profuse hæmorrhage. In three there was menorrhagia, and in two metrorrhagia. Whether the changes occur in cases in which there is no hæmorrhage, or where menstruation remains unchanged or is absent, or after the menopause, I cannot say. I have had opportunity of examining one case only in which menstruation had remained throughout unaltered. It was in private practice, so that I could not see her as often as is necessary to observe the case fully. She was thirty-six years of age, was and had always been regular in time and amount. She had a large irregular-shaped fibroid reaching to the umbilicus. I saw her every week for a month, but could find no change in the size of the tumour.

The amount of the change seems to vary somewhat in different cases. In one case the variation was not accurately measured. In one case it was 1 in. in the vertical measurement; in two, 1½ to 1¾ in.

The transverse measurements were made in one case only, and in that the variation was nearly 2 in. The probable explanation of this variation appears to be the difference in the density and seat of the tumours. The densest and hardest changed least. In the case in which the transverse increase was so marked, the tumour was lodged in the right border of the uterus, a position favourable to such a mode of enlargement. Two of these cases (3 and 4) show more than the enlargement of the fibroid; they show also the enlargement of the uterus, for the tumour projecting beyond the surface of the uterus formed a prominence separated by a depression from the fundus of the organ. It was found in these cases that the body of the uterus enlarged and diminished again with the increase and diminution of the tumour. In one of these cases the variation in the length of the uterine canal was found to be one inch.

It is generally believed, and indeed there is no doubt, that the uterus enlarges and diminishes in some way in connexion with menstruation. The belief has been that the enlargement takes place in consequence of congestion occurring at or about the menstrual epoch, and that it disappears after the flow has ceased, and in consequence of depletion. There can, I think, be little doubt that the alternations in size which occur in the uterus subject of fibroid tumour is only an exaggeration of the alternation taking place in the healthy organ; and if this be admitted, it appears pretty certain that the view of menstruation which has hitherto been accepted is not correct. The supposed period of rest—the intermenstrual interval—is no period of rest at all; but, on the contrary, one of active growth, for the enlargement does not take place during the flow, but during the interval. The increase can be noted in favourable cases as early as a week after the cessation of the flow, and then every third or fourth day until it ceases. It is difficult to determine when the decrease takes place, whether before, with, or after the appearance of the flow.

In all the cases it had taken place before twenty-four hours, in some before twelve had elapsed after the appearance of menstruation. In one it had occurred nine hours before, and in one uterine contractions were noted three days before the flow appeared. It is not to be inferred that in any of the cases the decrease began after the appearance of the flow, but simply that the cases were not watched with sufficient assiduity to determine the exact time it happened. In the two cases in which the decrease was observed before menstruation began, some decrease took place during the process also.

The question naturally arises, What part does this decrease play in the menstrual process? I believe it is in part the cause of the hæmorrhage, because in all the cases it took place at the beginning, and not at the end of the flow, and it remained practically unaffected by the quantity lost. It matters not whether the flow was scanty or profuse, the diminution in size took place just the same. It seems to me that the decrease depends upon contractions of the uterus and tumour, and the course of events to be the following:—Contractions of the uterus and fibroid, expulsion of the blood from their vessels into the plexuses of the pelvis, the vessels of the broad ligament and the decidua, giving rise to the appearance of congestion, which has been described as present during, and the cause of, menstruation. The rush of blood into the vessels of the decidua causes them to burst and menstruation follows.

The clinical value of the changes described cannot now be estimated; the data are insufficient. The careful observation of pelvic and abdominal tumours, as well as of a large number of cases of fibroids of various kinds, is necessary before any trustworthy conclusions can be arrived at.

DEATH FROM EATING MUSSELS.—A girl, seven years of age, whose parents reside in Sinclair's Close, Port-Glasgow, gathered some mussels from the quay on the 22nd ult., had them boiled, and ate them. On the following day she suffered from severe vomiting. Medical aid was sent for in the evening, but the doctor just arrived in time to see the child die.

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COTTON-WOOL AS A VEHICLE FOR MEDICATING THE NASAL REGION.

By EDWARD WOAKES, M.D.,
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DISEASES of the nose and post-nasal space have of late attracted a considerable share of attention, but scarcely perhaps so much as they deserve, considering the troublesome nature of the affections to which these regions are obnoxious, and especially how frequently in this climate they become the seat of chronic mischief as the sequence of ordinary catarrh. A great difficulty in dealing with such cases has been the want of a satisfactory means of applying medicaments to the post-nasal region with any prospect of maintaining them in contact with the diseased surfaces. The numerous washes, lotions, vapours, &c., respecting the application of which much ingenuity has been displayed, share alike in this respect, that their action is so temporary as to effect little more than a cleansing and disinfecting influence. Irrigation, however, in one or other of its forms will always play an indispensable part in the treatment of nasal and post-nasal diseases, for until incrustations and decomposing accumulations of muco-pus have been removed through its agency, little result would follow from more permanent applications.

Attempts have been made to overcome the difficulty of topically medicating these regions by mixing the drugs selected for the purpose with a gelatine basis, and introducing these in the form of conical-shaped bougies. Patients using them complain of the annoyance caused by their undergoing solution and trickling down the pharynx, producing cough and disturbance of rest. Nevertheless they have served a good purpose, and are still used by some practitioners. The insufflation of powders or medicated snuffs is sometimes adopted, but practically all these measures are insufficient for the purposes in view.

About three years ago, wishing to secure a better method of applying iodoform to the locality in question, I suggested its diffusion through cotton-wool in definite proportions. Pellets of this *iodoform wool*, introduced through the anterior nares, proved an efficacious mode of using the drug, and the practice has been extensively followed. It can be retained the required length of time without annoying the wearer, who is for the most part unconscious of its presence; it is removed when the douche is used. Encouraged by the success of this attempt, and aided by Mr. Bullock of Hanover-street, who perfected the preceding preparation, I have since adopted the method of diffusing a number of other drugs through cotton-wool for use in the nasal and post-nasal regions.

The method of applying medicated wool to the post-nasal space is very simple, and can be improvised under almost any circumstances. It is as follows. The quantity of wool determined upon, usually from two to three grains by weight, is twisted spindle-shaped, but loosely, upon a piece of thread or silk; the thin ends are brought together, and tied with a knot; thus the spindle-shaped pledget of wool is doubled upon itself, and secured firmly to the thread, having now a pear-shape, the stalk being represented by the thread. A blunt probe is engaged in the wool, and made to conduct it along the floor of the nose to the spot where it is to be retained. The process is then repeated on the other side, the threads from each pledget hanging out from either nostril. These are now tied together below the septum, by which means the patient will be assured the wool will not be swallowed. In the morning, supposing the application to be made overnight, they can be withdrawn by pulling on the threads. In this way any drug that may be selected can be introduced with ease, and with a little skill in the manipulation the vault of the pharynx, Rosenmüller's fossa, or the neighbourhood of the Eustachian tubes, may be topically medicated. If desired, several such pledgets may be introduced in succession, until a sufficient quantity has been placed *in situ;* the threads belonging to all can then be tied together, and secured.

The above process is so simple that I ought perhaps to apologise for dwelling on its details. It has, however, a practical bearing, inasmuch as it enables the patient to see for himself that the wool is withdrawn.

There are other advantages attending this use of medicated cotton-wool irrespective of the special virtue of the drug employed. Thus it absorbs discharge, and where necessary disinfects it. Further, when placed in the nasal meati (for which purpose it is unnecessary to attach it to a thread, as it will remain where it is placed), it exerts a beneficial mechanical support to the erectile-tissue-like arrangement of the vessels supplying the mucous membrane of the turbinated bones. It is this peculiar vascularity of the part which admits of the great swelling and profuse discharge often seen to occur quite suddenly in some patients. When the vessels of this structure have been repeatedly congested, their tendency is to remain permanently swollen, and against this issue the pressure exerted by the cotton-wool affords a curative influence, quite irrespective of the therapeutic action of the drug with which it is charged.

As my object in this communication is not to write a treatise on nasal therapeutics, but simply to place in the hands of the profession a ready method of carrying into effective practice the remedies they may themselves select, the further object of this communication will be answered by a brief statement of the formulæ of proved efficacy for the purposes in view.

Besides the iodoform wool already some time in use, the following will be found of most frequent utility:

ASTRINGENTS.

Perchloride-of-iron Wool.—Cotton-wool, one drachm; glycerine, ten minims: tr. fer. perchlor., one ounce.

Tannin Wool.—Cotton-wool, one drachm; glycerine, ten minims; tannin, one drachm; rectified spirit, six drachms.

Alum Wool.—Cotton-wool, one drachm; glycerine, ten minims; alum, half a drachm; water, one ounce.

Rhatany-Kino-Catechu Wool.—Cotton-wool, one drachm; glycerine, ten minims; tr. catechu, vel kino, vel rhatany, one ounce.

Hamamelis Wool.—Cotton-wool, one drachm; glycerine, ten minims; tr. hamamelis, half an ounce.

ANTI-CATARRHAL.

Cubebs Wool.—Cotton-wool, one drachm; glycerine, ten minims, tr. cubebæ, one ounce.

ANTISEPTIC, DISINFECTANT, AND STIMULANT.

Camphor Wool.—Cotton-wool, one drachm; glycerine, ten minims; æth. rect., one ounce.

Boric or Boracic Wool.—Cotton-wool, one drachm; glycerine, ten minims; boric acid, one drachm; sp. vin. rect., six drachms.

Iodine Wool.—Cotton-wool, one drachm; glycerine, ten minims; tr. iod., half an ounce.

SEDATIVE.

Opium Wool.—Cotton-wool, one drachm; glycerine, ten minims; tr. opii, half an ounce.

General directions.—Mix the glycerine with the tincture or other solvent, saturate the wool with the liquid, and dry.

Since writing the above, I have had some preparations of salicylic and carbolic acid made on the same principle, but have as yet no experience of their usefulness to report.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

A CASE OF SUPPURATIVE MENINGITIS AND ABSCESS OF THE BRAIN; REMARKS.

(Under the care of Mr. FIELD.)

S. G——, aged eighteen, an under-gardener at Goodwood-park, was admitted on Jan. 24th, 1880, with a purulent discharge from the right ear. He walked into the hospital, and stated that he had had a discharge from the ear for sixteen years, following scarlet fever. He had no paralysis

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of any kind, but complained of pain in the head. Eight leeches were applied around the right ear, with the immediate effect of relieving all pain. Iodide of potassium mixture was prescribed, and the ear was ordered to be syringed four times a day with a weak carbolic acid lotion.

Three days after admission, the house-surgeon was called to him, but the patient died very suddenly before he arrived.

The following are the notes of the post-mortem examination, which was most carefully made by Mr. A. J. Pepper:—There was suppurative meningitis over the petrous part of the right temporal bone, and in the posterior fossa of the skull, above the tentorium cerebelli, and also to a slight extent in the cerebellar fossa. Over the outer part of the petrous bone was a layer of pus between the dura mater and the bone. The dura mater over the bone was in a sloughy condition over a surface the size of a horse-bean. The inner surface of the mastoid bone, where it enters into the formation of the lateral sinus, was of a blackish-grey colour, and the bone here was so soft as readily to allow of penetration. For the same extent the sinus itself was occupied by a very firm thrombus, partly black and partly of a yellowish-brown colour. The internal auditory meatus was healthy. There was a thick layer of puriform lymph on the under surface of the posterior half of the right temporo-sphenoidal lobe of the brain, and on the inner surface of the occipital lobe. There was an abscess, with dirty-grey, sloughy, and purulent contents in the right hemisphere of the cerebellum, external to the corpus dentatum. It was of the size of a large walnut. The brain substance generally and its membranes were congested. There was a slight excess of clear ventricular fluid. There was no disease of the arteries, nor thrombosis of the superficial or internal veins. The membrana tympani had disappeared. There was some pus in the external auditory meatus. The site of the natural petrous and mastoid cells was occupied by an irregular cavity, which contained blackish-grey, purulent matter, and around this the bone was softened and reddened for some distance, evidently from progressive caries. The tympanum was filled by a yellow caseous matter, which blocked the Eustachian tube. No trace of the incus or stapes could be discovered; the malleus was loose in the cavity, and its head was carious. The chorda tympani nerve could only be traced for a short distance after entering the tympanum. The vestibule was occupied by soft caseous matter, which under the microscope was seen to consist of fat granules, and shrunken and flattened epitheloid cells. The cochlea, semicircular canals, aqueduct of Fallopius, and carotid canal were healthy, and the facial nerve appeared uninjured.

Remarks by Mr. FIELD.—The diagnosis of abscess of the brain is notoriously uncertain, and the above case is a good example of the sudden manner in which it is frequently revealed. It appears clinically under many aspects, and that we may the better be able to appreciate the significance of the symptoms which exist, it will be well to glance briefly at the pathology of the disease. Its causes are various, and the symptoms it gives rise to vary with the cause. It has been stated by pathologists that abscess of the brain is never a primary affection, and this fact may be now taken as well established. In all cases, therefore, in which we meet with cerebral abscess after death, we should never feel content till we have obtained evidence of past or present suppuration in some other portion of the body, and it may be in any part. The abscess of the brain may present itself in various stages, as either a patch of red-coloured acute softening, which has not got broken down to form an abscess; as a ragged cavity, with grey, soft, and irregular walls, containing pus, which may be more or less discoloured, the change in either case being an acute one; or, finally, it may appear as a well-defined cavity, with tough and fibrous walls, which contains a green-coloured, opaque, fluid resembling pus, but which on examination may be found to contain no pus cells, they all having undergone fatty and granular degeneration. It may also contain cretaceous material.

These abscesses are usually single, and occur most commonly in the posterior part of the brain, and out of the way of the motor tract; paralysis is, therefore, but rarely associated with them; they affect the white matter rather than the grey, most frequently that of the posterior part of the middle lobe, the posterior lobe or the cerebellum; occasionally they occur in the corpus striatum or pons. Broadly speaking, we may say that the more acute forms of the disease give rise to the signs usually attributed to meningitis or encephalitis, while the more chronic ones give rise to no symptoms whatever until the abscess extends sufficiently near the surface of the brain to light up an inflammation of the membranes, this being the usual mode of termination. Numerous cases have been recorded, in which there can be little doubt but that the condition has existed for months, or even years, before death, without giving rise to a single indication of cerebral disease. Occasionally abscesses are found in the brain after death, which have never given rise to any cerebral symptoms during life, and would probably never have done so, had life been prolonged for an indefinite period. Appearances have been described which suggest that such abscesses sometimes recover; the pus, it has been said, undergoes fatty degeneration, and becomes quiescent, the fat is reabsorbed, the fibroid sac shrinks and gradually contracts upon a cretaceous residue. On the other hand, cerebral abscesses have been known to penetrate the skull and open externally, forming a hernia cerebri. By far the most common cause of abscess of the brain is disease of the middle or internal ear producing necrosis of the temporal bone; this has been said to account for about one-third of the cases. The circumstances under which it occurs from this cause are various, but they vary between two chief types; in one there is extensive disease of the bone, with pus below the dura mater, and frequently thrombosis of one or more of the venous sinuses in connexion with the petrous bone. The dura mater itself is thickened, and the arachnoid and pia mater adherent over it; the brain tissue in the immediate neighbourhood is more or less inflamed and softened, and the abscess is near the surface; it is commonly found associated with a general meningitis. These cases give rise to symptoms during life, the symptoms being those of meningitis or encephalitis; their duration is uncertain, usually not less than ten days, frequently some weeks. It is to this group that the present case belongs; and considering the character of the lesions, the duration of severe symptoms was remarkably short. The cause in such cases is evident, either in the extension of the inflammation by contiguity of structures, or in thrombosis of the veins passing backwards into the cerebral substance. In the other type of abscess from ear disease the relation of the two conditions is more obscure; here is, perhaps, very slight necrosis of the petrous bone, which is found with difficulty, no adhesions of membranes, and perfectly healthy cerebral tissue intervening between the abscess and the surface of the brain; the veins, moreover, are not thrombosed.

It is hard to say how these abscesses are produced; that they are secondary to the disease of the petrous bone it would be impossible to deny, but by what means the materies morbi is conveyed from one place to the other we have at present no evidence to show, although the assumption naturally is that some infective material is conveyed either by lymphatics, arteries, or veins. But it is difficult to trace the connexion between these conditions when the distance is so short; still more difficult is it to do so when the abscess is secondary to some collection of pus in other parts of the body, such as an empyema, an ischio-rectal abscess, or one in the shaft of a long bone. It is not a little remarkable that the brain, unlike all other organs, should be liable to the deposition of these secondary abscesses, and that without any signs of a general pyæmia. These, of course, cannot be strictly compared to the secondary abscesses occurring in the liver, for in this case the peculiar blood-supply affords a ready explanation. These abscesses are much more chronic in their nature than those previously described. It is these which often give no signs during life; if rather more acute, they may terminate by exciting a meningitis when they approach the surface, which is always suppurative and very severe. In this form death occurs in a very short time from the appearance of the first symptom, although the abscess may have existed for months.

We find abscesses of the brain having the same pathological and clinical history as these two types, or intermediate between them, resulting from disease or injury of the nose, eyes, skull, scalp, or face, or from operations upon these parts. The cerebral symptoms which arise after injuries to the head may be due to abscesses connected with the dura mater, or to such abscesses of the brain as have been described; it is often impossible to distinguish between them clinically. It should be remembered under all these circumstances cerebral symptoms may arise, which would seem to indicate the existence of abscess or meningitis, but that these symptoms occasionally clear up, and the patient

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makes a good recovery; in all of these cases our prognosis should therefore be most guarded.

Abscesses of the brain occur occasionally as a result of a general pyæmia; in these cases the abscesses are usually multiple and small. Finally, it is said to result from embolism of one of the cerebral arteries. In this case it is usually associated with sudden paralysis and the usual symptoms of embolism, followed by headache, and sometimes more or less marked signs of encephalitis. Red softening is more frequently found associated with these symptoms. Occasionally this has broken down and formed an abscess, or rather the softening has been so diffluent that it almost justified the name of abscess.

DONCASTER INFIRMARY.

DOUBLE CONICAL CORNEA, OCCURRING DURING PREGNANCY; EXCISION.

(Under the care of Mr. J. B. WITHINGTON.)

THE following case would appear to come under the category of diseases of the eye occurring in connexion with pregnancy, referred to by Mr. Henry Power in his interesting paper lately published in THE LANCET. It was brought under the notice of the Doncaster Clinical Society some months ago, and was at the time attributed to the general condition of anæmia and exhaustion dependent on pregnancy and lactation, from which the patient was suffering. The results of the method of operating compare favourably with those obtained by trephining, both as regards the absence of adhesion of iris and ultimate vision, probably on account of the more perfect apposition of the edges of the wound in the oval than in the circular incision.

Mrs. G——, aged twenty-three, was admitted into the infirmary on May 3rd, 1878. She had an infant eight months old, which she had suckled almost up to the time of admission. During the later months of her pregnancy she noticed her sight becoming gradually worse, and about a month before admission, she perceived an undue prominence of cornea. She was a pale, anæmic, spare looking woman. Both eyes presented marked conicity of cornea, the most prominent part being opposite the centre of the pupil. The right cornea was opaque and nebulous at the apex; the left was clear.

On admission the sight was exceedingly dim in the right eye, with which she could with difficulty read Snellen No. 20 at three inches; with the left she read Snellen 20 at ten inches. She was unable for some time before admission to see her way about out of doors. Atropine was dropped daily into the eyes and iron and strychnia were given internally. On May 15th an oval piece of cornea was removed with a fine Graefe's knife from the apex of cone of the right eye one-eighth of an inch in length and one-twelfth of an inch in width. The knife was directed from above downwards, the small flap was raised with a fine pair of forceps, and excised. After the escape of the aqueous humour the edges of the wound fell into close contact with each other. Atropine was dropped daily into the eye, but the eyelids were not opened until forty-eight hours after the operation, when the eye was found to be quiet and clear. The aqueous was retained and the pupil was well dilated.

On May 25th a similar operation was performed on the left eye. On examining the eye forty-eight hours after the pupil was found contracted and the aqueous escaping; but by keeping up firm pressure for a few days with a compress bandage, complete union of the cornea took place without any adhesion of iris. The immediate effect on her sight of the operations was noticed by the patient, who was able to read a book of rather large type before leaving the infirmary early in June.

On May 20th, 1879, she read No. 1 Snellen at five inches with nearly equal facility with both eyes. She read No. 2 Jäger at six inches with the right eye, and No. 4 at four inches with left eye. She could do ordinary needlework without difficulty. There was scarcely any opacity of the right cornea, but there was a small leucoma in the left, on account of which it may be advisable at some future time to perform an iridectomy.

When last seen there was no return of the conicity. It is probable that the original cause of the disease is to be found in the debility and exhaustion caused by lactation in an already anæmic person.

As regards the relative advantages of excision of oval flap and trephining, with special reference to the danger of adhesions of iris, it may be doubted whether the operation chosen is not of less consequence than subsequent care and attention.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Encephalocele.—Extra-uterine Fœtation.

AT the meeting on May 5th, Dr. Playfair, President, in the chair,

Dr. GODSON showed photographs and a cast of the head of an infant the subject of a large Encephalocele. Nearly half of the brain was contained in a sac outside the cranium, a very narrow peduncle, passing through the anterior fontanelle, connecting it with the portion within the skull. The head with the tumour resembled an hour-glass. The child lived a month, and had never cried. It had no convulsions till just before death.

Dr. BRAXTON HICKS, in some observations on Recording the Fœtal Movements by means of a Gastrograph, called attention to two notes published in the Proceedings of the Royal Society for March, 1879, entitled "On the Auxiliary Forces concerned in the Circulation of the Pregnant Uterus in Woman," and "On the Supplementary Forces concerned in the Circulation of the Abdomen in Man." In the present paper tracings were brought forward taken from the abdomen by means of an instrument like a cardiograph and a polygraphic cylinder. Fœtal movements of two sorts were shown: (1) sudden kicks, shown by sharp marks indistinguishable from movements of the maternal limbs; (2) slow turnings about *in utero*, shown by a gradual elevation of the line of wave for some distance. Both kinds of marks were superposed upon the respiratory waves.—Remarks were made by Dr. Edis, Dr. J. Williams, and Dr. R. Barnes, and Dr Hicks replied.

Dr. BRAXTON HICKS then related a case of Extra-uterine Fœtation about the Seventh Month of Pregnancy; Sudden Urgent Symptoms; Removal of Fœtus by Abdominal Section. The patient, aged twenty-nine, married ten years, had had two children, one seven years, the other four years since; no miscarriages. In April, 1879, she was taken with severe vomiting and abdominal pains, for which she was kept in bed a month. After getting up she said that her womb came down. In July she was admitted into Guy's Hospital, under Dr. Galabin, and then thought herself about six months pregnant. Only the fact of pregnancy, together with a swelling behind the cervix, was then made out, and she shortly left the hospital. In the first week of August she was readmitted under the author, in the absence of his colleague. A tense enlargement then extended on the right side three inches from the middle line up as high as the umbilicus, whence it rose nearly to the left ribs, towards the flank, and extended downwards, filling the whole left hypogastric region. This evidently contained a living fœtus. A so-called "placental bruit" was heard over the centre of the abdomen, below the umbilicus. The cervix protruded through the vulva, the external os was patulous, so that the finger could reach the internal os, which was closed. The sound could not be carried into the uterus beyond the unimpregnated length. For greater assurance he had a sponge tent introduced into the uterus, but nothing was found within but some fragments of decidua. At the end of a week she was suddenly taken with increased pain and distension of lower abdomen, shortly followed by collapse and pallor, pulse rising to 140, thready; temperature normal. She said that while sitting by the side of the bed she felt something give way in her lower abdomen, upon which the fœtus kicked violently, and then she became faint, and shortly after the movement ceased entirely. Three hours later the author found her in great distress from the tension; saw that evidently blood had been effused internally, and decided to operate, as her only chance for life. This was done under carbolic spray, the incision being made in the median line, which had now become the most prominent part. A cavity was opened containing a large quantity of dark

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watery blood, which had evidently been effused within the placental area, and had been the cause of the symptoms. After its escape the chorion was ruptured, and the lifeless fœtus, about the size of a large six months' normal fœtus, extracted. Not much more blood flowed, and the wound was closed, except an opening an inch and a half long. The patient, however, began to show signs of sinking, and died shortly after. At the autopsy it was found that the placenta extended up the abdominal wall in front almost to the umbilicus, and was not attached to the uterus or bladder. The sac was adherent in all directions to the intestines and other parts. Its lowest portion was attached in front of the uterus and behind the bladder. On the anterior surface of the uterus was a pedunculated fibroid, as large as a walnut. The right Fallopian tube, firmly bound by adhesions, crossed the anterior surface of the uterus, and was attached to the lower surface of the fibroid, terminating in some loose tissue under the placenta. The right ovary was adherent to the right side of the amnial sac, and contained a large corpus luteum. The author remarked that the case was the analogue of concealed accidental hæmorrhage in normal pregnancy—that it was a clear case of true ventral pregnancy. He thought that carbolised sponges might be kept within for a time, and a compress maintained, since rigid antiseptic treatment would be impossible.—Dr. WILTSHIRE thought that there was no doubt that abdominal pregnancy did occur, and instanced a case of Kœberlé's in which, after ablation of an inverted uterus, pregnancy ensued by means of a fistulous opening at the top of the vagina; also one in which the roof of the vagina was ruptured by forcible coitus. He thought that in the present case, as an exception to the general rule, it might have been preferable to remove the placenta.—Dr. ROUTH thought that if the position of the placenta had been made out by auscultation, the incision might have been made away from the median line, and wounding the placenta avoided. He also asked why Dr. Hicks did not, in preference to performing gastrotomy at all, aspirate the sac, or kill the fœtus by injecting morphia into the amnial cavity. The separation of the placenta seemed to have been caused by the fœtal movement. —Dr. GERVIS mentioned a case in which he had performed primary gastrotomy for extra-uterine fœtation. Not much difficulty was met with, and but trifling hæmorrhage, the position of the placenta being mostly in the pelvis. But the patient died in about three days as the result of a continuous hæmorrhagic loss through the drainage-tube. The autopsy showed no sign of peritonitis, but separation of the placental margins.—The PRESIDENT was surprised to hear Dr. Hicks say that perfect antiseptic treatment was impossible, and thought that the chief hope of progress in such cases lay in carrying it out completely, however difficult it might be.—Dr. J. WILLIAMS thought that the insertion of a tent into the cervix was superfluous for diagnosis, and that it possibly had something to do with the sudden accession of severe symptoms. — Dr. EDIS called attention to the monograph of the late Dr. Parry of Philadelphia, who was led, by his statistics, to condemn the puncture of the cyst, and to recommend either removing the fœtus entire, or allowing the cyst to remain uninjured.—Dr. BARNES was inclined to think that the present might be reckoned among a few exceptional cases, in which removal of the placenta might be justifiable, the hæmorrhage being afterwards stopped by compressing the abdominal walls together.—Dr. BRAXTON HICKS said that most of the speakers had mistaken the state of the case. Urgent symptoms suddenly came on while he was waiting for a short time to consider the best line of treatment. The tension was then so great as to obliterate the previous outline, but he did not think that the position of a souffle would always absolutely determine the site of the placenta. He differed from Dr. Routh, and regarded the violent saltation of the fœtus as evidence of its impending death from asphyxia. No great amount of recent blood was lost during the operation, but the question he had asked was, What the treatment should be if the placenta were cut, the fœtus being still alive? He could not agree with Dr. Barnes that the placenta might be removed without too great risk of hæmorrhage. In answer to the President, he thought that it would be extremely difficult to carry out the antiseptic treatment perfectly, though it might be possible under advantageous circumstances.

Dr. G. F. FULCHER narrated two cases of Extra-uterine Fœtation. Case 1. On July 10th, 1872, the author was called to the wife of a cottager, who was suffering from intense abdominal pain, and showed signs of violent internal hæmorrhage. There was no vaginal discharge, uterus moderately enlarged, fundus tilted backward. Extra-uterine fœtation, with rupture of sac, was diagnosed, and the patient died in a few hours. At the autopsy a fœtus of about five months was found in the abdomen, together with a detached placenta, whose attachment had been parietal. Both tubes were intact. The final attack came on while the patient was drawing water from a well. There had been frequent uterine hæmorrhage previously. She was thirty-two years old, and this was her third pregnancy.—Case 2. A woman, thirty-two years old, pregnant for the second time, was expecting her confinement in November or December, 1879. On Dec. 6th the author was summoned on account of paroxysmal pain, with sickness. He found the uterus only moderately enlarged, retroverted, os pointing forwards and upwards towards the symphysis. The fœtal heart was heard over right side of abdomen. Next day, in consultation with Dr. J. B. Maurice, the uterus was ascertained to be empty. It was decided to remove the patient into the Savernake Hospital, there to perform gastrotomy, but some inevitable delay occurred. Reference was also made to an eminent authority in town, who said that it was better, *cæteris paribus*, to wait until the death of the fœtus and then quietly to operate. The fœtal heart was heard up to the 12th, and movement continued until the 14th. She was removed on the 16th, at which time the violent paroxysmal pains had ceased. On Dec. 18th, peritonitis having set in, operative measures were abandoned, and she died on the 26th. The autopsy revealed a large child, weighing nine and a half pounds; placenta attached over left iliac fossa, broad ligament and abdominal wall up to linea alba. The cavity contained grumous fetid fluid.

CAMBRIDGE MEDICAL SOCIETY.

Anomalous Choreic Spasms.—Intestine Ruptured through Violence.—Recovery after Severe Injury to Brain.—Scirrhus of Pylorus, combined with Simple Ulcer; Unusual Secondary Infection.—Glandular Tumour of Lip, containing Cartilage.

AT the meeting of the Society on the 7th ult. Professor Paget, M.D., F.R.S., President, in the chair—

The PRESIDENT showed a patient the subject of Anomalous Choreic Spasms. The patient is a robust labouring man, of ruddy complexion, well built, middle height, aged fifty. He has been under observation for eleven years, the symptoms having remained much the same throughout the whole of that period. The spasmodic movements are of the right arm and leg, and they are not continuous, but interrupted. He will sit quite still for a time, when the jerking movements of the limbs will suddenly begin, the most usual being a rapid tapping on the floor with the toe of the right foot. The vibrations or oscillations, both of the arm and leg, are usually of the short and rapid kind, but they are occasionally diversified with movements more extensive and more energetic, which increase in intensity until they reach a culminating point. It is scarcely probable that this disorder is merely functional, the patient being a stout labouring man. There is probably some organic disease, sclerosis or some other chronic condition of the cerebro-spinal centres. The symptoms resemble most closely those of disseminated sclerosis, but they are peculiar in several respects. The most remarkable thing is that after eleven years he is no worse; the head symptoms are not aggravated, the sight is not impaired, there is no oscillation of the eyeballs, nor the drawling kind of speech. Another point of difference is that the movements begin as if spontaneously from a state of rest, and not, as in cases of sclerosis, upon moving the arms or legs by an act of the will. When he gets up to walk the spasmodic movements cease, and his gait is, on the whole, firm and regular. Other differential points are: the vibrations are rapid and of limited range; there is no want of co-ordination; no paralysis or paresis; no wasting of the muscles; the patellar reflex is present, and the same on the two sides. It is difficult to localise the chronic lesion that is presumably present, the symptoms are neither those that arise from disease of the posterior columns, nor the symptoms of the ordinary antero-lateral sclerosis. A great number of remedies have been tried, but only two proved markedly

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beneficial—viz., cod-liver oil and sulphate of zinc (fifteen-grain doses). The improvement was greatest when the two remedies were taken together.

Dr. BACON showed a specimen of Intestine Ruptured through Violence. The patient, a man aged forty, was an inmate of the Cambridge County Asylum, in good bodily health, but a dangerous lunatic. He had frequently committed assaults, and his removal to another asylum, furnished with more special means of restraint, had actually been advised. The injury was received in some unknown manner, in a scuffle with another patient and with the attendants who interposed. When he was secured it was found that the first requirement was a bath, to remove the effects of an involuntary defecation. During the bath and after it he showed no signs of collapse. Death followed in twenty-four hours. There was the mark of a not very extensive bruise in the right lumbar region. On opening the abdomen there was a rush of fetid gas, and the cavity was found to be occupied with fæces and fluid. Peritonitis had begun; there was no rupture of the liver, spleen, or kidney; the laceration of the intestine was in the jejunal portion; the tear was transverse, extending round the free border half-way to the mesenteric attachment; the edges were widely separated, and the deep red villous mucous membrane was everted.

Dr. EASBY gave an account of a case from former practice, in which a severe injury to the brain, in a child, from a penetrating wound, had been followed by complete recovery in a few weeks.

Dr. BRADBURY showed specimens from a case of Scirrhus of the Pylorus, in which there was a combination with simple ulcer, and in which the course of the secondary infection was somewhat unusual. The patient was a woman aged sixty-eight. The symptoms (vomiting, &c.) had been observed for three years, and, two months before her death, a number of scirrhous nodules had appeared on the skin, some of which became red and painful. A tumour also appeared over the middle of the femur in front. After death the stomach was found to exhibit one small healed ulcer, without any infiltration of thickening near it, about the size of a sixpenny piece, on the posterior wall and near the greater curvature. There were two other small shallow depressions with smooth (cicatrised) surface, just within the pylorus, and in the submucous tissue beneath and around one of them there was a flat nodule of intense hardness, about one inch in diameter, and not more than a quarter of an inch thick at its thickest part. The muscular ring of the pylorus was much thickened, and admitted the point of the little finger. In the dense connective tissue round the pancreas (which was connected to the back of the stomach) there was numerous enlarged and cancerous lymphatic glands embedded. The gastro-hepatic omentum was normal, as well as the peritoneum generally. There were no secondary tumours in the liver or in any other organ. The retro-peritoneal glands on both sides of the spine in the lumbar region were enlarged and cancerous, and matted together. The skin round the umbilicus was occupied with a number of hard button-like nodules, and the same were found in the pectoral regions, and over the right scapula. The tumour on the femur lay beneath the crureus, and had formed in the periosteum, the subjacent bone being merely roughened on the surface. The tumour was larger than a hen's egg, and of medullary consistence and white colour. A microscopic examination of the tumours in the various parts, which had been made for him, showed the flat nodule at the pylorus to have the character of scirrhous infiltration, epithelial cells, with relatively large nuclei, arranged in linear rows or alveolar groups in the interstices of the submucous and muscular coats. The nodules in the skin had precisely the same structure (epithelial infiltration in the subcutaneous tissue), and so also had the tumour on the femur, the epithelial cellular elements in the latter being more abundant, and the stroma more scanty, in correspondence with the medullary consistence of the growth.

Dr. HUMPHRY showed a tumour which he had removed from the upper lip of a woman aged thirty-five. It was a very firm nodule the size of a large hazel-nut, and although both the skin and mucous membrane were freely movable over it, he felt uncertain about its malignancy, and removed it by V-shaped incision through the whole thickness of the lip. The tumour proved to be definitely circumscribed, with loose connective tissue round it. Some of the labial mucous glands adhered to its posterior surface. A section through the middle of it revealed several hyaline cartilaginous areas. On microscopic examination, numerous traces were found of the gland structure of the mucous glands of the region, undergoing a variety of complex transformations. The cartilaginous spots had in some places the tolerably perfect structure of hyaline cartilage. The tumour had grown from the mucous glands of the upper lip, and had undergone, here and there, a cartilaginous transformation, which was no doubt of the same nature as that which occurred in parotid tumours, and more rarely in mammary tumours. The character of the tumour, as seen after its removal, favoured the idea that it was non-malignant.

Dr. BRADBURY showed, from a case of Psoas Abscess, the organs with well-marked lardaceous change. The liver weighed fourteen pounds twelve ounces.

Dr. INGLE showed microscopic specimens and drawings of the parasitic fungi in certain skin-diseases.

Reviews and Notices of Books.

Cooley's Cyclopædia of Practical Receipts and Collateral Information in the Arts, Manufactures, Professions, and Trades, including Medicine, Pharmacy, Hygiene, and Domestic Economy. Designed as a comprehensive supplement to the Pharmacopœia and general book of reference for the manufacturer, tradesman, amateur, and heads of families. Sixth Edition, revised and greatly enlarged. By RICHARD V. TUSON, F.I.C., F.C.S., Professor of Chemistry in the Royal Veterinary College, formerly Lecturer on Chemistry at the Charing-cross Hospital. 2 vols. London: Churchill. 1880.—Cooley's Cyclopædia still remains without a rival in its way, and goes on from edition to edition with constant accession of bulk and value. It has, at last, outgrown the limits of a single volume, and appears in the form of two goodly octavos. The present edition has been published in monthly parts, and is larger by some 600 pages than the last. Professor Tuson has evidently spared no pains upon it, and his additions and corrections are innumerable. The book has long ceased to be a mere dictionary of receipts, although its character in this respect has never been lost, for receipts abound on almost every page. But it contains, in addition, a vast mass of information in all branches of theoretical and applied science, and much that can be found in no other book. It will be useful to every medical man, and almost equally so to every household. It may be added that any occasional taint of quackery that may have been detected in earlier editions seems to have been very carefully expunged.

Degeneration; a Chapter in Darwinism. By Professor E. RAY LANKESTER, F.R.S. London: Macmillan. 1880.—Professor Lankester's evening address at the last meeting of the British Association is now added to the Nature Series of scientific works. Numerous examples are brought forward to prove that degeneration as well as progressive elaboration must be taken into account on a far greater scale than is usual with biologists, when they endeavour to trace the genetic relationships of the various members of the animal kingdom. The author has not limited himself to the consideration of the scientific question, but has thought it necessary to introduce speculations on religious questions which are quite out of place in a work of this character, and disfigure an otherwise valuable discourse.

Royat-les-Bains. By G. H. BRANDT, M.D. London: H. K. Lewis. 1880.—In the autumn of 1877 we drew the attention of our readers to the baths of Auvergne, and among others to Royat, which is the subject of Dr. Brandt's monograph. The town of Royat is pleasantly situated at a height of 1400 feet above sea-level, close to the fine old town of Clermont-Ferrand; and its waters are warm and slightly mineralised, containing alkaline carbonates and chlorides. The reputation of this watering-place for the cure of chronic gout is considerable, and those who intend

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visiting it should furnish themselves with Dr. Brandt's little book, which contains all necessary information.

The Student's Guide to Surgical Anatomy. By EDWARD BELLAMY, F.R.C.S., Surgeon to, and Lecturer on Anatomy at, Charing-cross Hospital, &c. London: J. & A. Churchill. 1880.—Mr. Bellamy's small work on Surgical Anatomy is so well known to advanced students that a detailed description of it is quite unnecessary. In his new edition the author has made several improvements; the arrangement is clearer, and many new illustrations have been introduced. The descriptions of the fasciæ are fuller than in many of our text-books, and the manual quite deserves its name of a "student's guide."

New Invention.

APPARATUS FOR TREATING CICATRICES OF THE NECK.

AT a recent meeting of the Manchester Medical Society, Mr. E. Stanmore Bishop showed an apparatus made for him by Messrs. Holdernesse and Co. for the treatment of cicatrices of the neck depressing the lower jaw. It consists of a metal plate fitting to the back and over the shoulders, to which is fixed a modification of Sayre's jury-mast, with three rack and pinion movements. A cap of metal or poroplastic felt is fitted on to the chin, and attached to the arms of

the jury-mast by a chain on each side, in which is interpolated one or more elastic rings. In this way the extension can be made without pressing upon the chest and impeding respiration; it can be graduated as required, and, being elastic, is continuous, and does not interfere with eating. It could be simplified and cheapened by using Sayre's plaster jacket instead of the metal plate on the back. The difficulty in these cases is to get a firm hold on the chin, as it is so often but little prominent, if at all.

HOSPITAL ADMINISTRATION IN INDIA.

To the Editor of THE LANCET.

SIR,—In your leader of the 15th ult. on the subject of the Calcutta hospitals you have been good enough to approve of my definition of the duty of a medical officer in his relations to the sick, but you seem disposed to think that, in my letter of Nov. 19th to the Bengal Government, I have spoken too lightly of certain irregularities in the drug department of the General Hospital, for the existence of which, as will be observed in the sequel, I cannot be held accountable.

It has been constantly overlooked, in this controversy, that my last annual indent for drugs was dated on or about May 31st, 1875, that, judging from the papers before me, no loss of medicine or irregularity has been demonstrated as having occurred within the four corners of my tenure of office; that those drugs which were said to have been written off and found intact in store in October, 1877—nineteen months after my departure on furlough, on April 1st, 1876, and after two other annual indents must have been submitted, on May 31st, 1876 and 1877, with which I could have had no direct or indirect concern—may, as I suggested, have been condemned in good faith. Whether this be the true explanation or not, it is, however, not for me to say. When you ask—"And if thus written off, were they not liable to be removed without any chance of detection?" my answer is No, because the general store was secured in a strong room by Chubb's lock and key, and under the undivided custody of the resident surgeon.

If you will do me the honour of referring to the thirty-first paragraph of the letter aforesaid, you will find it there stated that, "notwithstanding a liberal and benevolent system of feeding and comforting the sick, the provisions to secure economy and a proper adjustment of supplies to requirements were always so successful as to demonstrate monthly a substantial saving within the limits of the maximum allowed," which shows that, in my administrative capacity, economy of the public money was always an important consideration, and received special attention.

The question now at issue is, Are the new rates of 3 annas and 6 pies or 5½*d.* for natives, and 8 annas or 1*s.* a day for Europeans, sufficient for the supply of first-class food, extras, and stimulants for the sick? I fear not. That they appear to fail in this important respect is manifest from the trouble which has been taken to prove that second-class and inferior and cheaper food, &c., is quite good enough for the sick in Calcutta; from the almost complete denial of extras and stimulants in the Scaldah or Campbell Hospital, where the cases are so grave that the annual death-rate averages 250 in the 1000; from the importation annually of about 10,400 diets from the homes of patients into the College Hospital; from analogous reinforcements in the General Hospital; from the earnest appeal of the Principal of the College for an increased allowance of 5 annas (7½*d.*) and 10 annas (1*s.* 3*d.*) a day for natives and Europeans; from the dissatisfaction with the present dietary openly and officially expressed by the Professors of Medicine, Midwifery, and Materia Medica (College Hospital), by Dr. Cobb (General Hospital), Dr. Tameez Khan (Campbell Hospital), and the late Surgeon-General for Bengal.

Whilst, therefore, it must be acknowledged that these revelations, viewed in the aggregate, furnish a strange and singular commentary on the Lieutenant-Governor's assurance that the system is working "satisfactorily and smoothly," they apparently indicate the necessity for a careful reconsideration of the subject by experienced medical officers *not serving under the Bengal Government*, in order that the proper dieting and treatment of the sick may be settled on a basis alike satisfactory to them, the physicians and surgeons who have to feed and treat them, and the Government which has to find the ways and means. If the existing system is actually as good as it has been made to appear on paper by the Bengal Government in the medical department, there ought to be no objection to an impartial investigation into its merits. Such an independent inquiry is all the more imperatively necessary since, by recent changes, the College, General, and Campbell Hospitals are now managed by three of the members of the late committee, and supervised by the senior medical member lately translated to the office of Surgeon-General for Bengal. In venturing to make this suggestion, my wish is not in the least degree to impute "motives to, or to impugn the good faith and common honesty of any one," but to give definite expression to a feeling very generally entertained beyond the precincts of the small circle with which the Lieutenant-Governor is immediately surrounded, a feeling which has been materially strengthened by the circumstances connected with the resignation of the principalship of the Medical College by Dr. D. B. Smith, a gentleman no less esteemed for his social than for his general and professional attainments.

I remain, yours very faithfully,

JOSEPH EWART, M.D.,
Late Superintendent of General Hospital, Calcutta.

Brighton, June 1st, 1880.

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THE LANCET.

LONDON: SATURDAY, JUNE 5, 1880.

THE meeting of the Council of the Royal College of Surgeons to be held on Thursday next can hardly fail to excite the attention of everyone who is interested in the vexed and perplexing questions of medical education. Rarely, if ever, has the Council occupied so conspicuous a position. On the decision of a majority next Thursday will depend the fate of the Conjoint Scheme for England, and of another measure of scarcely less importance—namely, Mr. MARSHALL'S proposal to institute a compulsory examination in elementary Anatomy and Physiology, to be passed by all candidates for the diploma of member at the end of the first year of professional study. There should be no risk of caprice or prejudice deciding the action of the Council in either of these matters. The discussion upon them should be free, full, and exhaustive, but devoid of the smallest taint of bigotry or bias. The responsibility of recommending a withdrawal from the projected Conjoint Scheme, and of thereby nullifying all the thought and deliberation, and the legislation of the last ten years is enormous; and it is, under the circumstances, difficult to avoid a suspicion that the Council has taken its last step hastily and with precipitancy. The Royal College of Surgeons, it must be remembered, is only one of seven co-operating authorities, and it is precisely the one for which a Conjoint Examining Board is most urgently needed, inasmuch as it is the only examining board in England—nay, perhaps in the United Kingdom—which is able and allowed to grant a registrable qualification that does not include a guarantee of proficiency in Chemistry, Materia Medica, Pharmacy, Pathology, Midwifery, and Forensic Medicine. Even its examination in Medicine is a trifling affair, and conducted more as a matter of form than as a serious test of a candidate's fitness to engage in the practice of his profession. The Council will, of course, excuse itself for abandoning the Conjoint Scheme at the last hour by averring that it does so in order to take a more independent course, and to be unfettered in instituting, either on its own account or in conjunction with one or other of the examining bodies, a larger and better examination that will include Chemistry, Materia Medica, Pharmacy, and Midwifery, so that its diploma shall be henceforth a genuine qualification of fitness to practise the different branches of the healing art. This may be so, and we have no desire to impugn the good intentions of the Council. But the end of good intentions is proverbial, and the Council should not forget that any delay in carrying out its proposed reforms may not unnaturally be regarded as a flagrant breach of public faith. The defects of medical education and medical examination have now attained a point at which delays and prevarications can and will be no longer tolerated; and if the Council of the Royal College of Surgeons cannot see it for itself, it must be plainly told that the existence of its Corporation as an examining body is now at stake. Some members of the Council seem to shut themselves up in a kind of fool's paradise, and imagine that the reason they have so large a number of applicants for their diplomas is that the diplomas are held in such high esteem. This is a silly infatuation. The diplomas of the College are sought after because they are the most easily obtained. At the Royal College of Physicians, for instance, no candidate can acquire even the licence without passing a really good examination in Chemistry, Materia Medica, Pathology, Midwifery, and Forensic Medicine, over and above what is needed for the membership of the Royal College of Surgeons. If the College of Physicians could only be wakened out of the stupor into which it has sunk and bestir itself, it might almost at once and for ever take the foremost place as the examining board in England for qualifying the great body of the practitioners of medicine. Were Parliament to insist, as it ought, upon all medical practitioners possessing a complete qualification, embracing Surgery, Medicine, and Midwifery, the ground would be cut away from the Royal College of Surgeons, and we should soon hear the last of its supposed ascendancy. We are far from wishing or seeking such a retribution. The Royal College of Surgeons has served a useful purpose, and has a claim upon the gratitude of every Englishman. Nothing would be more unwelcome than a decline of its prestige or a decay of its influence and power. Its future is, however, in its own hands. If it will adapt itself to the spirit and circumstances of the time there is no reason why its sphere of usefulness should not be extended, and its honour and glory enhanced. To this end the Council must spare nor time nor energy to eradicate the disgrace of granting a qualification so miserably inadequate to the demands of public convenience and safety.

The other matter to be brought before the Council on Thursday next contrasts strangely with this disregard of Chemistry, Materia Medica, and Midwifery. It is the proposal of Mr. MARSHALL to institute a compulsory examination in Anatomy and Physiology at the end of the first year of professional study. Some persons believe that the subjects of Chemistry, Materia Medica, and Midwifery are neglected in consequence of the stress laid by the Council of the Royal College of Surgeons on Anatomy and Physiology. Mr. MARSHALL'S scheme seems calculated to starve them completely. It is to be hoped that the Council will not take a slant-eyed glance at this matter, but will view it as a small but significant portion of the larger question of medical education generally. We believe that the recent recommendation to the Council to withdraw from the Conjoint Scheme was debated at some length, but it is stated that Mr. MARSHALL'S motion was put to the vote without any discussion whatever. Should the members of the Council repeat this apparent indifference, serious evils may arise. There is, of course, something to be said on both sides of the question, and it is desirable that all the arguments for and against the proposal should be fully stated and calmly weighed. There is, however, one preliminary matter that requires to be cleared up and explained. When Mr. MARSHALL first brought his scheme before the notice of the Council, four years and a half ago, a committee was appointed to consider it and report thereon to the Council. Mr. MARSHALL is stated to have alleged that this committee reported favourably. Where is this report? It has never been published or commented on in any of the

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Presidential Reports to the Fellows. Moreover, the arguments which Mr. MARSHALL used were specifically controverted, whether designedly or not we cannot say, in the answers which the Council of the College returned to the interrogations of the General Medical Council in 1877—that is within fifteen months of the time that Mr. MARSHALL first brought his motion forward. Mr. MARSHALL complained that the medical student's defects were chiefly seen in Anatomy and Physiology. The Council's answer to a special query of the General Medical Council was that the failures "are not particularly in any one subject or any one part of the examinations, but are equally (or nearly so) in all the subjects and parts, and that candidates who fail in one subject or one part are very generally found at fault in other subjects or other parts." Mr. MARSHALL maintained that it was desirable to institute a third examination—that is, a compulsory examination in Anatomy—at the end of the first year, in order to prevent idleness in the first-year's student, and to give directness to his studies. The Council, in answer to the General Medical Council's question as to the desirability of making an alteration in the subjects of the examinations, as to their number, range, division, or combination, or in the mode of conducting them, said that it did not see "any reason for changing either the subjects or the conduct of examinations." Mr. MARSHALL again affirmed that "those who enter upon their studies *now* are younger than their predecessors were when they began attendance upon anatomical lectures and to work in the dissecting-room; their minds are less formed, less ripe for, and bent upon thoroughly practical and efficacious study." The Council, a few months later, in answer to the General Medical Council, said it was "of opinion that the attainments, general and professional, with which candidates present themselves for examination, are now, on the whole, higher than they were ten or fifteen years ago." We do not care to say which is the more correct, Mr. MARSHALL or the Council of which he is deservedly an influential member; all we are concerned with just now is to point out the strange discrepancy, and to warn the Council that it cannot off-hand decide this matter one way or the other without laying itself open to the charge of inconsistency.

We will not disguise the hope that the Council will, instead of at once adopting Mr. MARSHALL'S proposal, rather appoint a trustworthy committee to consider and report on its desirability. We would even suggest that it might not be inconsistent with the duty or dignity of such a committee to take the opinion of some of the leading teachers of anatomy and physiology. If it should so happen that the balance of opinion was decidedly in favour of the adoption of some such scheme as that which Mr. MARSHALL proposes, the Council might consider the propriety of remodelling its answers to the General Medical Council, and ask that body to take some steps, or make some suggestions, calculated to remove and prevent the more obvious defects in medical education. We repeat, we are convinced that reform must begin at the beginning, that is, at the preliminary education, gradually working its way through every department of professional education, till it reaches its term by this indirect path in the examinations themselves. The facilities for gaining knowledge ought to be increased, and the character and quality of the teaching correspondingly improved. The student will learn better when he is better taught. Lazy students there are, and always will be. Medicine has not a monopoly in this respect; but, as we remarked on a former occasion, and as Mr. GOULD repeated last week, the laziness is not unfrequently acquired and even enforced. This is especially true as regards the study of Practical Anatomy. The supply of subjects for dissection is wholly inadequate at the metropolitan medical schools, and in the larger schools many students must perforce remain comparatively idle for lack of material for dissection. As to an advanced student keeping up his anatomy by dissection, it is simply impossible. After the primary examination in Anatomy and Physiology is passed, no student in a metropolitan school ever has an opportunity of practising dissection. Little wonder that his knowledge of medical and surgical anatomy at the pass examination is vague and confused. At the period of his curriculum, when the student could profit most by a short course of dissection, he is absolutely debarred by want of material. If Mr. MARSHALL will ensure an adequate supply of subjects for dissection not only for first, second, and third years' students, but also for senior students who should be compelled to study by dissection surgical anatomy in addition to operative surgery, for three or six months after passing the primary examination, and before presenting themselves for the pass, he will do an infinite service to surgical education. But, we protest again, the advantages of a compulsory inquisitorial examination at the end of the first year are at least equivocal.

EVERY summer brings under the notice of some members of our profession cases of the most startling of all the accidents to which men or animals are exposed—injury or death by lightning. The cases are of interest rather from the conditions of their occurrence than from their character, and the attention they excite is rather that of curious wonder than of scientific inquiry. For the latter, indeed, they afford few facilities. Their severity too often withdraws them from the scope of useful observation, and the circumstances under which they occur are not favourable to pathological research. Scientific pathology, too, has done little to aid the practitioner by ascertaining the points to which his attention may be directed. Experiment has left the subject almost unnoticed. We welcome, then, with much interest the publication in VIRCHOW'S *Archiv* of a series of experiments by NOTHNAGEL which, while they supply some interesting and important facts, show also how wide a field the subject presents for further investigation.

The experiments referred to were suggested by a clinical observation of great interest, but the mention of which may be deferred till the experiments have been described. These consisted in observing the effect of the repeated discharge of a Leyden jar through some part of an animal's body—rabbits being the animals on which the observations were made. Only the mildest forms of lightning-stroke were thus imitated, but the results obtained are very instructive. The repetition of the discharge was arranged to avoid the fallacy of imperfect results. The effect of several discharges appears to be somewhat greater than that of one only, and by employing several the chance of one having failed to produce its due effect was avoided. At first the ends of the

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conductors were merely placed in contact with the skin. The resistance of the skin, even when shaven and wetted, was found to be so considerable, and the escape of the electricity along the surface of the skin so great, that it was found necessary to introduce the points of the electrodes beneath the skin.

The first observations were made by attaching one conductor beneath the claws of a hind-leg, and the other to the groin. It was invariably found that when the discharge passed from the groin towards the foot no motor disturbance followed, but there resulted loss of sensibility in the foot, sharply limited at the articulation of the foot to the leg. Sensibility was tested with the faradaic current. At the point at which the discharge entered, in the groin, there was not the least loss of sensibility. If the direction of the discharge was reversed, the conductors remaining attached to the same part, the result was exactly the same. A similar effect was produced also when the upper conductor was connected with the side of the thorax or abdomen, instead of with the groin. If the peripheral conductor was attached to a fore-paw instead of to the hind-paw, the same anæsthesia was observed in the foot to which it was attached, the loss of sensibility being also limited by the position of the articulation. When the conductors were connected, one with a hind-paw the other with a fore-paw, in each extremity, there was anæsthesia as far as the foot articulation, and none in the intermediate part.

The exact distribution of the anæsthesia thus curiously limited was then investigated in another series of experiments. After the administration of the shock through the leg, the skin was removed from the foot, and the anæsthesia was found to involve the deeper parts, including the nerve trunks. At the articulation, corresponding to the limitation of the surface anæsthesia, the articular surface of the leg bone was still insensitive, together with the periosteum above the condyles and the adjacent soft parts, but a few millimetres higher sensibility suddenly commenced. The boundary between the two was an annular line around the leg. An hypothetical explanation of this singular limitation is that the electricity, when it reaches the long bones of the leg, is conducted in these only, and the soft parts do not suffer as they do in the foot. This explanation is rendered improbable by the fact that the periosteum just above the condyles is sensitive. It was, however, effectually disposed of by an experiment in which the same results were obtained after the tibia and fibula had been excised. Another possible explanation is that the conduction is chiefly by the soft parts, and that the paucity of these in the foot leads to the concentrated action of the electricity there. It was shown, however, that this explanation as such is insufficient, by an experiment which demonstrated that when one conductor was attached to the other parts, as the back, where the soft parts were equally scanty, no anæsthesia was there produced. Moreover, it was found that when the electrodes were fixed, one to the groin and one to the leg, or one to the groin and the other to the thorax, no anæsthesia occurred.

Thus hitherto the only positive fact ascertained was that when the foot was the point of entrance or exit of the shock, it, and it alone, was rendered anæsthetic. The discharge was then sent from one fore-paw to the tail. It was found that the whole tail (as well as, of course, the foot) was rendered anæsthetic, and the loss of sensibility extended as far as the insertion of the muscles at the root of the tail. In one experiment of this character, however, it is important to note, in which the discharge employed was comparatively feeble, the anæsthesia was produced in the tail, and not in the foot. This anæsthesia of the tail suggested to NOTHNAGEL the probable explanation of the anomalous condition of the foot. ARAGO expressed the opinion that when lightning strikes men or animals that are near together, in a straight line, or in an open curve, its action on the extremities of the line is always the most severe. The lightning, for instance, struck a stable in which thirty-two horses were standing in a row. Thirty were thrown down: one was dead—that at one end of the series; another was much injured, and subsequently died—that standing at the other end. Five children were sitting, reading, on a form in a house which was struck: the first and the last were killed; the three others were merely severely shaken. In these facts we have an analogy to those of the experiments, but they do not explain the sharp limitation of the anæsthesia, or its absence at the electrode placed on the thigh or trunk. Doubtless the reason is to be found in the laws of conduction in the animal body. The density of the electricity is greatest at its points of entrance and exit, and elsewhere it is less from the greater or less diffusion according to the transverse section of the conduction. The mechanical or other action of the electricity is the more considerable the smaller the transverse section and the less conducting power of the structures. Hence the effect on the sensory nerves, with the comparatively feeble shocks employed, is absent on the trunk, great on the foot; and hence, too, the effect ceased suddenly upon the tail at the point of insertion of the root muscles—i. e., when the size of the transverse section suddenly increased. The effect on the foot is intelligible on the same hypothesis, if we assume that the bones conduct frictional electricity less readily than the soft parts, just as is known to be the case with voltaic electricity. In the foot there is much bone and little soft part, the transverse area of the good conductor is small, and the effect of the discharge is great. Just above the joint there is a great increase in the area of the good conductor, and hence the intensity and physiological effect of the discharge become much slighter. In confirmation of this view, it was found that, by employing stronger discharges, the effect (anæsthesia) extended higher up the leg than in the preceding experiments—i. e., an effect was produced when the area of the conductor was greater. Moreover, in one of these experiments a distinct effect on the motor power was produced. The absence of anæsthesia at the electrode applied to the thigh or trunk may be explained by the rapid diffusion of the electricity, any action at the mere point of the electrode being inappreciable on account of the small size of the latter. This is confirmed by one experiment in which, with an unusually strong discharge, there was a small area of anæsthesia, about one centimetre in diameter, around the electrode on the thigh.

The anæsthesia was complete in degree immediately after the experiment, so that the strongest faradaic current was unfelt, but it was transient, disappearing in the course of one to two hours, and in some cases it seemed to be succeeded by a transient hyperæsthesia. Motor disturbances

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in these experiments were not conspicuous. The discharge always caused a convulsive jerk of the limb, and sometimes a slight movement of the whole body; but subsequent motor weakness was observed only if the electrodes were placed one on the front and one on the back of the thigh, so as to include between them the sciatic nerve. Then a complete paralysis of the leg was caused, and when the electrodes were placed on each sciatic nerve, paresis of both hind limbs was the result. The course of the motor weakness corresponded to that of the anæsthesia, but it disappeared in an even shorter time. During the existence of the motor weakness a very distinct diminution of the electrical irritability of the nerve was found to exist.

The direct clinical bearing of these experiments is shown by the case which suggested the investigation. A man was struck by lightning in the year 1873; he was unconscious for about five hours, and then felt well and was able to stand, but was unable to use his right hand, which had moreover lost sensibility, and in the middle of the back of the hand was a brown spot the size of a florin. At this spot the electricity had probably entered. No mark indicated its point of exit. He was treated by galvanising and rubbing for ten weeks, without improvement, and then power and sensation returned in the course of two days. He continued well until October, 1879, when, suddenly, while at work, the hand became powerless and insensitive, exactly as before. Galvanisation had now no effect. When he came under Dr. NOTHNAGEL'S observation in the beginning of the present year, the shoulder and elbow-joints could be moved fairly well, the movements of the wrist-joint were considerably impaired, and the fingers were almost motionless. There was a distinct atrophy of the interossei, which had been observed in the earlier attack, and was said to have disappeared, but this was doubtful. A diminution in electro-muscular irritability was found. The hand was completely anæsthetic, and the loss of sensibility was sharply limited by a line around the limb, just above the wrist-joint. He was treated for a few days with the faradaic and voltaic current, without any improvement. A trial was then made of a large horseshoe magnet which had been used for some experiments on cerebral anæsthesia. Both poles were placed on the ulnar half of the hand. In an hour and a half the patient complained of tingling at the spot where the magnet lay. In four hours and a half he could feel the prick of a needle at the spot. The magnet was then removed, and two hours later, the magnet not having been reapplied, some sensation had returned on the dorsal surface of the fourth and fifth fingers. Next morning sensation had improved still more, and the fourth and fifth fingers were slightly movable. The magnet was applied for several hours daily, and each day further improvement occurred, and in four days sensibility and mobility were normal. There was no diminution of sensibility (*transfest*) in the left hand. NOTHNAGEL points out the analogy between the last sudden paralysis and forms of hysterical paralysis, although there was not much question of "hysteria" in the burly smith who was the subject of the affection. The second attack of paralysis was very curious; its importance is that it was apparently an exact reproduction of the first attack, and presented a close correspondence with the experimental results obtained by NOTHNAGEL. Rarely, indeed, have clinical observation and experiment furnished a more conspicuous agreement.

The experiments, taken in conjunction with other clinical facts, show how favourable is the prognosis of partial paralysis by lightning. They show, also, as NOTHNAGEL points out, that we must be sceptical as to the influence, in many of these cases, of the "prompt treatment" by which recovery was preceded. In the first attack in his patient no effect can be ascribed to the electrical treatment. How the magnet in the second led to the disappearance of the symptoms, he wisely does not venture to suggest, but he promises some further experiments on this point, which we shall look for with much interest.

THE recent answer of the Vice-President of the Council to Mr. ERRINGTON will be read with interest by the profession. Mr. ERRINGTON asked Mr. MUNDELLA whether he would move the reappointment of the Select Committee on the Medical Acts, in order that the inquiry into medical education and registration might be continued. The Vice-President of the Council replied that the committee was appointed last session, not to inquire into the Medical Acts, but to consider three Bills which the House referred to it, one of which was a Government Bill. It was not the intention of the Government to reintroduce the Bill this session, and during the recess the whole question would probably be reconsidered. There was no reason at the moment for the reappointment of the Committee.

We have been in favour of the reappointment of the Committee this year, believing that there was just time for it to finish the investigation which had been well begun, but there is undoubtedly much to be said in favour of the course announced by Mr. MUNDELLA. We are now in June. Two or three of the more active members of the late Select Committee are not in Parliament; the Chairman of it is deeply engaged as a Cabinet Minister and Secretary for Ireland. In these circumstances any fresh committee would come to the subject almost *de novo*. We must therefore, however reluctantly, admit that there is much reason for postponing the question, and taking time to consider it. It is not one that is easy to mere politicians. It is somewhat technical and complicated in appearance. But it is not nearly so much so as it looks; and Mr. MUNDELLA will master it in a few days if he gives it the consideration which on Thursday last he promised Mr. ERRINGTON it should receive. The state of the case is very much as follows:—

1. Nineteen more or less competitive bodies, in different divisions of the kingdom, grant forty or fifty qualifications admitting to the Register and conferring the right to practise in all parts of the empire.

2. The minimum examinations of these bodies admit to the Register, and they are considered to be very unequal, so that persons failing repeatedly at one Board may go quite hopefully to another.

3. All the Qualifications of the different bodies, with the exception, perhaps, of the licence of the College of Physicians of London, are single qualifications only. Even if the examinations for any one of them cover all branches of the profession, the qualification given after passing is incomplete—medical only or surgical only,—not both.

4. Though the examinations are confessedly unsatis-

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factory, the rejections are numerous, showing a very ineffective state of medical education.

5. The Body superintending medical education—the General Medical Council of Education—is made up predominantly of the bodies interested in the continuance of these imperfect and incomplete examinations, some of them being prevented by Charter from making their examinations complete.

6. The General Medical Council is maintained by the general practitioners of the country, who are entirely unrepresented on the Council.

7. The general body of the profession have in various ways expressed their deep dissatisfaction with the costliness and the inefficiency of the General Medical Council, and have powerfully and successfully opposed Medical Bills which have not provided for its reform.

8. Finally, the medical profession feels aggrieved by the fact that, while the General Medical Council, acting under the Medical Act, has added seriously to the cost and difficulty of entering the profession, it has done very little to improve medical education and to discourage fraudulent and unlicensed forms of practice.

These are the chief points in a question which interests the medical profession, and still more the public. It has been before Parliament for a decade, and was never so near ripe for solution as now. Eight or ten more witnesses would complete the evidence on which legislation must be based, and it will be a credit to the present Ministry to make good arrangements for this end. We will cheerfully concede them time to do so. But the case is urgent, and will not admit of indefinite delay.

Annotations.

"Ne quid nimis."

COLLEGIATE ELECTION.

THOUGH the number of vacancies to be filled up in the Council of the Royal College of Surgeons next month will be larger than usual, there is little likelihood of a dearth of candidates. There will be four vacancies, and there is already the promise of eight or nine candidates, two of whom are Fellows residing and practising in the provinces—namely, Mr. Cadge of Norwich, and Mr. Reginald Harrison of Liverpool. We have never acquiesced in the principle that there should be a special representation of the provincial Fellows as such, believing that there are no interests or privileges relating to the College which are not common to metropolitan and provincial Fellows alike. But our objection has always been confined to the principle of special representation of the provincial Fellows, and has never extended to the candidates who have been induced to offer themselves for election. It is gratifying to find a gentleman of Mr. Cadge's high reputation and acknowledged good sense announcing that "he recognises no distinction or antagonism between metropolitan and provincial interests." On the other hand, those Fellows who have memorialised Mr. Reginald Harrison to allow himself to be nominated as a candidate would seem to attach considerable importance to the "opinion that the claims of provincial surgeons to representation on this occasion should be considered," and that Liverpool especially should have a representative. Mr. Harrison had, of course, no alternative but to accept the invitation, which was signed by 170 Fellows. It may be well to state that the provincial Fellows already constitute one-sixth part of the Council, and that if both Mr. Cadge and Mr. Harrison are elected the proportion will be raised to one-fourth.

NURSING AT GUY'S.

THE current number of the *Nineteenth Century* contains three articles on "Doctors and Nurses," written respectively by Dr. Octavius Sturges, Dr. Seymour Sharkey, and Miss Lonsdale. The last-named will naturally attract most attention, since it is confessedly a reply to the articles which appeared in the May number of the *Nineteenth Century* and the *Contemporary Review*. Miss Lonsdale regrets that she allowed her strong feeling in the matter upon which she wrote to cause her to use language which imputed unworthy motives to the medical men who support the old system of nursing in opposition to the new, and she declares that she had no idea or intention of asserting that in some ways the nurse knows better than the doctor what is good for the patient. She also defines the meaning she attaches to the phrase "sisters in the proper sense of the word." This has, it appears, nothing to do with religious sisterhoods, with which Miss Lonsdale disclaims all past or probable connexion, but with the beautiful sentiment of sympathy and kindness to her patients which the nurse "would feel and show towards her own brothers and sisters." Miss Lonsdale still adheres, she says, to the main issue of what she publicly stated on the subject of the old and new systems of nursing. No one will impugn her right to do so; and if the tone of her first article had been as temperate as that of the second, Miss Lonsdale might now have reckoned among her sympathisers and supporters many whom her strong language completely alienated.

HOTELS AS RESIDENCES.

ONE of the most striking developments of modern life is the increasing custom of large sections of our population to make hotels their residences, not merely for a few days or a week, but for months, and even *en permanence*. This practice is not merely spreading among individual members of the male sex who do not choose to take upon themselves the troubles and responsibilities of a household, but families, whose circumstances or inclinations lead them to the metropolis or seaside for a month or two in the season, or who habitually divide their time between three or four favoured resorts, are now adopting this plan of living. In many respects hotels present great advantages, and residence, in contradistinction to a mere stay of a few days, is increasing in favour daily. Next in importance, therefore, to the domestic and sanitary arrangements of our homes come those of our hotels, and as each new addition is made to these huge buildings, improvements in accordance with the progress of sanitary knowledge become more and more imperative. The formal opening of the Grand Hotel, Trafalgar-square, by the Lord Mayor and Sheriffs on the 29th ult. was, therefore, an event of some interest from our standpoint, and we were glad to find that domestic comfort and health considerations have been well attended to. The most important innovation is the placing of the kitchens in a distinct portion of the upper part of the building, as remote as possible from the sitting-rooms and bedrooms, and in separate communication with the public and private dining-rooms. The advantages of such an arrangement are self-evident. To all the principal suites of rooms special bath-rooms and lavatories are attached, in addition to those placed in the general corridors. These have all been fitted by Mr. George Jennings, of Lambeth, and are models of simplicity and perfection in working. The ventilation of the private sitting-rooms and bed-rooms has not been neglected, and the

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large public rooms are remarkably lofty and airy. We would point out that in future buildings of this class the smoking-room must also be removed from the lower part of the building, for no plan of ventilation will make amends for a situation which is inherently wrong. When the idea is fully grasped, that the future of large hotels depends to a large extent upon their suitability as residences, smoking-rooms, billiard-rooms, &c., will be relegated to a detached part of the building, or will be placed in the upper story, as in many of our modern clubs.

SALICIN AND THE SALICYLATES IN RHEUMATIC FEVER.

THE communications read before the Clinical Society last week by its President, Dr. Greenhow, were interesting from the doubt which was thrown upon the efficacy of the prevalent treatment of acute rheumatism. After a careful and extended trial of salicin and the salicylate of soda in this disease, he concludes their benefit to be counterbalanced by their toxic effects; and he has been forced reluctantly to admit that these drugs cannot be considered to have much advanced our therapeutics of the disease in question. These conclusions deserve, and will doubtless receive, full attention in view of the position of their author, and of the minute scrutiny to which he has subjected the facts before him. For in spite of the mass of literature that has grown up around this particular treatment, in spite of the numerous statistical analyses which have been made to prove that in the employment of these drugs in rheumatic fever we had at last got hold of remedies more certain in their action, and more favourable in their effects than any that have hitherto been employed, it must be admitted that there is growing up an impression that their value has been much overrated. At the Cork meeting of the British Medical Association last summer some members ventured to raise such doubts and to inculcate caution in the administration of these drugs, hinting darkly at their toxic qualities. Dr. Southey has recently written strongly in the same sense, and we have now to add Dr. Greenhow's experience of a large number of cases treated under the same conditions of environment, diet, &c., to this category of scepticism.

Briefly summed up, Dr. Greenhow's conclusions are these: The drugs are most powerful antipyretic agents; as a rule, within a few days of their administration the fever abates, the temperature falling to normal. Almost as speedily, and often more so, does pain leave the affected joints. But the complications of rheumatic fever do not seem to be averted by them. Evidences of cardiac failure often call for the withdrawal of the drug; or its toxic effects are shown in other ways—in deafness, delirium, headache on the side of the nervous system, or gastric irritation on the side of the digestive system. Relapses are very frequent; partly perhaps on account of the necessity of reducing both the dose administered and the frequency of its administration, and partly from the fact of the natural tendency of many cases of rheumatic fever to relapse—in spite of treatment, medicinal and dietetic. Nor has Dr. Greenhow found the duration of the disease to be diminished, but if anything prolonged by these drugs, which leave the patient more anæmic and debilitated than other modes of treatment. This forms on the whole a heavy indictment, and one not easily gainsaid. The question comes to this, Is the relief gained by early diminution of the febrile symptoms and abatement of pain sufficient to put in the scale against the many and obvious drawbacks of the use of the drugs?

Before, however, consenting to commit salicin and salicylates to the limbo which has received so many other methods of treatment of acute rheumatism, which each in turn have had their day and ceased to be, it is comforting to find physicians like Drs. Cavafy and H. Weber expressing their continued confidence in the use of these drugs. Dr. Cavafy, indeed, relies upon almost heroic doses, and thinks but lightly of their toxic effects. It seems that more light is wanted in the direction alluded to by Dr. Powell, as well as the discovery of the minimum dose capable of producing the good effects of the drugs—a dose which can be maintained for a long period and be tolerated by the patient, so that by keeping up its continuous administration the tendency to relapse may be obviated. It can hardly be said that we have reached this yet. It may be that neither salicin nor the salicylate of soda is capable of such effects; that, as Dr. Greenhow showed in his cases, the therapeutical effect can hardly be produced apart from the toxic effects, although we would fain hope that there is a *via media* in the matter. Perhaps, too, the combination of quinine and salicylic acid introduced to notice by Dr. Hewan may prove more reliable, although the preparation is one of the costliest in pharmacy. At any rate, it is incumbent on physicians to endeavour to submit these drugs to continued careful study, and not to rely upon mere *impressions*. Our own feeling is and has long been in favour of the salicylic treatment as compared with other methods; but had the facts at our disposal been as profoundly scrutinised as those of the President of the Clinical Society the impression might have been found to be baseless after all.

"CRUELTY TO WOMEN."

MANY of the West-end firms still hold out in their obstinate determination not to yield either to entreaties or remonstrances, and provide seats for the use of the young women in their establishments during the intervals of actual business, so as to take the strain off the organism and spare it the specially-induced maladies which long standing so commonly entails. The heads of these houses are respectable and humane individuals, and in their personal capacity would not wantonly injure a fly, much less would they sacrifice the life, or even the health, of a fellow-creature to their own advantage or caprice. The shop-walkers who administer the laws which make miserable victims of disease and suffering are equally estimable personally, and many of them have daughters of their own for whose care they are naturally solicitous. How, then, does it happen that these two classes of persons continue to keep up a system which is not either too sensationally or too strongly designated "cruelty to women"? The answer is, first, that the retail shopkeeper would fain persuade himself, and have his customers believe, the ordinary business of a first-class establishment cannot be successfully conducted unless those who work behind the counters and in the show-rooms are kept standing with a show of occupation throughout the long hours during which the shop is kept open. Humanity has to give way to *business*. Another class console themselves with the fact that they *do* provide seats, and are oblivious of the fact that the young women are so hounded by their shop-walkers that they cannot use them. The public is not humane. Ladies do not care for the health of their servants. If there had been any real feeling of sympathy for the young persons who are year by year pining away under this system it would long since have been brought to a summary close. Shopkeepers may persist in their obstinacy with impunity. Their customers will not interfere. If fashionable ladies saw a dog or cat worked and worried into its grave they would possibly bestow a little feeble emotion on the spectacle, albeit the pigeon-shooting entertainments so much enjoyed by the sex reputed gentle (!) do not indicate the existence of any superfluous sympathy for suffering in feminine nature. We sometimes hear of women having a special faculty for nursing the sick. Let them show in this matter of the wrongs of their own sisters standing painfully behind the

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counters and in the showrooms of West-end drapery establishments for *their* gratification, that they have, at length, the humanity to avoid the creation of needless sickness. Is it necessary that we should go more fully into details, and give the statistics of cases of agonising and incurable disease distinctly caused by the cruelty to women which consists in keeping girls needlessly standing when health and even life might be saved if only imperious ladies and selfish or careless tradesmen would allow them to sit?

ROYAL COLLEGE OF SURGEONS IN IRELAND.

AT a large and influential meeting of the Fellows, held on the 31st ult., an important motion by Dr. Brunker in reference to the election of the President, Vice-president, and Council was under consideration. Dr. Brunker, who had some weeks previously brought the matter before the Council without success, modified the resolution of which he had given notice, and proposed one to the effect that as about one-fourth only of the Fellows, in consequence of the provisions of the Supplemental Charter, were able to vote at the annual elections, their personal attendance being necessary, they were denied those privileges which it was intended they should enjoy; and that it was for the interest of the College and the Fellows to remedy these defects. For this purpose it should be recommended to the Council to prepare a memorial to the Queen, praying that the Supplemental Charter be amended so as to permit all Fellows to vote by proxy or voting-papers for the election of the President, Vice-president, and Council. Various reasons were put forward by the provincial Fellows in favour of the proposed change, and it was urged that the funds of the College would be increased, as many Fellows would be added to the College if the resolution were adopted. On the other hand, it was pointed out that voting by proxy was undesirable, and that if application was made for a change in the Charter it would be attended with great risk to the well-being of the College. On a division being taken the resolution was lost by a large majority. It was then proposed that, in order to accommodate Fellows residing at a distance, the Council be recommended to take steps to arrange for the annual meeting of the College on the Saturday preceding the first Monday in June, the day selected by the Charter for the annual election of office-bearers. This resolution was proposed by Mr. Jacob, seconded by Professor Macnamara, and unanimously adopted.

INSANITY: ITS COST AND CONSEQUENCES.

MR. STANLEY LEIGHTON has given notice of the following motion in the House of Commons:—"That the case of the insane is a subject of Imperial and not Local obligation; that the placing of insane persons, not of the class of paupers, in the category of paupers on account of their insanity, is inexpedient; and that the cost of maintaining lunatic asylums is an unfair burden upon the ratepayers." These separate propositions are of great interest, but we scarcely think the House of Commons will spend much time over them in an abstract form. Whether insanity should be paid for—when the patient or his friends cannot afford the payment—out of imperial or local taxes; whether an insane patient that has to be maintained and treated at the expense of the public should thereby be pauperised, are very difficult questions. When a patient with infectious disease is compelled to go to a hospital for purposes of isolation, he goes as much in the interest of the public as of himself and his family. It may therefore be argued that the public should bear the expense of his going. But even here we are trying to recover from the patient and his friends, if not actual paupers, the cost of maintenance. In the case of the insane the public has not the same interest in isolation. But it has some, and the State would easily be induced to take a humane view of its duty to sympathise with those afflicted with the huge calamity of insanity to the extent of providing for their comfort and treatment on the most reasonable and least discreditable terms. Provision for inevitable and urgent wants is more or less a State duty. At any rate it should be within the care of the State to facilitate as much as possible such provision. Insanity implies such wants, and should largely command the care and sympathy of the State. Few lots can be harder than for an insane person of fair position and intelligence to have to be pauperised in order to be treated, and to have to herd with veritable paupers in a state of insanity.

MORE TRAINING-SHIP COFFINS.

IT is really sad to have to write indignantly on the subject of "training-ships," but something must be said or done to avoid the repetition of what has twice proved a cruel blunder. We are not concerned with the opinion expressed by naval men, to the effect that *old* ships must be used for training purposes because no new ones exist in which boys can learn seamanship. Surely England is not so poverty-stricken that she cannot afford to build one wooden frigate, or if need be two such vessels, for sea-going purposes! It is a scandal to our humanity that crazy or cranky hulks are sent to sea with a freight of human lives, because we have no modern ships that will sail, or can be handled by seamen. We have already condemned the system of sending ships to sea for simply training purposes. We think the practice is absurd and unsafe; but if, as it is rumoured, a third unseaworthy—or even questionable—ship is to be told off for this "duty," the sooner some independent member of Parliament takes measures to have the project fully discussed the better. We cannot, in common decency, squander more lives.

HOT-AIR BATHS.

NOW that the hot-air bath has been fairly naturalised in England, it is necessary to examine the institution critically. One of the most obvious sanitary conditions of the bath, but, unfortunately, that which it is most difficult to secure, is the purity of the atmosphere in which the breathing organs of persons in a peculiarly susceptible or physiological state are immersed. The breather of impure gases under ordinary circumstances takes his poison largely diluted. If the air of a Turkish bath is laden with germs of disease thrown off from the lungs of a fever or a consumptive patient, there are no currents to carry the particles away. It is a physical certainty that others breathing in the bath must inhale them. This is an evident source of peril, and suggests the wisdom of taking measures to ensure the frequent changing of an atmosphere which may be thus easily polluted. Care is also required to compel those who conduct such baths in the way of trade, to provide attendants who not only can but *will* do what is necessary for the bathers. For example, if cold water is ordered for a patient, he or she should not be deprived of the full benefit such an application may be likely to afford, because the attendants are too indolent to procure the requisite appliances, as recently happened at a well-known bath.

CONSULTATIONS WITH HOMŒOPATHISTS.

IN THE LANCET of May 1st (p. 702), a Fellow of the Royal College of Surgeons in Ireland suggested that the Council of that body should adopt a resolution to the effect that meeting homœopathists in consultation was beneath the dignity of the Licentiates and Fellows of the College. That this proposal was not premature is evident from what took place at the annual meeting of the Fellows of the Irish College of Surgeons last Monday, when Mr. Tufnell drew attention to the matter as contrary to the ordinances of the College, which distinctly prohibited any consultation

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between its members and those practising homœopathy or mesmerism. He believed that it was necessary to impress the existence of such prohibition upon the minds of the members, and proposed a resolution that they should not, directly or indirectly, have any professional communication with such persons. Dr. Carte seconded the resolution, which was passed without a dissentient. In the ordinary course the resolution will come before the Council of the College. Mr. Tufnell only brought the matter forward in a general way, but he is prepared to give details should it be necessary. We hope, however, that this warning will be sufficient, and that the delinquent or delinquents referred to will for the future think more of the dignity of the College they are connected with than of their pecuniary interests.

PUBLIC WORK-ROOMS.

IT would be difficult to point to a more probable source of infection in the search for "causes" of disease in private families than the houses where the practical work of dress-making is performed. Ladies may not fully realise the danger to which they and their children are exposed; but a visit to a few of the residences of poor women who work for the large shops, or for private families, would suffice to place the facts beyond question. The poor ought not to be blamed for their poverty, or discouraged from the laudable endeavour to get their living honestly and honourably. Why cannot this evil be dealt with by the provision of public work-rooms under proper inspectors, somewhat on the plan of the baths and washhouses? It would not be costly or difficult to provide large, well-ventilated, and suitable buildings in districts conveniently near the residences of the humbler class, where women might take their work, and each in a little stall of her own labour in peace and cleanliness. A very trifling sum by way of hire money would suffice to cover the cost of keeping such a building in good condition, and a small rate would defray the expense of insuring the contents against fire, so that each worker might leave her materials in safety during the night. Each compartment would be let by ticket at the door on application, as admission is granted to a public washhouse, and there would be no expense to the industrious poor unless actually "in work." This ought to be the next reform. We invite the philanthropic who really desire to do good service to help us in giving this enterprise a start. The proposal is of moment, and the time propitious for setting it afloat.

HYDROPHOBIA.

THERE is a proverb regarding new brooms which we should like to see verified, in one respect at least, by the present Government. It has been in vain apparently that attention has been called, over and over again, to the prevalence of hydrophobia, and to the certain diminution which would follow the wide diffusion of knowledge regarding the early symptoms of rabies in the dog. We fear that no legislative enactments would make a "clean sweep" of the disease from amongst us, but at least its occurrence among animals and human beings might be made far rarer than it is. The evil is still pressing. In the neighbourhood of Cardiff a rabid dog, last week, ravaged the country, and inflicted bites which will, not improbably, result in a very serious outbreak. A dog belonging to a butcher wandered about away from home, and after some days bit a man at Pyle. On the next day he was found lying on the door of the school at Tarbach, and bit the schoolmaster severely in the leg as he was coming out. He next attacked a little girl, biting a part of her ear off, and further on he bit a boy in the arm. He then went off to Aberavon, where he bit another man, and then a little boy — the latter severely in the face. Some men then started in pursuit, and ultimately the dog was shot. How many animals, dogs, &c., the creature bit during his days and nights of wandering the account does not say, but certainly not a few. The moral of the sad story is this. Rabies always manifests itself, before the tendency to wander comes on, by characteristic symptoms, which have often been described in these columns and elsewhere. Hence it is practically certain that, had the owner of the dog been aware of the indications of the disease in its early stages, the frightful ravages described might have been prevented.

TEA FLAVOURINGS.

IT would be interesting to know what the preparers or vendors of cheap teas are using to flavour the varieties they offer in eager competition to please the palates of their customers, and win public support. If it be only a little finely chopped orange peel, or any simple material of that class, no harm is likely to come of the artifice; but there are always dangers lurking in the practice of adulteration, even when it is carried on under cover of a clever admixture of simple elements to produce a delectable result. It should be unnecessary to caution the trader in tea that cunningly prepared herbs and twig-chippings may include poisonous substances, and some of the phenomena which have been observed since the reduction of prices and the increased consumption consequent on the revulsion of "feeling" against alcoholic beverages has set in, suggest the need of caution both on the part of those who prepare "choice teas" and "mixtures," delicately flavoured, for the public, and the customers who confidingly consume them—not, we fear, without grave risks.

MEDICINE IN RUSSIA.

ACCORDING to a return of the Medical Department of the Russian Ministry of the Interior, the number of medical men in Russia in 1878 was 13,475, of whom 2035 held the diploma of doctor of medicine. In the course of 1878, 371 medical men were reported to have died, and 690 authorised practitioners were added to the official list. In addition there were 5100 "sous-chirurgiens," 2666 midwives, and 1652 pharmaceutists. The population of Russia is roughly estimated at 80,000,000.

A GRACEFUL ACKNOWLEDGMENT OF HOSPITAL SERVICES.

THE thank-offering of Mr. Henry Edwards, M.P. for Weymouth, to St. Bartholomew's Hospital is a graceful act which should not be allowed to pass unnoticed. Mr. Edwards had the misfortune, a few months since, to break one of his legs at the Cannon-street Station, and was conveyed to St. Bartholomew's, where he received the attention which sufferers of all grades of society experience in our medical charities. In acknowledgment of the service rendered to him, Mr. Edwards has forwarded to the treasurer of the hospital a cheque for £500 towards the Samaritan fund.

DR. BURGGRAEVE.

ON the occasion of the visit to London of Dr. Burggraeve, Emeritus Professor of Anatomy and Surgery of Ghent University, and Member of the Royal Academy of Medicine of Belgium, several eminent members of the profession met on the 27th ult. at the residence of Dr. Phipson, to listen to a discourse by the veteran Belgian professor, in which he disclosed the history of his researches upon the alkaloids, and their application to the treatment of diseases, by what is termed the dosimetric method.

Professor Burggraeve, in spite of his seventy-four years,

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addressed the meeting with wonderful fluency, and without the slightest fatigue, for upwards of two hours, illustrating his remarks by numerous interesting cases taken from his own practice. His object was to show how such powerful agents as strychnine, hyoscyamine, aconitine, atropine, digitaline, and veratrine, can be applied in medicine as safely and efficiently as quinine. He demonstrated their action in fevers of all kinds, and in other forms of disease, and insisted energetically upon the necessity of a complete reform in our present system of therapeutics.

Nature says, "It is a fact worth noting that M. Chevreul, who is now in his ninety-fifth year, has begun his course on Chemistry at the Paris Museum of Natural History, with as much apparent zest and energy as he did fifty years ago, when he first entered on his duties of that chair. The programme of his course, *Les Mondes* informs us, is beautifully and firmly written in his own hand. Notwithstanding his approach to the centenary, he still looks young and fresh."

AN accident, unattended, we are glad to learn, with any very serious consequences, occurred last week to Dr. Wybrants, coroner for Somerset. Whilst riding, with his wife and infant child, in a pony carriage, the animal shied, and as a result the whole party were thrown out. Dr. and Mrs. Wybrants were much shaken, but their infant escaped altogether unhurt.

THE Seventh Triennial Handel Festival, which will be celebrated at the Crystal Palace on the 21st, 23rd, and 25th of June, with Sir Michael Costa as conductor, promises to be as successful as the Festivals which have previously taken place.

THE townspeople of Huddersfield are to be congratulated on having become possessed of a new park, the generous gift of Mr. Henry F. Beaumont, of Whitley Beaumont, a former representative in Parliament of the southern division of the West Riding.

SIR JOHN LUBBOCK was on Wednesday elected Member of Parliament for the University of London, in succession to Viscount Sherbrooke, on the nomination of Dr. Samuel Wilks, seconded by Dr. Frederick Wood.

THE noxious properties of the leaves of the yew, when ingested, has received fresh illustration by the death last week of two valuable horses, belonging to a gentleman in Willesbourne, from eating the foliage of the *Taxus baccata*.

AT a meeting of the Obstetrical Society, Professor Simpson and Dr. Angus Macdonald stated that in their hands Chian turpentine, as yet, had not been productive of benefit when used in cases of uterine cancer.

TO the list of Vice-regal appointments, published last week, may be added that of Oculist-in-Ordinary to the Lord Lieutenant, an office which has been conferred upon Archibald H. Jacob, F.R.C.S.E.

WITH much regret we have to record the death of Samuel Messenger Bradley, F.R.C.S. Eng., of Manchester, which took place on the 27th ult., at the early age of forty years.

ON Friday, the 4th instant, an address will be presented to Earl Cowper, the new Lord Lieutenant, from the Royal College of Surgeons in Ireland.

A REUTER'S telegram announces the death of the Empress of Russia on the 3rd inst.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Birmingham (estimated population in 1879, 388,884).—Dr. Alfred Hill reports a birth-rate of 40·0 per 1000 population, and a death-rate of 21·8, in this borough for 1879. The death-rate was markedly below the average (24·9) of the six preceding years. This satisfactory improvement in the rate of mortality of the borough Dr. Hill attributes to a low summer temperature, with its consequent smaller mortality from diarrhœa, a total immunity from fatal small-pox, a diminution of the severity of scarlet fever and whooping-cough, "a not too flourishing condition of trade, which is apt to lead to intemperance and excess"; and, finally, to the many sanitary works carried out by the department presided over by the Health Committee of the Corporation. The death-rate given by Dr. Hill will, he cautions the reader of his report, be found somewhat lower than that given by the Registrar-General, because the latter includes among the deaths in Birmingham paupers belonging to the borough who died in the workhouses situated outside the municipal boundaries. The infant mortality was as low as 15·0 per cent. of the births, owing doubtless to an unusually small mortality from diarrhœa. Of the principal spreading diseases there was little of special importance to write as to extent of prevalence during the year, but the general observations on typhoid fever are of interest. Dr. Hill notices the gradual decline of mortality from "fever" from 0·63 per 1000 population per annum in 1870 to 0·22 in 1879, and a corresponding decline of typhoid fever: "I have in previous reports remarked upon the gradual decline in the cases of typhoid fever from year to year—a decline not confined to Birmingham, but exhibited by the generality of the great towns of England, and possessing all the more interest that it is an undoubted—perhaps the best—indication of the improved, and improving, general state of towns, the result of sanitary work systematically carried out. It is impossible that such a progressive improvement in the large towns generally, and in Birmingham in particular, can be the result of a series of happy accidents; it is only one of the many incidents marking sanitary progress, such as the partial or complete banishment of diseases like plague, typhus, ague, and small-pox, and, like them, it clearly shows the possibility of overcoming the other zymotics, such as scarlet fever, measles, whooping-cough, and diphtheria, when we shall become sufficiently informed upon their nature, and careful enough to apply the knowledge." The mortality from diphtheria has undergone almost as marked a diminution in Birmingham since 1873 as "fever." Both diphtheria and typhoid occur in Birmingham at all times of the year, and never as a sudden epidemic, and both diseases are distributed generally over the town, manifesting no special habitat. Their prevalence would appear to have no particular relation to elevation, to the condition of houses as to general cleanliness, to dampness of houses, privy accommodation or filth from animal-keeping in and about houses, but to have, as chief condition of occurrence, the action of *drain air*, we presume arising from particular defects of drainage. Birmingham would clearly appear to be slowly, but surely, remedying its sanitary shortcomings in detail; and the effects of the work already done in this direction are now making themselves manifest in the diminished and steadily diminishing mortality of the borough, and the greater control obtained over the spreading diseases most markedly fostered by local insanitary conditions. In few things will this detailed amendment of the sanitary condition of the borough be more marked than in the abolition of the old offensive midden privies which is in progress, 3055 pans having already been substituted for many of those unwholesome receptacles.

Cannock Union Rural Sanitary Authority (area of district, 55,222 acres; population, 1871, 13,459).—Mr. Fredk. E. Manby reports a death-rate (estimated on the population of 1871) of 19·47. No fatal case of enteric fever occurred in his district during the year, and there was a considerable diminution of infantile mortality. The most prevalent

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malady of the zymotic class was scarlet fever. Mr. Manby observes that the breast-suckled children of a healthy population ought not to die in anything like the proportion they do in his district, and he proposes, with the Sanitary Authority's consent, to prepare and circulate some plain rules on the management of infants, including their feeding. This is an example which might be more largely followed. The Sanitary Authority appears to be somewhat in the background as to matters of disinfection.

THE SANITARY CONDITION AND ADMINISTRATION OF THE ISLE OF WIGHT.

We are glad to learn that, under instructions from the Local Government Board, Dr. Ballard, of the medical department of that Board, is engaged in making an inquiry into the sanitary condition and administration of the island. Visitors to the island, who have taken the trouble to look a little behind the scenes, have had forced upon them the unpleasant truth that the inhabitants have been and are too commonly disposed to leave everything in health matters to the natural advantages the island gives to them, and hold these advantages so highly as to exonerate them from all serious care for avoiding or abating sanitary evils of their own creation. Moreover, the sanitary administration of the island appears to be especially contrived to perpetuate unwholesome conditions at the cost of the inhabitants and of visitors.

The state of the island in these matters has long needed inquiring into, and the investigation in which Dr. Ballard is now engaged will no doubt give the information which is needed. Hitherto it has been too largely the case that the community of health-resorts have substantially held that they possess a sort of right to counteract by their sanitary indifference and carelessness the advantages to be derived from their favoured positions. This ignorant short-sightedness is passing away, but not so rapidly as it might do; and visitors, upon whom so much of the prosperity of these resorts depends, would be well advised to cease visiting so-called health-resorts until they have some assurance that their sanitary authorities are doing all in their power to remove and prevent the recurrence of unwholesome conditions there.

LOCAL GOVERNMENT AREAS.

The Bill brought into the House of Commons by Mr. Peli and others for the appointment of a Commission for the alteration of areas of Local Government in certain cases, and for the rearrangement of the boundaries thereof, deals with a difficult subject, but one which may be regarded as the first step to a reconsideration of Local Government areas generally. The Bill provides that the Commissioners to be appointed under it shall be empowered to effect the following objects, to wit—1. That no poor-law parish or union shall extend over the boundary of any county. 2. That no poor-law parish shall be divided into isolated parts. 3. That no poor-law parish shall be of so small a size or have any part or parts thereof so situate as to render the administration of the relief of the poor in or the local government of such parish or part or parts thereof in the opinion of the commissioners inconvenient. 4. That every highway parish shall be coincident in area with some poor law parish. 5. That every highway district shall be coincident in area with some rural sanitary district. And the Commissioners are to deal with all cases where they think it necessary to alter any areas, and to adjust any boundaries in order to effect the objects aforesaid, and shall frame schemes and make orders in relation thereto, subject to and in accordance with the provisions of this Act.

The Bill provides that powers possessed by the Local Government Board and County authorities for altering areas shall be suspended during the times the powers exercised under this Bill by the Commissioners are in force, except at the request of the Commissioners.

REGISTRATION OF DISEASE.

The report of the medical officer of health for the borough of Huddersfield for the four weeks ending May 1st, 1880 (and dated the 12th ultimo), presents the singular characteristic of being based solely upon the returns of mortality for the district to which it refers. The registration of diseases, which has now been three or four years in force in the borough, does not appear to furnish one item of information which the medical officer of health can make use of in his report, notwithstanding that the deaths include two from scarlet fever and three from measles, and a considerable epidemic of the latter disease having been prevalent during the month. How is this to be explained? What advantage, if any, is Huddersfield gaining from its power to enforce notice being given to its sanitary authority of the occurrence of certain classes of disease? Is the advantage so slight that the information gives no help to the medical officer of health in framing his monthly reports on the health of the town? If so, how justify prosecutions of medical men for withholding information, as in the case we described last week?

VINDICATION OF A MEDICAL OFFICER.

The Committee appointed by the Penistone Guardians to inquire into certain charges of neglect preferred against Dr. Duncan, medical officer for the Denby district, have given in their report. The committee state that having at great length taken the evidence of parties alleged to have been aggrieved, they unanimously agree that the charges are incapable of being sustained, and that the inquiry has failed to establish or show any neglect of duty on the part of Dr. Duncan.

A correspondent signing himself L.R.C.P. has written to the *East London Observer*, complaining of a large mercantile vessel entering the Victoria Docks with cases of virulent small-pox on board. He thinks there must have been some carelessness on the part of the sanitary authority responsible for the health-welfare of the port that this should have happened. Having regard to the efficiency with which the Port Sanitary Authority have usually worked, we are inclined to think that the writer has penned his note under some misapprehension as to the conditions under which their work has to be effected.

Dr. Whitmore, in his monthly report for Marylebone, dated 12th May, 1880, reports the death of five young infants from having been accidentally overlain and suffocated in bed. He observes on this, that it is "by no means of unfrequent occurrence, so frequent, indeed, as to merit especial notice. It is not difficult to imagine," he adds, "a big burly man going to bed in a state of intoxication in which his young infant—a puny baby of only two or three months old—is sleeping, who, to his horror, finds on awakening in the morning that he has overlaid his child during the night."

A Parliamentary paper has been published, called for by Sir George Balfour, and which shows Taxes or Imposts to the amount of £5,632,158, with a view to the consideration at a future date of the desirability of transferring these taxes or imposts from Imperial to Local Taxation. The list of taxes and imposts included in the return is curious.

We regret to learn that difficulties have arisen between the Sanitary Authority and the Board of Guardians of Stepney with respect to the cost of removing cases of infectious diseases to hospital. In many cases the line between the non-pauper and pauper cases appears to be very ill-defined, and each authority is desirous to throw the responsibility upon the other.

AT a meeting of the Council of the Poor-law Medical Officers' Association, held at their rooms, 3, Bolt-court, Fleet-street, on June 1st, it was resolved that a petition in their name should be forwarded to the House of Commons, in support of the Medical Charities (Ireland) Bill now before the Legislature.

VITAL STATISTICS.

FEVER DEATH-RATES IN SCOTCH TOWNS.

The Registrar-General has just issued a supplement to the Monthly and Quarterly Returns for Scotland, which contains a summary of the mortality statistics for eight of the largest Scotch towns during 1879. The death-rates from all causes during last year in these eight towns per 1000 of the estimated population ranged from 19·6 and 20·3 in Edinburgh and Leith, to 24·7 and 30·6 respectively in Perth and Paisley. Comparing these rates with the average rates in the ten preceding years, we find that both Edinburgh and Leith, judged by their death-rates, are among the healthiest of these Scotch towns, while Paisley stands at the bottom of the list, whether judged by its average rate in ten years,

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or by its rate in 1879. It is very generally admitted that the death-rate from fever (including the fatality of typhus, enteric or typhoid, and simple continued fevers) affords a fair test of sanitary condition. It may be useful, therefore, to compare the fever death-rates in these eight towns, not only with each other, but with those in the large English towns for the same period. The death-rate from fever in the eight Scotch towns during 1879 averaged 0·36 per 1000 of the estimated population; while in twenty of the largest English towns the death-rate from fever did not exceed 0·29 per 1000. In the Scotch towns the death-rate from fever was equal to 0·26 in Dundee and Perth, 0·27 in Aberdeen, 0·35 in Glasgow, 0·39 in Edinburgh, 0·39 in Greenock, 0·49 in Leith, and was highest, 0·71, in Paisley. The excessive death-rate from fever in Paisley corroborates the evidence of unsatisfactory sanitary condition afforded by the death-rate from all causes. It is well known that in England the diagnosis of the various forms of fatal fever is very faulty. It would be interesting to know how far it may be relied upon in Scotland. The Scotch returns for the eight large towns show the classification of the fever deaths, from which it appears that during 1879 the deaths certified from typhus were 58 in Glasgow, 28 in Edinburgh, 19 in Dundee, 5 in Aberdeen, 17 in Greenock, 11 in Paisley, 6 in Leith, and only 1 in Perth. The proportion of fatal cases of typhus to the total deaths referred to fever was largest in Greenock, Paisley, and Dundee. Proportionally, the recorded fatality of typhus was considerably greater last year in Edinburgh than in Glasgow.

HEALTH OF LARGE ENGLISH TOWNS.

The death-rate in our large towns shows a further decline. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5540 births and 2887 deaths were registered last week. The births exceeded by 255, while the deaths were no less than 388 below, the average weekly numbers during 1879. The deaths showed a further decline of 62 from the decreasing numbers in recent weeks, and were equal to an annual rate of 20·1 per 1000, against 21·1 and 20·5 in the two preceding weeks. During the past eight weeks of the current quarter the death-rate in these towns did not average more than 21·3 per 1000, against 23·6 and 24·1 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 15·8 in Wolverhampton, 16·5 in Leeds, 16·7 in Hull, 18·3 in Portsmouth, and 18·5 in Leicester. The rates in the other towns ranged upwards to 22·6 in Oldham, 23·4 in Liverpool, 23·7 in Norwich, 23·8 in Newcastle-upon-Tyne, 25·9 in Manchester, and, the highest rate during the week, 28·6 in Salford. The excess in Salford was in great measure due to the fatal prevalence of zymotic diseases.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 439 and 400 in the two preceding weeks, rose 461 last week; they included 132 from whooping-cough, 131 from scarlet fever, and 90 from measles. The annual death-rate from these seven diseases averaged 3·2 per 1000 in the twenty towns, and ranged from 0·7 and 0·9 in Leeds and Birmingham, to 6·7 in Sunderland, 7·6 in Salford, and 8·4 in Plymouth. Whooping-cough showed the largest proportional fatality in Newcastle-upon-Tyne, Manchester, and Liverpool; scarlet fever in Salford, Norwich, and Hull; and measles in Plymouth and Sunderland. The fatal cases of measles in Plymouth, which had been 23, and 2 in the two previous weeks, rose again to 10 last week. Five deaths were referred to fever (probably enteric) in Salford. Small-pox caused 10 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 186, 193, and 196 in the three preceding weeks, further rose to 218 on Saturday last; and no less than 50 new cases were admitted to these hospitals during last week, against 36 and 45 in the two previous weeks. Judged, therefore, by these hospital returns, small-pox prevalence in London is steadily increasing.

The fatality of lung diseases showed a further considerable decline last week. The deaths referred to diseases of the respiratory organs in London, which had been 286 and 241 in the two preceding weeks, further declined to 208 last week, and were 46 below the corrected average weekly number; 116 were referred to bronchitis, and 60 to pneumonia. The annual death-rate from diseases of this class did not exceed 3·0 per 1000 in London last week, whereas the rate from the same diseases was equal to 5·1 in Liverpool, and 8·8 in Manchester. The weekly statement issued by the medical officer of health for Manchester is not, however, explicit as to whether "diseases of the lungs" includes phthisis.

HEALTH OF LARGE SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 22·8 per 1000, against 24·8 and 23·7 in the two preceding weeks; it exceeded, however, by 2·7, or 13 per cent., the average rate in the twenty large English towns. The rates in the eight Scotch towns last week ranged from 15·6 and 20·3 in Aberdeen and Greenock, to 25·3 and 28·7 in Perth and Paisley. The deaths referred to the seven principal zymotic diseases in the eight towns declined to 108 last week, of which 41 resulted from whooping-cough, 25 from fever, 15 from measles, 12 from diarrhœa, and 11 from diphtheria. The annual death-rate from these seven diseases averaged 4·3 per 1000 in the eight towns, whereas in the twenty English towns it did not exceed 3·2; this zymotic rate, which was but 2·0 both in Aberdeen and Greenock, ranged upwards in the other towns to 6·4, and 7·8 in Paisley. Whooping-cough showed the largest proportional fatality in Glasgow and Paisley. The fatality of fever again showed a marked excess compared with that prevailing in the twenty English towns; the rate of fever mortality was largest in Glasgow, Dundee, and Perth. The 12 deaths referred to diarrhœa showed a further decline of 10 from the numbers returned in recent weeks. The deaths from acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 131, 118, and 103 in the three preceding weeks, were 106 last week, and were equal to an annual rate of 4·3 per 1000; the rate from the same diseases in London last week did not exceed 2·6 per 1000.

THE HEALTH OF DUBLIN.

The 229 deaths in Dublin last week exceeded the numbers in recent weeks, and were equal to an annual rate of 38·0 per 1000, against 36·5, 35·0, and 34·2 in the three preceding weeks. During the eight weeks ending last Saturday, the death-rate in Dublin averaged no less than 36·3 per 1000, whereas in London during the same period it was but 20·1. When it is remembered that probably 9 per cent. of the deaths in Dublin escape registration, the excess of the recorded death-rate in that city becomes all the more noteworthy. Fifty of the deaths in Dublin last week were referred to the seven principal zymotic diseases, against 43 and 40 in the two previous weeks; 14 resulted from scarlet fever, 10 from fever, 9 from small-pox, 8 from whooping-cough, and 6 from measles. The annual death-rate from these seven diseases was equal to 8·3 per 1000 in Dublin, against 3·2 in London and 3·6 in Edinburgh.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE METROPOLITAN WATER-SUPPLY.

If the deputation from the Commissioners of Sewers of the City of London to the newly-appointed Home Secretary a few days ago, and before he had well settled down in his ministerial duties, on the subject of the metropolitan water-supply, appeared premature, at least it must now be said that the important body represented by the Commissioners has shown itself in earnest in the matter. At the meeting of the Court of Common Council on the 27th ult. a report was brought up from the Commissioners, and adopted, which showed that they had at once acted upon the suggestions made to the deputation by Sir W. Harcourt. The report stated that, without expressing any judgment on the provisional agreements entered into for the purchase of the water companies supplying London with water, they were of opinion that, as those agreements had been made after lengthened negotiations on the assumption that they were beneficial to the consumers, it was expedient that they should be carefully inquired into by a Select Committee of the House of Commons with a view of ascertaining whether all of them were to the advantage of the inhabitants of the metropolis, and

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should be carried into effect, or whether the expenditure contemplated under the agreements for acquiring the existing supply might not be more profitably spent in procuring a new and better supply of water for London. They were also of opinion that the Corporation should be prepared to take part in the inquiry, and co-operate therein, and they drew particular attention, among the many defects at present existing in regard to the water-supply, to the basis of charge for water as requiring reconsideration and revision.

On the 28th ult. a deputation of the Metropolitan Board of Works had an interview with Sir W. Harcourt and Mr. Dodson, the President of the Local Government Board, on the same subject. This deputation urged that the Government should take a course, in respect to the agreements considered by the late Government, similar to that recommended by the City Commissioners of Sewers; but it further claimed for the Metropolitan Board of Works the management of the water-supply, and objected in the interest of the ratepayers to the creation of a new body for the purpose. The deputation, in addition, proffered every help the Board could give to the Government in promoting inquiry either as to the lately contemplated arrangement or as to the consideration of new schemes. Sir W. Harcourt, in addressing the deputation, was careful to state that the Government had not adopted the agreements in question, and that it did not either promote them or support them. They found them existing, and were willing that they should be inquired into. The agreements would be laid upon the table of the House, and the Government would be extremely grateful to the Metropolitan Board of Works for such help as it could give in coming to a clear knowledge of their character. The Bill of the late Parliament on the subject was dead, and the Government had no intentions, as at present advised, of reviving that Bill.

Since these deputations, the subject has come before the House of Commons, and the Home Secretary has received a deputation from the Vestries and District Boards upon it. On the 31st ult., in answer to a question from Mr. Brand, Sir W. Harcourt stated that the Government would ask the House to appoint a Select Committee to inquire into the character of the agreements considered by the late Government, and their actual relation to the value of the property to be acquired under them. They proposed also to submit to the Committee, as a proper subject for inquiry, the basis of the charge for water—that is to say, the basis on which the powers of the companies were founded, and which enabled them to raise their water rents without limit in proportion to the growth in the value of houses, without themselves expending any further moneys or rendering any additional services.

The deputation from the Vestries and District Boards saw the Home Secretary on the 1st inst. Mr. Beal, of St. James's Vestry, speaking for the deputation, observed that if the report of the proposed Select Committee should favour purchase, they strongly condemned a price which, from the fluctuations on the Stock Exchange, showed that a huge bargain in the interest of the companies, and not in the public interest, had been made.

With reference to the particular question of the supply of potable water to the metropolis from the chalk in the London basin, it may be noted that a boring at Wokingham has struck a very fine spring at a depth of 405 feet. This spring yields at the rate of 360,000 gallons a day, and fills the well shaft to within thirty feet of the surface. The water is stated to be very pure and clear.

INFECTION IN PRIVATE SCHOOLS.

A recent instance which has come to our knowledge of the break-up of a private school on account of the occurrence of a case of scarlet fever among the children, and of the scattering of the children east, west, north and south, and with them the scattering of the disease, leads to some serious reflections on the responsibilities of schoolmasters in this matter. In the case in question the schoolmaster holds himself aggrieved that neither the sanitary authority nor voluntary effort has provided within his locality hospital accommodation, which would enable him at once to isolate a case of infectious disease within his school, and so protect the remainder of the scholars, and avoid the almost ruinous loss of an enforced break-up of the school. But there is another, and, as it seems to us, simpler and more reasonable view of the question. Ought large schools for young children to exist unless they have proper arrangements for the isolation of occasional cases of infectious disease? We think not, and should strongly advise all parents to avoid sending their children to schools where so reasonable a precautionary arrangement as this is not provided. It surely was not contemplated in the Public Health Act that sanitary hospitals should be founded for the relief of private school establishments, although, the hospitals existing, and there being space in them at command, no objection could be raised against them being so used. Still less could it have been contemplated that charitable hospital foundations would be devoted to such an object. The responsibility of the provision should rest with the proprietor of the school, and we trust the day may come when this responsibility may be given legal force by having a place in an amended Public Health Act.

GLANDERS IN THE METROPOLIS.

Dr. Dudfield, in his last monthly report, gives us some interesting information as to the prevalence of glanders and farcy among horses in Kensington. Since he first directed attention to the subject of the presence of the malady in London stables, in consequence of the occurrence of glanders in certain persons in his district, the increased attention given to it has permitted him to arrive at a definite knowledge as to the amount of glanders prevalent in his own district. This is not so great as at first apprehended, but is sufficiently serious to call for more energetic efforts of repression than have yet been made. Dr. Dudfield is able to assure us that the prevalence of the disease in Kensington does not appear to be exercising any injurious influence on the public health. The disease is not generally disseminated among the horses in the parish, but is localised in certain mews, and among the horses belonging to limited classes of the population. He specifies two areas within which the disease is found, and within them it is almost entirely confined to the horses of certain omnibus and cab proprietors, "no case of glanders having been reported in any gentleman's stable or livery yard." The observation is suggestive as to the conditions under which the contagion is disseminated, and the causes of its localisation. The contagion is limited to certain stables, as it were, and is doubtless fixed there by certain ill-advised and uncleanly habits indulged in in those stables favourable to the maintenance of the malady by its propagation from horse to horse. Dr. Dudfield refers to the probable spread of the disease by horses drinking from common drinking troughs, and advises his Vestry to let every horse in their own stables (to which the disease had found its way) be watered from its own bucket. In Kensington 81 horses were slaughtered, for glanders (57) and farcy (24) in 1879; 55 (glanders 35, farcy 20) in 1880; and during the first three months of the year 5 have been slaughtered for glanders, and 37 for farcy.

SEA-WATER IN LONDON.

Whilst the Great Eastern Railway Company are to be congratulated upon the enterprise which brings the luxury of the sea-bath, at a small cost, and with little trouble, within the reach of the jaded Londoner, we should like a little more information with regard to the particular point off Lowestoft from which the sea-water they propose to furnish us with is drawn. Lowestoft is one of our watering-places that has preferred to discharge its sewage into the sea in close proximity to its own shores, instead of carrying it to a distance, as many towns have wisely done. Lowestoft has three main sewers—two for the old town, and one for the new. The chief sewer for the north town discharges into the sea off the Ness. As the tides ebb and flow north and south, the sewage is carried seaward in one direction or the other, according to the state of the tide. The other sewer for the old town, together with that from the new town, discharges into the harbour; part of this sewage is carried out to sea with the ebb, and part deposited in the harbour. Visitors to Lowestoft will remember the constant dredging that is constantly going on in the harbour, so that eventually the deposited sewage finds its way to the sea by means of the barges, which convey and discharge the harbour mud into the sea. We do not deny the possibility of obtaining pure sea-water at Lowestoft, but owing to the conditions we have alluded to, the greatest care ought to be bestowed on its collection. We hope the railway company will give ample information as to the point of intake of their supply, and the condition of the tide at the time of collection, otherwise the public will have no assurance as to the

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purity of the water supplied. A trace of sewage-matter in the sea itself may not be injurious to those bathing in it, though the idea is unpleasant; but tinned sea-water may become objectionable in many respects. We should be sorry to see this valuable hygienic help to metropolitan life fall into disrepute from the want of a little forethought and prudence.

MEDICO-SANITARY NEWS FROM RUSSIA.

One of the most difficult problems to be solved in Russia is the sanitary organisation of zemstvos. The Russian journal the *Bereg* has some severe strictures upon the action which has been too commonly taken by the local authorities in this matter. It avers that they have given regard rather to some conspicuous exercise of their health-functions than to meeting the real health-needs of the population within the zemstvo. They have been more wishful to found "sumptuous" hospitals, and to introduce highly-trained medical men and nurses into the district, than to secure the services of medical men prepared to undertake the medical treatment of the peasantry, and of nurses accustomed to the habits and adapted to work among the lower classes of women. The result has been that the highly-trained men and nurses have been swallowed up by private practice, the hospitals have remained empty, and the class of the population for whom public medico-sanitary help was needed have profited nothing by the action of the local authorities. All this needs changing by the provision of small inexpensively-constructed hospitals, and by the obtaining of medical men and nurses whose services can be secured for the poorer classes.—The notices of diphtheria in the Russian press have latterly very much diminished in number and detail, and there is reason to believe that there has been a decline in the prevalence and severity of the epidemic. From Voronège it is reported that the measure adopted, with the aid of twenty medical students from the University, of thoroughly disinfecting infected cottages, has proved very efficacious. When the epidemic has come to an end, the local authorities propose to utilise the medical staff brought together for the purpose of combating it, in vaccinating generally the infants throughout the province.—Dr. Reich, of Betcho, has left a sum of 12,000 roubles to the Academy of Medicine, St. Petersburg, in order to found two scholarships to be designated by his name.—The mortality return for St. Petersburg during the week ending the 24th April showed a considerable increase. The deaths from all causes were 805 (537 males and 268 females), typhus being credited 199, and pulmonary phthisis 126. The most numerous deaths were recorded at ages from twenty to twenty-nine years—"young people," the return says, "in the flower of their age."—The question of systematically sewering Moscow is under consideration by the local authorities of that city. A commission appointed to report on the subject held its first meeting on May 15th at the palace of the Governor-General. It was decided to appoint three committees to discuss and report upon the technical, sanitary, and financial aspects of the question respectively. The commission proceeded to elect the members of the several committees.

TYPHOID IN GLASGOW.

A very grave outbreak of typhoid fever has occurred in Glasgow and in the contiguous parish of Barony, at Possil-park. Dr. Russell, the medical officer of health for Glasgow, and Dr. Christie, the medical officer of health for Hillhead, have been actively engaged in making a minute inquiry concerning the source of the outbreak. The investigation has been unusually intricate, and is not yet complete, but pending the completion and publication of the reports we may state that, with regard to Glasgow, the outbreak occurred in some twenty or more local centres, varying in intensity, but all attached to milk-shops supplied by an agent into whose stock milk from an infected farm in Stirlingshire was being sent. The original epidemic is quite at an end, but a few secondary cases have sprung up, chiefly in families where children were slightly ill or the patients were treated at home. There are about 200 persons under treatment for enteric fever in Belvedere Hospital, nearly all of whom are victims of the late epidemic.

With regard to Possilpark, we may state that since the commencement of the outbreak of typhoid fever in this district of the Barony parish, in the second week of April, above ninety cases appeared among a population of about 5000. The greater number of cases were recorded from about the 10th to the 28th of the month; but from the middle of May only a few cases have occurred, which have evidently been the outcome of the previous outbreak. The general features of the outbreak in this district have also been characteristic of those which have been observed in different epidemic centres within the municipal boundaries of Glasgow, and there is still reason for the hypothesis that all have been connected with one common centre of origin.

ADULTERATED MILK.

Two cases have recently been heard before metropolitan police-courts in which milk carriers of certain dairy-proprietors were charged with having added more or less water to the milk in their cans, whilst engaged in carrying the milk to their masters' customers. Both cases were fully proved, and in both cases heavy fines were inflicted. The cases are of interest, as showing one of the ways in which milk may become adulterated, and which is most difficult to control and detect. In the country and in towns without a general water-supply, this mode of adulteration is, as a rule, of more serious consequence than in towns which have a general water-supply. In the metropolis, where the water used for adulteration would probably be drawn from the mains of a water-company, the liability of the milk causing mischief, apart from its impoverishment, would be slight as compared with the country, where the water might be taken from a road-side ditch, or pond, or polluted surface well. Few professional men, we apprehend, who have had the opportunity of seeing local outbreaks of enteric fever in the country, which there have been reasons to attribute to an infected milk supply, have not at times suspected that the source of infection was not in the dairy from which the milk came, but from some intermixture of the milk with infected water during the course of its delivery among the customers.

THE PUBLIC-HEALTH CONFERENCE.

The Annual Conference on Public Health, promoted by the Society of Arts, and which is to be held in the rooms of the Society on the 10th and 11th instant, under the presidency of the Right Hon. James Stansfeld, M.P., promises to be of exceptional interest this year. The programme of the Conference includes four subjects—to wit, 1, Administrative Organisation (including county boards; sanitary districts; election of sanitary authorities; and Local Government Board Inspection); 2, Amendment of the Law (including the Public Health Act, 1875, and the Pollution of Rivers Act); 3, Sanitary Inspection and Classification of Dwellings; 4, Further Suggestions by Sanitary Authorities.

At a public meeting at Menai Bridge on the 29th ult. it was unanimously resolved to apply to the Local Government Board for powers to establish a local board of health for the district, rather than allow its sanitary interests to remain under the control of the Bangor Union.

The lecture recently given by Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S., at the Royal Indian Engineering College, Cooper's-hill, Staines, "On the Preservation of Health in India," is in the press, and will presently be published.

At a meeting of the guardians of the North Dublin Union, held last week, it was stated by the relieving officer that small-pox was so prevalent that there were no vacancies in the Hardwicke Hospital for further cases.

THE SERVICES.

INDIAN MEDICAL SERVICE.

IMMEDIATELY after the promulgation of the G.O. amalgamating the administrative staff of the British and Indian Medical Services, a Defence Committee was formed in London to take what steps they might deem advisable "to obtain compensation for what was clearly a very serious damage to the rights and interests" of the Indian medical officers. The committee issued a pamphlet under the title of "Brief Notes regarding the Indian Medical Service," which we brought to the notice of our readers (see THE LANCET of March 13th). They also issued, as we think

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with more haste than judgment, a "Notice to Medical Students," with the object of preventing candidates coming forward for the service. When the G.O. regulating the civil medical service was brought out, it was found that the most serious objections to the amalgamation were removed, and the Committee were under the necessity of issuing a second edition of the notice, in which they confine themselves to a comparison between the army and the Indian Medical Services. They have also published some "Observations on certain features of the Grievances of the Officers of the Indian Medical Service, issued by authority of the Indian Medical Service Defence Committee." We do not consider it necessary to go into a detailed examination of all the statements contained in this document, but shall merely notice some of those which we consider well-founded grievances, and, as such, calling for modification. Of these we may mention the relative rank of the medical officers, which should at once be assimilated to that granted by the last Warrant to the medical officers of the British army. It is quite out of the question to have two sets of officers working together, similarly qualified and performing similar duties, and the one having an inferior rank to the other. It would be matter for astonishment that this anomaly has not ere now been remedied, were we not aware of the eccentric manner in which the affairs of our public services are regulated. The examination previous to promotion to the rank of surgeon-major should either be restored in the British or abolished in the Indian army. If it be necessary as an evidence that the officer has not been neglecting his profession during the earlier years of his service, and is competent for its duties in the higher grade, it must be equally so in both armies; if unnecessary, it should be at once abolished. The scale of temporary half-pay and of retiring pensions granted to the Indian medical officers demands immediate revision. The difference between the rates in the two services is very marked, and is, in our opinion, utterly without justification. The grade of Brigade-Surgeon should be introduced into the Indian army, both to prevent any unpleasant collision between the two services and the aggrieved feeling which may not unlikely be manifested when a Brigade-Surgeon of the British and an old Surgeon-Major of the Indian army are on duty together, and also to compensate for the loss of two appointments of Deputy Surgeon-General under the new *régime*. A more liberal share in the distribution of rewards and decorations is also imperatively required. It is little to the credit of the authorities in India that only one medical officer is entitled to wear the decoration of a Companion of the Bath in a service which has furnished so many distinguished and excellent officers.

In their Observations, the Defence Committee discuss the question of promotion to the administrative appointments by selection, instead of by seniority as heretofore, and make out of it a grievance on the part of officers not selected. Looking to the results of the old system by which a post of great responsibility was not unfrequently filled by a man who might very fairly be classed as much below mediocrity, we confess our sympathies to be in favour of selection. With the aid of public opinion, and the facilities afforded by the Press for exposing jobbery, we look forward to the system being worked with justice to the officers of the Department, and advantage to the public service. But to soften down the hardship to those who are passed over, the introduction of the new grade of Brigade-Surgeon, as above recommended, seems a measure alike of policy and justice.

Taking an impartial view of the recent changes as they bear on the Indian Medical Service, we think it has been decidedly a gainer by them, the loss of two deputy surgeon-general's appointments having been more than made up for by the new position given to the sanitary commissioners, their increased pay, and their attaining the rank of deputy surgeon-general on completing twenty-six years' service, or on the promotion of any officer junior to them to that rank. If the Indian Government will now take up the question of the grievances we have above noted, and will, we do not say in a liberal, but in an equitable manner, remedy them, we have no doubt of the Department continuing to maintain its popularity with the profession and drawing to its ranks from the medical schools an adequate supply of educated gentlemen well qualified to keep up the high reputation gained for it by their predecessors.

Surgeon-General C. A. Gordon, C.B., Principal Medical Officer Portsmouth Division, retires from the service on half-pay from the 26th ult., having reached the prescribed age (sixty years) when administrative medical officers are by late warrants placed on the retired list.

Deputy Surgeon-General W. A. Thompson, M.B., Army Medical Department, has been appointed Principal Medical Officer of the Northern District, York.

Deputy Surgeon-General Herbert Reade, V.C., has been placed under orders for the West Indies, and will relieve Deputy Surgeon-General S. Fasson as Principal Medical Officer at Barbadoes.

Deputy Surgeon-General H. Kendall has arrived from India, and been appointed to the Chatham District, *vice* Deputy Surgeon-General G. Pain, retired on half-pay.

The undermentioned officers are granted a step of honorary rank on retirement:—Deputy Surgeons-General to be Surgeons-General: Edward Courtenay Thorp, M.D., of the Bengal Army; dated Oct. 20th, 1879. James Irving, M.D., of the Bengal Army; dated Dec. 13th, 1879. George Hutchinson Ray, M.D., of the Bengal Army; dated Dec. 17th, 1879. John Robert Theobalds, of the Madras Army; dated April 1st, 1880. William Judson van Someren, M.D., of the Madras Army; dated April 3rd, 1880.—Surgeons-Major to be Deputy Surgeons-General: Charles James Sylvester, M.D., of the Bombay Army; dated Jan. 13th, 1878. Francis Day, of the Madras Army; dated June 2nd, 1880.

Correspondence.

"Audi alteram partem."

"OVER-EXAMINED AND UNDER-TAUGHT."

To the Editor of THE LANCET.

SIR,—I have read with much interest your able article in last Saturday's LANCET on Mr. Marshall's proposal to institute a compulsory examination in anatomy and physiology at the end of the student's first winter session. I must, however, confess I learn with a feeling of disappointment, shared I cannot doubt by many others, that your opposition to his scheme is as pronounced as it was nearly five years ago. After a period of active work in the dissecting-room which has given me unusual opportunities of close and prolonged intimacy with students, I venture to say I have never known a single student—and during the past few years I have conversed with many on this subject—who has not at once been willing to admit the great advantages which would follow such an examination. So far from students raising an objection, they would, I am convinced, be the first to welcome the change, as the very thing above all others which would give them the best stimulus to their work. Those who find they must differ from the opinions you so forcibly express might well rest content with such evidence as this in their favour, taking the problem as already solved and beyond the region of doubt. I think, Sir, if the able writer of your "leader" would spend an hour or two amongst the men who fill our dissecting-rooms and class-rooms, he would not long remain an opponent to Mr. Marshall's scheme. For what are the facts to which our schools bear witness? That a bare majority of students in their first year work well; that the rest work very indifferently, or after the first few weeks not at all. In the second year only the former become properly fitted for the College examination. A few, but a very few, of the indifferent workers are able by an effort to catch their colleagues; the rest become more or less "chronic."

Now, Sir, I feel convinced that a compulsory examination in elementary osteology and the anatomy of the limbs would entirely alter this unhappy state of things. Surely, the diligent student would find his best inducement to work in the near prospect of such a test, under the management of properly selected and authorised examiners. His success would be the reward he has striven for, and the proof to himself and his school that his labour has not been in vain. It would, moreover, give him what he could scarcely gain in any other way, the experience and confidence, and the self-reliance, for want of which good men occasionally fail. I question very much whether we should have to record much indifferent work. Few men join a medical school with the thought of being idle; it is all the other way. It is

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just the want of a stimulus and the want of pressure—which an examination of this character would supply—which, I believe, is the main reason why these men drift into habits of idleness. Lectures, it is true, may do something, practical teaching may do more, but in my opinion an examination would do most of all to induce the bulk of our students to work, in the real sense of the word. Lectures become a farce when attended simply from necessity, and practical teaching loses much of its point when the knowledge taught must grow stale before it is wanted. It is true, as many teachers have suggested, that botany and chemistry might well be done with before the real professional work commences. It is, moreover, true that students waste time in learning how to work, but this is an evil that only disappears as knowledge and experience are gained by actual work, and this cannot be done *for*, it must be done *by*, the student himself. The sooner steady work is commenced the sooner these difficulties clear away.

Recognise the fact that the College of Surgeons has a paramount influence in shaping medical education, and admit that our teaching has to conform to its requirements—at least when it contemplates such a change as Mr. Marshall suggests,—it should receive the support of those who believe it will thus be giving to students the best and surest impulse to their work. It seems to me we shall never arrive at a scheme of education calculated to fit every mind and every capacity, and I apprehend this matters comparatively little if you insure the energy for work. This will bring with it success under almost any scheme. The present condition of things has resulted, I imagine, from the endeavour to attain this proficiency by compulsory attendance at lectures and in other ways. Mr. Marshall, I presume, sees this, and by a wise suggestion, and without altering materially the present system, has suggested a remedy. Is it not the lack of this energy which has made it necessary to institute class-examinations? These in one form or another have, I think, become the bane of the student's life. He seems ever driven along, with scarcely a moment he can call his own in which to do his work in his own fashion. All these encumbrances would disappear in the face of the college examination, and the teacher would be placed once again in his true relations to his pupils. We need, Sir, as you suggest, fewer examinations, and in this way we might get them. Our second-year's men might start with a really sound knowledge of osteology and the anatomy of the limbs. Such men would with ease, after a second session of work, be able to meet all the demands of the examiners. Of this I have no doubt; it is just the crowding of too much work in a small compass of time which leads to the necessity of cramming, and the evils which follow it.

I trust, Sir, the importance of this subject will be deemed a sufficient excuse for the length of this letter, and a plea in my favour for venturing to express so freely my own convictions. May I, as a teacher, add how highly I appreciate Mr. Marshall's aims in this matter of medical education? He has done much for science, he has done much for the College with which his name has been so long and so honourably linked. If he succeeds in his scheme he will, in my humble judgment, have done a work which will earn for him the gratitude and thanks of all grades of our profession.

I remain, Sir, your obedient servant,

ARTHUR HENSMAN, F.R.C.S.E.,
Senior Demonstrator of Anatomy at the Middlesex Hospital Medical College.

May 25th, 1880.

To the Editor of THE LANCET.

SIR,—From a recent notice of the proceedings of the Council of the Royal College of Surgeons, and from your leading articles thereon, I find that Mr. Marshall has again brought forward his proposition for the examination of students at the end of their first year.

Would you allow me to point out one or two considerations which should be weighed before such a motion be adopted?

The College of Surgeons is, as you state, only one of many examining bodies, and unless the examinations of other bodies be taken in lieu of its own, a still further increase in examinations is inevitable. This will be deplored by everyone who is conversant with the present unsatisfactory condition of medical examinations and medical education. The Council of the College of Surgeons seems to forget, or studiously avoids recalling the fact, that there are other bodies for which the student should be simultaneously preparing. Even now, from the undue preponderance of the influence of the College over teachers of medical students, many important branches of professional knowledge are neglected or postponed, and the one-sided diploma of the College has to be supplemented by any *other* that can be obtained as soon as possible. Hence the exodus to the Scotch Corporations for additional diplomas, and the wilful and persistent neglect by generations of students of such subjects as chemistry, botany, materia medica, forensic medicine, and hygiene, which although not apparently within the ken of the College of Surgeons, cannot be lost sight of by medical teachers.

The College of Surgeons is responsible for one of the lowest preliminary examinations which a student is called on to pass. My experience, Sir, as a teacher and examiner is that this is at the root of the whole mischief. We have but little trouble with pupils who have been well trained at school, but it is the ill-educated who get plucked time after time, and sorely try the patience of the teacher. The influence on teacher and other students exercised by such men does more to demoralise medical teaching than any other one circumstance with which I have been brought into contact.

We shall always, Sir, have a certain number of idle men amongst our students. I would ask the Council not to undertake the vain task of endeavouring to legislate for these: they can do much to prevent men being sent to us who have never "learned to learn," and who only degrade our teaching by turning us into routine grinders, instead of allowing us to teach our subject honestly and thoroughly, and with a reasonable latitude of independence.

The intelligent student gets on best the less he is hampered by the pressure of examinations, which, I would venture to say in the case of pass examinations, should be considered merely as safeguards for the public, and not as incentives to study.

Three examinations during the medical curriculum are amply sufficient for this purpose; and it is the duty of the council of every corporate body which grants merely a pass qualification, to see that the daily duties of practical work are not unduly interfered with. Examination has its advantages, but education, in the proper sense of the word, is infinitely more important.

The facilities for carrying out additional examinations in anatomy are entirely wanting. I presume that it is not intended to conduct these examinations without *subjects*; and the supply of these to examining boards even now seriously drains the dissecting-rooms.

I am, Sir, your obedient servant,

JOHN CURNOW, M.D., F.R.C.P.,
Professor of Anatomy in King's College, &c.

George-street, Hanover-square, W., June 1, 1880.

EXCISION OF OBSTRUCTION AT THE NECK OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—I have waited to see if any abler pen than mine would challenge the statements made by Mr. Teevan in the Lettsomian lectures, delivered before the Medical Society of London, and reported in THE LANCET of April 17th, respecting operations upon the enlarged prostate. He recommended for advanced cases when catheterism is difficult and frequent, "excision of the obstruction as invented and practised by Mercier," and exhibited two drawings of instruments "for incising the muscular valve and excising the prostatic one." Consequently he accepted the responsibility of advising an operation which he allowed had never been performed in this country either by himself or any other person; an operation rarely if ever employed by more than one surgeon in Paris, and that many years ago, and now abandoned there. Mr. Teevan would appear not to have consulted its chief English literature. Twenty-two years ago Sir Henry Thompson in his work "The Enlarged Prostate" (1858), and again in the second edition (1867), which contained the Jacksonian prize essay, awarded by the Royal College of Surgeons for the preceding year, devoted a chapter to a summary of the various opinions and operations adopted in relation to this form of obstruction at the neck

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of the bladder, *including Mercier's method*. There the whole subject is discussed at length, and *the very instruments now figured in* THE LANCET *are represented and described* (see pages 254–5, figs. 18 and 19; edition of 1858).

I have lately made special inquiry in Paris, and, from correspondence now lying before me, I am able to state that there is no evidence that these excisions or incisions of the neck of the bladder have ever been serviceable, while it is certain that they have been not only useless, but injurious. None of the leading surgeons, including Dr. Guyon, of the Hôpital Neckar, who, as your readers may know, succeeded Civiale in charge of the wards there devoted to urinary diseases, approves the proceeding, still less employs it. Surely Mr. Teevan should have looked into these facts before he ventured to state before a learned Society, and to repeat in your pages, that there are "hundreds of men now alive to whom Mercier has restored the faculty of free and natural micturition."

Further, he appears not to be aware that in Italy the attempt has lately been made to effect division by a heated galvanic wire for the express purpose of avoiding hæmorrhage known to have followed in some of the few instances in which Mercier formerly applied his proceeding in Paris. If any form of the operation be admissible, this alone appears to be entitled to consideration.

I am, Sir, your obedient servant,

G. BUCKSTON BROWNE.

Wimpole-street, W., May 31st.

Obituary.

ALFRED SWAINE TAYLOR, M.D., F.R.S.

THE announcement of the death of this distinguished toxicologist will be received by the profession with deep regret. Dr. Taylor had been in precarious health for some weeks, suffering, we believe, chiefly from heart disease, which, in spite of the most solicitous attention of his medical friends, terminated fatally on the 27th ult. The deceased physician was born at Northfleet in 1806, was educated at a private school, and studied medicine and surgery, under Sir Astley Cooper and Mr. J. H. Green, at the Hospitals of Guy's and St. Thomas's. After attending the medical schools of France, Germany, and Italy, he took the M.R.C.S. Eng. in 1830, and the M.D. St. And. in 1852, and in the following year was elected to the Fellowship of the London College of Physicians. Dr. Taylor was the first occupant of the chair of Medical Jurisprudence at Guy's Hospital, an appointment which he held till within a short time of his death. It was in connexion with this subject that his name was known all over the world, his works on "Poisons," "Medical Jurisprudence," and "Chemistry" being justly esteemed as standard treatises. As an authority in medico-legal questions his loss will be keenly felt by a large section of the community, whilst as a trusted physician and friend the place he has left vacant will not easily be filled.

MEDICAL NOTES IN PARLIAMENT.

THE SELECT COMMITTEE ON MEDICAL BILLS.

In the House of Commons on Thursday, May 27th, Mr. Errington asked the Vice-President of the Council whether he would move the reappointment of the Select Committee on the Medical Acts, in order that the inquiry into Medical Education and Registration may be continued.

Mr. Mundella replied, that the Committee was appointed last session, not to inquire into the Medical Acts, but to consider three Bills, which the House referred to it, one of which was a Government Bill. It was not the intention of the Government to reintroduce that Bill this session, and during the recess the whole question would probably be considered. There was no reason at this moment for the reappointment of the Committee.

CONTAGIOUS DISEASES ACTS.

The second reading of the Bill introduced by Sir Harcourt Johnstone, Mr. Stansfeld, and Mr. Whitbread, for the repeal of the Contagious Diseases Acts of 1866 and 1869 has been fixed for the 22nd instant.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination for the Fellowship of the College at a meeting of the Board of Examiners on May 27th:—

Francis H. V. Voss and David Phillip Harris, London Hospital; Stephen Chapman Townshend, St. Bartholomew's Hospital.

Of the 68 candidates examined during last week, 31 failed to satisfy the Board of Examiners, and were referred for six months' further anatomical and physiological study.

The total number of candidates admitted to the Primary Examination in Anatomy and Physiology for the Membership of the College during the sittings of the Board of Examiners in April and May last was 484, of which number 123 were referred for three and 12 for six months. In the corresponding period last year the total number of candidates examined was 480, and the rejections were 137.

The final examination for the diploma of Fellow of the College was brought to a close on the 29th ult. Of the 21 candidates admitted to examination, 11 were successful. We shall publish the list of names next week.

[In the list published last week of gentlemen who passed the Primary Examination the name "Chippendale" should have been printed "Chippingdale."]

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on May 27th:—

Abbott, James Eastoe, Darlington.
Benham, Harry Arthur, Clifton, Bristol.
Beckett, Thomas George, Brick-lane, Spitalfields.
Benthall, Winifred, Sherbourne, Dorset.
Farness, John, Hesketneed-market, Cumberland.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Edmund Samuel Dashwood, Guy's Hospital; James Hodges, King's College; Charles Speight Kilham, Sheffield Infirmary.

[For "Rees Thomas Edward Davies, Millfield-park, Aberdour," in last week's list, read Rees Thomas Edward Davies, Wellfield-park, Abercavon.]

FOURTEEN cases of sunstroke, twelve of them fatal, are reported to have occurred in New York since the commencement of the hot weather.

MR. GEORGE FLEMING, Army Veterinary Inspector, has been elected President of the Royal College of Veterinary Surgeons for the ensuing year.

TRINITY COLLEGE, DUBLIN, will receive a valuable legacy in the shape of many rare works in classics and oriental literature, under the will of the late Dr. Kenealy.

THE State Ball given by command of the Queen at Buckingham Palace on the 27th ult. was attended by the following members of the profession:—Drs. Minter, Risdon Bennett, John Lowe, G. V. Poore, and Robertson.

AT the fifty-second half-yearly election of candidates for the benefits of the Royal Hospital for Incurables, Putney, it was stated that there were no fewer than 160 applicants for admission, whereas the vacancies were only 25 in number. At the present time the institution contains 185 inmates, all afflicted with maladies which have been pronounced incurable.

THE Earl of Derby presided on the 27th ult. at the annual Court of Governors and subscribers of the Brompton Hospital for Consumption, and, in moving the adoption of the report, said that whilst in 1878 there were 11,500 out-patients, in the previous year they numbered nearly 12,000. The much-required new building, now in course of construction, would accommodate a large number of additional patients, and would entail an extra outlay of £10,000 annually from the funds of the hospital.

SOCIETY OF ARTS.—In connexion with the Conference on the Progress of Public Health, which, it is announced, will be held by the Society of Arts on the 10th and 11th inst., it is intended, as in former years, to hold an Exhibition of Sanitary Appliances. These exhibitions, though on a small scale—the Society's premises not affording room for a large collection—have been found very useful in former years, as the Conferences have always been largely attended by sanitarians from different parts of the country.

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THE HARVEIAN ORATION will be delivered this year by Dr. J. W. Ogle, at the Royal College of Physicians, on the 25th inst., at 5 o'clock.

THE NORTH-EASTERN HOSPITAL FOR CHILDREN.—The Duke and Duchess of Connaught on Wednesday visited the North-Eastern Hospital for Children in the Hackney-road, and the Duchess declared the new wards open.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—The annual distribution of prizes at the St. Mary's Hospital Medical School was held on Wednesday, June 2nd, the Earl of Carnarvon presiding. The report of the school, read by the Dean, stated that the condition of the school was satisfactory. After presenting the prizes to the successful students the Earl of Carnarvon addressed a few words of congratulation and encouragement to them.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Earl of Bessborough bequeathed £200 to St. George's Hospital. The Goldsmiths' Company have given £100 to the general fund, and £100 to the new-wing building fund of the Royal Hospital for Incurables at Putney. Messrs. Baring Brothers and Co. have given £100 to the North Eastern Hospital for Children. The Misses Brooke have given £50 to each of the following institutions—viz., Meath Hospital, Sir Patrick Dun's Hospital, and the National Eye and Ear Infirmary, Dublin. The Adelaide Hospital, Dublin, has received £100 under the will of the late Mr. Charles Bishop. The Right Hon. W. H. Smith, M.P., has given £50 to the Charing-cross Hospital.

BIRMINGHAM MEDICAL BENEVOLENT SOCIETY.—The fifty-seventh annual meeting of this Society was held in Birmingham on May 28th, Dr. Nason, of Stratford-on-Avon, president, in the chair. The report stated that the invested funds of the Society amounted to £9560, and that £395 had been dispensed in grants during 1879. A legacy of £100 had been received from the executors of Mr. Pye-Chavasse, a former trustee. Dr. Nason handed in donations amounting to £71. The following officers were elected:—President, Mr. W. H. Sproston, Birmingham; President-elect, Dr. Fitch, Chaddesley; Treasurers, Dr. Wade and Mr. Bartleet; Vice-Presidents, Mr. Batten, Bromsgrove, and Dr. R. C. R. Jordan; Trustees, Dr. Foster, Mr. W. C. Garman, Wednesbury, and Mr. J. F. West; Honorary Secretary, Dr. Sawyer. A vote of thanks was given to Mr. Bartleet, who for the last five years had assiduously devoted himself to the affairs of the Society in the office of honorary secretary. After the meeting the annual dinner took place at the Grand Hotel, the chair being occupied by Dr. Nason, and the vice-chair by Dr. Sawyer.

THE LEVEE.—The following members of the medical profession were presented to H.R.H. the Prince of Wales, at the Levée held by the Queen at St. James's Palace, on Monday last:—Surgeon George Houlton Bishop, R.N.A. Volunteers, by the Duke of Edinburgh; Surgeon F. E. Barrow, by the Director-General, Army Medical Department; Surgeon F. R. Barker, by the Director-General, Army Medical Department; Surgeon R. F. Cumming, Army Medical Department, by Lord Londesborough; Surgeon W. J. Campbell, by the Director-General, Army Medical Department; Staff-Surgeon James B. Drew, R.N., by the Duke of Edinburgh; Surgeon R. D. Donaldson, by the Director-General, Army Medical Department; Surgeon-General Hunter, M.D., honorary surgeon to the Queen, by the Secretary of State; Surgeon J. G. Harwood, by the Director-General, Army Medical Department; Surgeon W. R. Henderson, by the Director-General, Army Medical Department; Surgeon A. M. Kavanagh, by the Director-General, Army Medical Department; Surgeon H. G. Michael, by the Director-General, Army Medical Department; Surgeon Alexander Oberlin MacKellar, R.N.A. Volunteers, by the Duke of Edinburgh; Surgeon Samuel Osborn, R.N.A. Volunteers, by the Duke of Edinburgh; Surgeon G. T. Thomas, Madras Medical Service, by the Secretary of State; Surgeon-General J. A. Woolfreyes, M.D., C.B., C.M.G., on return from service in South Africa, by the Director-General, Army Medical Department; Surgeon J. Watson, by the Director-General, Army Medical Department; Surgeon T. P. Walsh, by the Director-General, Army Medical Department. The general company included the following gentlemen:—Sir Henry Thompson, Mr. Erasmus Wilson, Mr. Thomas Wakley, Professor Longmore, Surgeon-General W. Munro, and Dr. W. Alexander, of Halifax.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ABBOTT, R. T., M.D., has been appointed Medical Officer to the Bray District of the Rathdown Union, vice T. L. Whistler, M.B., resigned.

BRUNTON, J., M.A., M.D., has been re-elected, for a further period of four years, Examiner in Midwifery and Medical Jurisprudence at Glasgow University.

BRYANT, T., F.R.C.S.E., has been appointed Examiner in Surgery to the University of Durham.

CANTON, T., L.K.Q.C.P.I., has been appointed Medical Officer to the Kilskee Dispensary District of the Kells Union, vice T. F. Sparrow, M.D.

CARTER, W. F., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer for the Second District of the Bedminster Union, vice Smart, resigned.

EDGELOW, S. H., M.R.C.S.E., has been appointed Medical Officer for the Sherburn District of the Scarborough Union.

ELLIS, E. T. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Third A District of the Hailsham Union.

FRASER, G. B., M.R.C.S.E., L.S.A.L., has been appointed Honorary Visiting Medical Officer to the West of England Sanatorium, vice J. J. E. Willmott, M.D., resigned.

GREAVES, Mr. E. H., has been appointed Dispenser to the Sussex County Hospital, vice Fawthrop, resigned.

JOHNSTONE, C. R., B.A., M.R.C.S.E., L.S.A.L., has been elected Resident Medical Officer to the Dudley Dispensary.

NEWMARCH, B. J., M.R.C.S.E., has been appointed Surgical Registrar to King's College Hospital, vice W. W. Cheyne.

PARSONS, W. A., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Tanworth District of the Solihull Union.

PETTINGER, J. H., L.R.C.P.Ed., M.R.C.S.E., has been appointed Resident Assistant Medical Officer at the Crumpsall Workhouse of the Manchester Township, vice G. H. Jackson, deceased.

PULLIN, F. B., L.R.C.P., has been appointed Medical Officer to the Churchstanton District of the Taunton Union, vice S. W. Mackey, resigned.

SHEA, J., M.D., has been appointed Analyst for the Borough of Newbury.

SMART, A., M.D., L.R.C.P.Ed., has been appointed Third Assistant-Physician to the Royal Infirmary, Edinburgh.

STEPHENS, R. F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the First District and the Workhouse of the St. Austell Union.

TAYLOR, M., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Workhouse of the Cannock Union, vice Blackford, resigned.

WILLIAMS, A. F., L.F.P.S.G., L.M., has been appointed Medical Officer of Health for the Brixworth Rural Sanitary District. £5 5s. per annum, and £1 1s. for every visit made by order of the Board.

WILSON, D., M.B., C.M., has been appointed Medical Officer for the Workhouse of the Huddersfield Union, vice Macgregor, resigned.

YOUNG, A. H., M.B., C.M., has been appointed Pathological Registrar to the Royal Infirmary, Manchester, vice J. D. Bradshaw, M.B., resigned.

Births, Marriages, and Deaths.

BIRTHS.

HAMILTON.—On the 30th ult., at Northampton-park, N., the wife of Thomas Hamilton, M.B., F.R.C.S.E., of a son.

LAURIE.—On the 9th ult., at Simla, the wife of Edward Laurie, Esq., Surgeon, Bengal Army, Professor of Surgery, Lahore Medical School, of a daughter.

NORMAN.—On the 22nd ult., at Edde-Cross House, Ross, the wife of J. W. Norman, M.B., F.R.C.S., of a daughter.

THOMSON.—On the 24th ult., at Westgate, Peterborough, the wife of William Thomson, M.D., F.R.C.S.Ed., of a son.

MARRIAGES.

FRASER—AUSTIN.—On the 1st inst., at St. Benedict's Church, Glastonbury, Somerset, by the Rev. J. A. Miller, Vicar, Græme Bibdè Fraser, M.R.C.S.E., L.S.A.L., of Weston-super-Mare, younger son of P. Gordon Fraser, Esq., late Colonial Treasurer and Member of the Executive and Legislative Councils of Tasmania, to Fanny, youngest daughter of Jas. Austin, Esq., of The Abbey, Glastonbury.

WELLS—BURT.—On the 26th ult., at the Catholic Apostolic Church, Mansfield-place, Edinburgh, Charles Augustus Este Wells, eldest surviving son of the late Rev. John Tighe Wells, of Albury, Guildford, Surrey, to Anne Susannah Macdonald, youngest daughter of the late John Graham Macdonald Burt, M.D., F.R.C.P.E., of Edinburgh.

DEATHS.

BRADLEY.—On the 27th ult., at the Granville Hotel, Ramsgate, after three days' illness, S. M. Bradley, Esq., F.R.C.S., of Oxford-road, Manchester (one of the Surgeons to the Manchester Royal Infirmary). Friends, please accept this intimation.

GRAYLING.—On the 29th ult., at Sheldwich House, Forest-hill, George Grayling, M.D., aged 62.

HILLS.—On the 24th ult., at Bridge-road West, Battersea, London, S.W., George Hills, M.D., F.R.C.S.E., &c., late of Arundel, Sussex, eldest son of the late George and Charlotte Hills, of Arundel and Slindon, Sussex, aged 73.

TAYLOR.—On the 27th ult., at St. James's-terrace, Regent's-park, Alfred S. Taylor, M.D., F.R.S., in his 74th year.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

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BOOKS ETC. RECEIVED.

BOGUE, DAVID, London.
Epidemiology. By John Parkin, M.D. Part II. Second Edition. pp. 447. With Maps.

CHURCHILL, J. & A., London.
Diagnosis of Diseases of the Spinal Cord. By Dr. W. R. Gowers. With Illustrations. pp. 80.
Pay Hospitals and Paying Wards throughout the World. By H. C. Burdett. pp. 176.
The Spirit of Nature. By H. B. Baildon. pp. 216.
Orthopragms of the Spine. By R. H. Bigg, Assoc. C.E. pp. 149.

DAVIS, G. S., Detroit.
Homœopathy: What is it? By Dr. A. B. Palmer. pp. 104.

GRIFFIN & Co., London.
The Surgeon's Pocket-book. By Surgeon-Major J. H. Porter. Second Edition. pp. 319. With Illustrations.

HERBERT & Co., London.
Parliamentary Handbook. pp. 128. 2s. 6d.

HODGSON & SON, London.
The Calendar of the College of Preceptors for 1880. pp. 174.

KEGAN PAUL & Co., London.
The Brain as an Organ of Mind. By Dr. H. C. Bastian, F.R.S. Illustrated. pp. 708.

LEWIS, H. K., London.
A Treatise on Oral Deformities. By N. W. Kingsley, M.D.S., D.D.S. pp. 541. With 350 Woodcuts.

LINDSAY & BLAKISTON, Philadelphia.
Guide to the Practical Examination of the Urine. By Dr. J. Tyson. Third Edition, with Illustrations. pp. 184.

LONGMANS, GREEN, & Co., London.
A Winter Tour through India, Burmah, and the Straits. By H. E. Falk. pp. 90.
A History of Classical Greek Literature. By the Rev. J. P. Mahaffy, M.A. Two volumes. pp. 458 & 525.

PLON ET CIE., Paris.
L'Année Médicale (Deuxième Année), 1879. pp. 396.

SAMPSON LOW, MARSTON & Co., London.
Science a Stronghold of Belief. By Dr. R. B. Painter. pp. 471.

SMITH, ELDER, & Co., London.
Antiseptic Surgery. By William MacCormac, M.A., F.R.C.S.E. & I. pp. 286. With Illustrations.

SWAN SONNENSCHEIN & ALLEN, London.
Elements of Modern Chemistry. By Adolphe Wurtz. Translated and Edited, with the sanction of the Author, by Dr. W. H. Greene. pp. 687. With Illustrations.

Della Emoglobinuria da Freddo Lezoni di Augusto Murri. (Bologna, Garagnani.)—Discusion sobre el Tratamiento de las Fiebres Intermitentes.—Medical Education. By Dr. Pye-Smith.—British Journal of Dental Science for May. (Churchill.)—Monthly Review of Dental Surgery. (Smith, Elder, & Co.)—Modern Abuse of Gynæcology. By Dr. C. E. Wing. (Boston.)—Victorian Review for April.—Caries of the Ankle in Children. By Dr. V. P. Gibney.—Thomas Keith and Ovariotomy. By Dr. Marion Sims. (New York: Wood.)—River Water. By Dr. C. M. Tidy.—Dorset County Lunatic Asylum Report for 1879.—The General Medical Council: Whom it represents, and How it should be Reconstructed. By Dr. A. H. Jacob. (Baillière, Tindall, and Cox.)—Florida, what it Offers to the Capitalist and Settler. (Bailey, Wilson, & Co.)—Fifth Annual Report of the Darenth Schools. (M'Corquodale.)—Transactions of the Odontological Society of Great Britain. (Wyman & Sons.)—Fifteenth Annual Report of the Sanitary Commissioner for Madras, 1878.—The Doom of the Great City. (Newman.)—On the Coincidence of Optic Neuritis and Subacute Transverse Myelitis. By C. E. Seguin.—The Laws of Health.—Tenth Annual Report of the Deputy Master of the Mint, 1879.—Report of Executive Committee of the Duchess of Marlborough's Fund. (Atkinson, Dublin.)—Sessional Proceedings of the National Association for the Promotion of Social Science.—Pauperism and Drink; some Remarks on Workhouse Hospitals. By T. M. Dolan.—Pyrexin or Pyrogen as a Therapeutic Agent. By Dr. J. Drysdale. (Baillière, Tindall, & Cox.)—Sea-sickness. By Dr. G. M. Beard. (Treat, New York.)—L'Etude des Maladies et de l'Acclimatement des Européens dans l'Afrique Intertropicale. Par le Dr. Dutrieux.—Case of Ovarian Pregnancy. By Dr. T. Jones.—Paralysie Vaso-Motrice des Extrémités ou Erythromélalgie. Par le Dr. M. Lannois. (Baillière et Fils.)—The Family Physician. (Cassell & Co.)—Lehrbuch der Harn-Analyse.—Bearbeitet von W. Zuelzer. (Verlag von G. Hempel.)—Annals of the Brooklyn Anatomical and Surgical Society.—Fraser's Magazine, June.—Time, June.—Good Words, June.—Sunday Magazine. (Isbister & Co.)—Management of Infantile Eczema. By Dr. Bulkley.—Die Belastungsdeformetäten der Gelenke. Von Dr. F. Busch.—Annuaire des Specialités Médicales et Pharmaceutiques, 1880.—The Contemporary Review, June.—Report of the Medical Superintendent of the Fulham Hospital.—Veterinary Journal, June.—St. Louis Courier of Medicine, May.—On the Rate of Cooling of the Human Body after Death. By Dr. Wilkie Burman. (Oliver & Boyd.)—Homœopathic Review. June.—British Journal of Dental Science.—Ovarian Tumours. By Dr. E. Borck.—Contributions to the Study of Nerve Action in Connexion with the Sense of Taste. By Dr. Sigerson.—Bulletin de l'Académie de Médecine.

Notes, Short Comments, and Answers to Correspondents.

THE HASTINGS GUARDIANS AND THE PROVIDENT DISPENSARY.

WE do not think there will be any serious objection made by the medical officers of the Hastings Provident Dispensary to supplying members needing relief with certificates, if the guardians will receive these certificates with the respect to which they are entitled. Medical men will not voluntarily put themselves into the position in which Poor-law medical officers too often find themselves—that of recommending relief in urgent cases, and having their recommendations disallowed.

Voyageur, M.D.—Our medical contemporary and namesake in Canada states there is a good opening for a medical man in the village of Udora, co. Ontario.

Surgeon-Major.—We believe eighteen shillings an ounce.

"RESECTION OF RIBS IN EMPYEMA."

To the Editor of THE LANCET.

SIR,—In your remarks on the treatment of empyema by resection of the ribs, you properly point out that in the process of recovery one of the chief objects to be obtained is expansion of the lung.

Three years ago, at a meeting of the Medical Society (Feb. 26th, 1877), a discussion took place on this subject in consequence of my introducing to the notice of the Society an apparatus for securing the thoracic cavity against the entrance of air through the drainage-tube. Again, at the meeting of the British Medical Association at Manchester in August, 1877, after six months' consideration of the physiological and pathological conditions which should determine the treatment of empyema, I brought the subject forward by sending some observations on the importance of preserving a vacuum in the pleural cavity after paracentesis of the thorax and the insertion of the drainage-tube, with description of a method by which continuous aspiration may be effected.

The remarks contained in your article of the 22nd of May support the views I ventured to express as physically and pathologically important in determining the treatment of empyema. On the occasion of the discussion at the Medical Society, some objection was taken to the principles I desired to establish, particularly by my friend the late Mr. Maunder. It was not apparent to him at the time that if we wish to obtain expansion of the lung-tissue, we have no force which we can exert except that of atmospheric pressure, and there can be no doubt in the mind of anyone who considers the subject, as was afterwards the case with Mr. Maunder that in the movements of inspiration, if there is an opening in the chest-wall, the lung on that side will remain in a passive state, and cannot expand. You will perceive that in the use of the term "continuous aspiration" I suggested the propriety of preserving an exit for secretions from the thoracic cavity, at the same time that the force of atmospheric pressure was brought to bear on the lung.

The apparatus described at the meeting at Manchester was not as perfect as I should have wished, and as my views attracted very little, if any, notice from the profession, I have made no effort to provide more perfect means for obtaining the object in view. The difficulty which presents itself is in the attachment to the surface of the chest of an aspirator which will produce a gentle and constant exhaustive force on the lung; and, until this difficulty is overcome, I might suggest for the consideration of those who are interested in these cases the question whether the expansion of the lung might not be obtained by the application of an exhausting syringe, with a simple india-rubber cup or sucker, for a few minutes at intervals of a few hours in the course of the day. I was enabled to satisfy myself of the general truth of the principle of exhaustion by the application of an india-rubber cup around the opening of a thoracic cavity in a child of four years of age, who was under treatment at the hospital in Great Ormond-street. The drainage-tube had been introduced a few weeks before the cup was applied, and it was interesting to observe that the child would replace the cup of its own accord when adhesion had been reduced by the gradual entrance of air. The cup would remain attached for about three hours, and it was evident from the way in which the child replaced it that the entrance of air into the thoracic cavity occasioned discomfort, if not distress.

It will be clear to your readers that it would be of great advantage if we could obtain some efficient means of securing the condition of vacuum which is so important in the treatment of empyema after tapping, and I feel sure that any apparatus efficiently serving this purpose would receive every attention.

Yours obediently,
Savile-row, May 26th, 1880. R. J. LEE.

"TREATMENT OF GOUT."

To the Editor of THE LANCET.

SIR,—In reply to "Senex's" question as to blisters in gout, I beg to say that many years ago, whilst assistant with Dr. Richardson, of West Auckland, I observed him always rub over the affected part with nitrate of silver, which gave instant relief, and since I have invariably adopted his plan with the same result. Of course the general treatment was as usual, with an especial predilection for lithia carbonate and colchicum.

Yours &c.,
Birmingham, May 24th, 1880. J. H. LARKIN.

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MOURNERS' CLOAKS.

IT is satisfactory to see the hideous and unwholesome practice of wearing mourners' cloaks at funerals is being generally discouraged. The observance of the absurd custom has for years been growing less strict, and we may hope that shortly it will be discontinued altogether. As an indication in this direction, it may be noted that the Council of the United Synagogue of British Jews have passed a resolution to abandon the use of these sombre accessories at funerals.

A Subscriber.—The elections at the Royal Medical Benevolent College took place on the 27th ult., when Mr. Frederick Dover, F.R.C.S., headed the list of successful pensioners with 4750 votes, Mrs. F. Bourne 2264, and Mr. S. Rodick 1857. There were twelve unsuccessful candidates. For Foundation Scholarships there were forty candidates. The following (eight in number) were successful:—Merryweather, 8245; Charlton, 7721; Cheetham, 7184; Cranswick, 7145; Haviland, 6372; Pinder, 6323; Hutchings, 6277; and Edwards, 5986.

Medicus, M., and *M.D.* have forgotten to enclose their cards.

"EXTRACTING TEETH AND PUTTING THEM BACK INTO THE JAW."

To the Editor of THE LANCET.

SIR,—A tooth of a single root, or the gum portion of such a tooth, may be extracted, cleansed, filled, or an artificial crown adjusted and returned to its former socket, in many cases; success depends upon the constitution, temperament, and condition of health in the patient at the time of operation. The tooth must be more or less shortened, smooth grooves formed to help to secure retention, which is entirely mechanical, dependent wholly upon lateral or horizontal pressure; this retaining pressure not secured in the operation, or lost by any subsequent cause, the tooth invariably elongates until it is extruded from the mouth. This tendency is so unerring and invariable, that all teeth, in all conditions of health, in all temperaments, will be extruded, without this mechanical retaining power be secured by natural or artificial contact, through shape, position, occlusion in mastication or in rest.

All the parts engaged in supporting and retaining the teeth are essentially provisional, and always changing to meet the demands made by the wear and tear of the mouth from the forces exercised in grinding and cutting. A transplanted tooth is a lifeless substance, wholly divested of all means of vital or reciprocal union, essentially a foreign body, alien to all growth of this part tolerating its presence, and always working to throw it out, and prevented only from doing so at once by mechanical impediments. Indeed it is difficult to understand a necessity for this operation, as it is to doubt the recuperative energy in many constitutions and temperaments to heal so simple a wound by first intention as would be made in this operation under skilful selection of time and a patient's idiosyncrasy.

A simple porcelain tooth with fang would be, perhaps, less objectionable than the one extracted. It would be no more a foreign substance in effect, less subject to changes, might be easily and accurately placed, and would be followed by the healing of the part by first intention, just as well and as soon as the, or a, natural tooth, if it were well provided for in its retention by mechanical support; but without this support, and positive constant mechanical retention, it would in a short time be ejected from its position. This is the invariable rule with all teeth, under the most perfect condition of health in themselves, when from disease or unskilful interference this mechanical retaining force has been lost. The keystone of the dental arch destroyed, it is a question of time only when the teeth become loosened and finally lost to the mouth. It is not a question of vital reunion or of periosteal existence, but one of ordinary freedom from inflammatory tendency or mucous irritability at the time of operating, with the positive application of mechanical force to firmly retain the tooth in its place. There never has been a doubt in the older members of the dental profession of the possibilities of successfully doing the operation, which is old enough to be better in itself. This has been conceded by Harris, Westcot, Maynard, Forster, Devinelle, and others; but its utility, desirability, or necessity has never been recognised, nor ever can be by an intelligent comparison with other means to the same end. As good, if not a better, result can always be attained by a simpler, safer, and more expeditious operation. Consequently, this exceptional practice, although always held as possible, is not, and never will be, the practice, or an accredited operation.

I remain, Sir, your obedient servant,

Brook-st., Grosvenor-sq., June, 1880. ALFRED BLAINDY, M.D.

To the Editor of THE LANCET.

SIR,—In reference to the above in your last week's issue, the following may be of interest. It occurred during the time I was house-surgeon at the Rotherham Hospital, and I should have reported it at the time but that I thought it was no novelty.

Some time in 1877 a boy was brought to the Hospital suffering from injuries sustained by falling down some stone steps, whilst carrying an ingot of iron at Messrs. Corbitt's stove works. Of two prominent upper middle incisors, one was driven up through the socket into the nose and the other was knocked out altogether. I pulled down the one from the nose with a pair of forceps into its proper place, and on asking some question about the other, the boy pulled it out of his trousers pocket. I washed it (probably in carbolic lotion), and replaced it in the socket. A piece of cork was then placed between these teeth and the lower ones, and the jaw fixed in the ordinary way with a four-tailed bandage. I forget how long the bandage was kept on, but in a short time both teeth became quite firmly fixed, and have remained so till I last saw him, some months ago. From what I could make out, the tooth was "again part of the organism," and not a foreign substance.

I am unable to say how long the tooth was out of its socket, but it must have been more than half an hour.

I remain, yours, &c.,

W. MARRIG JONES, M.R.C.S.

Wath-upon-Dearne, Rotherham.

To the Editor of THE LANCET.

SIR,—In reply to your inquiry on this subject, allow me to mention a matter of personal experience.

When seventeen years of age my second left upper molar began to decay. Having then lately become a medical student, and having read about abstraction and reimplantation of teeth, I drew this tooth myself, scraped out the small cavity, washed the tooth in hot water, and replaced it. Severe inflammation followed, with much swelling of the cheek; these subsided after three days, and the tooth became fairly firm and useful, and never ached again; but an accident in my twenty-second year loosened it, and I again drew it. The decay had not progressed. I also afterwards extracted a tooth for a patient and replaced it immediately without washing, and it became very firm and useful, with very little inflammation. I am of opinion the washing of my own was a mistake.

Yours truly,

Liverpool, May 29th, 1880. JOHN W. HAYWARD, M.D.

SEA-SICKNESS.

Messrs. Wm. Nicolson and Co., of Jeffreys-square, E.C., write to correct an inaccuracy which they state we committed last week in attributing the invention of "self-leveling berths" to a steam-ship company. The device appears to have been introduced to public notice by the Hanson Ship's Berth Company, of Boston, U.S.

Mr. R. Ellery.—We are unable to call to mind the circumstance mentioned.

"CRUELTY TO WOMEN."

To the Editor of THE LANCET.

SIR,—In reference to your article on this subject in your last week's issue, I think it only fair to some of the leading West-end firms to mention that the denial made by them to the statements contained in my original letter to *The Times* of Nov. 7th, 1878, was proved on further investigation to be substantially correct. Only a few female shop assistants are employed in the better houses, and they are for the most part provided with seats. There are, however, a considerable number of young women compelled to stand from morning till night, during business hours, in numerous houses, where the welfare and comfort of the assistants are not so carefully studied.

The Factory and Workshop Act of 1878 does not apply to shop assistants, and nothing practical will ever be universally carried into effect until some supplemental clause be added, restricting the hours of labour, defining the time for meals, and insisting on seats being provided. Competition is now so great that the young women are afraid to advocate their own claims for fear of being driven from their employment, and therefore nothing can be expected to emanate from them. It is sincerely to be hoped that your "determination to press the demand for this reform until the claims of common humanity are recognised" will meet with the success it deserves.

I remain, Sir, yours faithfully,

Wimpole-street, June 1st, 1880. ARTHUR W. EDIS, M.D., &c.

J. W.—Next Monday will be the last day for sending in nominations for seats in the Council of the College of Surgeons. Up to the hour of going to press the following gentlemen had been duly nominated:—Mr. T. Smith, Mr. J. W. Hulke, Mr. T. Bryant, and Mr. B. Hill.

Dr. F. H. Daly.—Yes; but the report must be shorter, if possible, to insure prompt insertion.

Mr. E. F. H. Burroughs.—4, St. Martin's-place, W.C.

"THE TITLE OF 'DOCTOR.'"

To the Editor of THE LANCET.

SIR,—The gentleman who wrote upon the above subject in your last issue cannot have been attached to the Edinburgh College of Physicians for many years, otherwise he would have known that the Edinburgh authorities had been in the habit of addressing their licentiates as Dr.

Two or three years ago this matter was discussed in the pages of THE LANCET, and Dr. Plomley, of Maidstone, conclusively proved the truth of this statement by forwarding a letter received by him from Dr. Haldane in 1867 or 1868 in reference to this question.

Yours faithfully,

June 1st, 1880. M.R.C.P.E.

ANHYDROUS AIR AS A REMEDY FOR CANCER.

To the Editor of THE LANCET.

SIR,—Permit me to correct an error in the notice of the above, copied from the *New York Medical Record*, in your columns last week. The air is passed through chloride of calcium, *not* chloride of lime.

Yours obediently,

May 31st, 1880. G. A. KEYWORTH.

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FILTERING MATERIALS.

THE relative value of the materials used in filters has been the subject of inquiry by Professor De Chaumont, of the Army Medical School, Netley, on behalf of the Admiralty and War Office. Animal charcoal, carferal, silicated carbon, and spongy iron were tested in fifteen series of experiments. Of the whole series, carferal (a mixture of carbon, iron, and alumina) proved its superiority in thirteen, and silicated carbon in two.

Mr. Osman Vincent.—We regret that great pressure on our space will prevent the publication of the lecture.

POISONOUS DYES.

To the Editor of THE LANCET.

SIR,—On Feb. 14th last my patient, Miss M——, aged twenty-eight years, had a pair of beautiful cardinal red silk stockings. I have failed to find out where they were purchased or manufactured. On the 9th of March my patient for the first time wore the stockings, and she continued wearing them for three days. During this period she suffered from a good deal of itching and burning of the feet. On the evening of the third day she complained of intense pain and heat in both feet, and of a feeling as if they would burst. I saw her the following morning, and found her suffering from erysipelatous inflammation of both feet and toes. The pain was acute, and the swelling of the toes remarkable. There was considerable constitutional disturbance. The treatment I used was tincture of the perchloride of iron internally in half-drachm doses, and lead and spirit lotion locally. After a couple of days the right great toe looked somewhat dark, so I discontinued the lotion to this toe, and applied a warm linseed poultice. The top of the toe subsequently became gangrenous, and sloughed off. The patient was for a long time very ill, and is indeed only now sufficiently recovered to go to the seaside for change of air.

I had the advantage of meeting, in consultation, Mr. Henry Smith, of King's College, several times during the progress of this tedious and troublesome case, and I am indebted to him for some valuable hints. We found a grain of opium taken every night at bedtime very useful in controlling pain in the sloughing toe and procuring sleep. I believe, also, the healing process, after the slough had separated, was promoted by the opiate.

I have briefly recorded this case as a warning to intending purchasers of *cardinal red* or other poisonously dyed socks or stockings.

Yours obediently,

FREDERICK H. DALY, M.D.

Queen's-road, Dalston, May 28th, 1880.

A. B. C. and *Mr. William Sykes.*—We do not approve advertising in any form; but it would be impossible to notice the many instances of this evil which are brought under our notice.

Dr. Bernard Kelly will find the article published in THE LANCET of April 3rd.

GENERAL LYING-IN HOSPITAL.

To the Editor of THE LANCET.

SIR,—Is it usual in our profession and consonant with medical ethics for a physician to undertake, and receive a fee for the performance of, the duties of a hospital in the interval between the acceptance of the resignations of the whole acting medical staff and the appointments of their successors, especially when one of the staff has offered to continue his attendance until the new appointments are made? If it is the duty of a Committee to provide medical attendance during the interval, is it not also the duty of the physician who is applied to, to ask the retiring officers why they have thought it necessary to resign, and is not such a line of conduct the more imperative when the inducement, which I still think unusual, of payment for such services is offered? The ideas on the ethics of the medical profession which are expounded in Mr. Owen's letter of last week are to me so novel, and are so important in our relations to lay committees, that I have ventured to ask you for some enlightenment on these points. I am, Sir, your obedient servant,

June, 1880. F.R.C.P.

*** We wait the decision of the Committee of Inquiry on the question of fact. Our interest in the question is exclusively professional, and we do not desire to meddle in the matter in any other sense.—ED. L.

J. I. I.—We are sorry not to be able to accept the estimate formed by our correspondent of the grievances of medical officers in the militia.

Dr. J. W. Hunt, (Wolverhampton.)—The paper has been received, and is marked for early insertion.

Molar.—Registration is indispensable.

CÆSAREAN SECTION.

To the Editor of THE LANCET.

SIR,—I shall be particularly obliged if you will kindly allow me, through the medium of your very valuable journal, to ask the favour of any of your readers to oblige me by sending any case of Cæsarean section which has been performed in Great Britain and Ireland, but which has not been published. I am engaged in preparing a second edition of my observations, which I intend shall form a complete historical record of all cases of this capital operation which have been performed up to the present time in the before-named countries.—Yours truly,

Manchester, May 31st, 1880. THOMAS RADFORD.

Mr. William E. Lee.—The best galvaniser is usually some friend or servant of the patient, who may easily be taught in a few lessons how to apply the current. We do not know a "galvaniser" whom we could recommend, even were it not against our invariable custom to make any such recommendation.

G. B. S.—Corbyn and Co., High Holborn.

ETHER SPRAY IN WHOOPING-COUGH.

To the Editor of THE LANCET.

SIR,—Some two years ago I had in the same house two young patients very ill with whooping-cough; and when the younger one, an infant of only ten weeks old, seemed at the last gasp, and when all medicines had been abandoned from inability to swallow, I went into a neighbouring chemist's shop, and purchased a sixpenny scent-spray-producer and a small quantity of compound spirits of sulphuric ether, with which I returned to my patient, and I have no hesitation in saying that the free use of these articles saved its life. The vapour of the ether was blown freely into the child's face and over its clothes. I also ordered the nurse to blow it about the room at frequent intervals. Since then I have used this remedy in scores of cases, and have never yet met with one in which there was not a marked relief to the spasmodic cough, and this is my reason for venturing to send so simple a remedy to THE LANCET, hoping that others may relieve many a little sufferer, as I have done, in this trying and painful disease.

I may say, in conclusion, that I do not suggest the ether spray as a *cure*, but only as an important aid in the *cure* of whooping-cough.

Yours truly,

Longton, May 17th, 1880. JAMES WEAVER, M.D.

Mr. W. G. Parkyn.—The precise terms of the original agreement ought to have been carried out.

WE regret to be compelled again to hold over *Dr. Stephen Mackenzie's* letter.

VACCINATION.

G. H. D., writing on this subject, says:—

"It is my experience that, so far from private vaccinators following official instructions as to the number of vesicles necessary, many patients have recourse to them in order to avoid having their children's arms marked in four or even three places; and I have long been of opinion that vaccination cannot be considered to have a fair chance while people can evade the proper performance of the operation by having recourse to private practitioners who are not subjected to official supervision. I think this to be a subject of great importance."

A Small Public Vaccinator remarks:—

"The question of the number of vesicles produced at each vaccination is in practice unsettled and unsatisfactory. One practitioner does it in one place only, another in two, a third in three, a fourth in four, and, finally, some in five or more. Instructions have been issued by the Local Government Board on this subject, acknowledged by all, followed by a small majority, ignored by a not small minority, who for one reason or another, let us be charitable, choose to follow their own views rather than the instructions issued by the authorities. Under these circumstances, why should not the Local Government Board have public vaccinators of their own who are not in practice? The medical officers of health who are not in practice might be public vaccinators in their own districts, with fixed stations and certain days for vaccination."

A QUERY.

To the Editor of THE LANCET.

SIR,—Can any of your readers suggest—1st, a remedy (other than morphia) for acute neuralgia? or, 2nd, anything which will counteract the distressing effects on the brain caused by the subcutaneous injection of morphia? Yours, &c.,

Berkhampstead, June, 1880. F.R.C.S.

THE ADMINISTRATION OF OPIUM.

To the Editor of THE LANCET.

SIR,—In reply to "Querist" in your impression of May 29th, I beg to suggest from half to one grain of extract of belladonna with each opium pill at night. I have a patient suffering from a severe form of paralysis agitans, who has taken nightly for more than two years five grains of opium and two and a half grains of extract of belladonna with little or no inconvenience, being able to get about a little during the day, attending to his farm. Yours truly,

May 31st, 1880. E. W. J.

SALICYLIC ACID.

To the Editor of THE LANCET.

SIR,—Would any of your readers kindly tell me whether salicylic acid or any of its salts has been used in gout, and, if so, with what success?

Yours faithfully,

Chesterfield, June, 1880. RICHARD JEFFREYS.

TREATMENT OF GONORRHŒA BY THE URETHRAL DOUCHE.

To the Editor of THE LANCET.

SIR,—There is a paper by Mr. T. Windsor in the Manchester Medical and Surgical Reports for 1871, "On the Treatment of Gonorrhœa by the Urethral Douche," in which is described an apparatus very similar in design to the one referred to by me in THE LANCET of May 15th. Had I been aware of the paper I should have gladly acknowledged it.

Yours truly,

Liverpool, May 24th, 1880. REGINALD HARRISON.

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COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Bryant, London; Dr. Thin; Mr. F. R. Greenwood; Mr. O. Seth; Mr. Sykes; Mr. Taylor, Scarborough; Dr. Phipson; Dr. MacNalty; Dr. Keyworth; Mr. Brettell, Dudley; Mr. George, Chorley; Dr. Radford; Dr. Neale; Dr. Philpots, Poole; Messrs. Cassell and Co.; Mr. Buckston Browne, London; M. Rosenkranz, Berlin; Mr. Ormsby; Mr. Oglesby, Leeds; Mr. Newton; Dr. Ewart, Brighton; Dr. R. J. Lee, London; Dr. Daly, Dalston; Mr. Lucas; Mr. Craigie; Mr. Hensman; Mrs. S. Butson; Mr. Morgan, Wallingford; Mr. Ellery; Messrs. Byles and Son, Bradford; Mr. Barnardo; Messrs. Burgoyne and Co.; Mr. Jordan, London; Mr. Inskipp, Hastings; Mr. Lawrence, London; Dr. Creighton, Cambridge; Dr. Dunlop, London; Lieut.-General Bourchier; Mr. Havers; Dr. Hayward; Mr. T. W. C. Jones, London; Mr. Shairp, London; Mr. Moore, Moreton-in-Marsh; Mr. Sewill; Mr. R. Lauth; Dr. Reid; Mr. Shirley Deakin, Allahabad; Dr. Russell, Glasgow; Dr. Christie, Glasgow; Dr. Thompson, Leamington; Dr. E. G. Barnes, London; Mr. Larkin, London; Dr. Pettigrew, Edinburgh; Mr. Mason, Paris; Mr. Lyle; Dr. Smart, Edinburgh; Mr. Crooke; Mr. Wickham Barnes; Dr. A. Marsden, London; Mr. S. F. Murphy, London; Mr. Maitland; Mr. Eastes; Mr. Friend; Mr. Warner; Dr. Sandford; Mr. Kitchener, Newcastle; Mr. Parker, Liverpool; Messrs. Marsh and Son; Messrs. Sharratt and Cree; Dr. Campbell; Dr. Heywood Smith, London; Dr. Blandy, London; Mr. Schreiner, Eastbourne; Dr. Edis, London; Mr. Elliott, St. Leonards; Dr. Blane, Bombay; Mr. Greenway, Plymouth; Mr. Saunder; Mr. Morton, New Brompton; Mr. R. Jeffreys; Dr. Pilcher, Brooklyn; Dr. Sawyer, Birmingham; Mr. C. White; London; Mr. M'Munn, Belfast; Dr. Alexander; Mr. Mehta, Baroda; Mr. M. Jones, Rotherham; Messrs. Wright and Co., Birmingham; Mr. Gurner, London; Mr. Kavanagh, Coventry; Mr. Bigg, London; Mr. Kellett, China; M.D.; Medicus M.; X. B.; Surgeon-Major; G. B. S.; A. B., Manchester; W. A. G., Pinner; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Hanly, Sheffield; Mr. Buckland, Clapham; Mr. Grattan, Cork; Mr. Inman, Kettlewell; Messrs. Jolly and Sons, Norwich; Mr. Fraser, Glastonbury; Dr. Franklyn; Mr. Hamilton, Swadlincote; Mr. Waddy, Manchester; Mr. Bishop, Banbury; Dr. Shirtliff, Kingston-on-Thames; Mr. Brook, Huddersfield; Mr. Dove, Sherborne; Mr. Baron, Ulceby; Dr. Kavanagh, Deptford; Mr. Wall, Wigan; Messrs. Leader and Sons, Sheffield; Mr. Newman, Bowness; Messrs. Smith and Son, Dublin; Mr. Humby, Alresford; Mr. Lownds, Newcastle-on-Tyne; Mr. Morris, Colwyn; Mr. Arrowsmith, Bristol; Messrs. Gerrard and Tanner, London; Mr. Cornish, Manchester; Messrs. Armfield and Sons; Mr. Mulliner; Dr. Tinley, Whitby; Mr. Reece, Axbridge; Mr. Jones, Harlech; Mr. Wicks, Newcastle-on-Tyne; Surgeon, Oldbury; M.D., Notting-hill; F. R. T.; S. A. C.; Surgeon, London; H. F., Chobham; E. B., Wolverhampton; B., Kentish-town; G. C. H., Clapham; C. B., Stamford-hill; Fides, New Seahan; Ivan; R. E., Swansea; Medicus, Chesham; F. J. G.; A. B., Macclesfield; C. D. C., Leighton Buzzard; P. F.; Physician, Leeds; Medicus, Starcross; W. C. W., Hereford; J. R. G.; Medicus, St. Helens; E. J. D., Wells; Medicus, Bradford; Medicus, Aberdeen; &c.

Coffee Public-house News, Pharmaceutical Journal, Uxbridge Gazette, Western Lancet, Hulme Gazette, Church of England Temperance Chronicle, Kingsbridge Gazette, Public Opinion, Shield, Night and Day, El Jurado Médico-Farmacéutico, Worthing Intelligencer, Leamington Advertiser, Weekly Mercury, Midland Free Press, Export Mercantile Advertiser, Courier, Bolton Advertiser, Estates Roll, Spiritual Notes, Juristen-Zeitung, Boston Medical and Surgical Journal, Education, New York Medical Record, Medical Herald, Colonies, City Press, Commercial World, Western Daily Mercury, &c., have been received.

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, June 3rd, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
May 28	30·19	W.	56	51	104	67	47	..	Cloudy
,, 29	30·48	N.W.	55	48	107	68	42	..	Cloudy
,, 30	30·38	S.W.	56	51	99	67	47	..	Cloudy
,, 31	30·17	N.	55	52	..	57	50	..	Overcast
June 1	30·14	N.E.	57	52	98	64	47	0·20	Cloudy
,, 2	30·04	E.	56	54	95	63	50	0·02	Overcast
,, 3	29·90	N.E.	55	53	..	63	50	..	Overcast

Medical Diary for the ensuing Week.

Monday, June 7.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. B. T. Lowne, "On the Development of Sensory Organs."
ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

Tuesday, June 8.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. F. G. Hilton Price: "Camps on the Malvern Hills."—Rev. R. H. Codrington: "Religious Beliefs and Practices in Melanesia."—Mr. Peter Bemridge: "The Aborigines of Victoria."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. D. Powell and Mr. R. W. Lyell, "On Basic Cavity of the Lung treated by Paracentesis."—Mr. Henry Morris, "On a Case of Aneurism of the External Carotid, in which, after failure of the Ligature of the Common Carotid, the old Operation was successful."

Wednesday, June 9.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M. — 5 P.M. Mr. Osman Vincent, "On Genu Valgum and Rachitic Deformities."
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. B. T. Lowne, "On the Development of Sensory Organs."
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Professor H. Smith. "On the Life History of the Diatomaceæ."—Mr. S. Holmes: "A New Binocular Microscope with Isophotal Prism."—Mr. W. H. Gilburt, "On the Structure and Functions of the Scale-leaves of Lathræa Squamaria."—Mr. J. W. Stephenson, "On the relative Visibility of Minute Structures when Mounted in Phosphorus, Bisulphide of Carbon, or other Media."

Thursday, June 10.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, June 11.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. B. T. Lowne, "On the Development of Sensory Organs."
QUEKETT MICROSCOPICAL CLUB.—7 P.M. Conversation and Exhibition of Objects.

Saturday, June 12.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Clinical Lecture
ON
OPERATIONS FOR CATARACT BY DISCISSION FROM BEHIND.

Delivered at University College Hospital on Feb. 19th, 1880,

BY PROFESSOR WHARTON JONES.

GENTLEMEN,—In the early part of this session I gave a clinical lecture on the differential diagnosis between the cataract of old persons and glaucoma; on the operation of extraction of the lens, which I performed in the cataract case; and on the operation of iridectomy, which I performed in the glaucoma case. Amongst other points, I particularly directed your attention to the difference and distinction between the greyish-green appearance, as if of opacity, in the region of the lens in the case of glaucoma, and the actual opacity of the lens in the case of cataract.

In glaucoma, the appearance as if of opacity behind the pupil I explained to be owing to a reflection from the concave fossa hyaloidea of some of the light which has entered the eye. The reason why the seat of the apparent opacity varies—being always on the side opposite to that whence the light enters the pupil—I further explained by a reference to the circumstance that the reflection is from a concave surface. The greyish-green tint of the apparent opacity, again, I stated to be owing to an alteration in the constitution of the lenticular substance, which, without being opaque, is no longer normally transparent and colourless, so that it is certain rays only—blue and yellow—of the reflected light which are retransmitted through it.

In the cataract case, the real opacity of the lens, you saw, did not change its seat with a change of the direction in which the light entered the eye. Its greyish-amber colour I explained to you to be owing to the opaque amber-coloured nucleus of the lens shining through the greyish-opaque cortical substance.

In the glaucoma case I had performed iridectomy upwards some time before, not with the expectation of restoring sight, but with the hope of giving relief from pain. Temporary relief only accruing, I performed a second iridectomy downwards, but with no better success. In regard to this case, I observed in my former lecture referred to that relief from suffering might be obtained by enucleating the eyeball altogether, and that this operation would be, under the circumstances, a justifiable alternative. No other alternative now remaining, I have advised the patient to submit to it.

In the cataract case, all useful sight in the right eye being lost, I performed the operation of extraction on it. In making the section of the cornea I cut out at some distance from its margin, as you saw, instead of prolonging the incision, so as to make the usual semilunar flap. This mode of making the section of the cornea has been especially practised by Mr. Pridgin Teale of Leeds, and is, I think, for many reasons, much to be recommended. One great advantage is the less danger of infiltration of the cornea with puro-lymph, such as, unfortunately, sometimes takes place after the flap operation. When the section is made by cutting out at some distance from the margin of the cornea, nutritive material for the healing process is derived from either side of the wound in due proportions. In the case of the flap, however, the portion of cornea forming it being large cannot be supplied with nutritive material in corresponding proportion. This being the case, stagnation of nutritive interchange and prevention of reparative action are more liable to occur in low states of the system. It might be said that a sufficiently large opening for the exit of the lens is less likely to be obtained, but you saw that when the anterior wall of the capsule was lacerated in the usual way the cataractous lens slipped easily out. Within a week the patient was convalescent, and the corneal wound had healed, with a scarcely perceptible linear cicatrice. The restored sight, you will remember, turned out good, and the man went home provided with cataract glasses for looking about with, and in the course of a few weeks returned, as he had been told to do, to be fitted with glasses helping him to read.

At my lecture to-day I have to direct your attention to a very different kind of operation for cataract in the case of the woman bordering on seventy on whose left eye you saw me operate a fortnight ago. The cataract was of the ordinary hard kind met with in old persons, and the operation performed was by my method of discission from behind. This was a third operation. The first was performed about twelve months ago, and consisted simply in *lacerating the posterior wall of the capsule* of the cataractous lens. For this purpose I passed a curved, spear-headed cataract needle into the eyeball by piercing the sclerotica on the temporal side, at a point about one-sixth of an inch from the margin of the cornea, and half way between the insertions of the external rectus and inferior rectus. Pushing now the spear-head on in the vitreous body, as if towards the centre of the globe, I next turned its point against the posterior wall of the capsule, and rotating the handle of the instrument between my finger and thumb, freely lacerated that membrane, including, of course, the corresponding layer of the hyaloid, and at the same time slightly broke up, or rather scratched, the lenticular substance from behind, and then withdrew the instrument.

This laceration of the posterior wall of the capsule was the same as that which you saw me perform yesterday on another woman, aged fifty-six.

The second operation on this old woman was performed about six months ago, just before the hospital was closed for repairs. The woman having lately presented herself again at the hospital, I took her in for the purpose of performing the third operation — namely, breaking up the lenticular substance from behind for the second time. The pupils being dilated, I found on examination that the lens of the left eye especially had become much diminished in bulk by absorption, and that the patient could see distinctly the shadow of my hand held up before her. I had operated twice on the right eye last year at the same time that I operated on the left, but absorption of the lens of that eye had not advanced so far. I resolved, therefore, to operate on the left eye only for the present.

The operation you accordingly saw me perform on the left eye consisted in breaking up the remains of the cataractous lenticular substance from behind, and then lacerating the anterior wall of the capsule. The cataract needle being introduced into the eye in a manner exactly similar to that which I have just described as having been followed on the first occasion, when I simply lacerated the posterior wall of the capsule, I next turned the point of the instrument against the back of the lenticular substance, which proved so friable that it was easily broken up into fragments by two or three rotations of the needle, as you saw. This being done, I lastly pushed the point of the needle forwards until it was seen through the pupil, and in the course of this manœuvre lacerated the anterior wall of the capsule. When the woman was allowed to open her eye a few minutes after the operation, you heard her say that she could see objects, which no doubt was true, as there were in the pupil clear spaces between the fragments into which the friable lenticular substance had been broken up. These fragments being exposed to the solvent action of the vitreous humour from behind, and of the aqueous humour from the front, have already almost entirely disappeared by absorption. On the third day after the operation, and on every day of visit since, you have heard the patient repeat that she could see you all around her. With a cataract glass of four and a half inches focus she can recognise my features perfectly distinctly, and with a cataract glass two and a half inches she can see to read.

In the case of the man before spoken of, on whom I performed the extraction, this my operation by discission from behind would have been a perfectly appropriate operation; but, as the clearing of the pupil would have been a slower process, I decided on extracting the cataract, as the man was anxious to get back to work as soon as possible, and because the otherwise healthy appearance of the eye gave promise of a good result.

My operation for cataract by discission from behind is described in the last edition of my treatise on Ophthalmic Medicine and Surgery. In the operation of discission, as hitherto performed, the capsule and cataractous lens are attacked from the front, the cataract needles being introduced either by puncturing the cornea and thence pushed on through the pupil against the front of the cataract, or by

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puncturing the sclerotica and then directing the point of the instrument forwards through the extreme circumference of the cataract into the posterior chamber, whereupon by moving the handle of the instrument from behind forwards, its point is directed backwards against the front of the cataract.

In the operation of discission from the front, whether by corneal or by sclerotic puncturation, the lenticular substance by imbibing aqueous humour is liable to swell up, and pressing forwards against the iris often excites inflammation of that structure. But supposing this danger got over, it is not uncommon to find, after the opaque lenticular substance has disappeared by absorption, opacity of the posterior wall of the capsule, constituting what is called "secondary capsular cataract." Opaque capsule or secondary capsular cataract, remember, is never absorbed, and, being tough, does not always admit of being easily torn up or even extracted.

One great advantage of lacerating the posterior wall of the capsule from behind, in the first step of my operation, is that the posterior wall of the capsule being thus removed from opposite the pupil, no opacity of it in that place can of course supervene to form the secondary capsular cataract I am speaking of, and which so often mars the ordinary operation of lacerating the anterior wall of the capsule, and breaking up the cataract from the front. Another advantage of lacerating the posterior wall of the capsule and breaking up the cataractous lenticular substance from behind is that the iris is saved from any irritation of pressure by the swollen lens, and therefore inflammation of it is less likely to occur. Swelling of the lenticular substance by imbibition of fluid from the vitreous body after laceration of the posterior wall of the capsule does indeed take place, but it presses back into the soft centre of the vitreous body, and causes no irritation.

In the case of the woman on whose right eye you yesterday saw me perform the first step of my operation of discission from behind, the swollen lenticular substance I have this day seen beginning to ooze out back into the vitreous. I shall perform the second step of breaking up the lenticular substance in about six weeks, and I hope the pupil of this right eye will have cleared before the left eye, which is rapidly failing, shall have ceased to be useful.

Here let me remark that when, as in my operation from behind, the anterior wall of the capsule has been left entire and untouched, I have not found it become opaque, as the posterior wall of the capsule is so prone to do after the operation of discission from the front, in which the said posterior wall is left entire and untouched.

The common doctrine among surgeons has hitherto been that solution and absorption of the cataractous lenticular substance can take place only when it is exposed by laceration of the anterior wall of the capsule to the action of the aqueous humour; but my various cases, in which the posterior wall of the capsule alone was lacerated, and the anterior wall preserved entire, so that there never was or could be any access of aqueous humour to the lenticular substance—unless, indeed, by osmose—show that the direct action of aqueous humour is not a necessary condition for the solution and absorption of the cataractous lenticular substance. When, however, the cataractous lenticular substance has been reduced by absorption to small bulk, and there is no longer any danger of pressure on the iris by it, I usually add to my last operation of breaking up the remains of the cataractous lenticular substance from behind, laceration of the anterior wall of the capsule—from behind also, of course, as I before described in the case of the old woman upstairs—for the purpose of accelerating the completion of the dispersion of the remains of the cataract by exposing it to the solvent action of the aqueous humour as well as of the vitreous fluid, to which latter it had hitherto been alone exposed.

I will now read you three cases in which I left the anterior wall of the capsule entire and untouched in order to show you that laceration of the anterior wall of the capsule and the access of aqueous humour to the lenticular substance is not a necessary condition for the solution and absorption of cataractous lenticular substance.

1. The patient was a lady, sixty-three years of age, and the cataract the ordinary greyish-amber coloured hard cataract of old persons. At a first operation I lacerated the posterior wall of the capsule, and at a second, six weeks after, I broke up the lens from behind, leaving the anterior wall of the capsule still untouched, and in about six weeks after that the pupil had become so cleared that, with cataract glasses, the lady was able to see quite well.

2. The patient in this case was a man about forty years old. Cataract affected one eye only, and had appeared after a blow on the forehead. It had a whitish aspect, and was of the natural consistence of the lens. In operating I did nothing more than simply lacerate the posterior wall of the capsule. The man having one eye quite good, and, therefore, in no hurry for the clearing away of the cataract in the other, I did not perform any second operation of breaking up the lenticular substance, but contented myself with watching the progress of the case. The man presented himself at the hospital now and then at my request, and I had the satisfaction to observe that the cataract became smaller and thinner by solution and absorption of the lenticular substance. The last time the man presented himself, which was a year or a little more after the posterior wall of the capsule had been lacerated, the pupil had become almost wholly clear and black. There was only a small fragment of opaque lenticular substance remaining unabsorbed, and he could see very well with cataract glasses. Of course, if I had performed the second operation of breaking up the cataractous lenticular substance from behind, the pupil would have been cleared long before. But, as I have said, the man being in no hurry, I took the opportunity which his case presented me of observing how far the cataractous lens was capable of being dissolved and absorbed under the action of vitreous fluid alone without breaking up.

3. I operated in the same way on an infant for congenital cataract in both eyes. The pupils had become clear—all with the exception of a small speck of opacity in the centre—when I last saw the case, and the infant was looking about, moving its eyes steadily. Should the patient ever be brought to me again, and if the small speck of opacity has not disappeared, I shall break it up.

To conclude. From what you yourselves have seen and from what I have now related, you will have perceived that my operation for cataract by discission from behind is the simplest and easiest for the surgeon to perform, and the safest and least severe for the patient to undergo; whilst it answers well in old persons with hard cataract as well as in young persons with soft cataract.

After the first step of lacerating the posterior wall of the capsule, it is generally necessary to perform the operation of breaking up the lenticular substance two or even three times at intervals of six weeks or two months, before the cataract becomes completely dispersed; but this is not of much consequence, considering the mildness of the operation and that usually little or no inflammation supervenes to prevent the patient, during the intervals between the operations, from going about as much as he had latterly been able to do. The great desideratum, on the part of the patient, is patience.

When absorption of the cataract has been completed, as we have seen it may be in six months on an average, the sight has turned out in old persons as perfect as after the most successful operation by extraction; and in young persons, more generally and uniformly satisfactory than after the common operation by discission from the front; whilst in all, the appearance of the eye has been left so natural that nothing about it could be detected to indicate that an operation had ever been performed on it at all, except the inclination of the iris backwards, necessarily resulting from the loss of support behind by the removal of the lens.

HOSPITAL SUNDAY was held in Cambridge on the 30th ult. The collections in the various churches and chapels in aid of the funds of Addenbrooke's Hospital realised a sum of £184 16s. 1d. The amount collected after the University sermon on May 2nd was £70 16s.

BIRMINGHAM HOSPITAL SATURDAY COLLECTION.—At a meeting of the distribution committee of the Hospital Saturday Collections at Birmingham, on Tuesday, it was announced that receipts on account of the present year's collection amounted to the sum of £3745 3s. 1d., and it was decided that £3500 should be divided among the medical charities of the town, on the same principle as in previous distributions—viz., in proportion to the ordinary current expenditure in the last published report of each institution.

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EXTRACTS FROM A

Clinical Lecture

ON

TWO CASES IN WHICH THE PLASTER JACKET WAS USED.

By FURNEAUX JORDAN, F.R.C.S.,

SURGEON TO THE QUEEN'S HOSPITAL, PROFESSOR OF SURGERY AT QUEEN'S COLLEGE, BIRMINGHAM; CONSULTING SURGEON TO THE WOMEN'S AND THE WEST BROMWICH HOSPITALS.

1. On the use of Pulley-extension in the application of a Jacket, or of a Jacket and Jury-mast. 2. A rapid and convenient method of putting on a Plaster Jacket. 3. A simple and efficient plaster Jury-mast.

I SHOW you to-day two cases which illustrate a few modifications tending, I believe, to simplicity, ease, and efficiency in the Sayre-Walker jacket. In one case you see a jacket only on a man with caries of the lower dorsal vertebræ, with which is associated a large psoas abscess. The other case is that of a girl with caries and a sharp curve in the uppermost dorsal vertebræ. She has on a plaster jacket, and united with it a plaster jury-mast, and both were put on while pulley-extension by means of a chin and occiput sling was being kept up. In this case the pulley was kept on for a week before the jacket and jury-mast were applied. The jury-mast maintains extension and immobility in the head and neck as completely as the jacket keeps up extension and immobility in the trunk. The two are also so continuous and strong that the body cannot be moved independently of the head, nor the head be moved independently of the body. There are three principles in the treatment of spinal diseases which I wish to bring before your notice. They may be considered and applied separately, although in practice they may be frequently used together.

1. *The use of a Pulley before and during the application of a Jacket, or a Jacket and Jury-mast.*

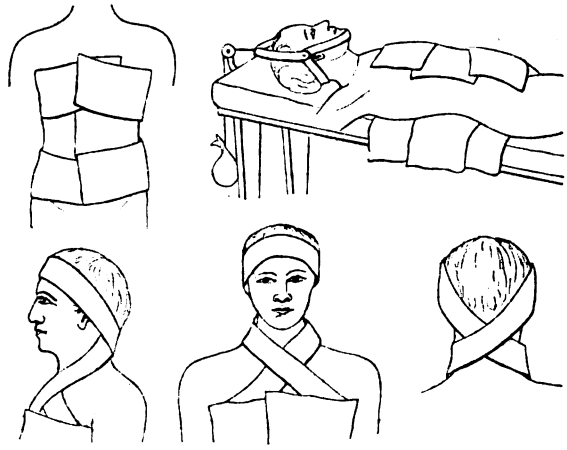
For nearly two years we have adopted pulley-extension of the spine in the horizontal posture. To a chin and occiput sling a weight is attached which passes over the head of the bed, or couch, or table. A bag of shot (or pebbles) allows easy adjustment of the weight as regards comfort and increased length of the trunk. In slight and early cases pulley-extension during the application and setting of the plaster apparatus is sufficient. In severer cases a few days or weeks of preliminary extension may be beneficial. In some cases the weight may be attached to the feet as well as to the head, or the head of the couch or bed may be raised.

I am indebted to my late house-surgeon, Mr. Brett, for the interest he took in combining pulley-extension with the application of jackets. In the case of a girl with dorsal caries, whose jacket was put on with a sliding weight attached to the head and another to the feet, we found that she was taller than she was in a jacket put on under the tripod.

2. *A Rapid and Convenient Method of putting on a Plaster Jacket.*

The use of a continuous splint around the body, as introduced by Professor Sayre, will rank with the leading events in the history of surgery. I, for my part, feel also indebted to Dr. Walker of Peterborough for showing how the benefits of a jacket may be secured by putting it on in the horizontal posture, with little assistance, with complete safety, with no cumbrous machinery, and no mental alarm. Dr. Walker uses a many-tailed bandage, consisting of numerous muslin strips; he takes a little longer time, and delays the setting of the plaster by adding gum to it.

The two jackets you see to-day were put on by a simple modification of the Sayre-Walker method. I put on three broad strips only. The strips were compound or multiple, each strip consisting of several superimposed layers of muslin and plaster. In one case honeycomb towelling and plaster were used. When ready to be dipped in water there were practically three rolls. The leisurely application of these three strips did not occupy two minutes. This rapid process with plaster only and early setting saves much trouble as well as time. One strip is put on round the centre of the trunk, the ends overlapping in front; another strip is put on higher up, it reaches the axillæ, and is so put on that a cone is formed with the base upwards; the third strip is put on below, it reaches the trochanters, and is so arranged that a cone is formed with its base directed downwards. These cones are not formed artificially; they naturally follow the neat adjustment, with moderate traction of the three strips to the trunk. The upper and lower strips well overlap the middle, which latter may be a little wider than the others. The central strip may be put on first or last. The three may be made to fit the trunk like a glove, and they secure double conicity more certainly than do the numerous narrow strips—continuous, or many-tailed. The principle of the multiple strips being adopted, the number used in each jacket may be varied—say four, six, or eight. Where the number is greater the width may be narrower.



Understand that these three strips may be put on under the tripod as easily as on the bed should the tripod seem to give a better position, and the rapidity, without hurry, of the process is no little benefit when suspension is adopted. If put on in the horizontal posture, the strips are so arranged that the patient is laid down on them; if pulley-extension be used, the multiple strips may be first placed on a sheet of macintosh or paper, and then drawn under the trunk.

I am not yet quite clear which answers best—six or eight layers of checked muslin or two or three of thin honeycomb towelling. The towelling is more manageable, the muslin contains more plaster. If a loop of twine be drawn through the four corners of each strip the whole strip is readily drawn straight and smooth when taken out of water. I may here suggest the utility of these multiple strips as splints in many cases of fracture, diseases of the joints, talipes, &c. The several strips are cut to the desired pattern, filled with plaster, put one on another, rolled up short-ways or any convenient way in one roll, dipped in water a few moments, unrolled and put along and around the adjusted limb.

3. *A Simple and Efficient Plaster Jury-mast.*

In the case of this girl you see what I venture to call a solution of the jury-mast difficulty. The jury-mast itself is so complete, and is also so immovably connected with the jacket, that the little patient's trunk and head and neck are as fixed as if they were carved out of a single block of wood. We not only turn the head when we turn the body, but when we turn the head we turn the whole body also. If we lift the body we lift at the same time the head without a jar or vibration. The effect is somewhat weird. We could, if we chose, lean her against the wall or roll her along the floor without the slightest movement in any single vertebra. This jury-mast is perhaps stronger than is needful. It is a multiple strip made up of ten layers of prepared muslin; it is fifty-two inches long and two inches and a half wide. The strips may vary from two to three or four inches in width to fifty or sixty in length, according to age, size of head, and length of neck of the patient.

It is put on thus:—The patient is reclining on a mattress with no pillow, pulley-extension is being made with a chin and occiput sling consisting of two strips of adhesive plaster to which thin webbing is sewn above the ears. The hair

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has previously been cut short. The prepared multiple strip in a single roll, after being dipped a few moments in water, is completely unrolled, its centre is then applied to the forehead well away from the eyes, the two ends are next carried along the sides of the head to the back of the neck where they cross—one end being carried under the neck first, then the other (pulley-extension being still kept up), they are drawn firmly enough to closely embrace the head and back of the neck; the ends are brought forward one on each side of the neck, where they again cross each other in front of the neck and sternum, and lastly the two ends are fastened by a plaster jacket. Before the multiple plaster strip is applied a flannel strip or long fold of lint is put on in the same way, and a little cotton-wool is put over the ears and in front of the neck. The flannel strip and subsequently the plaster strip are put over the adhesive plaster chin and occiput sling, the uncovered portions of which latter may be cut away when the plaster is set.

Again, understand that this jury-mast may be put on during suspension so long as an adhesive plaster sling is used. In cervical caries the use of pulley-extension in the horizontal posture some time before the head is fixed is preferable. In severe cases of cervical disease it would probably be admitted that suspension is inapplicable. Whether the pulley-extension be preliminary and prolonged, or temporary, the weight must not be more than that which can be borne with comfort.

CASE ILLUSTRATING THE

VALUE OF THE OPHTHALMOSCOPE IN THE INVESTIGATION AND TREATMENT OF DISEASES OF THE BRAIN.

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I HAVE many times, since 1863, urged that very marked ophthalmoscopical changes may exist when sight is good. Under treatment this pathological condition may disappear, or leave but slight and doubtful traces, sight remaining good. I am tempted to illustrate these two dicta once more by facts from a very striking case. The statements to be made do not rest merely on the authority of a physician. The examinations were made, not by myself only, but by Mr. Couper, whose reports are given. The patient never had any defect of sight, and thus, unless his eyes had been examined by routine, a very striking pathological condition must have been missed. The patient had, besides, what looked like slight fits of epilepsy, and also headache and vomiting. I say nothing of the nature of the case beyond remarking that such a condition of the discs usually points to gross local cerebral disease. I make no predictions as to the patient's further progress. Unless I had examined with the ophthalmoscope I should have thought I had to do with an ordinary case of epilepsy; what I discovered led to different, or rather to additional, treatment. I only wish to show in this note that double optic neuritis may exist with good vision, and that it may pass off without impairing sight. I have seen and recorded cases like this before. This is not a case of recovery from amaurosis; the patient had a pathological condition without any attendant symptom; he had no amaurosis to recover from. In all cases I have seen the recovery from optic neuritis has been under the administration of iodide of potassium; in this case bromide was given too. Whether the neuritis would pass off were no drugs given is a question I cannot answer, nor am ever likely to be able to answer, as I should never fail to give the iodide in any case of optic neuritis; I would not risk its omission. My impression is that early recognition of neuritis would save many patients from blindness or defect of sight.

It is not meant to be implied that treatment by the iodide always causes disappearance of the changes of optic neuritis, and leaves sight good. I have now under my observation a young woman who was treated by iodide, and later by mercurial inunction, who has become blind, although her sight was good when the iodide was first employed. Nor do I wish to imply that when with optic neuritis there is defect of sight, treatment is hopeless. I hope shortly to report the case of a woman recently under my care in the London Hospital who had become practically quite blind with neuritis, and who got good sight again after treatment by iodide of potassium and mercurial inunction.

Double optic neuritis without defect of sight; recovery under treatment.—Mr. B——, aged eighteen, was sent to me in June, 1879, by Mr. Baxter, of Cambridge, for slight epileptic seizures, the first of which occurred a year before. The patient looked well, but had headache and vomiting. There was no albumen in the urine. He could see well, but I discovered double optic neuritis. Mr. Couper saw him also, and reported as follows:—

"June 12th, 1879.—I find normal acuteness of vision for near and distant objects in F. K. B——'s eyes. There is also normal accommodation and field. At the same time there is well-marked double optic neuritis. The swelling, although not extreme, is yet sufficiently pronounced to admit of accurate optical measurement. It amounts in the right eye to an hypermetropia of $\frac{1}{16}$, and in the left to $\frac{1}{15}$: i.e., the macula being emmetropic, the highest part of the respective discs has H $\frac{1}{16}$ and $\frac{1}{15}$. There is further objective proof of the swelling in the high parallax between disc and adjoining retina, as seen by direct examination.

"There is a high degree of capillary engorgement in the nerve-substance of both discs, the visible small vessels being much increased in number. This condition, together with the œdema and some increase of the connective-tissue elements of the discs, wholly conceals the choroidal boundary in all directions. The course of the optic nerve fibre bundles in crossing over to the retina is visible as a fibrillar appearance at the margin of the swollen disc, and radial to its centre. The veins of the disc and adjoining retina are distended, prominent, and abnormally dark in colour. The sheaths both of arteries and veins are somewhat thickened, and are seen as greyish lines parallel to the vessels, or as thin fibres crossing the surface of the larger trunks. Excepting one minute doubtful patch on the right disc there are no hæmorrhages on either.

"The maculæ are normal with the exception of a very slight increase of grey colour in the retina immediately around the right fovea; this indicates a trace of œdema at that spot. But at neither macula is there a vestige of the corona of plaster white patches so often visible in renal disease.

"The state of the discs accurately corresponds to that often associated with brain mischief."

The patient took iodide and bromide, the former in doses of four grains, raised in July to six, up to his second visit to me in March, 1880, with but one week's omission. He was much better, but had had two "fainting fits"—slight epileptic seizures. To ordinary indirect examination the discs seemed normal. Let the reader carefully compare Mr. Couper's second report on March 24th, 1880, with that on June 12th, 1879. The patient's sight was good; he knew of nothing wrong with it, except during his "fainting fits," when he said he did not quite lose consciousness. There was no albumen in the urine. Mr. Couper reports as follows:—

"March 24th, 1880.—I re-examined yesterday, and found the translucency of both discs perfect. Their colour, although somewhat full, is within normal bounds. By direct examination, the redness of the left disc is seen to be somewhat patchy, and there is a little more projection of nerve substance than normal. Both these conditions are absent in the right disc. There are no thickened sheaths, except a trace in the case of one retinal vein on the left disc. The maculæ and their regions are healthy and free from greyness and œdema. Either his accommodation was unduly active, or a slight myopia has developed in the right. It requires −72 spherical to get $\frac{2}{3}$. Even the left got $\frac{2}{3}$ more easily with −72. The amount of myopia, even if real, is of no importance. It thus appears that a very satisfactory improvement has come in the discs and retinæ."

THE JOHN HUNTER MEDAL.—This medal, of the value of fifty guineas, was executed by Wyon, and has on the obverse in bold relief a striking likeness of Hunter, with the simple inscription "John Hunter"; on the reverse is a shield, surrounded by a wreath of laurel, on which is inscribed the Collegial-triennial prize, awarded to Mr. George Arthur Woods, a member of the College, 1880. Dr. Woods obtained the Astley Cooper prize in 1877. No award of the triennial prize has been made since 1858.

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"CHANGE" AS A MENTAL RESTORATIVE.

BY JOSEPH MORTIMER-GRANVILLE, M.D.

THERE is too often, it must be feared, a lack of clearly-defined purpose in the medical prescription of "change" as a mental restorative. Vague terms, for example, relief, rest, quiet; and figurative phrases, such as "taking off the strain," "breaking the monotony," and "setting up again," are employed to designate the remedy and the effect it is intended to produce; but there is no more precise notion of the way in which benefit will result than is represented by the popular expression "It will do good!" A plan of treatment so extensively adopted, and at times so inconvenient and costly, as ordering a patient "away for change," ought to be fully understood and specifically applied. That it is not either the one or the other may be inferred from the almost empiricism with which it is recommended, particularly in cases that have baffled other expedients for their cure; and from the very large proportion of instances in which the remedy fails, and evil rather than good is entailed on the sufferer. Let us attempt the study of three common and typical cases, remembering that it is the duty of the physician not only to do his best for his patient, but to assure himself that nothing better can be done for him, and, above all things, to ascertain clearly *what* it is he desires to do, and *how* it may be most directly accomplished.

CASE 1.—A. was verging on middle-age, and held a position of high trust and responsibility in an old-established house of business, where the transactions were considerable and involved large interests, but were not speculative. His duties were managerial and arithmetical, such as would tax the brain-powers of a less experienced man, but by practice he had come to perform them almost automatically. His figure-work resembled that of a calculating machine, and when a process was commenced by the will it could be carried out subconsciously. The greater part of his daily business was of a routine nature, and the intellectual strain caused by it it could not at any time during the previous ten years have been great. He had some domestic trouble about a year and a half before the date of which I speak, but seemed to have recovered from its depressing effects. Nevertheless he had practically broken down. His work had become a toil. He worried over it, and laboured through it with distaste and weariness, and he had begun to make mistakes. There were no indications of cardiac, lung, or any other organic disease. His general health was fairly good, with the exception of slight stomach symptoms, ascribed to "dyspepsia." He slept without trouble when once he fell asleep, but was apt to lie awake and worry for what seemed a long period before forgetting himself, and awoke unrefreshed and slowly in the morning, complaining of a creeping sensation in the back of the head and nape of the neck, which lasted a little while after assuming the erect position, but gradually subsided, leaving a sensation of numbness which he described as extending over the whole brain. The circulation was weak, the breathing slightly laboured and interspersed with sighs. The skin had the appearance of being dirty and mottled. The extremities were alternately cold and hot, and there were local perspirations. Position in bed, or even when sitting in a chair, had a strangely marked effect on the local surface temperature, and doubtless on the blood-supply of deeper structures. The eyes were injected, but sleepy-looking. The pupils changed too tardily under the influence of light. There was a little knitting of the brows, the token of mental effort when thinking before answering a question; and an air of lassitude and general despondency prevailed. He was "nervous" and irritable, started at the slightest noise or intrusion, and was excited to passion—with an impulse to abuse or strike those around him—after any strong muscular exercise, for example, hastening to catch a train. He brooded over the past and had gloomy forebodings of the future, cared nothing for society, and without being really ill or obliged to give up his work, he feared that he would have to do so, and having a family—in which he began to lose interest, and to look upon as a burden—this was an additional source of uneasiness. He had been prescribed chloral to procure sleep, bromide of potassium with the same object, and nux vomica as a muscular tonic, all without permanent benefit. "Change" was now recommended. It was practically impossible for him to obtain more than a brief holiday, say a month at the outside; and he had taken such a holiday in the autumn of the preceding year without any appreciable benefit, although his condition was presumably more amenable to the effects of "change" then than it could be expected to be when the same remedy was again prescribed!

The mental state—with which, of course, is inseparably connected the nerve-state—of a patient in the condition described is essentially one of failure of *energy*, as distinguished from exhaustion of *strength*. When routine duty which has long been easy becomes difficult this is generally the fact. There has been no augmentation of the demand for mind and nerve force, but the normal supply has failed. In practice this is a very important discrimination, and one which it is not difficult to make. It follows that change cannot be needed for the sake of rest. Automatic work—which is the sort of work in which A. had been chiefly engaged—generally becomes less exacting every year. The nervous centres, or combinations, formed by the repetition of the same series of mento-physical actions, are consolidated and strengthened by functional exercise, until in process of time work which in itself appears complicated and difficult, comes to be simple and effortless. It is, therefore, obviously absurd to suppose that the work a man has done for years with ease has suddenly come to be "overwork," unless the state and strength of the worker had wholly changed. The condition of the worker *has* changed when habitual work is felt to be "over-work; the task is really lighter to him than it used to be, but he has lost the power necessary for its performance. This being made clear, the only question that arises is whether it is physical strength or mental energy he has lost? If it were "physical strength"—using that term as synonymous with nerve-power—there should be some evidences of physical disease to account for the weakness. A careful review of the symptoms noted will, however, show that not one of the number—in the absence of a strongly marked indication—pointed to a physical cause. Even the want of force in the circulation, with deficient oxygenation of the blood, the dyspeptic symptoms, the local stagnations with corresponding sensations, and the atonic condition of the bloodvessels, betokened a vaso-motor depression which was more likely to be the result of want of tone than of actual weakness, and there was an entire absence of any formulated disease in the organism. Knowing, therefore, the important part which mental energy—using that term to denote mind-force—plays in the maintenance of health, it is reasonable to conclude that it was this he lacked. The centres whereby *force* is supplied to the nervous system, and through it again to the organism as a whole, were failing to perform their functions, and there is no part of that psycho-physical being which may not suffer from this cause.

It is useless to tell a man in this state to "rouse and exert" himself. He *cannot* shake off his malaise. He is as much ill as a patient who lies prostrate with fever and ague. The energy which would be required to supply the motor force of *self*-recovery is wanting. The disease consists in a drying up of the springs of vitality. "Change" may do good; it is probably the best remedy to use, but "change" is a generic term like "tonic," and we need to determine precisely what form of change a particular case requires before we can intelligently prescribe it. The obvious indication in the case of A. was to stimulate the centres which generate force, or from which, so to say, force springs—the centres of *vitality*. It is impossible, in the present state of our physiological knowledge, to ascertain what these may be, as where they are situated, but that it is not impossible to reach and influence them is proved by the circumstance that, by accident, we do occasionally hit on the sort of change a patient requires, and so actually use change as a mental restorative. Among the considerations which should guide the judgment in its selection of a form of change are, I believe, the following. Mere "change of air" is nothing to a man who is in physically good health. It will not produce any better or more lasting effect than the endeavour to recover his strength by administering nux vomica for the muscular system. "Change of scene" is not likely to benefit him. He is not sufficiently imaginative, and too old, to be stimulated by the *novelty* of his surroundings. As for awakening new interests in life by

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travel, he has not the mental energy requisite to get up the initial excitement. The question of treatment by change, therefore, narrows itself to the possibility of discovering some latent spark of energy, or an impressionable spot, in his dormant nerve-centres. Send such a man on a tour in which he has not at the outset any strong interest, trust to the contingency of an interest springing from the new scenes, or the change itself, and you will fail; but find some potential susceptibility, deeply buried perhaps, within him to which you can apply a stimulus, and you will succeed; the latent energy will be stirred, the centres of vitality set once more in motion, and motive force capable of re-invigorating the system called into operation. Change which will act in this way is a safe mental restorative.

It is not invariably, or even generally, the experience that the right mode of eliciting energy from a patient proves agreeable to him. We know how in the long and deep depression that sometimes follows a great grief, when the mourner appears to be passing into a state of hopeless fatuity, and every endeavour to "rouse" the spirits by travel and gaiety—a vain and mischievous policy, of which science knows nothing, and art cannot justify—has failed, some incident which stirs the old chord of sorrow, through sympathy, will revive the energy and restore the mind. Precisely that which proves effectual in a grave case is necessary in a less pronounced form in lighter cases. Practitioners make a great mistake when they treat the less fully-developed forms of mental disease as though they were essentially different in nature from its advanced manifestations. The difference is one only of *degree*, and by regarding a slight form of the morbid state as unworthy of solicitude, it may readily be thrown into a condition of self-growth, which is likely to end in its complete establishment. The seemingly trivial hebetude of the man who has ceased to evolve the energy essential to life because he has lost interest in his work, and become enervated by its monotony, is, I am convinced, as much a case for active mental treatment, and will require remedies as potent as, though in smaller doses than, those necessary to recover the mentally deranged who may be threatened with dementia. In the case we are now studying it may well happen that the only way to rekindle the energy essential to life is to revive the spark of force buried in an old sorrow, and thus run the risk of reviving it. When, therefore, the question of *change* arises, it will be sometimes expedient to send a man back to the scene of a half-forgotten trouble or annoyance, to subject him to a process of heart-stirring or pains-taking from which he will certainly recoil, and his medical adviser *may* shrink from submitting him. We can recall cases in which the very anxiety and worry from which we have striven to save a patient has been forced upon him, and proved restorative, after all our carefully-laid plans for smooth treatment have failed. Therefore I say do not reject any likely mode of stirring the energies of a patient who may be drifting unto a condition of mind-inertia because it is likely to be distasteful. If it be possible to find a path, to the hidden sources of energy, which does not lie through dirty water, that, of course, should be chosen—but the goal must be reached in *some* way. The energies must be aroused, though it be done awkwardly, and the nervous organisation, though exquisitely sensitive, is happily by no means so delicate and fragile or liable to be thrown out of gear by rough treatment as many of us suppose. It is the fashion of the day in mental medicine—and there are fashions in every department of the applied sciences—to allow patients to die of neglect, for the great dread we have of doing a mischief by our interference. This fear is of a piece with the reluctance so long exhibited by surgeons to perform operations of a critical character except in cases where life was already in jeopardy, thus shielding the risks of surgery under cover of the perils of disease. Listerism has dispelled the worst apprehensions of the surgeon, and opened the way for bolder and better surgery. It would be well if something analogous to the system of antiseptic precautions could be brought to the aid of practical psychology. The aim must be, at all costs, to reach the fount of vital force, and to do this "change" is most desirable; but it should be prescribed on precisely the same grounds as those on which an insane person is removed—I mean the *therapeutic* considerations with which alone the physician has any concern. Every form of change except the particular one indicated by the specific mental condition of the patient—looking to the history of the case, and the course of life antecedent to the illness or weakness, not less than to the existing state—must be held to be contraindicated, and likely to prove injurious.

What had happened in the case of A. was, doubtless, a gradual and unnoticed wasting of the powers of mental life, with atrophy—in a functional sense—of the centres of energy from disuse and the failure of their proper stimuli. He had lived on placidly, and worked on automatically, although his career has appeared to himself, and others perhaps, to be an active one. He would probably have persisted in this effortless course of existence, daily losing power, but without perceptible change of conduct, it may be taking wine freely as a stimulant to the flagging energy, until a congestive pneumonia or acute attack of any disease caused the sapless and hollow life to collapse, but for the trouble which caused at first considerable mental excitement and then depression a year and a half before the attack I have described. This trouble did not produce the condition into which he afterwards fell, but simply disclosed it. The momentum which was carrying the mental system on its monotonous course was interrupted by the shock, and was left standing confessed as a ruin; but it was not the trouble that caused the ruin—that had been wrought previously by neglect. At this conjuncture in the history of the case "change" seemed likely to do good, but it was evident that it must be a change that would stimulate to exercise and repair. Absolute rest would have completed the disaster by allowing the unstirred embers of a smouldering life to die out. There was not sufficient energy to make a new start possible.

The only course open to us was to call upon the old centres of energy, those which gave out the force that enabled this man to do good work years ago. It was impossible to set these long disused centres in action by mere sympathy. Appeal to a person in this plight to revive his love of the pursuits that interested him years ago, and it will be impossible for him to respond; but place him in circumstances which, so to say, *compel* a revival of the old associations, and call up the forgotten impressions of a vigorous period of life, and the old energy will, in a measure at least, reappear. Recommend "change" vaguely or generally in a case of this class, and if carried into effect, so as to give the mind what is called "relief," the prescription can scarcely fail to do harm. Send such a patient to a new scene of activity, charged with a duty which shall call his dormant energies into action; set him to start a new branch establishment on the same pattern as his own, or to search out the cause of failure in an enterprise like that in which he has been successful, and you will probably cure him; because the "change" you exhibit as a remedy for his morbid state is not merely a change of place, of air, of scene, or of the surroundings, but a change in the inner workings of his mind, which lifts him out of a morbid groove, not on to a new line calling for new motives and fresh energy, but back on to the old lines of his life, where the associations and impressions of an active stage of his experience will be reawakened and the energies of a period when the pulse of life was vigorous once more stirred. If no such opportunity offers, then send him fearlessly to the scene of some sorrow or difficulty that may lie buried in his memory, but to which still living and possibly vital, though slumbering, energies cling.

It is one of the unrecognised advantages of our mental constitution that every trial in life calls into existence new energies, which when it is past still adhere to it. When any circumstance recalls the recollection of a wrong done to us, or a mistake or wrong we have ourselves committed, we know how the feelings and impulses the event originally stirred are revived; how we again burn with the sense of injury, or sink with shame. When the physician has to deal with a dormant and dying mental organism, he should not scruple to recall evil for the sake of its associated good—the energy that lies entangled with its memories, and which may act as a stimulus to the now lethargic mind. Of course such a plan of treatment needs to be devised and carried out with judgment, but what active measure for the relief of suffering, or the cure of disease does not call for skill and caution? The surgeon requires to be familiar with the anatomy of the region he invades with his scalpel. It is one of the marvels of medicine that the physician expects to be able to minister to a mind diseased without obtaining a corresponding acquaintance with its constitution and subtle processes.

The case I have cited may be taken as the type of a very

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large and daily-increasing class of cases, in which the state the physician is called upon to treat is discovered, instead of being produced, by the event or condition assigned by the friends, and perhaps the patient himself, as its cause. The mental state does not, perhaps, appear to be a very serious one, but it is, and measures at once prompt and vigorous are required for its relief. A. was recovered from his depression after a long period of "rest" and *supervision*, which not only did him no good but great harm, by a fortunate concurrence of circumstances which compelled him to action. Previous to this call upon his energies, he had fallen into a condition which threatened the most serious consequences, and the more he rested and relief was sought in change the worse he became. There can be no question that what saved him was not rest but *work;* and the "change" that proved successful was one from aimless automatic routine to activity with a purpose and an end.

(To be continued.)

UNUSUALLY LARGE URIC-ACID CALCULUS SUCCESSFULLY REMOVED BY LITHOTRITY.

REPORTED BY

MR. G. BUCKSTON BROWNE.

AMONG the numerous cases of operation in which I am engaged in assisting Sir Henry Thompson, there are some which are very interesting and uncommon, and which ought not to be lost sight of; one such example is furnished in the following history.

A gentleman well known in one of the European capitals, aged fifty-three, had long been the subject of symptoms of stone in the bladder, for which he consulted the leading surgeons of his own city and of others at a distance. The result was nineteen sittings by lithotrity, removing 395 grains of calculus, chiefly uric acid with some phosphates. At the end of these operations, which occupied some months, his symptoms not being relieved and being severe, it was said that two or three fragments still existed, but that these were difficult to be removed, and had better for the present be left to nature.

He became worse and dissatisfied. His frequent and painful micturition, with considerable incontinence at night, loaded urine, and absolute incapacity to attend to any engagements, brought him to London, with a statement of his case from his medical attendants, to consult Sir Henry Thompson, who first saw him on March 8th of this year.

At the first examination, on March 10th, Sir H. Thompson found several fragments and a very large uric-acid calculus; he crushed and used his aspirator, removing 230 grains of very hard calculus in eighteen minutes; the patient being evidently the subject of emphysema of the lungs, Mr. Clover, who gave ether, advised cessation at the end of this period. The second sitting was on the 15th, when 248 grains were removed in fifteen minutes. At the third sitting, on the 19th, 136 grains were removed in ten minutes. At the fourth sitting, on the 23rd, 98 grains were removed in eight minutes. At the last sitting, on the 27th, 75 grains were removed in eight minutes.

These five sittings completely emptied the bladder. Mr. Clover gave the ether on each occasion, and judiciously limited the time. Mr. Henry Smith took great interest in the case, and was present at every sitting.

The patient had not one attack of fever or any other untoward symptom; and in every respect his general health is excellent. The urine is clear, and he uses his catheter night and morning to withdraw about four ounces of residual urine. Inability to empty the bladder to a large extent had existed for a long period, leading to the marked incontinence during sleep which formerly troubled him, and which has of course now quite disappeared.

The total calculus removed in the five sittings is 787 grains, or almost one ounce and three-quarters avoirdupois, and almost double the weight of that removed before his arrival here. This is an illustration, not exactly of lithotrity by a single operation, since the patient's condition did not admit of prolonged anæsthesia, but of what may be done by Sir Henry Thompson's new aspirator in conjunction with the lithotrite, and by a proceeding judiciously modified to meet exceptional circumstances, without absolute conformity to any one precise method, which cannot be always applicable to the varied conditions and circumstances which occur in practice.

ON "WOOLSORTER'S DISEASE."

BY JOHN HENRY BELL, M.D.,

MEDICAL OFFICER TO THE BRADFORD INFIRMARY AND BRADFORD EYE AND EAR HOSPITAL.

(Concluded from p. 873.)

CASE 8. (Attended by Dr. MONRO, Bradford.)—G. L——, aged thirty-nine, married, healthy; had worked for the same firm as a sorter many years. On Sept. 10th, 1878, not feeling very well, he left work during the afternoon. On the 12th he sent for Dr. Monro. His illness at this time did not appear to be serious. On the 13th he felt better, and wished to go to his work. On the 14th he got up, went downstairs, but soon back to bed again. He died at 5.30 P.M. Duration, four days.

On Sept. 15th I made a post-mortem examination of the body, twenty-four hours after death, assisted by Dr. Monro, Mr. Denby, and Mr. Appleyard. The surface was cold, except over chest; rigidity fairly well-marked. Dark-purple discoloration of neck and upper part of front of chest, with swelling and emphysematous crackling under pressure of fingers; livid discoloration of flexure surfaces of elbow-joints, although much lighter in colour than in the neck; bright-red discoloration of upper anterior part of scrotum, inferior and more dependent part natural; finger-nails and lips dark-purple in colour. Thorax: Muscles on front of chest somewhat darker than usual. Bubbles of air escaped from subcutaneous tissue at upper part of chest and root of neck. No fluid escaped from thorax when opened. Right lung pale in colour, surface irregular, apparently from emphysema of some small lobes and collapse of neighbouring ones; lower lobe shrunken away from chest wall; right pleura contained about thirty-six ounces of turbid, sanguinolent serum; one old pleuritic adhesion at posterior part. Left lung paler than usual in front, somewhat shrunken from chest wall, so that the pericardium was wholly uncovered anteriorly; left pleura contained about fourteen ounces of sanguinolent serum, much more deeply blood-stained than serum of right pleura. Parietal pleuræ not ecchymosed, blood-stained, or injected; no lymph observed in either cavity; surfaces of lungs free from ecchymoses, but there was dark-red congestion of posterior part and apex of left lung; base of right lung on section very dark, border leathery and shrunken, not indurated, crepitant, and floated in water. Pericardium: When opened no fluid visible, but found to contain two ounces and a half of blood-stained serum. Parietal and visceral layers smooth, neither ecchymosed, injected, nor blood-stained. Heart average size, substance soft and flabby, having but little fat on surface; on section of a pale chocolate colour. Blood in vessels entering and leaving heart quite fluid, of dark port colour; no clot in any of the cavities. Endocardium of left side of a dark chocolate colour, which was well seen in chordæ tendineæ. Endocardium of right auricle and ventricle showed much darker staining than that of the left heart. Lining membrane of pulmonary artery stained of a pale cherry-red colour, that of the aorta of a deeper red colour, especially in the sinuses just above the aortic valves. Aortic valve: Thickened, non-translucent, and of a dark chocolate colour, this being most marked towards the free edge of the anterior flap. On section of each cusp a thin, dark-red, even layer was seen between the serous coverings, equal in thickness to the membrane, and apparently consisting of extravasated blood. Mitral valve: The cusp, which adjoined the aortic orifice, contained a little hard mass, rather larger than a pea; calcareous on section; the endocardium over it apparently not ulcerated. Posterior cusp of this valve also contained a small calcareous mass. Abdomen opened: Viscera appeared normal in position and size. No fluid visible; a trace found afterwards. Visceral and parietal peritoneum smooth and glossy, not ecchymosed or injected; no lymph seen. Liver: Uniformly

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dark in colour on section, but firm and resistant to pressure. Spleen about half larger than natural; no ecchymoses on surface, which was uniformly smooth. Kidneys: On section both very dark in colour, especially between the pyramids. Cut surfaces covered with exuded fluid blood, and when wiped off the kidney substance was stained of a deep prune colour. Capsule smooth, small spots of air beneath it here and there, causing a mottled appearance; no ecchymoses.

CASE 9. (Attended by Mr. TRIMBLE, Bradford.)—W. L——, aged thirty-seven, white mohair sorter, was at work on Oct. 11th, 1878. During the evening he complained of headache, and felt inclined to shiver; took some sweet nitre, and went to bed, but did not sleep much.—12th: Was up all day; did not go out; head bad; no cough.—13th: Head easier; a slight cough; stayed in bed, and felt better; but his friends, being anxious about him, sent for the doctor, although he did not feel or appear to be seriously ill.—14th: Felt weak, exhausted, and alarmed at his condition; had no cough, expectoration, or pain, breathing becoming more rapid.—15th: Died at 2.30 A.M. Duration, three to four days.

I saw the body on Oct. 17th. The lower part of neck and upper part of chest were of a dark-purple colour, swollen, and crackled under pressure of fingers, as in Case 8.

Cases of less severity which terminate in recovery are not uncommon. They approach nearer to ordinary forms of disease, but have more or less distinguishing peculiarities. I will give one example. I saw this man with Mr. Mossop, Bradford, who has favoured me with the following notes:—

CASE 10.—J. D——, aged fifty-five, a woolsorter for thirty-six years—twenty-nine years at Saltaire on mohair and alpaca. He had always been healthy, but for a month or two previous to his present illness had complained of feeling wearied and listless. On Aug. 8th, 1878, he returned from work complaining of shortness of breath, confused feeling in his head, and great exhaustion; had no shivering; his tongue was parched, and the palms of his hands felt to burn. He had been sorting damaged alpaca; said it was rotten, and smelt bad.

I visited him on Aug. 9th. His countenance bore an anxious expression; there was no flushing, but a cold perspiration over his face, neck, and chest; tongue dry, fairly clean. Temperature, under tongue 105°; pulse 120; respiration 40; urine scanty. The temperature fell every day for a week. From the 15th to the 18th there was a gradual rise to 104°. An attack of pneumonia of the right lung posteriorly supervened with delirium, rendering his condition for some days very critical. On August 30th he had œdema of the left leg and foot. The urine was not albuminous. On Sept. 1st he had a rigor, and on the following day an abscess appeared forming within the left side of the mouth close to lower jaw. On the 4th it burst and discharged offensive pus. Occasional attacks of diarrhœa came on, and it was not until Sept. 8th that I considered his condition safe. His convalescence was very slow indeed.

Some of the notes of these cases are recollections by the medical gentlemen who attended them, and not clinical records. They illustrate, however, some important general characteristics of the disease, such as its insidious and rapid progress, the absence of pain and urgent symptoms, its deceptive character, both to patient and practitioner.

It is not surprising that medical men were often at a loss to account for such sudden and unexpected deaths, hence they have been certified as from "natural causes," "heart disease," "failure of heart," "pulmonary embolism," "congestion of lungs," &c. I must say, too, that some have appeared to me to come nearer the nature of the disease and certified deaths as from "pyæmia" and "blood-poisoning;" but more frequently they are certified as ordinary cases of pneumonia, pleuro-pneumonia, bronchitis, &c.

I cannot think that this disease is confined to the Bradford district; indeed, I know it is not uncommon in Halifax, and I expect it will be found, if looked for, at most other places where carpet and blanket wools, dry hairs, and furs are used for manufacturing purposes.

Etiology.—For more than thirty years it was generally thought that this disease was caused by the dust and fine short hairs which arise from the materials, acting mechanically, and "so vexing the lungs as to create in them a high susceptibility to any sudden atmospheric or other influence, likely to excite inflammation." Others have thought "that the main cause of these sudden deaths has been due to either the constitutions of the sorters," or "to their habits of drinking." Employers have been very ready to believe that no such specific disease existed. In Dec., 1874, a death was certified from "woolsorter's disease." In 1876 another was certified from "blood-poisoning." It thus appears that some medical men were beginning to question the correctness of the then current opinion, although they did not venture to express themselves more definitely.

When attending Case 1 (a previously healthy man, who died within seventeen hours after leaving his work), I could not accept the usual explanation of mechanical irritation by dust, &c., causing congestion of lungs and death in so short a time. The illness was evidently from poison, and had great resemblance to those severe cases of small-pox, scarlet fever, &c., which are fatal within a few hours, sometimes before the disease is recognisable. He had been sorting a bag of "stinking" alpaca. I therefore thought his illness and death might be caused by poison from putrid animal matter.

To correct, or confirm, this opinion, I inspected the sorting rooms of the largest firms in the worsted district where these infectious wools are used, and collected all the information I could to elucidate the subject from medical men, employers, foremen, workpeople, deputations of sorters, representatives of societies, shippers, brokers, and agents who had lived in the countries where these wools and hairs are grown. I considered the geology, physical geography, climate, &c., of the countries; the mode of life of the inhabitants who own the herds; the natural history of the animals, their food, rearing, herding, management, clipping, &c. I followed the wool from its growth on the bare mountains to the district market town; noticed its classing, pressing, packing, &c.; its removal to the coast, shipping, warehousing, sorting, and washing. My object in so doing has been to ascertain whether it became contaminated by anything it came in contact with in its course; and also to determine the first point at which the disease appears, and the last point at which it affects the workpeople. As the result of these inquiries, I may state, shortly, that these hairs are not known to communicate disease to persons who handle them in the countries where they are grown, they are not suspected on shipboard, neither do they affect those who work in warehouses where they are stored in bags. I have not heard of a case of suspected disease from these hairs before the bags are opened by the sorter; neither have they been known to affect any person beyond the packer who sometimes receives them from the sorters.

It is well known that "Van" mohair (from Lake Van district, Asia Minor) is the most dangerous; it contains more putrid materials, and more fallen fleeces, than any other kind of these hairs; it frequently happens that such inferior qualities contain fleeces from animals which had been dead several days before the hair was removed from them. It has been torn ("sliped") off with the epithelium, and has a strong fetid smell. Other samples contain much scurf, large scabs from sores, dried blood, pieces of skin, clags, burrs, maggots, beetles, lice, &c. These when dried cannot do much harm, but bales in transit may be damaged by water, ship leakage, or otherwise; after they have soaked and partly dried these various animal matters decompose, so that when this has gone on for months in the interior of a hard-pressed bale to which the air has not free access, the activity of the dust poison developed will be at its maximum when the bale is opened; it will contaminate and adhere to the hair for some time after exposure, and endanger the lives of those who first come in contact with it.

Sorters of these hairs are of two grades: bagmen and daymen. The bagman opens the bags in which the hair is packed, shakes out the fleeces, spreads each on a "board" in a good light, and separates the fleece into six or eight qualities. The dayman looks over what has been done by the bagman and corrects mistakes, or separates it into other qualities. The bagmen who open the bales are generally the victims to this disease, very rarely the daymen. I have known a fatal case in a man who packed the wool in sheets directly after it had been sorted. I have also known a sorter who re-sorted mohair after it had been in sheets several months die from a chronic form of the disease; but I have not heard of any case of disease from wools or hairs after they had been washed. The infective power of these hairs gradually diminishes as they pass through the sorting room.

In a paper on this disease which I read before our local medical societies in January and February, 1878, I stated my opinion that it was "a septicæmia caused by the inhalation of a septic poison (spores, bacteria, or other living

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organisms) produced by the decomposition of animal matter within the bales." In February, 1878, it was suggested to me by Dr. Eddison of Leeds, that the "woolsorter's disease" might be splenic fever caused by the "now famous bacillus anthracis." On comparing the symptoms, progress, and pathological changes of the two diseases I found that although the resemblances were remarkable the differences were distinct. Since then our knowledge of both these diseases has increased, and the differences between them have in a great measure disappeared.

Splenic fever, as anthrax, has been associated with the manufacture of hides, hairs, wools, and furs for more than a hundred years. "Fournier[1] in 1769 reported upon the frequent and very common method of transmission of anthrax to man in the manufacture of wool from diseased animals in the tapestry works of Montpellier." "Montfils (1776) relates that anthrax is transmitted to man in part by handling diseased animals, and partly by the washing and manufacture of their wool, hairs, and hides." "Trousseau[2] relates that in two factories for working up horsehair imported from Buenos Ayres, and in which only six or eight hands were employed, twenty persons died in two years from malignant pustule." Dr. Russell, Glasgow, in the recently published annual report of the medical officer of the Local Government Board, has an exhaustive paper on certain cases of sickness and death occurring among workers in horsehair factories, Glasgow, during the last few years.

A few months ago, on seeing a patient who was dying of woolsorter's disease, it occurred to me to try to determine whether it could be transmitted to animals by inoculating them with the blood. Knowing that the bacilli of septicæmic blood were rapidly killed by exposure to air during transportation, I tried to charge the hypodermic syringe direct from the vein, but failed, and was obliged to use the lancet. The blood was received into a warmed cup, and within a few minutes two or three drops were injected under the lumbar skin of a rabbit, a guinea-pig, and a mouse. This was done on a Tuesday at 6 P.M. The animals all continued to appear well till Thursday at 1.30 P.M., when the rabbit was breathing rapidly, and in two hours was dead. The guinea-pig and mouse were apparently well on Thursday; on Friday morning they were both dead. Another rabbit was injected with blood from the first, and died in a shorter time than the other. The blood of the first three inoculated contained a few bacilli. The blood of the last rabbit swarmed with them. They appeared to me to be identical with the bacillus anthracis. Inoculation of blood from several cases I have seen more recently has not always been followed by the same result; hence I have been disposed to consider some cases of septicæmia, others of anthracæmia.

The absence of external pustule in any of the fatal cases I have given, and also in many others I have heard of, is remarkable. No internal pustule has been noticed in any of the bodies on which an autopsy has been made. Sorters themselves are not aware that they are liable to such disease more than other persons. I have, however, heard of one or two cases. Recently several cases of malignant pustule have occurred among woolsorters.[3] A few months ago a letter appeared in the *Bradford Observer* from the agent of one of our firms residing at Constantinople, in which he says, "This year, after sorting a parcel of 'Van,' six of my sorters fell ill. Boils of a very malignant nature broke out on their necks, chins, and cheeks; another firm has just lost a sorter from this same disease, but it took effect on the chest." This disease "frequently follows Van mohair sorting." He further states that "in the market where this growth of mohair is bought this disease is unknown." I think it probable that the constitutional rapidly fatal disease would be found, if looked for, at Constantinople, and also that both forms would be found in the eastern parts of Asia Minor, where the hair is grown. In Kurdistan there is a proverb that "a chill in the evening is death in the morn." In Peru, within the watershed of Lake Titicaca, 12,500 feet above the level of the sea, where alpaca is mostly grown, sudden deaths with pulmonary symptoms are frequent, but the disease is not considered to be communicated from animals. We know that herds of alpacas and goats suffer severely at times from epizootics of anthrax or splenic fever, that the fleeces are torn off the bodies of the animals when in a putrid condition, and may then communicate to man the disease from which the animal has died.

It may be asked, How is it that sheep's wool is not equally dangerous as alpaca, mohair, and camel's hair when they are grown, packed, and shipped together? I reply: (1) Because sheep are generally washed some days before they are clipped, and the wool is often scoured before it is packed. Goats are not generally washed, alpacas and camels never. (2) Wool from sheep is uniformly pervaded by a peculiar kind of unctuous substance, or natural potash soap, which is called *yolk*. This protects the animal from the effects of rain and cold; it also nourishes the wool, rendering it soft, oily, and pliable. It is equal in quantity to 7 or 8 per cent. of the raw material. Some Asiatic wools are not "yolky"; if unwashed they are dangerous. The goat has very little yolk, the alpaca and camel have none. On this peculiarity I think depends the difference between poisonous and non-poisonous wools. The poison is fixed by it, and rendered innocuous.

Anthrax, or braxy, is at times very prevalent among the sheep of South America. All wool grown in the countries drained by the River Plate is exported, the greater portion to Belgium, and a considerable quantity to this country. Two-thirds of what comes to England is "in grease" (unwashed). I have not heard of any particular danger to health from sorting it. Wool from anthrax countries, presumably including fleeces from diseased and dead animals, does not appear to communicate the disease to man in this country.

We recognise four forms of this disease as it affects sorters: (1) Splenic fever; (2) Malignant pustule; (3) Splenic fever (not severe) with secondary malignant pustule; (4) Malignant pustule (severe), with secondary splenic fever. These different developments of the disease correspond with the kinds of splenic fever as observed in animals in this country, and also in man in other countries. Malignant pustule has long been known to affect man in this country, and I think it probable that the other forms occasionally occur, but are not recognised as such. I believe I have known and heard of similar cases in others besides woolsorters.

Prevention.—Great care should be taken that the person who opens the bales does not inhale any dust from the fleeces. The vitality of the spores is very persistent. "Spores which had been kept dry for five years were rendered inactive after two minutes' boiling."[4] If the degree of heat necessary to destroy them impairs the quality of the materials, they may be effectually "laid" by passing the wool or hair through water, or submitting them to steam in partly closed vessels, and sorting whilst damp. Since the recent coroners' inquests on some victims there are firms who wash "Van." So far so good; no death or illness of this kind has occurred from sorting mohair so prepared. But that is not sufficient; all alpaca, mohair, camel's hair, and dusty low-class Eastern wools, in which there may be "fallen fleeces," should be washed, steamed, or otherwise disinfected. If not, deaths from this disease will occasionally occur from sorting them. I would further suggest that greater care be taken to remove all injurious adjuncts when classing and packing in the countries where the wool is grown and made up into bales, and that fleeces from diseased or dead animals be washed or excluded.

Wool-warehouses and sorting-rooms do not come under the supervision of the factory inspector, and therefore do not receive the same attention as regards cleanliness and ventilation as the mill to which they are attached. I would recommend: (1) That they be well ventilated. (2) That they be warmed in winter. (3) That they be limewashed yearly. (4) That they be not used for storage.

[1] Ziemssen's Practice of Medicine, vol. iii., p. 406.
[2] The Principles and Practice of Veterinary Medicine, by Professor Williams. Second Edition.
[3] See THE LANCET, May 22nd, 1880, p. 820.
[4] Dr. Cossar Ewart, Quarterly Journal of Microscopical Science, April, 1878; p. 169.

UNIVERSITY COLLEGE, LONDON.—The Earl of Kimberley, as President of the College, took the chair on the 2nd inst., at the distribution of prizes to the students in the Faculty of Medicine, in the theatre of the college in Gower-street. The list of the recipients of these prizes, consisting of gold medals, silver medals, and certificates, was very long, among them were young men from the Mauritius, Bombay, and Madras, and even from Adelaide and Sydney. The successful candidates received their prizes, amid loud cheers from their fellows, from the hand of Professor W. H. Flower, who afterwards delivered an address.

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ON A NEGLECTED SYMPTOM IN BREAST-CANCER.

BY HERBERT L. SNOW, M.D. LOND.,
SURGEON TO THE CANCER HOSPITAL, BROMPTON.

I DESIRE to call attention to a symptom which very commonly occurs in the course of breast-cancer, and on which, I think, sufficient stress has not hitherto been laid. Beyond a general allusion to the implication of the osseous system in the later stages of cancer, I have not met with any description of this symptom in surgical works, but from its frequency and obviousness I can hardly presume that it has not been noticed in numerous instances. I doubt, however, whether the earliness of its appearance has been remarked, and whether its importance as a prognostic sign has been duly realised.

I refer to a thickening of the humerus on the side corresponding to the diseased gland, accompanied by tenderness on pressure. This condition obtains mainly over the trochanters and the upper third of the bone. On firm pressure the patient complains of tenderness, which tenderness extends for a variable distance down the shaft, beyond the part where thickening is apparent. The tenderness and thickening rarely interfere with the movements of the arm, and are never noticed by the patient before examination; they are only detected by digital pressure and comparison with the humerus on the opposite side. Occasionally (but not often) there is also some thickening of the clavicle. The condition never advances to any very marked hypertrophy.

These symptoms are found in the majority of cases of ordinary breast-scirrhus comparatively early in the course of the disease, and simultaneously with commencing enlargement of the axillary glands. I have lately operated on a case of four months' (stated) duration, in which two axillary glands were about the size of a horse-bean; the others (all of which were removed, as far as possible), and being not manifestly affected, yet there is already some thickening of the humerus, with tenderness extending down half the shaft. The bony thickening thus appears, as a rule, long before œdema of the arm. When that has supervened, the condition, of course, is completely masked, and when it takes place, as in a few cases comparatively early, may not be noticed at all; though I believe that it is an invariable concomitant of the disease sooner or later. I may add that in a few cases the tenderness on pressure is more obvious than the bony enlargement.

I have not yet had an opportunity of examining microscopically one of these cases before it has run its usual course, and the brawny œdema of the arm has set in. After death with such a condition, I have found the medulla of the affected bone red in colour, and completely composed of nearly spherical cells containing very large nuclei, without any fat cells on the one hand, and on the other without alveolar structure. There was no obvious hypertrophy of the bone after removal.

In the later stages of cancer, severe pains in the thighs (so-called sciatica), pelvis, and lumbar spine have long been noticed as a proof of advanced systemic implication; there is great fragility of all the bones, and often a pseudo-paralysis of the lower limbs. This condition, doubtless, is but a later stage of the one I have described; although it becomes noticeable only in a certain proportion of cases, being usually masked by other symptoms. The influence of secondary carcinoma on the osseous system has not been worked out; but in considering it, we naturally remember the frequency with which we find primary cancer of bone attended by secondary deposits in distant parts of the skeleton, yet with little or no affection of the other tissues. I do not pretend to explain how (in secondary cancer) the first contamination takes place—probably through some lymphatic channels hitherto undescribed. But I think the facts tend to indicate that the medulla of bones is a specially favourable nidus for the development of malignant disease; that when once cancer germs reach this they speedily multiply in the soft and vascular tissue; and that, not unfrequently, all the long bones become filled with cancerous material, whose presence is not always manifested by symptoms. Bearing in mind the reported development of red blood-corpuscles in the medulla, it would be interesting to speculate on the influence which such a condition would have upon nutrition generally, and the familiar cancerous cachexia.

I am disposed to regard the "thickening" I have referred to as due to a low form of periostitis, consequent upon deposit of cancer germs in the medulla. I look upon it as only apparent, and do not think there is any real hypertrophy of the osseous tissue.

In all the cases I have noticed there has been a recurrence of the disease within a few weeks or months. The appearance indicates that the disease has extended beyond merely local treatment, and that a renewal of its more obvious manifestations at no distant date is a certainty. I do not consider the condition an absolute bar to operations, but it is undoubtedly one which ought to be previously taken into consideration, and, whenever present, operative measures must be described to the patient only in the light of a palliative. It is a symptom of grave prognostic importance, and my only excuse for offering these somewhat crude remarks is my wish to direct more general attention to a practical point hitherto little regarded.

PUERPERAL ECLAMPSIA.

BY JAMES MURPHY, B.A., M.D. DUB., &c.,
SURGEON TO THE HOSPITAL FOR DISEASES OF WOMEN AND CHILDREN, SUNDERLAND.

THE symptoms of puerperal convulsions are, unfortunately, too well known to all of us engaged in obstetric practice to require any description; but as opinions still differ as to their nature and treatment, I have ventured to bring the matter before the readers of THE LANCET, as a subject not unworthy of their attention.

The condition of pregnancy or labour acts as no preventive against convulsive diseases in general, and we therefore, from time to time, meet with these attacks occurring during those periods from hysteria, epilepsy, apoplexy, anæmia (from profuse and rapid hæmorrhage), cholæmia, and other causes; but in the great majority of cases of convulsions occurring during pregnancy, or the puerperal state, where the urine has been examined, it has been found to contain a varying quantity of albumen, as has been shown by the researches of Lever, Frerichs, C. Braun, Litzman, Wieger, Simpson, Halbertsma, Traube, Rosenstein, Schrœder, Leishman, Playfair, &c.; and so frequently is this the case, that practically, when after careful examination we fail to find albuminuria, we may regard the case as not one of puerperal eclampsia, in the usual acceptance of the term. I will, therefore, exclude for the present those few exceptional cases where no albumen can be found, and only consider eclampsia as a symptom of albuminuria during the pregnant or parturient state. It is now well known that a considerable number of pregnant women suffer from albuminuria towards the end of their pregnancy. Of 131 pregnant women examined by Litzman, 37 had albumen, and of these 7 were attacked by eclampsia. It would appear, therefore, that a small proportion of pregnant women suffer from albuminuria; of these a small proportion suffer from eclampsia; and it has been further ascertained that a considerable number of these latter have their urine deficient in its normal constituents—notably urea, which is then present in the blood to an excessive degree, sometimes as much as 1 in 960 (Fordyce Barker), and often suffer from disturbances of vision, probably albuminuric retinitis; and it must be borne in mind that the peculiar excitable condition of the nervous system in pregnancy predisposes women to these attacks. Schrœder gives the proportion of cases of eclampsia to deliveries as 1 to 500; and of 38,306 deliveries collected by Cazeaux, eclampsia occurred in 79, or roughly, as 1 to 485. Dr. Lever considered the albuminuria to be caused by the pressure of the gravid uterus on the kidneys and their bloodvessels, and the consequent congestion and embarrassment which ensue; in which views he is supported by Dickinson, while Halbertsma suggests that the pressure is on the ureters. Either of these theories will, however, account for its temporary presence before parturition, and its frequently rapid disappearance afterwards. Of the many theories to account for the albuminuria causing the convulsions, two seem to me to be most deserving of

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attention; the first, put forward some thirty years ago by Frerichs, that they were caused by the presence of carbonate of ammonia in the blood, which was caused by the decomposition of the urea under the influence of some peculiar ferment, the nature of which he was unable to determine, nor has it yet been determined, as far as I am aware. This theory has the great weight of its complete acceptance by Carl Braun of Vienna, and several eminent obstetricians of this country and abroad; and, indeed, it has been suggested by some that herein lies the explanation of the good effects of chloroform in the treatment, for its administration produces a temporary diabetes, with probably also sugar in the blood, and this, it is alleged, prevents the decomposition of the urea, as a little sugar added to the urine, after it has been voided, prevents for a time the common decomposition of urea into carbonate of ammonia. This may be termed the "chemical theory" as distinguished from the other or "mechanical theory," since put forward by Traube and Rosenstein, which is that the loss of the albumen from the blood and its consequent impoverishment, in addition to the simultaneous hypertrophy of the left ventricle of the heart, causing a greater pressure in the arterial system, leads to œdema of the brain, which shows itself as coma when the cerebrum is œdematous, and as convulsions when the middle portions are affected. Eclampsia, then, according to this, depends on the blood being more watery than usual—the predisposing cause, and increased arterial pressure—the exciting cause. Now, these conditions are almost invariably present in pregnant women to a slight degree, for to them a watery condition of the blood is usual; this is further increased by the loss of albumen, and during the pains the various muscles are in a state of intense activity, thus augmenting the already increased pressure in the arterial system, which is still further increased by the action of carbonic acid on the heart, owing to the impeded respiration from the woman holding her breath and straining during the pains; and when the hydræmia and pressure reach a high degree, we have eclampsia developed, according to this theory. But it must be borne in mind that these theories are not proved, and that they still remain in the embryonic state of theories, to be hereafter at length perchance confirmed or refuted.

But yet, with our still imperfect knowledge of these matters, it will be prudent, when we find œdema of the face or extremities, with tube casts and albumen in the urine of a pregnant woman, to adopt prophylactic treatment, and endeavour to improve, as it will probably be impossible to completely remedy, affairs; and what appears to conduce most to this end is to put the woman on starchy foods, such as arrowroot and tapioca, and a spare and chiefly vegetable diet, with sugar and cream, as it has been shown that rich and animal diet increases the quantity of urea. Frerichs recommends the use of benzoic acid, or lemon-juice, for the neutralisation of the carbonate of ammonia, and when exudation has taken place into the Malpighian capsules and the tubuli of Bellini, that the cylindrical clots be removed by the copious use of diluents, to be supplemented, if the urine be scanty, by the free use of the waters of Vichy or Seltzer; he states that pills of tannin and aloes will help to restore the normal tone. Byford looks upon colchicum almost as a specific, and for my own part, I believe that I have obtained good results from the occasional use of a jalap purge, and the free use of spirit of nitrous ether, and the tincture of the perchloride of iron. The bringing on of premature labour, though strongly recommended by Tarnier, seems uncalled for while the symptoms are not very urgent, as also the recommendation of Chailly to give chloroform to all patients suffering from albuminuria as soon as labour commences. But in those cases where eclampsia has already commenced, before we have time to take any means towards its prevention, the treatment divides itself into medical and obstetrical. In the first place, free movement of the extremities may be permitted, only preventing the patient from rolling out of bed, and the tongue is best protected by inserting a towel between the jaws, and then pressing the tongue well back; the use of knife-handles and spoons is to be deprecated, as being most injurious to the teeth. Chloroform should be given freely, and the narcotism kept up by the subcutaneous injection of morphia, or preferably by an enema of hydrate of chloral, the dose to be regulated by the effect on the patient, as the point to be gained is complete insensibility, and this result is to be obtained irrespective of the quantity of the narcotic used, the same way as in a case of delirium tremens we go on giving it till sleep is procured. Formerly copious bleeding was looked upon as a specific, and, adopting, the *post hoc ergo propter hoc* method of reasoning, several cases are recorded in its favour. Now, believing in the mechanical cause of eclampsia, the removal of a large quantity of blood suddenly should give immediate relief, and this it generally does; but the last stage of these women is generally worse than the first, for we know that after depletion the quantity of the blood soon becomes the same from the serum taken from all the tissues, while the quality is greatly deteriorated, being much more watery than before; and though a number of cases do recover after bleeding, it does not seem to be a commendable practice, though some blood removed from the back over the kidneys by cupping is sometimes desirable, and in two cases where I have tried it, it seemed to be beneficial. But suppose the treatment by narcotics fails, is there another left us which still holds out prospects of success? Dr. W. Lange records the following:—"A secundipara was admitted at the Heidelberg Clinique with œdema, albuminuria, commencing labour and convulsions. Delivery was accelerated by forceps. The child was dead, macerated. The patient was bled, had ice to head, clyster, morphia injections, chloroform, cold douche to head. After thirty-two fits, being in the highest degree exhausted, in deep sopor, transfusion was resorted to. Blood defibrinated was used, seven ounces were injected. The pulse rose, breathing became freer, cyanosis disappeared, sleep followed, *she recovered.*" (Prager Vrtljhrsch.)

Here we have all the recognised remedies tried; narcotism fails, venesection is performed, and some of the poisoned blood removed; this also fails, for it is not sufficient; then comes the injection of the healthy blood, and the patient recovers.

Surely then this is the proper treatment, if milder methods fail, as unfortunately they too frequently do. Obstetricians both in this country and abroad are almost unanimous in attributing to the altered condition of the blood, at least a very important part in the etiology of puerperal convulsions. Even Barnes, who in his Lumleian Lectures gives such prominence to "exalted nervous irritability," says that "it is under the stimulus of the reproductive functions and *lowered or empoisoned condition of the blood.*" (*Obstet. Journ.*, 1873.)

I have never had occasion to try this treatment in my own practice, or in that of others; but if milder methods failed, I would not hesitate to do so, and I believe in time to come, when we get more expert at transfusion, it will be found a safe, and I trust an efficient mode of treatment.

As regards the obstetric treatment Gooch recommended, "to attend to the convulsions, and leave the labour to take care of itself;" but though this may in some cases be wise when the pains are pretty strong and the head advancing, it must still be remembered that the eclampsia has an injurious effect on the life of the child, and so has the narcotism, more especially when prolonged for several hours. It will, therefore, be often advisable, in the interests of the child, to put on the forceps, if these can easily be applied; but the treatment must necessarily vary very much in individual cases, for if the fits appear to be kept up by the pressure of the fœtus its removal may be advisable in the maternal interests as well; while, again, the introduction of the forceps, or turning (which is seldom permissible) may increase the severity of the convulsions. Each case, then, must be decided on its merits, the treatment being indicated by the procedure which seems likely to cause the smallest amount of irritation to the mother, having a due regard to the safety of the child.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The University College Hospital has received £200 from "G. F. H.," and twenty guineas from Mrs. Wakefield Christy. The Rev. Charles Hayes, of St. Mary Church, bequeathed £200 to the Torbay Hospital and Infirmary, Torquay. The Merchant Taylors' Company have given one hundred guineas to the Brompton Hospital for Consumption, &c. Mr. A. G. Price bequeathed £500 each to the General Infirmary and the Dispensary, Gloucester. The Earl of Bessborough bequeathed £200 to St. George's Hospital. The Edinburgh Royal Infirmary and the Leith Hospital have become entitled respectively to £1000 under the will of the late Mr. W. Muir, of Inistrynich. Mrs. Curr, of Roseville, has left £1000 to the Dundee Royal Infirmary and £1000 to the Baxter Convalescent Home.

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A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

SYPHILITIC DISEASE OF THE LARYNX; GREAT DYSPNŒA; DYSPHAGIA; RECOVERY; REMARKS.

(Under the care of Dr. DE HAVILLAND HALL.)

M. F——, aged thirty-eight, was admitted on Sept. 29th, 1879. She stated that she had been married twice. By her first husband she had five children. She married the second time two years ago. At the end of April, 1879, she had a flooding, and as she had not menstruated for three or four months she thought that she had miscarried. About the beginning of May she had what she described as "a cold with hoarseness." Towards the end of July she found one morning that her voice had gone completely; the loss of voice lasted two or three days, but she subsequently gained a certain amount of power. For two months she had difficulty in swallowing. At the time of admission she stated that she was unable to swallow anything. For two or three weeks she had had pain in both ears, but especially the left. She expectorated a large quantity of fetid puriform mucus, and a little blood occasionally. She was losing flesh and had night-sweats.

Nothing abnormal was discovered on making an examination of the chest. There was no history of an eruption at any time, or of other symptom pointing to syphilis. The epiglottis, arytenoid cartilages, and the aryteno-epiglottic folds were found to be enormously swollen; the epiglottis turban-like in shape. The upper orifice of the larynx was extremely contracted. There was some puriform discharge from the mucous membrane of the larynx. Beef-tea and milk diet were ordered; and a draught containing five grains of iodide of potassium was given every four hours, and an inhalation of benzoin.

On Oct. 2nd, as the patient appeared incapable of swallowing, she was ordered to discontinue taking food by the mouth, and a third part of the following mixture was injected into the rectum thrice daily—viz., two eggs, a pint of beef-tea (double strength), with forty-five minims of dilute hydrochloric acid. She was ordered ten grains of iodide of potassium every six hours by the mouth, to suck ice, to poultice the throat, and to continue the inhalation.

On the 6th the throat was easier, and the patient could talk more comfortably, the voice being stronger.

On the 7th the epiglottis and larynx were generally much less swollen. The right vocal cord could now be seen, and appeared healthy. The patient felt stronger; she took nothing by the mouth except the medicine and ice. There was no discomfort from the enemata.

On the 13th the iodide of potassium was discontinued, as symptoms of iodism had appeared. Bicarbonate of soda, aromatic spirits of ammonia, and tincture of cardamoms were given instead.

On the 14th the throat was still less swollen. Both cords were visible and appeared healthy.

On the 15th a draught containing five grains of iodide of potassium and one-twentieth of a grain of the red iodide of mercury were ordered to be taken three times a day.

On the 16th the nutritive enemata were discontinued. Vapour of creasote was substituted for the vapour of benzoin.

On the 23rd a good view of the larynx was obtained. Almost all the swelling of the epiglottis had disappeared; the arytenoids were less swollen. The right vocal cord was quite healthy and moved freely; the left cord was thickened and bound down to the side of the larynx.

On the 27th the patient could swallow easily. The voice was still weak, but only slightly hoarse. There was no pain.

The patient left the hospital a few days later perfectly well, there being no difficulty in swallowing, and only slight hoarseness.

Remarks by Dr. HALL.—So great was this patient's dyspnœa in the out-patient's room, and so cyanosed was she, that when I persuaded her to come into the hospital I intimated to her daughter that in all probability tracheotomy would have to be done without delay; but on getting the patient into bed, and finding that she seemed pretty comfortable I determined to postpone the operation. When I first examined her with the laryngoscope the appearances presented were those of laryngeal phthisis rather than those of syphilitic laryngitis; this view was not confirmed on examining the chest, as there was no evidence of pulmonary mischief, and in my experience it is very unusual to meet with marked phthisical disease of the larynx and not to find some corresponding lung affection. The result of treatment, however, soon cleared up what little doubt there was in the case. The point, however, to which I particularly wish to direct attention is the extremely rapid progress the patient made as soon as the larynx had almost complete rest, and to insist upon the importance of the recumbent position so as to diminish the number of respiratory movements as much as possible. In addition I would strongly advise that, in cases of severe laryngeal disease, where there is much swelling, as in syphilitic and phthisical laryngitis, the patients should be fed by enemata so as to avoid the pain and irritation caused by deglutition. It would be well to add to the injection some pepsin as well as the dilute hydrochloric acid, so as to facilitate the digestion and absorption of albuminous articles in the intestine.

BATLEY AND DISTRICT COTTAGE HOSPITAL.

PULPY DISEASE OF KNEE-JOINT; AMPUTATION; RECOVERY. REMARKS.

(Under the care of Dr. ALFRED SWANN).

P. B——, aged forty-seven, labourer, was admitted on November 11th, 1879. He said that, two years before, his right knee began to swell and feel stiff, and became very painful. Twelve months later abscesses, which burst, formed in the neighbourhood of the joint. There was no history of injury or syphilis. He had never been submitted to any systematic treatment. The joint was greatly inflamed, swollen, intensely painful, and had several large sinuses both on the inner and outer side, discharging profusely. The limb was semiflexed; the bones grated in movement, and the patient was evidently rapidly sinking from exhaustion. He was advised to enter the hospital.

On admission he was put to bed, ordered a liberal diet. Pain and restlessness were subdued by opium. In a few days the swelling had materially subsided, and the pain decreased, and his general condition was much improved. An extensive apparatus was applied to the limb for some weeks, but at the end of that time the patient evidently began to go back, as was shown by severe and repeated diarrhœa. This was checked by hæmatoxylon and opium. At a consultation of the staff, removal of the limb was decided upon, excision being out of the question owing to the extensive sinuses running in all directions around the joint, and also to the patient's general condition.

On Dec. 4th chloroform was given and an Esmarch's elastic bandage applied. Dr. Swann, assisted by his colleagues, then removed the limb in the lower part of the thigh. The anterior flap was made by means of an oval incision extending as far as the upper margin of the patella. On the outer side one of the sinuses was utilised to complete the incision. The posterior flap was made by transfixion. The soft parts were divided and well retracted, and the bone was sawn through. Sinuses were burrowing amongst the muscles for some inches above the knee, and there was a large quantity of pulpy material apparently infiltrating all the soft parts. This pulpy matter was all carefully cut away. Four blood-vessels were ligatured. The surface of the flaps was washed with one in twenty carbolic solution, a drainage-tube passed through and left hanging out at the angles of the wound, which was carefully closed with strong silk sutures alternating with fine silver ones. A piece of dry lint was placed along the face of the wound, an evenly compressing bandage applied, and the patient put to bed. The evening temperature was 100·2° Fahr. Half a grain of morphia was given by the mouth, and repeated during the night.

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Next morning he was free from pain, though he had not slept much during the night. Temperature 98°.

On the 8th the bandages were removed, and the tube was found to be discharging freely. Some of the dirty dressings were cut away, and the bandage was reapplied in such a manner that no impediment was placed in the way of the drainage-tube.

On the 11th, for first time since operation, all the dressings were removed. The whole of the wound (except at its angles, where drainage-tube and ligatures found exit) had healed by first intention. The drainage-tube and all the sutures were removed.

The ligatures came away on the 14th, 15th, and 18th Dec., and on the 22nd patient was allowed to get up and go about on crutches. He was kept in the hospital for a few days after this, and when discharged there was only a superficial granulating surface at each end of the line of incision, which soon healed up.

CYSTIC TUMOUR OF BREAST; REMOVAL; RECOVERY.

E. S——, aged nineteen, housewife, married two years, was admitted on April 1st with the following history: Two years before she noticed a small lump at the upper and inner part of the left breast, which was quite movable. She was confined about eleven months later, and at that time the tumour was as large as a filbert. For two months she suckled her child from both breasts, but acting on the advice of her friends she began to suckle entirely from the left breast, "thinking the child would suck the tumour away." Contrary to her expectation, the tumour began to enlarge, and continued to increase in size up to the time of admission. She suckled the child from the left breast until some eight weeks before admission, when she applied for advice, complaining of pain and the inconvenience caused by the size of the growth. The child was then weaned, and the milk completely disappeared in a few weeks.

On admission there was a fluctuating tumour as large as a six months' fœtal head occupying the whole of the upper and inner part of the left breast. The lower and outer part of the mamma felt rather hard in places, but here and there baggy and fluctuating. The patient complained of a good deal of aching pain. On puncturing with a trocar and cannula exit was given to some thick granular yellowish-white fluid, which on inspection under the microscope contained corpuscles resembling those of milk.

Belladonna was applied locally, and strapping, iodine, &c., were tried without benefit. After a consultation of the staff, operative interference was resolved upon; and on April 7th, with the assistance of his colleagues, Dr. Swann, removed the breast by means of an elliptical incision, extending from the upper and inner border of the tumour downwards and outwards to the axilla, and embracing the nipple. Considerable difficulty was experienced in removing the whole of the gland, as besides one large cyst, containing some eight or ten ounces of thick granular pultaceous matter, there was a series of smaller cysts affecting the whole gland, containing an exactly similar material. The tumour having been removed, the cavity was washed out with a one in twenty solution of carbolic acid, an opening was made in the most dependent part of the axillary flap, and a drainage-tube passed through to the upper angle of the wound. One vessel was ligatured, and several were twisted. The skin was brought together with silk sutures, alternating with thin silver ones. A pad of dry lint was applied over the whole length of the wound, an evenly-compressing bandage put over all, the arm being bound to the side. The patient was then put to bed.

Without going into the details of the progress of the case, it will be sufficient to state that the highest temperature reached was on the 8th of April, the day after the operation in the evening, when the thermometer registered 100·5° F. On the 11th the temperature rose to 100°, but on removing the bandages a small bagging of sero-sanguinolent fluid was found at the lower extremity of the wound, which was evacuated by gently cutting away a small piece of the dry lint, covering it, and making gentle pressure on the part.

On April 13th all the dry dressing was removed (this being the first exposure of the whole wound since the operation), when the whole of it was found to be healed up except at the upper angle where the drainage-tube was. The tubing was removed, except about an inch at the counter-opening in the axilla, which was left with a thread attached to drain off any fluid that might be secreted from the track of the removed tube. On the 15th this was taken out, and the patient was allowed to get up, the wound being quite healed, except at the upper angle, where there was a small superficial granulating surface left by the drainage-tube, which was completely healed before March 24th, when she was discharged.

Remarks by Dr. SWANN.—In both these cases the treatment was of the simplest character, and the results were certainly satisfactory. The efficiency of dry and infrequent dressing was forcibly brought before me as a student by my distinguished and respected teacher, Mr. Sampson Gamgee, of Birmingham, and since it has fallen to my lot to perform numerous operations on my own responsibility, I have almost invariably adopted it, and with success. Without in any way wishing to detract from the glorious triumphs of Listerism, one cannot but feel that to ordinary operating country surgeons such as myself engaged in general practice the details of antiseptic dressing, and the trouble and expense attending its application, must generally place it beyond our reach, and this being the case, provided due care be taken to observe "rest, position, pressure, and free drainage," we may reasonably expect such good results as will warrant us in keeping to the well-beaten track of some of those who are fathers in our art.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Treatment of Lateral Curvature of the Spine.—Epithelioma of the Neck, following on a Patch of Chronic Skin Disease twice Excised, and Ligature of Jugular Veins.

THE ordinary meeting of this Society was held on the 25th ult., J. E. Erichsen, Esq., F.R.S., President, in the chair. A paper by Mr. Adams upon the treatment of lateral curvature of the spine was first read. One by Mr. H. Morris, relating details of a case of epithelioma following chronic skin disease, raised two important questions of pathological and surgical interest—viz., the association of cancer with eczema—and the effects of ligaturé of the jugular vein which was practised in this case owing to the disease involving the vessel.

The following is an abstract of the paper "On the Treatment of Lateral Curvature of the Spine by Steel Supports, Plaster-of-Paris Jacket, and the Poro-plastic Jacket," by Mr. W. ADAMS. The author commenced by alluding to the great change in the treatment of curvatures of the spine—both angular and lateral—during the last three years in consequence of the method introduced by Professor Sayre of New York—i.e., the application of the principle of extension, by suspending the patient from the head and arms, and then applying a plaster-of-Paris jacket during suspension. In the present paper the author did not propose to speak of angular curvature from Pott's disease further than to say that it was in this class of cases the advantages of the plaster-of-Paris jacket were most conspicuous, and the author's experience led him to confirm all that Professor Sayre had claimed for it, but in the treatment of lateral curvature Mr. Adams differed as widely from Dr. Sayre, and believed the plaster-of-Paris jacket to be as useless and injurious in this class of cases as it is useful in cases of angular curvature. For practical purposes the author proposed to arrange all cases of lateral curvature in three classes—viz.: 1. Physiological curves. 2. Confirmed structural curves. 3. Commencing structural curves. In forming a diagnosis between these three classes the importance of the stooping position as affording evidence of the existence of rotation of the bodies of the vertebræ was particularly insisted upon, attention being directed to the symmetrical relations, or otherwise, of the angles of the ribs in the dorsa region, and of the transverse processes in the lumbar region, rather than to the spinous processes, the apices of which may preserve their normally straight line in relation to one another without any lateral deviation, whilst rotation of the bodies

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of the vertebræ may have taken place to a considerable extent, rendering the case incurable—a fact illustrated by a specimen exhibited to the Society by Mr. Adams, and described in a paper published with illustrations in vol. xxxvii. of the Transactions of the Society. In the cases of commencing structural curve, in which probably the intervertebral cartilages only have suffered from unequal compression, arranged in the third class, and forming an intermediate group between the first and second classes, the spinal curvature is much more apparent in the standing than in the stooping position, although in the stooping position it does not completely disappear, as in the physiological curves; some evidence of commencing rotation is afforded by a slight posterior projection of the angles of the ribs on one side, and depression on the other; and a similar deviation as regards the transverse processes in the lumbar region, when the patient is examined in the stooping position. With regard to treatment of cases in the first class or physiological curves, no mechanical treatment by any form of spinal support should be given, but reliance placed entirely upon physiological means such as gymnastic exercises, partial recumbency, and attention to the general health. In some cases an elastic brace attached to stays may be of use. In the second class of confirmed structural curves, mechanical support of some kind must be resorted to, and continued during the period of growth, in the hope of preventing increase and obtaining some improvement in the curvature; but confirmed lateral curvature, whether slight or severe, with its adapted series of structural changes, is essentially an incurable affection. The most efficient retentive spinal support is that form of instrument made with a pelvic belt, and spring plates attached to vertical bars at the back, without any mechanism requiring alteration by the surgeon. In some favourable cases for improvement the stronger spinal instrument with steel plates attached to levers, and adjusted by rack and pinion movements, may be used with advantage. Sayre's plaster-of-Paris jacket has been largely employed in these cases, but from what the author had observed in the practice of others, he condemned its application on the following grounds: that it fails as a curative agent, the gain in height by extension being quickly lost; that it weakens the spinal muscles by its constant use, and hinders gymnastic exercises; that it restrains respiratory movements, and prevents active exercise; that it is an unnecessary restraint at night, and interferes with bathing and cleanliness. Another form of support has been recently introduced—the poro-plastic jacket; which, when softened by steam, is applied in the same way as the plaster-of-Paris jacket, during suspension, and is free from the disadvantages of the latter, as it can be removed at night, or at any time for the purpose of gymnastic exercises, &c. It acts as an efficient and light retentive support in many cases of incurable curvature. With regard to the cases of *commencing structural curves* in the third class, these form the only curable cases of lateral curvature, and for which the author recommended a combination of mechanical support, gymnastic exercises, and partial recumbency, and mechanical support by either of the steel instruments above-described, according to the case. By this combination of physiological and mechanical means the further progress of curvature will be arrested, and the best opportunity afforded for recovery from such slight structural damage as may have already occurred.—Mr. BRYANT said that most surgeons would agree with the author as to the non-necessity of mechanical supports in the early stages of lateral spinal curvature; but the difficulty was to know, in a given case, when it was passing from the stage curable by rest to the incurable stage; for it was surprising how rapidly some cases got well without any supports. The method of diagnosis employed by Mr. Adams was good; and he himself was in the habit of making the patient bend forward in a somewhat similar way. He concurred in the inapplicability of the plaster-of-Paris jacket to these cases, but he had seen cases in heavily-built subjects where the poro-plastic jacket had not proved strong enough. Such cases were exceptional, and he would advocate the discarding of iron supports in favour of the poro-plastic casing, which in a few cases perhaps might require strengthening by the steel supports as suggested by Mr. Adams. But he would hesitate long before advising the application of any form of support whatever.—Mr. WARRINGTON HAWARD was gratified at such an authority as Mr. Adams stating that many cases required no apparatus at all, for he feared that the prejudice of the public was n t against but in favour of apparatus, a prejudice which the surgeon had to combat. He was glad also to hear Mr. Bryant say that the period at which a support was called for was a late one, for it was obvious that no form of instrument could be worn without interfering with respiration, and if, as was the general rule, the case was only one of general debility, such interference with proper exercise and with breathing was bad. In the class of cases with commencing structural change, although not prepared to say that they could not be arrested by the use of a spinal support, yet the majority of such cases were better treated by the prescription of regulated recumbency and exercise, aided of course by general tonic treatment, cold douches, &c. Instruments only weakened the spinal muscles, and, as in a knee-joint enclosed in a splint, the muscles wasted and became more and more inefficient. For the incurable cases the best and only support needed was the poro-plastic jacket, and he had seen cases long treated by steel instruments receive much comfort from this jacket.—Mr. OWEN expressed satisfaction at the lines taken by the speakers, and at the limitations placed on instrumental intervention by Mr. Adams, especially in view of the difficulties in determining the proper class of cases to be so treated, for he could not but think that surgical mechanicians must of necessity be less discriminating, and that they must feel tempted to apply supports to cases which were physiologically unsuited for them—e. g., hysterical cases. He instanced a case where great improvement followed the use of a plaster jacket, but the material broke, and he would give the preference to the poro-plastic jacket, which could not only be applied with accuracy, but was also cheap. He had seen many cases at the Children's Hospital where parents had spent large sums to procure spinal supports, which proved to be worse than useless.—Mr. ADAMS, in reply, said that his object had been to lay before the profession the results of a long experience in the treatment of spinal affections, as well as to deprecate the rapidly-spreading practice of applying the plaster-of-Paris jacket. He had lately seen a young girl of thirteen, and an old lady of seventy, who had both been "put up in plaster"—an evidence of the extent to which this practice was followed. Therefore he was glad to hear Mr. Bryant condemn this method—the value of which in angular curvature in children he fully admitted. He laid stress upon the prominence of the ribs in the dorsal region and of the transverse processes in the lumbar as diagnostic of true lateral curvature. His attention was first drawn to this in examining the spine (which he showed before the Society in 1854, and again exhibited) of Dr. Mantell. The examination, carried out on the wish of Dr. Mantell himself, was made by him (the speaker) in the presence of Dr. Hodgkin and Sir B. Brodie, when it was proved that what had been taken during life by many eminent surgeons to be a tumour was produced by the projection of the transverse processes in the lumbar region. Mr. Bryant advocated delay in the resort to spinal supports, but he (Mr. Adams) thought that such treatment should be entered on as soon as there is evidence of commencing structural change, lest the case pass on to the incurable condition. He was educated in the mechanical school founded by Mr. Tamplin; too much had been claimed for it, and it consequently collapsed. The aim should be to imitate nature's efforts, and a specimen (one of Mr. Shaw's) he showed from the Middlesex Hospital Museum exhibited the natural curve—which could only take place when the curves are short; for cases with long curves are incurable. He concurred also in much that had fallen from Mr. Haward and Mr. Owen.

A paper was then read on a "Case of Epithelioma of the Neck following a Patch of Chronic Skin-disease, in which the cancer was twice excised, and the external and internal jugulars of the same side were ligatured," by Mr. HENRY MORRIS, of which the following is an abstract:—Eliza H——, aged sixty, had for years a small circular red and scaly patch on the right side of the neck, which remained in much the same condition, shedding fine scales occasionally for five years. At the end of this time, and about four years before admission into the Middlesex Hospital, the surface of the patch was knocked off by the elbow of a child; then followed a scab, and the gradual extension of the underlying sore. Subsequently, under a course of treatment by "burning plasters," the sore spread more rapidly, until it reached the size of half the palm of a man's hand, having raised, everted, and hardened edges, and a yellow-grey, and in places sloughing base. It was situated in the central and upper part of the right posterior triangle. She had also

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a large bilateral solid bronchocele, which on both sides displaced the large cervical vessels outwards. On Sept. 20th, 1876, the growth was excised, and the external jugular vein was ligatured. The microscopical examination of the ulcer proved it to be an ordinary epithelial cancer. The patient made a good recovery, and remained well until January, 1878, when the growth recurred. On March 21st, 1878, this was excised, and during the operation the internal jugular vein, which was largely involved in the disease, was wounded. A silk ligature was applied to the vein above, and another below the wound. Chloride of zinc paste was required in the after-treatment to one or two points where the disease showed a tendency to recur; but ultimately a good recovery was made, the patient left the hospital on May 23rd, 1878, and remains well to this date (April 1880). The case affords another illustration (although a somewhat different one from ichthyosis of the tongue and eczema of the nipple) of cancer excited by long-standing irritation of epithelial surfaces, and spreading from those surfaces to the tissues beyond; it also points to the truth of Sir James Paget's suggestion, "that a superficial disease induces in the structures beneath, in the course of many months, such degeneracy as makes them apt to become the seats of cancer"; and, further, it gives support, like the other cases referred to, to the local as against the constitutional hypothesis of the origin of cancer. As regards the ligature of the internal jugular veins, reported cases justify the conclusion that the simultaneous ligation of the common carotid artery and the internal jugular vein, contrary to the opinion of Langenbeck, is at least four times more likely to excite brain mischief than ligation of the internal jugular alone, and that in no case in which the ligature has been completely—i.e., not laterally—applied has either apoplexy, softening of the brain, or other cerebral disorder ensued. While incised and punctured wounds of the internal jugular, if not treated by the ligature, are almost invariably fatal, yet the chances of a good recovery after the complete ligation of this vein are very considerable, provided the carotid artery is not interfered with, and that neither extreme hæmorrhage nor the aspiration of air into the vein has occurred before the application of the ligature. The mortality of cases hitherto reported is not more than 10 per cent. when the vein alone is ligatured; but if the carotid be ligatured at the same time as the vein, the chances of recovery or death are about equal—i.e., the mortality is about 50 per cent., or 7 per cent. higher than the mortality after ligature of the common carotid alone. — The PRESIDENT pointed out that two distinct questions had been raised in the paper—viz., as to the local origin of epithelioma, and as to the effects of ligature of the internal jugular vein. In one case in which he saw this vein ligatured for a wound, no cerebral symptoms occurred.—Mr. HOLMES could only recall one case in which the internal jugular was tied, and that was a case under Mr. Cutler, at St. George's Hospital, many years ago. The vein was tied during the removal of a tumour; no cerebral symptoms followed, but the patient died from the effects of his previous exhausted condition and the shock of the operation. The vein was implicated in the growth for a considerable distance. In Mr. Morris's case, was it not probable that the vein had become occluded below the point at which it was tied, owing to the growth of cancer around it; and that collateral circulation had already been established? The practical point of testing the freedom from infiltration in the growth of the carotid artery by setting the sterno-mastoid in action was valuable; but how did it operate in this case, when the growth on dissection was found to be adherent to the subjacent scalenus muscle? He agreed that ligature of the carotid was a useless and dangerous operation to be practised in addition to ligature of the vein, as suggested by Langenbeck. The large and free anastomosis rendered it easy for the collateral venous circulation to be established.—Mr. PARKER, when house-surgeon at the London Hospital, had tied the two extremities of a severed jugular in a case of cut-throat, with good result. Upon the other question he said that, since Sir James Paget's paper appeared, he had sought for but failed to find sufficiently convincing evidence to show there was any necessary connexion between "eczema of the nipple" and cancer of the breast. The direct evidence was very scanty. The first two cases described by Mr. Butlin were admittedly not cancer, but cases of eczema only; and of the two cases in his second paper, in one the eczema was only of two weeks' duration, although in the other it had lasted for three or four years. Nor did the collateral evidence afforded by statistics of cancer show any ground for chronic skin disease, being the forerunner or cause of cancer. Winiwarter had recently published the statistics of cases of cancer under the care of Professor Billroth for the past seven years. Out of 578 cases there were 173 of cancer of the breast, and 278 of the skin (including 91 of mucous membranes). Of the 187 cases of pure cutaneous cancer, in only one was there any previous skin disease, and that was a case of epithelioma of the face following chronic eczema. It might be said that the breast was peculiarly liable to cancer, which might therefore be evoked in it on comparatively slight irritation, but in estimating the comparative frequency of breast-cancer it should be borne in mind that there were two breasts to one uterus or one lip; and for strict comparison the number of mammary cases should be halved. Seeing how common eczema is, and how intractable it often proves, one would think the association of the two conditions would be far more frequent than appears. He was inclined to agree with Dr. Thin's view that the disease began in the nipple and extended outwards. In cancer of the breast there often occurs a discharge from the nipple due to proliferation of the duct-epithelium, and a discharge long-continued will produce an excoriated and eczematous condition of skin. The view that the cancer arose from long-continued irritation should not be too readily adopted, for it would close inquiry against seeking for the real cause. Nor was it a mere quibble to contend that the condition was cancerous *ab initio*, for if, as Sir James Paget advocates, the condition of "eczema" should be vigorously treated, there was more reason still for strong measures could it be shown that it was not the forerunner of cancer, but cancerous itself.—Mr. BRYANT recalled two instances of ligature of the internal jugular divided during the removal of tumours; and although both cases died subsequently, no symptoms due to the ligature appeared. In a case recently under his care, where he tied the left carotid for a large innominate aneurism, a large branch of the internal jugular vein was divided in the operation, and tied close to its junction with the main trunk. The patient was much relieved by the operation, and died three weeks after from rupture of the aneurism. At the post-mortem examination, the carotid was found to be occluded, and also the jugular vein; but no symptoms had followed on this.—Mr. MORRIS, in reply, said he wished particularly to draw attention to the remarkable differences between ligature of the internal jugular alone, and of the vein and artery together. Since Dr. James Simpson, of St. Andrews, recorded his case there had been forty-three recorded, and in none was there any interference with cerebral functions—whereas ligature of the internal carotid produces such disturbance, and in four out of nine cases similar effects have followed ligature of the carotid and the vein. The disease only invaded the posterior and outer surfaces of the vein in his case, and blood flowed from both extremities, showing that there was no occlusion. The enlarged thyroid had displaced the carotid outwards. The subject being thin its pulsation was communicated to the growth; but by bringing the sterno-mastoid into action the separability of the growth from the artery was shown. Although he agreed with much that Mr. Parker had said, yet when cancer is seen to follow on long-standing ichthyosis of the tongue, or, as in this case, at the seat of cutaneous disease of five years' duration, there seemed strong *à priori* reason for the view that the superficial disease preceded the cancer. He had before admitted the great rarity of cancer of the breast following eczema of the nipple, having seen only two cases out of more than 500 cases of breast cancer; but as the observation had been hitherto limited to this country, he would be chary of admitting as contrary evidence statistics of cases before this association was pointed out. The special condition of "eczema of the nipple and areola" differed from that often seen from the discharge from the nipple in cancer, and if it was due to this, it was difficult to conceive how the disease could spread beyond the areola to the surrounding skin, as it sometimes did.

ST. MARY'S HOSPITAL.—The Earl of Carnarvon distributed the prizes and certificate of honour to students of this hospital on the 2nd inst.

VACCINATION GRANT.—Dr. W. V. Lyle, of the western district of the parish of Paddington, has received £36 1*s.* (fourth award) for successful vaccination.

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Reviews and Notices of Books.

Catalogue of the Specimens illustrating the Osteology and Dentition of Vertebrated Animals, recent and extinct, contained in the Museum of the Royal College of Surgeons of England. By WILLIAM HENRY FLOWER, Conservator of the Museum. Part I. Man: *Homo Sapiens*, Linn. London: Printed for the College; and sold by David Bogue, St. Martin's-place. 1879.

IT is now within twelve months of half a century since the first printed list of the osteological specimens contained in the Museum of the Royal College of Surgeons was published. This list was both brief and imperfect, and a demand soon arose for a more complete Catalogue. In January, 1842, Professor Owen, then conservator of the Museum, presented a report "On the Advantages of Combining the Fossil and Recent Osteological Specimens in one Catalogue and System Arrangement;" and in February of the same year, as Professor Flower informs us in his preface, the Museum Committee, in pursuance of the authority given to it by the Council, resolved that the fossil and recent osteology be incorporated in the same series, and the catalogue be prepared in accordance with this view. With that strange inconsistency so inherent to the College—"for some motive not explained upon the Minutes, the method of arrangement approved by the Committee and Council, and which had been recommended with much urgency and excellent reasoning by the Conservator, was not carried out." The specimens continued to be divided primarily, not according to their zoological or anatomical relations, but by a most inconvenient and artificial system, according as the animals from which they were derived lived before or after a particular period of the world's history. The consequence was that each series was incomplete, and required reference to the other for its illustration and perfect comprehension.

In 1845 Professor Owen's "Catalogue of Fossil Remains of Mammalia and Aves" appeared, in 1853 his "Catalogue of the Osteological Series," which comprised only the specimens of existing species, and in 1854 his "Catalogue of Fossil Remains of Reptilia and Pisces." The additions to the collection, and the advances of zoological classification, have gradually impaired the value and utility of these admirable catalogues, and rendered the supply of new ones imperative. The difficulty was to hit upon the precise time for preparing a new catalogue. To do it too soon would be to incur unnecessary labour and expense, and to defer it too long would be detrimental to the interests of the collection and of the workers thereon. The present time has properly been deemed opportune, and it has been determined to publish first and separately the portion relating to human osteology. The plan upon which the present catalogue is formed is in accordance with the resolution of the committee of 1842.

The necessity of a new catalogue may be best illustrated by the fact that of the 1312 specimens mentioned in the present catalogue only 345 are to be found in the edition of 1853. Of these 113 are part of the original Hunterian collection. The new catalogue has been divided into three parts, the first dealing with the general osteology of man, the second with dentition in man, and the third with the special osteology of man, or illustrations of those variations which have become so fixed and hereditary as to give distinctive characters to the different groups or races of mankind. The arrangement of the specimens is, provisionally we infer, like that in Dr. Barnard Davis's "Thesaurus Craniorum," a purely geographical one, the specimens having been placed according to the countries to which they presumably belonged. Besides the catalogues proper Mr. Flower has, in the introduction, given some excellent advice and instruction on measuring skulls, and in a kind of appendix a short chapter "On Cranial Measurements as Characteristic of Race," with three carefully prepared tables—(*a*) to calculate cranial indices, (*b*) to calculate nasal and orbital indices, and (*c*) to calculate alveolar indices.

As far as practicable the name of the donor of each specimen is given, and the date at which the specimen was acquired. References are also supplied to any published descriptions or figures, and the number in the former catalogue is stated of every specimen contained therein, so that the full description in it may be referred to, for which purpose copies of that catalogue will be kept in the museum.

Craniometry has of late acquired so much importance that it is not surprising that an anthropologist like Professor Flower should have bestowed much time and labour in measuring the fine collection of human crania contained in the museum of the College, and in formulating the results. Every addition, however small, to the store of careful observations is acceptable, but the results of Mr. Flower's prolonged labours will be read with avidity by every ethnologist throughout the world. This part of Mr. Flower's task has been performed in a manner altogether above praise. Though the number of measurements given is few compared with the number that would be required in a catalogue professedly descriptive, they are sufficient to indicate the general characters of the head and face as revealed in the osseous framework. The most ardent and enthusiastic craniologist would scarcely look in a work of this kind for the multiplicity of measurements given by some observers. Indeed, the measurements have, in some instances, been carried to a ridiculous degree of complexity. As many as 139 different dimensions have been measured in a single skull. Mr. Flower has, wisely, avoided this confusing elaboration, and has rather confined himself to the most important and characteristic dimensions. These have been taken with the scrupulous care and accuracy that have always distinguished Mr. Flower's work. In most cases the measurements have been repeated more than once, and at considerable intervals of time. The element of time may at first seem unimportant, but a little consideration will show that its influence on osteological measurements is really very great. Bone varies greatly with the surrounding atmospheric conditions, and Mr. Flower affirms that he has repeatedly confirmed Broca's observations that a cranium will vary, not only in capacity, but as much as five millimetres in circumference, and a femur two or three millimeters in its length, according as it is dry or damp—shrinking when dry, and expanding when wet. The state of the atmosphere is quite sufficient to account for these variations.

We must refer our readers to Mr. Flower's admirable remarks for the detailed description of the best mode of estimating the capacity and of taking the linear and circumferential measurements of the crania, and of the precautions to be observed. Mustard-seed was the material used for estimating the cubical capacity of the skulls, the measurement of the seed being subsequently taken with the chorometer designed and constructed by Mr. Busk. The linear measurements were all taken with a sliding caliper.

While the skulls of both sexes have been included in the indices of measurement, partly because the numbers were generally not sufficient to allow of separation, and partly because the sexual differences, except in the case of the orbital index, are said to be usually inconsiderable, only the skulls of males have been used for the cranial capacities.

Mr. Flower has achieved a well-merited success, and we congratulate him on securing a printer and publisher to produce his work in a bold and agreeable form.

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Surgery in the Pennsylvania Hospital. By THOMAS G. MORTON, M.D., and WILLIAM HUNT, M.D., Surgeons to the Hospital. Prepared by direction of the Managers of the Hospital. Philadelphia: J. B. Lippincott and Co. 1880.

SINCE the foundation of the Hospital in Philadelphia in 1752, more or less careful and detailed notes of the cases have been taken and preserved; latterly these clinical records have been more ample, and all according to one plan, favourable for reference. As the hospital has long taken a leading position in the United States, the managers desired that some account of the results obtained there should be published, and the volume before us is the result. The report deals with surgical cases only, and in separate chapters a short account is given of the modes of treatment adopted for various diseases and injuries, and a statistical table of all the cases of such disease or injury is appended. Cases of special interest are detailed more fully. The volume affords abundant evidence, if such were needed, that the surgical practice of the hospital is and has been of a high order. In glancing over the chapters we have not met with much calling for special comment from us. In the treatment of wounds Listerism appears not to be usually adopted, and an immunity from pyæmia and erysipelas arising in the hospital is claimed as the result of a perfect system of ventilation of the wards, and cleanliness in dressing. Several cases of elephantiasis are noted, in one of which, after ligature of the femoral artery had failed to produce a cure, excision of a portion of the great sciatic nerve in the thigh was followed by very marked improvement; and this treatment, rather than ligature of the artery, is recommended as more certain to be followed by a permanent good result.

WE have also received the following: — The Cobham Journals. By E. A. Ormerod. (E. Stanford.)—The Human Body and its Functions. By Dr. H. S. Paterson. (Hodder and Stoughton.) — Hay Fever. By Dr. C. H. Blackley. Second Edition. (Baillière, Tindall, and Cox.) — Homœopathy: What is it? By Dr. A. B. Palmer. (Davis, Detroit.) —Heat a mode of Motion. By John Tyndall, D.C.L. &c. Sixth Edition. (Longmans.) — New Greek Delectus. By H. M. Wilkins, M.A. (Longmans.)—A Guide to the Practical Examination of the Urine. By Dr. J. Tuson. Third Edition. (Lindsay and Blakiston, Philadelphia.) — On Insufficiency of the Aortic Valves. By Dr. J. Cockle. (Baillière, Tindall, and Cox.) — How to Feed an Infant. By Dr. Benson Baker. (Baillière, Tindall, and Cox.) — A Winter Tour through India, Burmah, and the Straits. By H. E. Falk. (Longmans.) — The Surgeon's Pocket-book. By Surgeon-Major J. H. Porter. Second Edition. (Griffin and Co.) — Ward and Lock's Long Life Series. (4 vols.) — A Guide to the Examination of the Urine. By Dr. J. W. Legge. Fifth Edition. (H. K. Lewis.) — Water, its Impurities and Purification. Seventh Edition.—Pharmacopœia of the British Hospital for Diseases of the Skin. Edited by B. Squire, M.B. Second Edition. (Churchill.)

DOCTORS IN PARLIAMENT.

To the Editor of THE LANCET.

SIR,—The new Parliament has been complete for some little time, and a word or two may not be inopportune with regard to the medical element in its composition. The first thing that strikes one is, that whatever may be the quality of that element, the quantity is anything but excessive. The legal profession, not more learned or more numerous, or of greater legislative importance than the medical, has nine times as many representatives in the House of Commons, besides an important contingent in the Lords. That this is a misfortune to the medical profession no one can doubt; that it is a loss to the public, *The Times* and other organs of opinion have decidedly affirmed. It may be noted that the deficiency is due chiefly to the larger division of the United Kingdom, Ireland sending two doctors to Parliament, Scotland three, and England none. This is a state of things at once curious and unsatisfactory. That of the twenty thousand learned and scientific men who constitute the medical profession in England not one should be found even to offer himself for Parliament during the late general election, is a phenomenon worthy of more than passing notice. It is a phenomenon all the more striking when contrasted with the animated interest displayed in politics by the medical profession in France, Germany, and other Continental countries. Such an attitude may satisfy the older physicians and surgeons, but cannot be other than disappointing to those younger men who, along with their medical learning, have imbibed some small portion of the spirit of literature and philosophy. They are not content to be the mere padding of social and political life. It is an offence to them that eminent members of their own profession should be in the background whilst men of the "Gorgius Midas" type, whose only claim to notice is that of wealth or vulgar self-assertion, should ruffle themselves in high places and pose as imperial law-makers.

It is evident from the tone of the Press that the doctors alone are responsible. There is no unwillingness on the part of the public to be represented by medical men: rather is there an urgent outcry for scientific and sanitary legislators. Why is there, then, so feeble a response to so imperative a demand? Are the doctors so much oppressed with a sense of their own deficiency that they dare not adventure their bark on the troubled waters of political life? If so, they may take courage. That which rich traders can do with so much apparent satisfaction to themselves and so little injury to their country may surely be done by men whose minds have been trained to use the patient, observant, and accurate methods of science. It seems probable, however, that it is no overstrained modesty which prevents physicians and surgeons from entering upon a parliamentary career. More frequently it is the result of a devotion to professional work so absolute as to produce in the subjects of it great narrowness of mind and want of sympathy with general, social, and political questions. Such devotion may be pecuniarily and professionally profitable to the individual, but it is highly disadvantageous to the community at large. It has, moreover, the effect of dwarfing the whole profession in public estimation. Some of the eminent physicians and surgeons of the present day are men of robust and manly character, whose natural characteristics have been developed in a high degree by severe and prolonged training, and they may fitly be considered great and illustrious men. But take them away from their own line of things, and they will be seen to hold a very modest place in the public judgment.

There is an unfortunate feeling among medical men that they should keep strictly to their own department, and not mix themselves up with the turmoil and excitement of political life. There is an uncertainty, too, as to what might be the effect on their professional gains if they took a decided stand and gave up a portion of their time to political duties. Now, whilst this feeling may be strictly in accordance with the dictates of a cold and worldly prudence, it by no means commends itself to a noble and generous patriotism, and one would be very unwilling to think that there are few or none in the medical profession who possess the highest attributes of mankind. Be this as it may, it is certain that the profession has missed a great opportunity, and has surprised and disappointed the public more than a little. Never yet have we seemed to see and possess that social and political position which is our just due, and which it is so important for the public welfare that we should possess. That lawyers and divines should sit in the highest council of the nation, whilst men who study the very reason and nature of all things, theology and law not excepted, should be forbidden to approach those high precincts is an anachronism and an absurdity. But who is at fault? If we take no interest in imperial politics, if we show no legislative capacity, if we prefer a narrow, though, perhaps, profitable exclusiveness to a broader and more varied range of duty, we ought neither to wonder nor complain if we are taken at our own valuation.

I am, Sir, yours, &c.,

G. W. POTTER, M.D. EDIN.

Grosvenor-road, N., May 24th, 1880.

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THE LANCET.

LONDON: SATURDAY, JUNE 12, 1880.

ON Saturday and Sunday, the 12th and 13th inst., the religious bodies of the metropolis will have the usual annual opportunity of contributing to the support of the hospitals and dispensaries of the metropolis. We wish much that the annual recurrence of this great occasion should not be allowed to have the effect of making the collection a formal one. The consequences of the recent, and to a great extent still present, depression of trade have been most painful to those institutions. Their resources have been curtailed and the numbers of the sick poor obliged to repair to them increased. At the Council meeting of the Hospital Sunday Fund on the 31st ult., some facts were stated by Dr. GLOVER which should incline every one to double his contribution to the collection. In the metropolitan hospitals benefited by this fund there are about 5531 beds. This does not seem a large number for London, with its population of nearly four millions, whose hospitals are the receptacles of cases from the country and from the colonies, as well as of its own sick poor. It gives only one bed to 723 persons. But the real provision is much less than even this; owing to some cause or other, a large proportion of these beds is daily unavailable. Thus, of the 5531 beds only 3232 are in daily use, and 2299 are daily unoccupied; this gives only one available bed to 1237 of the population, which, after making allowances for the beds of the endowed hospitals, must be regarded as insufficient. But even this provision is not adequately supported. There was a general agreement in the Council that though a certain number of beds in a hospital must be reserved for emergencies and for hygienic purposes, the number unused in the London hospitals was so large as only to be explicable on the theory of want of funds. The majority of the hospitals live anxiously from hand to mouth, and their annual expenditure greatly exceeds their income. This is at once painful and discreditable, and the supporters of both Hospital Saturday and Sunday Funds, Protestants, Catholics, Jews, and all other religious bodies, should resolve that this starvation of the hospitals shall cease. There are hundreds, not to say thousands, of persons drifting into permanent and incurable forms of misery and disease, who might be put on a more hopeful footing if hospitals were not obliged to refuse admission to all but extreme or unusual cases. It was also shown at the same meeting, from data in the possession of the Council, that the dispensaries of London, not to mention other work done by them, pay no less than 127,000 medical visits to the Homes of the poor in the year. This is work of an urgent character, which hospitals cannot do. Contributions to the coming collection will to some extent help this work. We earnestly commend the cause to all denominations as eminently an urgent one.

In olden times the Church was distinctly and directly engaged in the beneficent work of ministering to the sick. In our times it deputes this work to hospitals and dispensaries. The very least it can do is to see that these institutions are well supported. So far is this from being the fact that, as we have said, they are starved and stunted. Even rich and endowed hospitals have had to close wards, or are thinking of doing so, and the sick among four millions of the richest people in the world are kept waiting for admission into hospitals till the time for benefit has gone by, or are never admitted at all.

We need scarcely apologise for pleading at this critical moment from our own particular standpoint. We represent a profession which gives the best of its time and its energy to the work of hospitals and dispensaries. And THE LANCET was amongst the first to propose "Hospital Sunday." We are thankful that it has become an institution not only in London, but in nearly all the provincial towns, in the colonies, and in the United States. The fact is significant that all religious differences disappear in the face of these Hospitals and Dispensaries. But the effort has never yet been equal to the cause. There have now been seven annual collections. The largest of these, in 1874, was £29,936. In 1878 the sum fell to £24,904 19*s.* 6*d.* The average sum collected annually has been £26,927. This is but a poor sum to divide among 128 institutions. It is far below the income of one of the endowed hospitals. Birmingham, with only an eleventh of the population of the metropolis, raises a fourth of the London sum. If London does as well this year as Birmingham did last, we shall have the pleasant duty to discharge of reporting a collection next Sunday of £66,000. If the sermons could be preached in the wards the collection would be doubled. The grateful or the suffering faces of the sick would plead more eloquently than even the preacher, and perhaps the empty beds and wards would be the most powerful sermon of all. We think we may appeal to ministers of all churches to say whether the institution of Hospital Sunday has not given a fresh impulse to charity and religious harmony among all classes. The churches through their ministers feel themselves in more direct contact with the Hospitals and Dispensaries, and with their work. We only wish that ministers would visit hospitals on Saturday and verify for themselves the statements and the arguments we now present. They would meet with a hearty welcome from the resident authorities, and we should have to record the receipt of many thousand pounds more than we have ever had to announce.

THE movements which result when the cerebral motor zone of an animal is stimulated by electricity have been studied by means of the graphic method by MM. FRANÇOIS FRANCK and PITRES, and the results which they have obtained are of considerable interest. The method adopted was to connect a myograph with the tendon of a muscle of the anterior or posterior limb of the animal experimented upon (dog, cat, or rabbit). The time elapsing before the movement was registered by electro-magnetic apparatus. The first point examined was the character of the movements. When the cortical excitation is a single stimulus, the contraction on the opposite side of the body is a simple muscular jerk. A series of stimulations not exceeding forty per second produce dissociated jerks. If the frequency of the stimuli attains forty-five per

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second, in the dog, the muscular contractions are fused together in a continuous contraction. A similar frequency of stimulation is necessary to cause tetanus in any animal, whether the stimulation is applied to the surface of the brain, to a motor nerve, or to a muscle. When, instead of employing stimulation sufficiently strong to cause isolated contractions, stimuli a little less strong are employed, the phenomenon of summation may be observed. The first stimulation gives rise to no muscular contraction, and the jerks only appear after several stimulations. If the excitation is strong or prolonged, after a simple movement, directly provoked, an epileptiform attack occurs confined to the group of muscles corresponding to the centre stimulated. The attack may remain limited to this group, or extend to both limbs on that side, or to the whole body. It is usually constituted by two successive stages, the one of tonic contraction, the other of clonic spasm, in which the jerks are dissociated. Sometimes the initial tonic stage is absent. When one convulsive attack has occurred, the least excitation suffices to produce another. The convulsions, local or general, are not produced if, instead of stimulating the cortex, this is removed and the electrodes are applied to the subjacent white layer. Then, even with the strongest stimulation, no convulsions occur, only simple movements result. The excitability of the white fibres increases as the internal capsule is approached, so that, at this level, even weak stimulation suffices to produce a violent tetanus, with periodical, often rhythmical, exacerbations; this deserves, on account of its special characters, the term "capsular tetanus."

A delay occurs between the stimulation and the resulting movement, which is constant for each group of muscles in the same animal, whatever is the form or intensity of the electrical stimulus employed. A considerable part of this delay is due to the physiological resistance of the cortical grey layer. If the thin grey substance which covers the centrum ovale is removed at the point stimulated, and the white substance is then excited, the total delay lessens by a fourth or even by a third.

The movements produced by irritation of one side of the brain are not always limited to the muscles situated on the opposite side of the body; symmetrical contractions occur on the same side if the stimulation exceeds a certain degree of intensity. In this case the delay is greater for the associated movements on the same side than for the movements which occur on the side opposite to the hemisphere stimulated. When two points on the same side of the brain are simultaneously excited, the one corresponding to the upper limb, the other to the lower limb, the movement in the latter occurs at a later period than that in the former. This greater delay is probably due to the conduction in the spinal cord, the period of which, in the case of impulses proceeding from the brain, may thus be estimated.

A singular method has been applied by Dr. AMIDON of New York to the study of cerebral localisation. Instead of observing the peripheral effect of central stimulation, he has endeavoured to determine the effect on the brain of voluntary movements, estimating it by the change to be ascertained in the local temperature. Finding that the temperature on the surface of the skull varies at different points when certain movements are executed for a time, he infers that the point at which the temperature is thus raised corresponds to the centre for that movement. Ten of SEGUIN'S surface-thermometers were applied to different parts of the skull, and maintained in position by india-rubber bands; and the temperature of the several thermometers observed after a muscular effort maintained during several minutes. Proceeding thus, Dr. AMIDON believes he has established the position of a series of centres which do not altogether correspond with those ascertained by FERRIER. The results have been communicated to the Société de Biologie of Paris, and in the discussion upon them M. PAUL BERT mentioned his own researches on the same subject. Employing a thermo-electric pile, with all necessary precautions, he found that talking in a loud voice caused an elevation of the temperature in the left anterior frontal region. He has also found a rise in the temperature of the head (ascertained in the frontal region) in children at the moment of waking. Examining the lateral regions of the skull, over the motor convolutions, he was never able to observe any change in the temperature on muscular exertion. This shows that the results of Dr. AMIDON must be accepted with great caution, and it was suggested that the muscular exertion in the limbs may have been accompanied by contractions in the muscles of the head sufficient to cause the local rise in temperature. The negative results obtained by M. BERT in the motor region of the hemisphere render, for the same reason, the significance of the rise in temperature he has found in the frontal region during speaking very doubtful. One fact affording some corroboration to Dr. AMIDON'S conclusions was mentioned. One of the centres he describes is for the movement of the trapezius, and it corresponds to the part damaged in a patient of M. PONCET, in whom this muscle was paralysed.

THE discussion in the House of Lords on the Earl of CARNARVON'S proposal for Insurance against Sickness and Old Age calls for notice at our hands. The noble Earl's statement of the case of the poor is only too forcible and accurate. They are apt to be improvident, and when they are not so, but put by hardly spared savings into a club, it too often happens, as the noble Earl said, that the club breaks. Then all the misery of a broken bank transpires in the poor man's home, with no solace from public sympathy and public exposure of those who have robbed him. Lord CARNARVON made the astounding statement that no less than one hundred and fifty of the registered Benefit Societies "broke" last year. The poor man is not only robbed, but demoralised. It seems as if providence was of no use to him, and he is apt to give it up and abandon himself to his fate. It is probably true that there is an increasing spirit of independence and self-respect amongst the working classes, and many of the Friendly Societies are most creditable to their faculty for organisation. But that a hundred and fifty registered societies should break is discreditable, not only to their officers, but to the system of registration under which they acquire a sort of Government sanction.

But our object at present is rather with Lord CARNARVON'S remedy than with his exposure of an admitted evil. He will have the sympathy of all good and thoughtful men in lamenting the drunkenness and improvidence of one section of the working classes, and the misfortune of another in trusting to

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unsound and insolvent societies, both classes alike drifting into the estate of pauperism, neither being provided against an accident or an illness that may suspend their working powers even for a month, to say nothing of the inevitable advent of old age, which arrives prematurely in such conditions. But when we come to Lord CARNARVON'S remedy, we have to confess that it does not seem to us either practical or satisfactory. His proposal is to compel the payment of £10 by every young man between the age of eighteen and twenty-one. If the sum cannot be obtained directly, the master is to have the power to stop it from wages. Lord CARNARVON speaks mainly from his experience of agricultural districts, and we are glad, after all we have heard lately of agricultural depression, to find a competent witness affirming that it is practicable to get £10 from an agricultural youth for an ulterior and prospective purpose. In spite of this evidence we are very much disposed to doubt the accuracy of his Lordship's opinion. Either, as the Lord Chancellor said, the youth would claim the market value of his labour, or the direct extraction of so substantial a sum, when he is not married, indeed, but thinking about it, would be about as difficult an operation as even the tax-gatherer has ever been called on to perform. But supposing the extraction effected by compulsion and force of law, and the sum duly invested by the State and in the way of multiplying itself against all accidents and contingencies, is the youth likely to be the better for the operation? We think not. He will be apt to regard himself either as a child of the State, to be taken care of by it, or as having, at a great price, bought his freedom, and having no need to take care for the future. Sickness and old age being provided against under a State guarantee, he might easily consider himself liberated from all further care or providence, and so from a great part of the discipline of a good life.

So much by way of objection to the scheme as one to encourage thrift. But it is equally open to question from the Government side. Friendly Societies have doctors of their own whose interest it is to shorten sickness, and who are supposed to look sharply after those making claims on the funds. But even they find it hard enough to protect themselves against fraud and imposition. But how should the Government protect itself? It has no friends. Its ability to pay is such as to excite no pity and much imposture, and it would be helplessly defrauded. We say nothing of the soundness of the actuarial basis of Lord CARNARVON'S scheme. Lord GRANVILLE and Lord KIMBERLEY might well, on behalf of the Government, shrink from giving any encouragement to so doubtful and difficult a proposal. We give Lord CARNARVON every praise for bringing such a subject under the notice of the House of Lords—not an unfit assembly in which to make proposals for the amelioration of the agricultural poor. But we cannot think that in his particular proposal he has been well advised.

Let it not be supposed, however, that the Government acquits itself of all further responsibility by referring to what has been done by the Legislature to improve the security of Friendly Societies. The very fact that one hundred and fifty of these break in the year is proof enough that, despite the appointment of a Registrar and Assistant-Registrars of Friendly Societies, security is not yet attained. The Earl of PORTSMOUTH said he knew as a fact that in one Union more than half of the old people in the workhouse had been obliged to go there in consequence of having lost their insurance money by the breaking up of parish clubs. This is a most pitiable and injurious evil that calls for the further attention of Government without delay.

Annotations.

"Ne quid nimis."

"CRUELTY TO WOMEN."

IT seems only too likely that the subject of providing seats for young women serving in shops will again fall out of public notice before the consideration it has received bears fruit. Under these circumstances it is necessary to go one step farther, and to say that the large houses of business which have not declared their determination to provide seats, as required by the obligations of humanity, or intimated that it is already their practice to do so—and that the young persons in their employ are not only permitted, but encouraged, to sit in the intervals between serving customers—are defying public opinion and inflicting a grievous wrong on humanity. It is a little absurd for the heads of these firms to send their contributions to the hospital fund as *charity*. What they give is an inadequate dole in aid of relieving—for it is impossible to *cure*—the injuries they daily inflict! We are not making this assertion at random, but speaking by the book—the case book of hospital work—and affirm that some of the most painful and destructive diseases to which women are liable are distinctly produced and perpetuated by the cruel practice of compelling them to stand behind counters during long and weary hours for the profit of their employers. If it be true that the press of business is so great in the large establishments of Regent-street, Oxford-street, and other great thoroughfares, that there is no time for those who attend upon customers to rest, let the heads of these houses of business devote a portion of their enormous gains to the humane purpose of saving life and health in their establishments by increasing the number of their *employées*. The matter is too serious to admit of its being shelved. It is no mere sentimental grievance we are concerned to redress. We have little sympathy with some of the proposals made by philanthropists for the "good of humanity;" but this is a veritable case of cruelty and of disease-making. The evil is as grave and obvious in its character as though physical injury were intentionally inflicted on those patients who apply to surgeons for relief. A correspondent of the class we are trying to rescue from this cruelty writes as follows:—

"I have watched with much interest and anxiety your continued appeals on behalf of shopwomen, for whom, as one of them, I beg to express our grateful thanks, and to assure you how much we appreciate your efforts for us. It appears that our employers do not recognise the necessity of providing seats, but even if they do so under pressure, I am quite convinced it would in most cases be a mere farce, for we should never be permitted to use them; and, indeed, in ordinarily busy times the duties behind the counter are of such a nature as to make it almost impossible that there can be any sitting down. It seems as if nothing can really help us save the strong arm of the law. Let medical men (as being the best judges) decide how many hours a woman may daily stand without serious injury to health, and then let the law say that no woman shall be compelled to exceed those hours. This will give us the power to protect ourselves, a power we do not now possess; for, alas, we are too many. The difficulty lies not in finding assistants, but in their finding employment; and were our duties made heavier instead of lighter, there would still be no lack of 'hands.'

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I can speak from experience of the ill effects of long hours of standing. Some time since I was compelled to seek advice. The doctor whom I saw, most kindly, without fee or reward, or solicitation on my part, called upon my employer to explain the absolute necessity of my being allowed to sit down as frequently as possible, in order to avoid being laid up altogether. This was stated to be *quite impossible, as others would expect the same privilege.* (The italics are our own.) It was then proposed that I should be allowed two hours' rest in the middle of the day. After most strongly and persistently urging my case the doctor was victorious, and I have indeed reason to thank him daily for this 'rest,' which has no doubt saved me from an illness. There are, perhaps, hundreds of poor girls who need this rest as much as I did."

If these young women are kept standing, by shop-walkers employed for the purpose, to make a show of business which is not real, we say that practice is dishonest, and looking to the contingent mischief done, it is unworthy of the heads of houses of business affecting to conduct their trade and make their profits honourably. If, on the other hand, the business done in these establishments is really so great and pressing that those who serve cannot obtain a little rest, nothing but the most unpardonable greed can prevent such increase of their numbers as would put an end to the evil and cruelty of which we complain. We leave this obvious rejoinder to the disingenuous and pitiful excuse of the shop-walkers, "We are too busy to let our young people rest," to the consideration of those ladies who retain any spark of human sympathy in their natures, when they "go shopping." We fear the number of feeling women is small. If ever there was a proof that the feminine nature is *not* gentle, or the sympathies of woman keen and active, the perpetuation of this grievous wrong is a proof that cannot be gainsaid. To obtain a wider selection of materials for a dress, or see the newest patterns of robe or mantle, a "lady" will sanction by her patronage, and aggravate by her exacting demands on the strength and endurance of those who wait upon her, the "cruelty to women" we are striving to put down.

MILK AS A CAUSE OF TUBERCULOUS DISEASES.

IN the brief allusion to bovine tuberculosis on the 22nd ult., and to the danger of consuming milk from animals affected with that disease, the fact that this danger was pointed out some years since was omitted to be mentioned. So long ago as October, 1874, a very interesting and exhaustive paper from the pen of Mr. Fleming, then veterinary surgeon to the Royal Engineers, appeared in the *British and Foreign Medico-Chirurgical Review.* In that paper evidence as to the infectiousness of tuberculosis, and its accidental transmission from diseased to healthy animals, was given; as well as experimental proof of the production of the disease, not only by inoculation, but also by feeding with tubercular matter and milk from tuberculous cows. Both in that article and in his work on Sanitary Science, published in 1875, Mr. Fleming has insisted upon the urgent necessity that exists for preventing the consumption of the milk and flesh of diseased cattle. In a paper recently read by him at Norwich, he has adduced further proofs of the extreme danger to the public from this source, and these proofs are certainly startling and worthy of notice. We learn that tuberculosis among cattle is greatly on the increase, and especially in the higher bred stock; some authorities even going so far as to assert that five per cent. are infected. As dairy cows are never inspected as to their state of health, and as they furnish by far the larger proportion of phthisical bovines, there can be no doubt as to the gravity of the question in its relation to human tuberculosis. As the pig, an omnivorous creature like man, and bearing a close analogy to the lord of creation in other respects, is most readily infected by feeding with milk or tubercle, there is every reason to think that mankind, and particularly children, may be as susceptible as the porcine tribe. It is somewhat strange that, though the note of warning was sounded so frequently and so long ago, it should not have excited attention. It is not too late now to adopt precautions, if what is reported be correct. It is high time that the sanitary condition of milk and flesh-producing animals was ascertained. At present there is ample scope for free-trade in these disease- and death-dealing articles of food. What with private slaughter-houses and unvisited dairies, there is no check whatever.

NEW BIRTHS AND DEATHS REGISTRATION ACT FOR IRELAND.

ON Wednesday last the Bill for providing a more satisfactory system for the registration of births and deaths in Ireland was read a second time, and, mainly in deference to the objections urged by Dr. Lyons, the new member for Dublin, was referred to a select committee. The imperfection of the registration system in Ireland has long been notorious, and a deficiency in death registration, to the extent of nine per cent., was recently disclosed in Dublin. It may be hoped that the new Act for Ireland will not only redress the imperfections of the old system, but even improve upon the Births and Deaths Registration Act of 1874, which now governs the registration system in England and Wales. At the same time we cannot agree with Dr. Lyons, that this improvement is to be obtained by abandoning the English system of the certification of deaths, for the foreign system of verification. It is to be hoped that an attempt will be made to secure some form of verification in cases where no certificate can be furnished by a registered medical practitioner or by a coroner; but with this improvement we should prefer the English to the foreign system, as yielding better results, and as better suited to national habits and prejudices. It would be difficult to enforce registration within twenty-four hours of death, and still more so to fix upon relatives the responsibility of reporting deaths within a few hours of their occurrence. The main object of the Act should, however, be to secure the registration of all deaths, on the information of a properly-qualified informant, previously to the burial of the body.

"THE SLEEPING GIRL OF TURVILLE."

MR. HENRY HAYMAN, F.R.C.S. Eng., of Stokenchurch, Oxford, sends us the following communication on this interesting case:—"Between nine and ten years ago I was called in to attend Ellen Sadler for an ordinary case of illness, from which she did not soon rally. The parents being very poor, the vicar asked me to allow her to be sent to the Reading Hospital, where she seemed to become gradually worse, and, after being there eighteen weeks, was discharged as incurable. She was not in a cataleptic state immediately, but soon after her return home she was seized with a fit, and after the paroxysm had subsided she turned round on her side, with her hand under her face. The mother has assured me that she has never (of herself) changed from that position, and I am bound to say that I have frequently gone upstairs without a moment's warning and never found her otherwise. The fit occurred on March 17th, 1871. The girl was twenty-one years of age on the 15th of May last. The case has been visited by numerous medical men from all parts, and, I believe, without any exception, with more or less of scepticism. I was often told by the deceased mother that the reason she objected to her child being handled or touched much was 'because the doctors used to have pins or needles *secreted* to test her powers of feeling.' At the early stage of her illness I wanted to apply galvanism, but this was strenuously opposed by the parents. Every effort

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has been made to discover the deception (if any), but without effect. The late Home Secretary was applied to, I believe, and he communicated with the senior magistrate of the district, but as the girl was not represented as a 'fasting girl,' and the parents never asked for any donation when showing her (although it is supposed, in the summer, as much as £2 a week had been received by them), there was no room for interference by the law. When last I had communication with the deceased mother on the subject, she assured me that nothing had passed the bowels of the patient for five years, but about every fourth day a somewhat large amount would pass from the bladder."

THE LATE MR. BRADLEY.

AT the meeting of the Manchester Medical Society on June 2nd, Dr. Little in the chair, the President alluded in feeling terms to the lamented death of Mr. S. M. Bradley, which had occurred since the last meeting, and proposed "That this Society has heard with the most unfeigned sorrow of the sudden death of Mr. Bradley, whose loss will be keenly felt, not only by the Society, to whose interests he was warmly attached, and to the debates at which his sparkling eloquence always made him a welcome contributor, but also by the whole profession, of which he was acknowledged to be one of the brightest ornaments." This resolution was seconded by Dr. William Roberts, and supported by Mr. Whitehead (representing the surgical staff of the Royal Infirmary, the senior members of which were, to their great regret, unavoidably prevented from being present) and Dr. Lloyd Roberts, and unanimously adopted. Dr. Lloyd Roberts then proposed "That the President, Mr. Whitehead, and the honorary secretary be requested to prepare and forward to Mrs. Bradley, in the name of the Society, a letter expressing the profoundest sympathy of the Society with her in her sad bereavement, and its deep sense of the irreparable loss which it has itself sustained"; seconded by Mr. Stocks, supported by Dr. Noble, Mr. Cullingworth, Dr. Simpson, Dr. Leech, and Mr. Meacham, and carried unanimously. It was then decided by the unanimous vote of those present at once to adjourn the meeting.

THE ROT IN SHEEP.

THE enormous mortality amongst sheep during the past few months has led the Royal Agricultural Society to undertake an investigation into fluke disease or "rot;" with a view to ascertain both the immediate causes of its recent prevalence, and of its especial occurrence, in certain localities, and to determine more accurately the life history of the parasite, Fasciola hepatica, which is the cause of the disease. An elaborate scheme with this object has been drawn up by Professor Simonds, of the Royal Veterinary College, who suggested the following points for inquiry:—1. An approximate estimate of the amount of the loss which has occurred, especially amongst sheep and cattle. 2. An explanation of the prevalence of the disease in the Midland, South, and North-Western Counties. 3. The distribution of correct information as to the means of prevention, especially in dangerous seasons, and the mode of treatment with a view to arrest the progress of the malady. 4. Fresh investigations into the life history of the fluke. 5. Experiments to determine the truth of the supposed occurrence of the disease in sheep pastured in particular meadows and not in others. 6. Experiments to ascertain whether the embryos of the parasite cannot be conveyed by hay cut from wet or low-lying meadows, or by other means than feeding on the grass and taking water in such situations. The Council of the Society have decided to take up only two of these points: the diffusion of correct information on the local causes and mode of treatment of the disease; and the investigation of the life history of the fluke. Professor Rolleston of Oxford has been invited to undertake the latter portion of the inquiry.

It is noteworthy that no case of the disease in the human subject has been reported during the last few months, whilst sheep have been dying by thousands, and even cattle and horses have suffered in the infected districts. But, apart from the enormous loss to farmers, the periodical recurrence of these epidemics in certain rainy seasons has important sanitary bearings. The impossibility of properly disposing of the carcases has in some districts led to their being simply heaped together into pits or dry ponds, where they are left to decompose unburied, and poison the air and water. Nor is it to the credit of those more immediately concerned that a disease of which the direct cause, pasturage on low-lying lands in rainy seasons, is well known, should be permitted every few years to destroy animal food of the value of millions of money. Much has yet to be learnt of the precise mode of entrance of the cercarian form of the Fasciola hepatica into the animal body, and it may be that the result of further investigation will reveal some means of destroying the parasite at some stage of its protean existence without injury to animal or vegetable life. That it should be left to a private body to initiate slowly, with totally inadequate funds, an inquiry of such national importance, does not speak well for the powers or organisation of the Government departments, whose duty it should be to watch over matters affecting public health. In the present case we believe there is no Government department or organisation short of a Royal commission which possesses the power necessary for such an investigation.

RAILWAY ACCOMMODATION FOR INVALIDS.

IT would be not only a gracious act but a commercially spirited stroke of policy on the part of the leading railway companies, to provide special compartments in their ordinary carriages for the use of invalids. At least one carriage so furnished and appropriated, with a compartment for each of the several classes, should be included in every train, whether the distance to be travelled be long or short. The fittings might be plain and glazed leather or waterproof material employed, with movable covers that could be readily washed and disinfected. As it is, the sick are inconvenienced and the sound are subjected to needless annoyances, and often exposed to grave perils, because there are no special carriages devoted to invalids. It is, probably, only necessary to call attention to this matter in order to have it remedied. The Companies are not asked to embark in any large expenditure, and the result would not injuriously affect their receipts. It does not suffice to be able to secure an invalid compartment by bespeaking it. There ought to be no trouble or extra payment entailed, and one such compartment might well be provided for each "class."

A PETITION FROM FRENCH DOCTORS.

M. LABADIÉ, deputy for the department of the Bouches-du-Rhône, has laid before the National Assembly a petition signed by the doctors and chemists of Marseilles and the surrounding district. This document enumerates the reforms desired with respect to the practice of medicine and the trade of dispensing chemist. The petitioners first inquire whether it is necessary to maintain two classes of practitioners—the doctor in medicine and the officer of health (officier de santé). They propose, as a compromise, that an officer of health shall, after seven years' practice, receive the degree of Doctor on the simple presentation of a thesis. The petitioners then proceed to examine on what conditions the exercise of medicine by foreigners, or Frenchmen who have taken a foreign degree, should be sanctioned. This is a point of considerable importance to the many English doctors who practice on the Riviera, many of whom satisfy the French

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law by obtaining the diploma of officier de santé. The petitioners further desire to restrict the powers of monthly nurses in respect to accouchements, and, in a word, to render the illegal practice of medicine more difficult. They also maintain that doctors who are called upon to act as experts before the tribunals should receive higher fees. Finally, they urge the creation of Medical Councils of Discipline, intrusted with maintaining the traditions, the honour, and dignity of the profession. The barristers-at-law already possess a similar organisation. With respect to the chemist's business, the petitioners endorse the project elaborated by the Association of French Chemists, and demand that the law may be more clearly defined.

THE COLLEGE ELECTION.

THE time for sending in nominations of candidates for the four vacant seats in the Council of the Royal College of Surgeons, caused by the death of Mr. Hancock and the retirement of Messrs. Busk, Curling, and Simon, expired on Monday last, when the following Fellows (all by examination) had been duly nominated—viz., taking them in seniority of fellowship: Messrs. William Cadge of Norwich, surgeon to the Norfolk and Norwich Hospital, Fellow August 10th, 1848; William Adams, surgeon to the Great Northern Hospital, April 10th, 1851; Joseph Lister, F.R.S., surgeon to King's College Hospital, December 9th, 1852; Thomas Bryant, surgeon to Guy's Hospital, May 12th, 1853; Sydney Jones, surgeon to St. Thomas's Hospital, December 11th, 1856; J. Whitaker Hulke, F.R.S., surgeon to the Middlesex Hospital, May 23rd, 1857; Thomas Smith, surgeon to St. Bartholomew's Hospital, June 10th, 1858; Berkeley Hill, surgeon to University College Hospital, November 24th, 1859; and Reginald Harrison, surgeon to the Liverpool Royal Infirmary, December 13th, 1866. According to sect. 7 of Charter 15th Victoria, no Fellow of the College is eligible for election who has not been a Fellow for fourteen years, or a member for twenty years. Although Mr. Harrison is not a Fellow of fourteen years' standing, his eligibility is effected by the date of his membership diploma—namely, April 15th, 1859.

IRISH MEDICAL ASSOCIATION.

THE annual meeting of this association was held on Monday last, at the Royal College of Surgeons in Ireland, presided over by Dr. George H. Kidd. The annual report of the Council referred with satisfaction to the Vaccination Bill drawn up by the Association, which had been passed last year without much alteration, whereby very considerable advantages have been conferred upon the public and dispensary medical officers, affording, as it does, greater protection to public health and giving the medical officers a greater interest in the success of vaccination. The new Dispensaries Act was much needed, for in many districts the places used for dispensaries were utterly unfit for that purpose, and were so situated as to cause great inconvenience to the sick poor. The representations made by the Council relative to the remuneration of medical officers of health, though concurred in to some extent by the Local Government Board, have not, up to the present, produced the practical result which was hoped for. The report was adopted and also the following resolutions:—That the Poor-law medical officers of Ireland are justly entitled to receive as a matter of right a superannuation allowance not less than two-thirds of their entire official emoluments when incapacitated by sickness, or old age, or after twenty years' service; that the indiscriminate issue of dispensary tickets involves a heavy and improper charge upon the rates, and is oppressive and unjust to the medical officers; that the imposition of a fixed limit to the salaries of medical officers of health is a gross injustice towards those officers; that the administration of gratuitous treatment in Workhouse Hospitals of persons who are able to pay for medical attendance acts injuriously on the medical officers; that in reference to the Medical Act (1858) Amendment Bills, now before Parliament, no alteration of the existing law can be satisfactory which does not provide, by conjoint examination or otherwise, for a sufficient degree of professional competency, guaranteed by a curriculum of study and examination uniform throughout the kingdom; that the General Medical Council should be reconstituted, and adequate provision made for the representation of the profession at large in that body; and that a committee be appointed to consider the desirability of creating a fund in aid of widows and orphans of medical officers of workhouses and dispensaries in Ireland.

ASYMMETRY OF LOWER LIMBS.

IT has been commonly believed that a well-developed body is a perfect example of bilateral symmetry, with the single exception of the thoracic and abdominal viscera. And this fact has been of considerable importance to surgeons who have been at great pains, in cases of disease or injury of a limb, to obtain a length equal to that of the sound side. Recently, however, exact measurements of healthy uninjured limbs have been made with the view of testing the truth of this opinion, and the result has been to show that the statement was far too absolute, and that perfect bilateral symmetry is not to be met with even in the majority of healthy persons. Dr. Thomas G. Morton, of Philadelphia, has recently measured the lower limbs in 512 boys varying from eight to eighteen years of age, and in 271 he met with inequality of length, while in 241 there was no appreciable difference. Ninety-one showed a difference of $\frac{1}{8}$ inch; 100 of $\frac{1}{4}$ inch; 41 of $\frac{3}{8}$ inch; 22 of $\frac{1}{2}$ inch; 12 of $\frac{5}{8}$ inch; 2 of $\frac{3}{4}$ inch; 2 of $1\frac{1}{2}$ inch; 1 of $1\frac{5}{8}$ inch. In these cases the right limb was the longer of the two in 198 cases, and the left the longer in the remaining 73. It is stated that none of these boys had suffered from injuries or diseases of the bones or joints of the extremities, and that none of them were at all aware of the shortening in one of their legs. These, like all carefully observed facts, are of value; but it would be perhaps still more conclusive if similar results were found in adults, because there is a great difference between inequality in rate and inequality in extent of growth. The teeth on the two sides of the jaw are not always cut exactly at the same time, although, when the process of dentition is complete, bilateral symmetry is secured. It would be satisfactory, therefore, if measurements could be made, say of a regiment of soldiers, with a view to corroborate or correct the results of Dr. Morton's measurements. This investigation is important; already it has rescued a doctor in America in an action for malpractice, in which the plaintiff claimed damages on account of $\frac{3}{4}$ inch shortening after fracture of the thigh; in addition to evidence that inequality of the limbs is not unfrequent, a lad in court was measured, and his limbs showed a difference in length of $\frac{3}{8}$ inch. This at once led to a nonsuit.

PARLIAMENT AND THE CARE OF THE INSANE.

MR. S. LEIGHTON did not, as we anticipated, get much satisfaction from the Government in respect to his motion, that the care of the insane ought to be regarded as an Imperial responsibility. Liberal Governments notoriously lean towards the development of local responsibility and the discouragement of centralisation. Mr. Dodson's condemnation of the Prisons Act was strong and significant. There is nothing, however, in Mr. Dodson's views which is inconsistent with the State taking much more interest in the insane than it has yet done, and making it more easy for the insane among the poorer middle class to be treated

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well without incurring the discredit of pauperism. It cannot be denied that the public mind is much exercised about the question of insanity generally. The present Government will be expected to do something to protect and favour a class so greatly entitled to consideration.

In regard to criminal lunatics, idiots, and chronic lunatics, and accommodation for their treatment in separate institutions, at the request of Mr. Paget, the Government, through Mr. R. Peel, agreed to appoint a committee partly departmental. On the suggestion of Mr. Pell, Mr. Dodson promised to confer with the Under-Secretary for the Home Department, with a view to include in the reference to the committee an inquiry as to the best mode of dealing with persons suffering from senile dementia.

DEATH FROM MISADVENTURE IN A WORKHOUSE INFIRMARY.

THE last meeting of the Bethnal-green Board of Guardians was occupied with the consideration of an unfortunate case of death from an overdose of chloral, administered by mistake. A small minority of the members present were for summarily suspending the assistant medical officer who dispensed the drug, but juster counsels prevailed, and the medical officers were enabled to state fully the circumstances of the case. It appeared that the solution in stock was a concentrated one, and was labeled "Solution of chloral, ℥ss. in a ℥j.—Poison;" the assistant officer mistaking the latter symbol for ℥j., dispensed the drug accordingly. In spite of this clear and frank explanation of the matter, one of the members persisted in urging an amendment to the effect that the death was caused by a want of skill on the part of the assistant medical officer; but this manifestly unfair amendment was not even seconded, and a resolution to the effect that the Board was satisfied from the explanation that the case was one of misadventure, and that no blame attached to the medical officer, was carried by a majority of nine to two.

THE EMPLOYERS' LIABILITY BILL.

THERE can be but one opinion as to the desirability of legislation for the further protection of the life and limb of the labouring man. It should be such as shall not exempt the worker in any degree from the natural duty of protecting himself. Next, and very particularly, it should have provisions for acting independently of the Law Courts, otherwise litigation and bad feeling between master and servants will be the result rather than any advantage to the working man. If the promised Bill does not guard against this contingency, it is to be feared that for one pound that will reach an injured *employé* three will be spent in litigation. So far as possible it should take a form that will not be discouraging to employment or hard in its bearing on employers, otherwise it will be of doubtful kindness to the working classes. It is probable that such a Bill will give rise to many fine medico-legal questions, and in any Board that may be created for the settlement of questions arising under the Bill medical assessors will be an indispensable element.

ACCIDENTAL POISONING.

IN addition to the disastrous case at Bethnal-Green Infirmary, we have to record the occurrence of two other cases of accidental poisoning during the past week—both from mistakes in the administration of drugs. One was a case of a child at Hayland, who was given laudanum by mistake for "paregoric," and in their verdict the coroner's jury, without actually censuring the druggist, made it appear that he had unwittingly sold the one drug for the other. The second case was an even more common misadventure. A liniment of aconite and turpentine prescribed for a woman at Blackburn, who was suffering from rheumatism, was taken internally by her, under the impression that it was so prescribed. The jury appended a rider to their verdict of Accidental Death, stating that in their opinion no liniment containing poison should be sent out without the word "poison" being put upon the bottle. Such occurrences as these should surely teach prescribers and dispensers to be extremely careful in their directions as to the administration of remedies, especially when the patients belong to the large and ignorant class who imagine that everything in the form of medicine can be taken only in one way.

WOOLSORTER'S DISEASE.

THE Local Government Board inquiry into the occurrence of this disease at Bradford, which is being carried on conjointly by Mr. John Spear, one of the medical inspectors of the Local Government Board, and Professor Greenfield, at the Brown Institution, has, we understand, already led to some important results. Amongst the suspicious cases of death of those engaged in sorting or unpacking wool, one which occurred last week is of especial interest. It was that of a man named Jacob Bolton, a wool buyer, who died after about four days' illness, having previously been out of health for some days after examining some "Persian wool." The autopsy was made ten hours after death by Mr. Spear, together with several local medical men. In addition to the conditions often met with in blood-poisoning, hypostases, early decomposition, a fluid state of the blood, œdematous infiltrations, pleuritic effusion, and pulpy condition of the spleen, there were also hæmorrhagic effusions in the connective tissue of the mediastinum, about the larynx, kidneys, &c., hæmorrhagic infarctions in the lungs, and large extravasations in the pia mater. On examination of the blood, Dr. Greenfield discovered the anthrax bacillus, though in a somewhat unusual form; and we understand that he has been able to reproduce the disease by inoculation of animals, amongst them a cow, with the blood, and to demonstrate the identity of the disease with the splenic fever of cattle.

We regret to learn that both Mr. Spear and Dr. Butterfield, the medical officer of health for Bradford, have been suffering from dissection wounds acquired at an autopsy on a previous case of the disease. In Mr. Spear's case there was a large carbuncular swelling, together with considerable inflammatory œdema and lymphangitis. He has been under the care of Dr. Greenfield in St. Thomas's Hospital, and we are happy to learn is progressing speedily towards recovery.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

ON Monday last the annual elections of office-bearers for the ensuing year took place, when Mr. McClintock was appointed president, Mr. Chaplin vice-president, and Mr. Colles secretary. The only change in the Council was that Mr. Brunker has been replaced by Mr. Nixon. During the scrutiny of the voting papers it was found that one was signed, and the question of its validity caused considerable discussion, but ultimately it was decided to be illegal and contrary to the ballot, and was accordingly refused.

THE OPIUM TRAFFIC AND OPIUM SMOKING IN CHINA.

THE awakening of public attention to the trade in opium carried on between India and China by the debate in the House of Commons last Monday is daily becoming more marked. It is impossible not to sympathise fully with those who desire to restrict this traffic, or even to abrogate it entirely; but for the present it would seem impossible, from political reasons, to attain this end. Still, if we are powerless to attack the evil at its root, there is no reason why efforts should not be strenuously made to mitigate its effects; and for this reason we are glad to see that a premium of £50 has

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been offered for the best essay on the medical means of counteracting the effects of opium-smoking in China. From the advertisement on another page it will be seen that the essay should "contain suggestions as to the best method of conducting an Opium Refuge (or hospital) in that country." Dr. Risdon Bennett, Dr. Sieveking, and Sir Joseph Fayrer will act as adjudicators, and if they think fit a second prize of £25 may be awarded.

AT the small fishing village of Instow, North Devon (says the *Bradford Observer*), the wife of a thatcher has given birth to two females joined, or rather incorporated, together from the mammæ down to the abdomen. They are healthy and perfect in every other respect, having each a head, a trunk, and two upper and two lower extremities.

ADDRESSES have been presented during the week to Earl Cowper, Lord Lieutenant of Ireland, by the College of Physicians and the Royal College of Surgeons of Ireland. His Excellency's replies expressed the gratification it afforded him to receive so cordial a welcome from the time-honoured institutions.

DR. CHARLES HENRY RALFE, Visiting Physician to the Seamen's Hospital, and Lecturer on Physiological Chemistry in the Medical School of St. George's Hospital, has been appointed Assistant-Physician to the London Hospital.

IT is gratifying to learn that in Dublin during the past twelve months ninety houses have provided seats for their shop assistants at the request of an influential committee of ladies interested in the movement.

MR. BRET HARTE has consented to deliver his first lecture in London, entitled "The Argonauts of '49," on the evening of June 21st, in aid of the funds of the Victoria Hospital for Sick Children.

AMONG the gentlemen who on Wednesday last had conferred on them the Honorary Degree of D.C.L. Oxon., was Joseph Lister, F.R.S., Professor of Clinical Surgery at King's College.

A CHAIR of Vegetable Physiology has been established at Paris. The first lecture has just been delivered by M. Dehairan at the Museum d'Histoire Naturelle.

A MEETING of the General Medical Council is summoned for July the 7th, at two o'clock.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Scarborough.—Dr. Taylor has favoured us with a copy of his recently-published report on the sanitary condition of this favourable health resort during 1879. He first describes the local meteorology of the year—its general low temperature, an excess of rain of the earlier months and deficiency of rain in the later, and the greater prevalence than usual of northerly and easterly winds—a sort of weather to rob even Scarborough of some of its attractiveness. He next considers the births and deaths in the borough. With regard to the births, distinguishing the illegitimate from the legitimate, he finds that certain localities of the town furnish an undue proportion of deaths among the former, and expresses the opinion that in these localities he will discover "baby-farming" in operation. In earlier reports Dr. Taylor described the establishment of a *crèche*, and gave some figures illustrative of the use which was being made of it. It is to be regretted that he has not completed these figures to the date of the present report. With regard to the mortality, Dr. Taylor gives the death-rate of the borough for 1879, in an estimated population of 29,100, as 20·17 per 1000 of the population. Prior to 1872 he tells us the death-rate of the borough had ranged from 24 to 25 per 1000, but during the last seven years it has averaged only 18·60 per 1000. He attributes much of this reduced mortality to the system of sewer ventilation carried out in the town. To enteric fever 11 deaths were assigned during the year, 1 to scarlet fever, 10 to measles, and 13 to diarrhœa and dysentery, making a total of 35 deaths from these diseases. With respect to enteric fever, it seems not improbable that several of the deaths registered from that disease were due to some other cause. Dr. Taylor, indeed, reduces the number to 7. Considering the liability of Scarborough to importations of infectious diseases during the season when visitors throng into the town, her bill of health in respect to the spreading diseases is good. Dr. Taylor's report gives indications of systematic sanitary work in progress in the borough, and it would appear that a house-to-house visitation is being carried out with a view of discovering private sanitary defects. It should be obvious to the sanitary authority that the more detailed and exhaustive their sanitary work the more the reputation of their charming health-resort (for the wholesomeness of which they are responsible) will be enhanced.

Craven Combined Sanitary Districts.—Dr. Frederick W. Barry, writing in Cyprus of burial-grounds in Craven, presents a somewhat incongruous picture. Nevertheless, here we have a report from this gentleman, dated Nicosia, May 4th, 1880, on the burial-grounds in the Settle district of the Craven Sanitary Combination. Shortly before Dr. Barry gave up his appointment as medical officer of health to the Craven Combination, and accepted the appointment he now holds in Cyprus, he was called upon to report to the several sanitary authorities in the combination, under the Public Health (Interments) Act, 1879, and in accordance with a circular of the Local Government Board, dated August 19th, 1879, on the state of the burial-grounds in his combined district. He appears to have taken all the preliminary steps for reporting before he resigned the appointment, and to have obtained much of the information he required for his purpose. Loyal to his former authorities and not disposed to cast upon his successor the completion of a work he had already nearly finished, he now sends from Cyprus a report on the burial-grounds in the district of the Settle Rural Sanitary Authority. This report shows how much the inquiry was called for in a sanitary sense. Of sixteen burial-grounds in this district, it would appear that six require to have cemeteries substituted for them, one needs to have increased accommodation, either by extension of the present burial-ground or provision of a cemetery, two are in such proximity to wells that it is necessary the wells should be closed, and one should have diverted from it a water-supply which passes through it in a rubble-drain. Of this conduit an eye-witness informed Dr. Barry that he had seen the foot of a coffin, in burial, placed upon the covers. The water from this conduit supplied the village inn, and as Dr. Barry remarks, any person having a glass of spirits and water after that occurrence might literally be said to have found "death in the cup!"

Bollington, Cheshire (population 3666).—Mr. James Allen reports for the year 1879 a death-rate of 21·27 per 1000 population, as compared with 19·91 in 1878. The higher death-rate of 1878 appears to have been due to an increased infantile mortality, and to the prevalence of scarlet fever in the district.

REPORT OF THE FULHAM HOSPITAL.

The report of the medical superintendent of the Fulham Hospital for the year 1879 has its chief interest in the additional information it gives on the alleged spread of small-pox from the hospital to the inhabitants of the houses nearest to it. It would appear that careful inquiry was made as to the sources of infection in the several cases reputed to have been infected from the diffusion of contagion from the hospital, and all the patients were found to have been exposed to more or less direct chances of contracting the malady in the ordinary fashion in which it is known to be spread. This detailed inquiry is the only means by which the truth of the matter can be discovered,

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and the only way in which the popular delusion as to the injurious influence of small-pox hospitals upon the occupants of neighbouring houses, by the diffusion of contagion from them, can be dispelled. But the data given by Dr. Mackuna are not set forth in a way which would enable them to be readily followed and appreciated by a general reader; and, moreover, they are not accompanied by a map of the district to which they relate. The Metropolitan Asylums Board appear to be afflicted with judicial blindness in this matter. First, they ignored entirely the question; and now, that they are displaying a more intelligent interest in it, they are publishing data such as those recorded by Dr. Makuna in a way which seems designed to exercise the least influence possible upon the public. It is worthy of remark in the history of this question as relates to the Fulham Hospital that, while the occurrence of small-pox in near contiguity to the hospital has been alleged by the opponents of the building to have arisen in consequence of diffusion of contagion from it through the air, the appearance of the disease in a more distant zone in the neighbourhood has been alleged to have arisen from dissemination of the disease from the sewers of the locality into which the sewage of the hospital was presumed to flow. The second allegation is worthy of the first, for Dr. Makuna now tells us that the hospital drains have no connexion with the sewers in question, and that the assumption of the hospital sewage flowing into them was absolutely without foundation.

MEASLES AT PLYMOUTH.

The diminution of the excessive mortality from measles at Plymouth is a subject for congratulation, but the history of the outbreak of this disease in that town and the coterminous towns of Devonport and East Stonehouse, has been such as to reflect the greatest discredit on the sanitary authorities of the several places, and to a superficial observer to throw doubts upon the justness of the principle of local government. Notwithstanding the very large powers entrusted by the law to sanitary authorities for the welfare of the communities under their control, the outbreak of the disease found the authorities practically unprepared to cope with it, and the malady has had its own way among the several communities as unchecked as if there had not been either sanitary law or sanitary authorities in existence. We are glad to learn that local opinion is rightly fixing the responsibility of what has been left undone upon the local authorities. Our contemporary the *Weekly Mercury* attributes the exceptional prevalence of the disease to two principal causes—namely, the "disgracefully overcrowded" state of some parts of the towns, and the want of any hospital provision for the isolation of cases of infectious disease. It notes, moreover, other samples of sanitary negligence, particularly streets "as utterly neglected as those of a century ago," and the want of "decent" cottage accommodation. Our contemporary does not seem hopeful of proper action on the part of the sanitary authorities, even after the recent severe lesson, and remarks, in effect, that if the public does not require such action "in some strong and decisive way," it is not likely to be got. This is to hit the right nail on the head. The subject is one in which the citizens alone can help themselves. The Legislature has done its part in giving them power to do so. It is for them to deal with their own local representatives.

THE HEALTH OF SHREWSBURY.

The *Shrewsbury Chronicle*, in an article which should exercise great influence upon the inhabitants of that ancient city, shows that the Local Authority there is pursuing a singularly ill-judged policy in its sanitary administration. Shrewsbury had to rejoice in an exceptionally good condition of health during the past quarter, but not, it would appear, from any particular wholesomeness of the city itself; on the contrary, in spite of some very decided conditions of unwholesomeness within it. It shared, indeed, in common with other cities and towns of the kingdom, in the general healthfulness of the period, and our contemporary is wisely anxious to draw a lesson from this somewhat different from that which seems likely to be drawn by the Local Authority. It would have advantage taken of the healthier period to set to work to remove those local conditions which it is well known will exercise a disastrous influence on the well-being of the inhabitants in unhealthy periods. These conditions seem to be in chief an unfiltered and untrustworthy (as to pollution) water-supply, and imperfect sewerage and drainage. The sewerage and drainage of the city are not carried out after any proper system, but are done (according to members of the Local Authority) in a "pettyfogging," "higgledy-piggledy," "patch-work" fashion, which must eventually frustrate the very object for which they are presumably carried out, and which even now are productive of mischief. With an unfiltered and indifferent water-supply, and sewers and drains which do not properly serve their purpose, Shrewsbury would do well to listen to our contemporary's thoughtful teaching, and take advantage of the fair weather to make all snug for the foul.

THE ASSOCIATION OF MUNICIPAL ENGINEERS.

The Association of Municipal and Sanitary Engineers and Surveyors held their annual meeting in Leeds the week before last, under the presidency of Mr. A. W. Morant, M.Inst.C.E., the borough engineer for Leeds. On taking the chair, Mr. Morant read an interesting address on the undertakings of the Leeds Corporation, passing briefly in survey the costly works of sewerage, water-supply, and road-making that had been done, the arrangements for the supply of gas, and generally the sanitary organisation and work of the borough. Speaking of town-refuse, and the difficulty experienced in many populous localities in finding places for its deposit, and from which for some time Leeds had suffered, he said that the introduction of Fryer's Patent Destructor into the borough had enabled the Corporation to get rid of it entirely and to dispose of all refuse without nuisance. During 1879 the following quantities of materials were consumed in the destructor: 14,400 tons of rubbish, 59 beds, 131 mattresses, 264 carcases of pigs which had suffered from swine-fever, 1 cow, 8 sheep, 2 lambs, 28 quarters and 13 cwt. of bad meat. The money expended by the Corporation on works affecting the health of the town (not including the cost of paving and flagging new streets done by the owners) had been £1,289,000; and the death-rate had fallen from 28·2 per 1000 population in 1870 to 22·3 per 1000 in 1879. Papers were read in the course of the meeting on "Town Sewers," by Mr. Hewson, M.Inst.C.E., borough engineer of Rochdale; and by Mr. Graham Smith on "The Effects of Sulphates of Lime on Mortar."

LEAD-POISONING FROM THE HUDDERSFIELD WATER-SUPPLY.

Numerous occurrences of lead-poisoning are reported within a particular district of the public water-supply of Huddersfield. Mr. B. Jones, M.R.C.S., L.R.C.P., of Milnsbridge, reports not less than twenty cases, some severe, in his practice; and Mr. James Ashbridge Hall, M.R.C.S., of Lockwood, reports several cases in his practice, and in both series of cases lead was found in the common water-supply. The circumstance was mentioned at the meeting of the Town Council on the 19th ult., but neither report of the medical officer of health nor report of the borough analyst appeared to be before the Council. One member of Council stated that part of the water-supply was very soft, and that this supply had acted upon the lead of the service-pipes of the houses in which it was consumed, or upon the lead of cisterns in which the water had been stored. The subject seems to have been treated very lightly at this meeting of the Authority responsible for the quality of the water-supply, and we are afraid from communications of Mr. B. Jones and Mr. Ashbridge Hall to the local press that we may have hereafter to report still greater mischief from the polluted supply.

Dr. Vavasour Sandford, the medical officer of health to the City and combined sanitary districts of the County of Hereford, reminds us that in commenting upon one of his earlier sanitary reports, and with reference to the large amount of nuisances removed recorded there, we asked, "how far the benefits of the Public Health Act would be brought to light and made manifest by his insisting upon a house-to-house sanitary survey being made every other year throughout" his district. He sends, as a sort of equivalent to such survey, a series of resolutions passed by his several sanitary authorities, seven in number, and, with one exception, expressing their high appreciation of the great services he has rendered in improving the health-condition of their districts. We congratulate Dr. Vavasour Sandford on this very gratifying testimony to the efficient way in

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which he has performed the difficult duties of his post. The one authority which has held back from the chorus of approval is Weobley, a district which appears to be the black sheep of the combination, and which employs its two relieving officers as inspectors of nuisances at a salary of £20 a year each, and which, of course, only gets £40 worth of inspection.

The statement which has recently appeared in the general press, that the Local Government Board has refused to sanction the scheme propounded by the Lower Thames Valley Main Sewerage Board for the disposal of the sewage of their district by a system of irrigation at Molesey, and that a provisional order has been issued extending for three years the time allowed to the board for the diversion of the sewage from the Thames, we find, on inquiry, is inaccurate. The Local Government Board's decision on the inquiry of its inspectors has not yet been announced.

The Rural Sanitary Authority of Bath and the Urban Sanitary Authority are, it appears, still unsettled as to hospital accommodation for infectious cases of disease. A proposition from the Urban Sanitary Authority to the Rural that the two authorities should occupy conjointly the Urban Authority's hospital on Claverton-Down has broken down, the Rural Authority declining to pay what they deemed to be an unusually large share of the establishment expenses. The Urban Authority have, indeed, shown themselves too eager to make a good pecuniary bargain.

Colonel Bolton's report, as Water Examiner, on the metropolitan water-supply for the month of April shows the Water Companies still actively moving in giving constant supply to their districts. The new houses added to the number supplied by the several companies during the month was 1361, the total number supplied being 578,870. Professor Frankland's report shows that the Southwark and Lambeth Water Companies delivered water of "a very objectionable quality."

The inhabitants of the Rural Sanitary District of Wrexham appear to be as careless of the remains of their dead as they have proved to be of the health-interests of the living. The inspector of nuisances recently reported to the Rural Sanitary Authority that, in company with the village policeman, he had picked up in the churchyard of Holt and in an adjoining ditch numerous human bones—fragments of skeletons thrown to the surface when old graves were disturbed.

We regret to learn that scarlet fever is becoming seriously prevalent in parts of the district of the Craven Rural Sanitary Authority in Yorkshire. A serious outbreak of scarlet fever is also reported at New Brompton in Kent.

VITAL STATISTICS.

HEALTH OF LARGE ENGLISH TOWNS.

The rate of mortality in our large towns continues to decline, and is just now exceptionally low. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5321 births and 2787 deaths were registered last week. The births exceeded by 136, whereas the deaths were as many as 488 below, the average weekly numbers during 1879. The deaths showed a further decline of no less than 110 from the decreasing numbers in recent weeks; and the annual death-rate, which had steadily declined from 22·7 to 20·1 in the seven preceding weeks, further fell last week to 19·4. During the past nine weeks of the current quarter the death-rate in these towns did not average more than 21·1 per 1000, against 23·3 and 23·7 in the corresponding nine weeks of 1878 and 1879. The lowest death-rates in the twenty towns last week were 13·6 in Portsmouth, 14·0 in Bradford, 14·6 in Brighton, 16·5 in Birmingham, and 17·8 in Hull. The rates in the other towns ranged upwards to 23·0 in Plymouth, 23·4 in Manchester, 23·4 in Newcastle-upon-Tyne, and 24·5 in Liverpool. The high death-rates in these last-mentioned towns were not to any great extent due to excessive zymotic fatality.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 400 and 461 in the two preceding weeks, declined again last week to 411. These included 114 fatal cases of whooping-cough, 110 of scarlet fever, and 88 of measles. The annual death-rate from these seven diseases averaged 2·9 per 1000 in the twenty towns, and ranged from 1·0 and 1·1 in Hull and Birmingham, to 5·5 and 5·7 in Norwich and Plymouth. Whooping-cough showed the largest proportional fatality in Liverpool, Salford, and Bristol; scarlet fever in Norwich and Bristol; and measles in Plymouth, Sunderland, and Oldham. Measles has caused no less than 318 deaths in Plymouth since the middle of November last, of which 9 occurred last week. Three fatal cases of diphtheria were returned in Leeds last week. Small-pox caused 8 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily increased from 186 to 218 in the three preceding weeks, further rose to 227 on Saturday last; 39 new cases were admitted to these hospitals during last week, against 45 and 50 in the two previous weeks. These figures afford evidence of a further increase of small-pox prevalence in London.

The fatality of lung-diseases again showed a decline last week. The deaths referred to diseases of the respiratory organs in London, which had been 286, 241, and 208 in the three preceding weeks, further fell last week to 189, and were 51 below the corrected average weekly number; 109 were referred to bronchitis, and 60 to pneumonia. The annual death-rate from diseases of this class did not exceed 2·1 per 1000 in London last week, whereas the rate from the same diseases was equal to 4·6 in Liverpool, and 3·9 in Salford.

HEALTH OF LARGE SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 21·8 per 1000, against 24·8, 23·7, and 22·8 in the three preceding weeks; it exceeded, however, by 2·4, or 12 per cent., the average rate in the twenty large English towns. The rates in the eight Scotch towns last week averaged from 16·0 and 20·1 in Leith and Edinburgh to 30·8 and 31·2 in Paisley and Perth. The deaths referred to the seven principal zymotic diseases in the eight towns further declined to 98 last week, of which 32 resulted from whooping-cough, 20 from measles, 16 from diarrhœa, and 14 from fever. The annual death-rate from these seven diseases averaged 3·9 per 1000 in the eight towns, whereas in the twenty English towns it did not exceed 2·9; this zymotic rate, which was but 1·3 and 1·8 in Greenock and Leith, ranged upwards in the other towns to 5·8 in Perth and 8·5 in Paisley. The 14 deaths referred to fever showed a further decline from recent weekly numbers; of these 9 occurred in Glasgow and 3 in Perth. The fatality of fever, however, again showed a marked excess upon the fever fatality in the twenty large English towns; this excess was largest in Perth. The 16 fatal cases of diarrhœa exceeded by 4 those returned in the previous week, and included 6 in Dundee and 4 in Aberdeen. Whooping-cough, which caused 9 less deaths than in the previous week, showed the largest proportional fatality in Paisley, Edinburgh, and Glasgow. The deaths from acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 103 and 106 in the two preceding weeks, declined to 95 last week, and were equal to an annual rate of 3·8 per 1000; the rate from the same diseases in London last week did not exceed 2·4 per 1000. The recent excess of mortality in the Scotch compared with the English towns has been mainly due to excessive mortality from lung diseases and to zymotic fatality.

THE HEALTH OF DUBLIN.

The last return shows no improvement in the health of Dublin. During the week ending 5th inst. 227 deaths were registered, equal to an annual rate of 37·6 per 1000, against 34·2 and 38·0 in the two preceding weeks. The annual rate of mortality in Dublin during the first nine weeks of the current quarter averaged no less than 36·4 per 1000, which would become 39·7 if raised by nine per cent., which was recently found to be the proportion of unregistered deaths in Dublin; the death-rate in London during the same period has not averaged more than 19·9 per 1000, or just half the corrected rate in Dublin. No less than 61 of the 227 deaths in Dublin last week resulted from the seven principal zymotic diseases, against 40 and 50 in the

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two previous weeks; 18 were referred to small-pox, 13 to scarlet fever, 9 to fever, and 9 to whooping-cough. The annual death-rate from these seven diseases was equal to 10·1 per 1000 in Dublin, against 2·9 in London, and 4·8 in Edinburgh. The fatal cases of small-pox were more numerous in Dublin last week than in any week since the beginning of June, 1879.

HEALTH OF IRELAND.

During the March quarter there were registered in the 801 registrars' districts 35,208 births, a number equal to an annual birth-rate of 26·3 in every 1000, and 30,654 deaths, representing an annual rate of 22·9 per 1000. The births and deaths were both under the average for the corresponding quarter of the past five years. The deaths from the principal zymotic diseases numbered 2985, or 9 per cent. of the total deaths registered; and included 788 from fever, 610 from scarlet fever, 554 from whooping-cough, 497 from diarrhœa, 361 from measles, 94 from small-pox, and 76 from diphtheria.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

SANITARY ADMINISTRATION IN JAPAN.

Two reports have been issued by the Central Sanitary Bureau, Japan, which are of the greatest interest, whether regarded as literary productions or for the intrinsic interest of their subject-matter. Both reports are from the pen of Nagayo Sensai, the director of the Central Sanitary Bureau, Tokio; both are written in English; and both have been beautifully printed in Tokio. The first of the two reports includes the first and second annual reports of the Central Sanitary Bureau, and states the attempts which have hitherto been made to institute in Japan a system of local and general sanitary administration on an European model, and the amount of success which has been obtained. This report gives a brief history of the bureau, and states in successive sections the measures already taken with regard to the statistics of mortality and sickness, infectious and contagious diseases, vaccination, hospitals, the prevention of venereal diseases, and the inspection of prostitutes, the Government control of medicines, the regulation of physicians, apothecaries, and local sanitary officers, and the analysis of mineral springs. A chapter is also devoted to the notifications, regulations, and instructions which have been issued by the Government on these several matters. The scheme of the bureau is nobly devised, and excites admiration of the courage which has not hesitated to attempt its introduction into Japan in the present state of occidental civilisation there. The promotors, however, seem fully to apprehend the difficulties which lie in the way of its adoption, and the time which must be required before it can come into general use. It is modestly described as a beginning, but under the circumstances it must be regarded as a magnificent one.

The second report, by the same author, relates to the prevalence of cholera and of choleraic diseases in Japan, and especially to the epidemic of cholera there in 1877. This report has a special interest for the epidemiologist.

YELLOW FEVER.

The medical officer of the quarantine station, New Orleans, Dr. G. Farrar Paton, writing to the *Glasgow Herald*, urges a somewhat different line of action with regard to yellow fever among sailors than has hitherto been considered. He speaks hopelessly of "prevention," but he thinks that much more might be done than has been done in diminishing the gravity of the attacks among seamen. He thinks that much of this gravity is dependent upon the habit of sailors (natural to the individual or enforced by captains suspicious of shamming) holding out to the last under the earlier malaise of the disease. He suggests, therefore, that a series of instructions should be prepared for the guidance of masters of ships, and that it should be obligatory on all consuls in yellow-fever districts to supply masters with these instructions. The instructions should set forth the means for disinfecting the ship and the ship's company, bedding, clothing, &c.; information as to the earlier symptoms of the disease and as to the use of the clinical thermometer in regard to them (Dr. Paton properly observing that "any man who can take the meridian altitude of the sun and work logarithms ought not to hesitate about learning to use a medical thermometer"); and the course to adopt when the symptoms indicate yellow fever. These suggestions deserve attention, and will no doubt come under the consideration of the International Conference proposed to be got together by the National Board of Health, U.S., in the course of the year.

BERI-BERI IN CALCUTTA.

Dr. K. McLeod's report on the health of Calcutta for the past quarter of the present year gives a summary of the results of the special inquiry which was made concerning the recent prevalence of beri-beri in Calcutta. The disease appeared in the southern suburbs of the city in the year of 1877, and again in the same suburbs and in villages east of the city in 1878. Dr. McLeod notes also the presence of the disease in Shillong in October, 1878, and in Dacca, January, and February, 1879. It appears to have prevailed, moreover, in Cachar, Sylhet, the Khassia Hills, and part of the districts of Assam proper. Beri-beri appeared in Calcutta itself (the city proper) towards the close of 1879. Dr. McLeod gives a record of 376 cases, of which 163 were fatal. Little light appears to have been obtained during this outbreak (which now seems to have ended, at least for the moment) upon the causation of the disease. Although most prevalent among the poorer classes of Mahommedans, it was by no means confined to them; it had no defined relations to poverty, nor was it found associated with any special insanitary conditions, and the evidence touching its infectiousness was very conflicting. Facts have come to Dr. McLeod's knowledge which favour the impression that the disease is communicable, while others have opposed that view.

THE NATIONAL BOARD OF HEALTH, U.S.

The annual meeting of the National Board of Health, U.S., was held in the City of Washington on the 4th and 10th May ult. The board re-elected its former officers, revised its bye-laws, and appointed committees. The standing committees appointed are four in number, and their functions relate respectively to—(1) epidemic and contagious diseases; (2) registration and vital statistics; (3) State, municipal, and local sanitary legislation; and (4) quarantine legislation—State, national, and international. At this meeting certain resolutions relating to small-pox among immigrants were adopted. A preamble set forth that small-pox was being introduced into the United States, and spread from one State into another by emigrants arriving from Europe. In view of this evil the board resolved that it was of the first importance that personal inspection of all emigrants should be made at the several ports which they enter in order that proper vaccination might be secured before landing. It was further resolved that the Executive Committee should ascertain to what extent an inspection to this end and vaccinations resulting from it, are now made, and that the committee should be empowered to take such measures as they may find desirable to give efficiency to the action of the quarantine authorities in this direction.

INDIAN SANITARY GOSSIP.

We learn from our contemporary, the *Indian Medical Gazette*, that a law of compulsory vaccination has been passed by the Bengal Legislative Council, and now awaits the sanction of the Governor-General. It is made applicable in the first instance to Calcutta, its port and suburbs, but may be extended, under certain provisions, to other municipalities. The Health Officer for the city is to be made responsible for the administration of the measure. The recommendations made by Assistant-Surgeon Abdur Ruzzack for the sanitary regulation of the pilgrims proceeding from Indian ports to Mecca are, it seems, likely to remain unfruitful at present, hesitation to interfere with so delicate a matter and want of money being assigned as the main reasons which deter the Government of India from dealing with the subject now. The Government of India submitted several of the recommendations of Mr. Abdur Ruzzack to the local governments for their consideration, and the result appears to have been unfavourable to them. The comments of the Lieutenant-Governor of Bengal upon these recommendations, so far as quoted by our contemporary, appear to us to have been founded upon an inaccurate view of the subject, and even to suggest doubts whether the Government of India is dealing with it in a way least likely to obviate diffi-

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culties. Mr. Abdur Ruzzack has been appointed civil surgeon of Sutna, Central India. We reviewed the report of his sanitary pilgrimage to Mecca and Medina in THE LANCET a short time ago.

HEALTH OF THE DUBLIN POLICE.

The medical officer of the Dublin Metropolitan Police, Dr. Thomas Nedley, in his report on the health of that force in 1879, states that, notwithstanding the inclement weather of the year, it attained the highest standard it has yet reached. The daily percentage of sick, which in 1877 is said to have been 2·875, and in 1878, 3·3, was in 1879, 2·9. There is evidently an error in these figures; probably a misprint. The report curiously enough gives the numbers of the sick from day to day during the year, and the total mortality, but does not state the strength. The return given of the more dangerous ailments from which the men suffered is suggestive. It is as follows:—Typhoid fever 22, typhus 2, scarlet fever 5, small-pox 13, measles 15, and rheumatism 15. To these ailments have to be added assaults, 30. The preponderance of infectious maladies is remarkable. In respect to small-pox, Dr. Nedley remarks that the thirteen members of the force had none of them being revaccinated. It appears to be the custom of the force to revaccinate all recruits, except they produce satisfactory evidence of this operation having been previously performed. It is not explained how the thirteen members who suffered from the disease last year had escaped revaccination.

THE SANITARY STATE OF CYPRUS.

The report of her Majesty's High Commissioner for Cyprus, for the year 1879, contains interesting information on the sanitary condition of the island and health of the population for the period to which it refers. The High Commissioner states that the island was "extremely healthy" in 1879, and refers to the year 1878 as having been exceptionally unhealthy both to the English and to the natives. "Although the plentiful rain," he observes, "of the present winter augurs well for the harvest of 1880, the inhabitants confidently affirm that an abundant harvest will not this year be accompanied, as it often is, by an unhealthy season, as the extreme and unusual cold, such as has been experienced this winter, has always in previous cases been the forerunner of a healthy summer." The report includes special medical reports by Dr. D. H. McNamara, Civil Surgeon, on the Famagusta district, Dr. W. H. Steele, Civil Surgeon, on the Limasol District, Mr. W. Keays, A.M.D., on the Paphos District, and Mr. C. J. Irving, Civil Surgeon, on the Nicosia District. The report also includes a special report by Mr. C. J. Irving on a leper village, near Famagusta.

DUBLIN TENEMENT HOUSES.

At an inquiry recently held by order of the Local Government Board with reference to a proposed improvement scheme projected by the Corporation of Dublin under the Artisans' Dwellings Act, some startling information was given as to the condition of tenement houses in the area under consideration. The area, which is about three and a half acres in extent, contains 156 dwelling-houses, of which 143, or 90 per cent., are tenement houses; and of these 91 per cent. are now unfit for occupation. Sixteen houses are in a ruinous condition, 24 are incapable of repair, and the sanitary accommodation is extremely limited. The inhabitants number 1619, of whom 1556, or 96 per cent., occupy the tenement houses. This area is a focus of disease, and is one of the worst places in Dublin in consequence of its narrow passages and insanitary condition, and is quite irremediable except by entire removal of the houses.

From recent reports of the meetings of the Cork Board of Guardians, it would appear that the female lunatic wards in the workhouse are in a very unsatisfactory condition in consequence of the overcrowding which has existed for a considerable time past.

The Totnes Board of Guardians has adopted the petition to Parliament circulated by the Plympton board, praying that education, sanitation, and other matters may be defrayed out of imperial rather than local rates.

There has been a sudden increase in the mortality from small-pox, diphtheria, and particularly from measles, in Paris.

THE SERVICES.

INDIAN MEDICAL SERVICE.

LAST week a deputation from the Indian Medical Service Defence Committee waited upon the Marquis of Hartington to ask for the appointment of a Royal Commission to inquire into the injury done to the prospects and position of the medical officers by the late reorganisation of the department. They were introduced by Dr. Lyon Playfair, M.P., who stated that it was feared that under the recent General Orders "changes would be made in the admission to the service and in the future prospects of candidates which would prevent the Government getting as good a class of men as hitherto, and thus both the public service and the public of India would alike suffer." Dr. Ewart then submitted the views of the Committee on the effect of the new organisation upon the service. They objected to the subordination of the military branch to the army medical officers. "This subordination was effected by placing the whole military medical staff under a Surgeon-General to be chosen from the British service, at the same time making great reductions in the number of Indian administrative appointments." It would render impossible the attainment of honorary distinction by them for service in the field, and would retard promotion. This seemed to be the chief grievance arising out of the new system; but they also complained of the injustice of the existing scale of pensions, the present furlough rules, and the omission of the medical officers in the distribution of honours. The Marquis of Hartington repudiated any idea of the Government desiring to lower the status of the service. He pointed out the necessity which had existed for a reorganisation and for the abolition of a double administrative staff, and affirmed that the Indian and home Government alike had endeavoured to effect the change, "bearing in mind the interest and the efficiency of the service, and at the same time the rights of each member of the profession." He promised that when the opinion of the Indian Government and of the new Governor-General upon the memorials which had been presented by the medical profession were received in this country, he would give the subject his attentive consideration, and would communicate with Dr. Lyon Playfair and Mr. Cowan, M.P.

As we lately pointed out,[1] the loss was limited to the appointments of two Deputy Surgeons-General, and this was much more than compensated for by the increased status and pay accorded to the Sanitary Commissioners. The prominence given by the Defence Committee to the fact of the military administrative medical appointments being all made from the British Army seems to point to an object in this statement—that of recovering a proportion of them for the Indian service. But if this were mooted, as the British service lost also two Deputy Surgeons-General, without receiving any equivalent, it would certainly be open to it to claim a fair share of the civil appointments in lieu of any of the military which might in this manner be taken from them. We are of opinion that the present arrangement has been made as equitably for the two services as circumstances would admit; and we feel that if it be disturbed, it can only be rearranged by giving to the British medical officer some compensation for what is taken from him for the Indian service; and in what manner could this be effected but by a rearrangement of the civil appointments?

We trust that the Marquis of Hartington may be able to remedy the injustice complained of by the Indian medical officers in regard to retired pay, relative rank, and the share accorded to them in the distribution of honours; but we feel well assured that in the question of the administrative appointments he will not accede to the suggestion of dividing them between the two services, without granting a fair proportion of the lucrative civil appointments to the British medical officers in exchange for the military ones of which they would be deprived.

THE GUARDS' MEDICAL OFFICERS.

In reply to a question in the House, the Secretary of State for War stated that the question of a new Warrant for the medical officers of the Guards was under consideration, "but considering the great advantages which these officers enjoy

[1] THE LANCET, June 5th, p. 895.

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in other respects over the rest of the army medical officers, he could not undertake that their pay and rate of promotion should be identical. There never has been any difficulty in obtaining medical officers for the Guards." We are disposed to agree, to a considerable extent, with Mr. Childers, although we think he has over-estimated "the great advantages" supposed to be enjoyed by these officers. We believe that it was owing to pressure brought to bear by themselves on the War Office that they were exempted from the operation of late Warrants. If this be so, they must be content to bear the disadvantages arising from this in consideration of having retained what they deemed privileges. At the same time we think that, in the interests both of the medical officers and the men entrusted to their care, certain modifications in the department are necessary. The most important of these is the appointment of an officer for administrative duties. We pointed out lately the absence of all information in the Army Medical Department Report on the subject of the barrack accommodation and general sanitary arrangements of the Guards. We think that the Senior Surgeon-Major of the Brigade might advantageously be made a Brigade-surgeon, for the purpose of inspecting the barracks and hospitals, and advising the General Officer in command of the Home District on all questions relating to the health of the Guards, and that he should be required to report on such matters to the Director-General, for the information of the Secretary of State. Considering the very slow promotion in the brigade, it would be only just to extend to it the principle adopted in the line, of granting promotion to the rank of surgeon-major after a certain number of years' service. It may be very true, as Mr. Childers pointed out, that no difficulty has been felt in obtaining medical officers for the Guards, but it is a serious question whether it is advisable to continue a system which must naturally give rise to feelings of discontent and, as a probable consequence, to a want of zeal and efficiency in the discharge of important duties. We trust that the Secretary of State may see his way to introduce such changes as may remove any such unsatisfactory condition, and also secure to the Household Troops an efficient supervision in sanitary matters.

VOLUNTEER AMBULANCE DEPARTMENT.

The official inspection of Surgeon-Major Godwin's class of volunteers connected with the Arsenal took place at Woolwich on the 2nd inst., when the certificates of proficiency in stretcher drill and first dressings to the wounded were presented to the class by the President, Surgeon-General William Munro, C.B. The inspection, which began at eight o'clock, was witnessed by Colonel Farrell, the Commandant of the 26th Royal Arsenal Volunteers, and several officers who accompanied Surgeon-General Munro from London. The class went through the "stretcher drill" most steadily, and showed considerable skill and knowledge in applying bandages, splints, &c. Certificates were then delivered to over thirty members of the 26th Kent and Kent Artillery Volunteers by Surgeon-General Munro, who complimented the class on the particularly steady manner in which they had gone through their work, and their knowledge and skill in applying the various dressings. He urged them to continue to study and practise bandaging and first dressings, as from their work in the Arsenal they may have constant opportunities of putting their knowledge to a practical test.

GOOD SERVICE PENSIONS.

We have much pleasure in announcing that Her Majesty has, on the recommendation of H.R.H. the Field Marshal Commanding-in-Chief, bestowed six pensions of £100 a year, for "distinguished and meritorious service," on the following medical officers of the army:—Director-General Sir Wm. Muir, K.C.B.; Surgeon-General C. A. Gordon, C.B.; Surgeon-General Huntly G. Gordon, M.D.; Surgeon-General William Munro, C.B.; Surgeon-General H. H. Massy, C.B.; and Surgeon-General Thomas Crawford, M.D. The officers were selected from those on full pay on the 1st of April, from which date, the commencement of the financial year in the army, the pensions are drawn. We offer our sincere congratulations to the Army Medical Department on this substantial recognition of the good work done by members of their service in all parts of the world.

The officers of the Army Medical Department employed with the Cabul Field Force in Afghanistan have erected a handsome and substantial monument over the graves of Deputy Surgeon-General J. H. Porter and Surgeon Alexander Keith, both of whom died in Cabul in December last, from pneumonia brought on by the exposure and privation they had gone through during the campaign.

Surgeon William Finlay, Army Medical Department, has been appointed Assistant-Surgeon to the Royal Military College, Sandhurst, vice Surgeon-Major John Anderson, who has accompanied the Marquis of Ripon to India as Surgeon on the Personal Staff of the Viceroy.

Brigade-Surgeon J. L. Jameson has been appointed to officiate as Deputy Surgeon-General of the Allahabad Division, vice Deputy Surgeon-General J. Gibbons, C.B., invalided to England.

ARMY MEDICAL DEPARTMENT.—Brigade-Surgeon Thomas Smith Hollingsworth is granted retired pay, with the honorary rank of Deputy Surgeon-General; dated June 9th, 1880. Surgeon Francis George Adye-Curran, M.B., from half-pay, to be Surgeon; dated May 5th, 1880. Surgeon Phineas Barrett Tuthill, M.D., from half-pay, to be Surgeon; dated May 12th, 1880.

VOLUNTEERS.—Surgeon Angus McMillan, M.D., resigns his commission in the 4th East Riding Corps, but is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement; dated June 9th, 1880. Henry Eugène de Méric, gent., to be Surgeon in the 2nd Tower Hamlets Corps; dated June 9th, 1880. Acting Surgeon Edgar John Don Bavand resigns his commission in the 1st Cumberland Corps; dated June 9th, 1880. Acting Surgeon George Cran, M.D., to be Surgeon in the 1st Kincardineshire and Aberdeenshire (late 2nd Kincardineshire) Corps; dated June 9th, 1880.

ADMIRALTY.—The following appointments have been made:—Staff Surgeon H. J. Lauder and Surgeon A. W. W. Reid to the *Defence;* Surgeon G. J. Irvine to the *Hector;* Surgeon C. W. Magniac to the *Flora.*

Correspondence.

"Audi alteram partem."

ON THE DIAGNOSIS OF TUMOURS OF THE CEREBELLUM.

To the Editor of THE LANCET.

SIR,—I desire to make some comments on Dr. Althaus's letter[1] referring to a paper of mine with the above title.[2]

To clear the ground, I will first point out that certain things to which he gives prominence require only passing notice. Everybody knows that tumours of the cerebellum, or of the cerebrum, may exist without any symptoms, at any rate, without striking symptoms, or symptoms available for diagnosis. My experience is quite in accord with that of Nothnagel and other observers, who have pointed out that localising symptoms are more frequently present when the middle lobe of the cerebellum is the part involved by disease. It is, as far as I know, the accepted opinion that the stress of cerebellar disease falls on the legs before it affects the arms. It has been asserted, over and over again, that vomiting and optic neuritis are of no localising value, and it has long ago been pointed out that pain at the back of the head is not to be trusted in the diagnosis of tumour of the cerebellum. On these matters I, at any rate, cannot be at issue with Dr. Althaus.

The "first principle of diagnosis" is very true. There is no one who would not prefer as evidence for or against localisation a circumscribed small lesion to one which might involve several parts, or to one large enough to exercise pressure on other parts. We must make the best of the cases we meet with. The reader must not overlook the fact that in the cases Dr. Althaus is remarking on the diagnosis of cerebellar tumour *was made.* Apparently, according to

[1] THE LANCET, May 8th, 1880. [2] Ibid., April 3rd, 10th, and 17th.

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Dr. Althaus, it ought not to have been made on the evidence adduced.

Of course it is quite legitimate to infer that better reasons for the diagnosis might have been given, or that the necropsy showed that the diagnosis was a mere guess. On the latter supposition it would be remarkable that in three successive cases a correct guess should have been made on the same grounds.

In other parts of his letter Dr. Althaus confidently expresses certain opinions, which of course he has a right to do. I am glad he has. In the following I join issue with him, and after his own method I express confident opinions to the contrary. One of us, or very likely both of us, will have to take the scientific consequences.

The walk in ataxy and in cerebellar disease is, according to Dr. Althaus, "generally very similar." "Very similar" is a vague expression here, and so is the expression that in "some cases" it is impossible to draw a distinction. These are generalities which cautious men will leave as they are. I may, however, remark that observers are constantly making the distinction. Further, I can say that I never knew anyone find a cerebellar tumour in a case he had declared to be tabes dorsalis, and I never knew anyone find posterior sclerosis in a case he had called cerebellar tumour. The diagnosis of cerebellar disease is often made from the gait alone. For, as aforesaid, optic neuritis, headache, and vomiting are of no localising value. By them we infer, almost with certainty, that there is a tumour, and by a reel we infer that the tumour is cerebellar, or at least subtentorial.

Next as to vertigo of the kind Dr. Althaus describes. I have not myself found that vertigo is present to any marked degree in cerebellar tumour; never to a degree which I should trust in diagnosis. Vertigo is a symptom which it is most difficult to estimate properly. This, of course, is only opinion against opinion. The issue will be decided by cases.

I am particularly glad that Dr. Althaus has expressed his disbelief that the tonic convulsions can be due to disease of the cerebellum. I say this because his denial enables me again to draw attention to the matter. That they *occur with* disease of the cerebellum there is no doubt; that they might depend on squeezing of the subjacent medulla was suggested long ago, as also that they might depend on some change induced in the corpora quadrigemina.[3] So, then, there are two opinions. Time will decide this issue: Do the tonic convulsions occurring with cerebellar disease depend on discharge of the part wherein the tumour lies, or on the more or less severe pressure it exercises on another part, such as the medulla oblongata?

Of course, it goes almost without saying that we have to establish the absence of tonic convulsions in tumour of other parts. With tumour of one large division of the nervous system—the cerebrum proper—we may say that they are almost never seen. This is the more significant since another kind of convulsion is very common with tumour of that division. However, Dr. Hughlings Jackson has mentioned one case—the only one of the kind he had seen—in which with a large cerebral tumour there were tonic convulsions at the very close of the patient's life. Since it has been said that tumour of the cerebellum may exist without any symptoms, or any marked symptoms, it is really superfluous to say that there may be no tonic convulsions. It is well, however, to give prominence to this. In cerebral tumour there sometimes are, and sometimes are not, convulsions. But it is granted, too, that there may be reeling gait, and also a certain kind of rigidity in cases of tumour of the cerebellum where there are no tonic convulsions. So it is of tumour of the cerebrum: there may be hemiplegia without epileptic or epileptiform convulsions.

With reference to movements of the eyeballs, Ferrier's experiments prove that electrical excitation of the middle lobe of the cerebellum produces movements of the eyeballs, in association with movements of the head, in a direction varying with the application of the electrodes. He shows, also, that the effects he thus produces are not due to conduction. I am aware that injury to the middle peduncle of the cerebellum produces particular deviations of the eyeballs. M. Nonat, many years ago, diagnosed correctly disease of this part from this symptom. I have witnessed as part of the tonic convulsions which occur with tumour of the cerebellum movements of the eyeballs; but as, according to Dr. Althaus, the tonic convulsions which occur *with* tumour of the cerebellum are not due to affection *of* the cerebellum, he may not regard this fact as of any importance.[4]

Enlargement of the head occurs in children; it scarcely can occur except in children. I would here mention in passing that in cases of tumour of the cerebellum in adults we often find at the necropsy dropsy of the lateral ventricles, which, no doubt, answers to the symptom—a slowly developing hebetude from the gradual deterioration of the compressed brain.

It is well known that large tumours, or other masses, in one cerebral hemisphere may cause enlargement of the head in children, and, since in little children the gait is tested with great difficulty, a slight hemiplegic defect might be confounded with the reel of cerebellar disease in a young or indocile child. But I have never known this mistake to be made. Enlargement of the head in a child past the age when ordinary hydrocephalic enlargement usually occurs, in association with optic neuritis indicating some intracranial growth, is some evidence of the disease involving the middle lobe of the cerebellum. As above said, it might occur from a large mass in one cerebral hemisphere, but even then the diagnosis is practically limited to one of these two regions, which is a step towards localisation. Sir William Gull was, I believe, one of the first to draw attention to enlargement of the head from tumour of the cerebellum.

Finally, as to the cases which formed the text for my remarks. That the post-mortem appearances were not given in greater detail is explained by my not wishing to burthen the pages of THE LANCET.[5] I thought I had stated what was essential, but since I find my omitting certain negative conditions appears to render the cases incomplete, I will now supply further details.

Cases 1 and 2 were carefully examined by myself. In Case 1 the whole of the cerebrum, the pons, medulla, and upper half-inch of the spinal cord appeared healthy. In Case 2 there was no disease of the pons, and small part of the spinal cord removed with the brain. The medulla oblongata showed the squeezing I described, but section of it showed no apparent disease. There was no tubercle in any parts than those I named. In Case 3 I was only present at the commencement of the necropsy. I saw the tumour and surrounding parts *in situ* and after their removal, but being unable to remain to complete it, the detailed examination was conducted with great care and patience by Mr. Frederick Treves. He reports: "The pons and medulla and, indeed, the entire encephalon, were examined in the most careful manner possible—indeed, I spent the whole afternoon over them. Every nerve was isolated and examined, and every part, both of the cortex and of the cerebral collections of grey matter. I was much interested in the case, having watched the symptoms during life, while the lad was on the surgical side. The pons and medulla and, indeed, every part except the cerebellum, were perfectly healthy in every respect so far as the naked eye could judge. The tumour from its position could not have influenced (by pressure) the functions of either the pons or the medulla, as it was well separated from these structures. We can hardly conceive a lesion more accurately isolated or more uncomplicated than was the lesion in this case." It is well known that nervous organs bear slow pressure remarkably well. "I might add that the notes I took of the case were made on the spot, and not from memory afterwards. The outline of the sketch was also made from the specimen before the parts were disturbed."

I remain, Sir, your obedient servant,

Finsbury-square, E.C. STEPHEN MACKENZIE, M.D.

[3] Of quite recently published cases in which tonic convulsions were present *with* cerebellar tumour, I may refer to the following: Dr. Hughlings Jackson, THE LANCET, Jan. 24th, 1880, p. 122; Dr. G. Mackenzie Bacon, Brit. Med. Journ., Feb. 21st, 1880, p. 280; Dr. Drummond (Retraction of head), Dublin Journ. Med. Sci., April, 1880, p. 287; and Dr. Dreschfield, Journ. of Anatomy and Phys., vol. xiv., p. 337. Dr. Hughlings Jackson recorded a case in Brit. Med. Journ., Nov. 4th, 1871: he, indeed, holds the hypothesis that tonic convulsions are owing to cerebellar discharges.

[4] Dr. Drummond describes (op. cit.) in his case oscillation of the eyeballs with deviation of one eyeball.

[5] We are always anxious that the reports of cases in which pathological details have been ascertained should be as full as may be necessary for *scientific* purposes, though closely condensed.—ED. L.

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EXCISION OF OBSTRUCTION AT THE NECK OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—In concluding my Lettsomian Lectures I expressed my regret that time had only permitted me to glance at some of the more salient points of my subject. Much there was that I left undone. I ought, for instance, to have exhibited the *dilatable air tampon*, invented by Bushe, for the arrest of hæmorrhage after lithotomy, and reproduced many years afterwards in THE LANCET by Mr. Browne. I ought to have shown that the lithotrite, recently described by Sir H. Thompson in one of your contemporaries as *new*, was constructed after the principles of Mercier, whose instrument had been introduced by me several years previously in THE LANCET. I ought, further, to have exhibited Mercier's aspirator side by side with Sir H. Thompson's, and pointed out that the latter was but a modification of the former. It will thus be seen that in matters of omission I have been a great offender. I am not unacquainted with Sir H. Thompson's valuable works, and am in particular aware of his criticism on Mercier's operation, but I am also acquainted with Mercier's reply. That surgeon's operation was submitted to the searching investigation of the highest known tribunal—a Commission of the Académie de Médecine, from whose long report this is an extract:—"M. Mercier s'est occupé des maladies de la prostate et notamment des saillies valvulaires qu'amène au col vésical l'hypertrophie de cet organe. ..... Il a présenté un instrument fort ingénieux pour en pratiquer l'excision. Les faits nombreux dont votre Commission a été témoin sanctionnent l'importance et l'utilité de ce procédé opératoire" (p. 44). The report of the Commission of the Académie des Sciences was still more flattering. Mercier's operation has recently been described by that distinguished surgeon M. Reliquet, and its indication set forth at p. 458 of his "Traité des Opérations des Voies Urinaires":—"L'excision est indiquée quand la rétention étant complète, le malade éprouve de grandes difficultés à se sonder, ou ne peut plus le faire. La disparition de la saillie côntre laquelle la sonde de gomme vient heurter est un résultat immédiat et des plus importants." Much more I could add, but I think I have produced sufficient evidence to enable your readers to form a correct opinion on the merits of Sir H. Thompson's reclamation presented by Mr. Browne.

I remain, Sir, your obedient servant,

Portman-square, June 8th, 1880. W. F. TEEVAN.

TREATMENT OF CANCER.

To the Editor of THE LANCET.

SIR,—I notice in THE LANCET of June 5th a paragraph that Drs. Simpson and Macdonald "have stated that in their hands Chian turpentine, as yet, had not been productive of benefit when used in cases of uterine cancer." I presume that the cases in which the remedy was used were treated in the Edinburgh Royal Infirmary. If such be the case, I may be allowed to state that I have every reason to believe that the drug used for some time in that institution was not genuine Chian turpentine. Within the last two or three weeks, however, from a specimen that I have seen, it is probable that a drug of a better quality is being used, although undoubtedly adulterated with some other resin. Considering the short time that the latter has been in use, comment is unnecessary. I may add that in my hands the most satisfactory results continue to be produced by the true remedy in cancer of various organs.

I am, Sir, yours, &c.,

Birmingham, June 7th, 1880. JOHN CLAY.

FILTERING MATERIALS.

To the Editor of THE LANCET.

SIR,—A paragraph from *The Times* has been going the round of the papers concerning my report on Filtering materials. That paragraph is a misleading one, and does not give a fair account of the conclusions arrived at. The experiments were made to ascertain if the new material carferal was sufficiently good as a filtering substance to justify its adoption for service purposes, and for that purpose it was tried against spongy iron and silicated carbon. All three were found good filtering media, but the balance was rather in favour of the carferal *and* of the spongy iron. Indeed, the excellence of the latter material was never questioned. The carferal seemed, however, more practically convenient for the public service. For ordinary purposes the spongy iron still remains one of the best filters in the market.

I remain, Sir, your obedient servant,

F. DE CHAUMONT.

Netley, June 8th, 1880.

NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—The usual advertisement appears from the Admiralty informing young medical men that their services are required for commissions in the Medical Department of the Royal Navy. It does not therefore seem as if any action was about to be taken on the Report of the Committee which has just sat to inquire into the disabilities of the service, and it is as well they should be told that the circular printed for their guidance is a snare, and that instead of medical officers having choice of cabins according to relative rank a case now presents itself where a cabin is being specially built on board a frigate refitting at one of the ports for the chaplain, an officer of only three years' service, and twenty years junior to the fleet surgeon, who still is allotted the same accommodation as the junior lieutenant, a young man of twenty-three years of age. This is the injustice medical men are invited to submit to.

Your obedient servant,

June 8th, 1880. VINDEX.

SEA-WATER FROM LOWESTOFT.

To the Editor of THE LANCET.

SIR,—I observe in your issue of last week you hint that the sea-water which is being conveyed by this Company may perhaps be obtained from the harbour or from off the Ness, both of which places, you say, are contaminated by sewage from the town.

I am instructed by my Directors to state that the water is obtained from neither of those places, but from a point about half way down the new arm which is being added to the North Pier. This point is outside the harbour, and was selected by the company's engineer as being the best for obtaining a pure supply.

You also suggest that tinned water may not be good. My Directors admit that, under given circumstances, this may be so, but the water *ex* Lowestoft is in tins a few hours only, and not long enough, they are advised, to be affected.

My Directors, however, think that experience may show some other material to be better than tin. We first experimented with earthenware vessels covered with wicker-work, but had to give them up on account of their weight. Then we took to tin; and now we are having made, for experimental purposes, vessels of papier-mâché, of wood, and of glass encased in wicker.

I am, Sir, your obedient servant,

Great Eastern Railway, Secretary's Office, June 8th, 1880. J. HADFIELD.

PARIS.

(*From our own Correspondent.*)

THE difference of opinion between the Faculty of Medicine and the Ministry seems to be now smoothed over. The project of creating a professorship of Pathological Anatomy has been abandoned in favour of a histological laboratory which will be directed by one of the *agrégés*, who will be styled "Directeur des Travaux Anatomo-pathologiques" and rank with the already existing director of anatomical studies. Having been unsuccessful in his endeavour to create this professorship for himself, M. Cornil has withdrawn from the candidature altogether, and the new appointment will probably be bestowed upon M. Cadiat, who is already well known, at least in France, for his microscopical labours.

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The last two sittings of the Academy of Medicine have been rendered interesting by communications from M. Pasteur. Recent experiments with the virus which gives rise to the cholera of fowls have led the eminent biologist to some conclusions relative to variola and vaccinia, which are of the very highest importance. Vaccine matter, says M. Pasteur, is nothing else than attenuated or diluted variolous virus, and it is unnecessary that it should pass through intermediate organisms. The experiments tend to prove that a weak dose of a specific virus gives rise to a mitigated form of disease, which, however, is protective against the occurrence of the disease in its ordinary evolution. Should these views be justified by future research, and should their application be extended to other diseases than those already mentioned, a new light will be thrown on the pathology of zymotic affections, and their prophylaxis rendered a matter of certainty. Disturbances have occurred at Montpellier in consequence of the appointment of two assistant professors of zoology and botany. The students of the Faculty of Medicine who were in favour of an unsuccessful candidate testified their displeasure with more vigour than reason at the opening lectures, and the rector of the Academy was compelled to close the Faculty. A ministerial decree has now confirmed this action, and the most strenuous measures have been taken to repress the insubordination. Until further notice, the students of Montpellier are under a kind of scientific interdict. Their own school is closed, and they will not be allowed to take out their curriculum or to pass examinations at any other university. The tone of the decree admits of no mistake, and the sooner submission is made the better for the prestige of Montpellier.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Lords on June 4th Lord Carnarvon called attention to the principle of insurance against sickness and old age under public guarantee, and proposed a compulsory plan of insurance—viz., that within the ages of eighteen and twenty-one every man should be obliged to make a payment of £10, which would entitle him to 8s. a week in time of sickness, and 4s. a week after the age of seventy.

In the House of Commons on the 3rd inst., the Home Secretary proposed the appointment of a select committee to inquire and report upon the expediency of acquiring on behalf of the inhabitants of London the undertakings of the existing water companies within the metropolitan area, and further to inquire and report as to the nature and extent of the power of the water companies to levy water-rates and rents, and how far it may be desirable to modify the same. The proposition was agreed to. The Committee, which is to meet on Tuesday next, consists of the following members: Sir W. Harcourt (chairman), Sir J. M'Garel-Hogg, Mr. Chamberlain, Sir Richard Cross, Mr. Alderman Lawrence, Mr. Brand, Mr. Pemberton, Mr. Caine, Baron H. de Worms, Mr. Firth, Sir Gabriel Goldney, Lord George Hamilton, Mr. Thorold Rogers, Mr. Sclater-Booth, Mr, John Holms, Mr. Parnell, and Mr. J. G. Hubbard. The President of the Local Government Board, in answer to a question from Mr. Harcourt, in the House of Commons, on the same day, whether it was the intention of the Government to bring in a Bill for regulating the conservancy of rivers, said, in effect, no, as he thought it would not be possible, having regard to the difficulties with which the question was surrounded, to pass a Bill dealing with it this session.

In the House of Commons on the 4th inst., Colonel Alexander asked the Secretary of State for War whether he would place the medical officers of the Guards on an equality with the other medical officers of the army as regards pay and promotion under the Royal Warrant of November 27th, 1879. Mr. Childers replied that the War Office had it now under discussion to propose a New Warrant with respect to the medical officers of the Guards, but he could not undertake—considering their very great advantages in other respects—that they should be put on an identical footing with medical officers of the army generally as to pay and promotion. He thought he ought to add that there was no difficulty—and he understood there never had been any difficulty—in obtaining efficient medical officers for the Guards.

On Monday, at the time of private business, the Glasgow Faculty of Physicians and Surgeons' Widows Fund Bill, from the House of Lords, was read a second time.

In the House of Commons on Tuesday evening, in the course of a discussion as to the maintenance of pauper lunatics, Mr. Hibbert intimated that the Government were favourable to provision being made in workhouses for the care and custody of harmless imbeciles. Mr. R. Paget, who moved for a Select Committee on the whole subject, stated in the course of his speech that imbeciles kept in workhouses as an experiment had had to be sent back to the Somerset County Lunatic Asylum; and it was found that, during their stay in the workhouses, they lost weight, and their mental condition deteriorated. He recommended that different counties should be allowed to combine in establishing branch asylums for imbeciles. His chief point, however, was a strong objection to the present system of distributing criminal lunatics amongst the county asylums; and he contended that the State should provide a prison asylum. Mr. Peel, replying on behalf of the Home Office, suggested that Broadmoor Asylum might be used exclusively for the worst class of criminal lunatics. With regard to chronic lunatics, one or two applications had been made to employ disused workhouses for their reception; but a comparatively small proportion of cases were considered fit for removal even to the first-class workhouses. There was a large class suffering from senile dementia, and it was curious to note how few of them were judged by medical officers of the asylums to be fit to be removed, with any prospect of good. At Hanwell, out of 1840 inmates, there were only 50 females and 15 males reported as fit for removal to a first-class workhouse, such as those in the metropolis; at Colney Hatch, out of a total of 2178, 20 males and 40 females; and at Banstead, out of 1600, only 40 males and females together were so certified. It was truly said that lunacy law was a maze of statutes, and they undoubtedly needed consolidation and amendment. In March, 1879, the late Home Secretary appointed a Departmental Committee, including many gentlemen unconnected with the Department, who were qualified by special knowledge, to consider (1) whether it was desirable that criminal lunatics should be separated from pauper lunatics to a greater degree; (2) whether special provision should be made for the care and custody of imbeciles; and (3) whether Broadmoor had answered its purpose. That Committee did not report to the House in consequence of the intervention of the dissolution. He was prepared to propose the reappointment of that Committee, but would reserve for the present the terms of the reference. In reply to Mr. Peel, Mr. Dodson promised to communicate with the Home Office with a view to an enlargement of the reference, and Mr. Paget thereupon withdrew his motion for a Select Committee.

On Wednesday afternoon the second reading of the Medical Charities (Ireland) Bill was moved by Mr. Meldon. The Bill proposes various changes in the administration of medical relief under the Poor Law, one of them being a system of lending medical tickets to persons in temporarily straitened circumstances, and there is also a proviso for the superannuation of aged medical officers. Mr. Mitchell Henry opposed the Bill in the interest of the medical officers and on the ground of surprise, and after further hostile criticism, Mr. Meldon himself moved the adjournment of the debate, which was agreed to. At the same sitting, Mr. Meldon moved the second reading of the Births and Deaths Registration (Ireland) Bill, which proposes to assimilate the registration law of Ireland to that of England. Dr. Lyons described the Bill as a partial measure, and said, if it were passed, it would shut the door to a more complete settlement of the question. It sought to continue the system of making it everybody's business to give notice of a death; and of course, what was everybody's business was nobody's business. It also left matters open for seven days, which, in his opinion, was too long a period. He thought twenty-four hours would be quite sufficient. The whole of this question had extensive medico-legal bearings. These points had been fully considered in Continental legislation, and a tolerably complete process of verification of death had been for some years at work in France, Germany, and other countries. He desired to see introduced in this country some mode of verifying death under the hand of responsible and scientifically educated persons. He would impose on relatives the responsibility of reporting the occurrence of a death within a few hours to a medical officer specially charged with that duty, who should immediately go to see

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the body, and ascertain whether there were any circumstances to warrant suspicion that death resulted from ill-treatment or foul play of any kind. On the Continent a body was not allowed to be disturbed until the arrival of the verificator; and upon receiving his certificate the relatives of the deceased could dispose of the remains. If, however, he found ground for further inquiry he reported accordingly, and a minute investigation was then made. Before legislating on this question it was desirable that the whole subject should be inquired into; and he, therefore, recommended that this Bill should be referred to a Select Committee. Several other hon. members supported the recommendation, which was adopted by Mr. Meldon; and the Bill was read a second time, and referred to a Select Committee.

On the 11th inst., on the motion to go into Committee of Supply, Dr. Cameron will call the attention of the House of Commons to the practice of animal vaccination, and will move, as an amendment, "That as cow-lymph direct from the calf, commonly known as animal vaccine, is of at least equal value as a prophylactic against small-pox with the ordinary humanised lymph, and as its use affords an absolute guarantee against the propagation of those human diseases occasionally invaccinated with humanised lymph, this House is of opinion that to meet the objection to vaccination founded on the possible communication of other diseases through the operation, a supply of animal vaccine should be provided by the National Vaccine Establishment for the use of those who prefer it to the ordinary lymph." We understand that Earl Percy will second the amendment.

Notice has been given of the following amendments to Dr. Cameron's motion:—Mr. P. A. Taylor: "That, in the present unsettled condition of medical opinion in regard to the safety of using ordinary humanised lymph, as also of the safety, effectiveness, and practicability of the use of animal vaccine, it is, in the opinion of this House, inexpedient and unjust to enforce vaccination, under penalties, upon those who regard it as undesirable or dangerous." Mr. Samuelson: "That, inasmuch as it has been shown that vaccination, as performed by certain public vaccinators, has caused the propagation of other diseases, as the reliance on vaccination as a protection against small-pox has been diminished by differences of opinion amongst medical authorities, and as the penalties for non-compliance with the law have in some cases been enforced in an oppressive manner, it is expedient that an inquiry into the whole subject by a Royal Commission should be instituted."

ROYAL COLLEGE OF SURGEONS.

AT an ordinary meeting of the Council of the Royal College of Surgeons, held on Thursday last, after the reading of the minutes of the last ordinary meeting (13th ultimo), Mr. Gay (seconded by Mr. Busk) moved the non-confirmation of that part of the minutes relating to Mr. Marshall's proposal to institute a compulsory examination in elementary anatomy and physiology at the end of the first year. After an explanation from Mr. Marshall, that he had no intention of making the proposed examination punitive, but that he merely sought to institute a compulsory examination at the *schools*, or in the presence of an assessor from the College, both Mr. Gay and Mr. Busk withdrew their opposition, and stated that they could not object to a scheme of *that* character. The matter will consequently now be referred to the "Committee on Examinations in Anatomy and Physiology." Sir James Paget then moved the non-confirmation of the minutes relating to the withdrawal of the Council from the English Conjoint Scheme. After some discussion this was carried, and a motion was made by Sir James Paget, seconded by Mr. Curling, to the effect that, in view of the uncertainty respecting the present Conjoint Scheme, the Council should give notice to the several co-operating authorities in England of its intention to make arrangements, alone or in conjunction with other bodies, to hold a complete examination to be passed by all candidates for the diploma of membership. This will be carried into effect at once without waiting for further confirmation. All the present professors and lecturers were re-nominated with the exception of Mr. Lowne, who does not desire re-election.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND. — The following gentlemen, having passed the required examination for the Fellowship on May 27th, 28th, and 29th, have been duly admitted Fellows of the College:—

Battle, Wm. Henry, L.S.A., Potter Hanworth, Lincoln; diploma of Membership dated July, 1877.
Boon, Alfred Pearl, L.R.C.P. Lond., St. Kitts, West Indies; November, 1871.
Giles, George Michael James, M.B. Lond., Alexander-square, N.W.; November, 1876.
Hayward, Thomas Ernest, M.B. Lond., Tewkesbury; January, 1877.
Howlett, Edmund Henry, L.R.C.P. Lond., Cintra-park, Upper Norwood; January, 1877.
Margerison, Richard, Cromwell-road; July, 1878.
Paddle, Jas. Isaac, L.R.C.P. Lond., Albert-street, N.W.; April, 1880.
Pickering, Charles Frederick, L.R.C.P. Lond., Bristol; May, 1876.
Saunders, Arthur Rich, Kingston, Jamaica; July, 1871.
Takaki, Kanehiro, L.R.C.P. Lond., Tokio, Japan; April, 1878.
Webb, John Rheece Wynn, L.R.C.P. Lond., Shrewsbury; July, 1876.

Ten candidates out of the 21 examined failed to reach the required standard, and were referred for twelve months' further professional study.

[In the list published on the 29th ult. of gentlemen who passed the Primary Examination, the name "Chippendale" should have been printed "Clippingdale."]

UNIVERSITY OF CAMBRIDGE. — At a congregation held on June 3rd the degree of M.D. was conferred on the following gentlemen:—

Hitchcock, Charles Knight, Caius.
Stirling, Edward Charles, Trinity.

APOTHECARIES' HALL. —The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on June 3rd:—

Benthall, Alfred Elliott, Sherborne, Dorset.
Hall, Thomas Lambert, Ashford, near Ludlow.
Hurtley, William Maw, Caledonian-road, Leeds.
Parke, Charles James, Hougham, Grantham.
Rogers, James Macdonald, Berners-street.

THE Longstaff medal of the Chemical Society has been awarded to Professor Thorpe of the Yorkshire College, Leeds.

THE will of Mr. Edward Davies, M.R.C.S. Eng., late of Merthyr Tydfil, was proved on the 4th inst. The personalty was sworn under £35,000.

A VIRULENT DISEASE has appeared among the deer of several of the royal parks. The matter is, we believe being investigated by Mr. Frank Buckland and Professor Simonds.

THE East London Hospital for Children has received £1000 from Messrs. Cassell and Co., collected by them from the readers of *The Little Folks' Magazine*, for endowing a cot, to be called "The Little Folks' Cot."

Charles Alexander Gordon, M.D., Alexander Charles Macrae, M.D., and Charles Meymott Tidy, M.B., F.C.S. F.I.C., have been elected members of the Royal Institution.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

BERESFORD, C. W., M.R.C.S.E., has been appointed House-Surgeon to the Royal Isle of Wight Infirmary, vice B. H. Mumby, M.B.
BERNSTEIN, M. J., M.B., has been appointed Junior House-Surgeon to the Birkenhead Borough Hospital, vice H. H. Boucher, M.B., resigned.
BUNCLE, A., M.B., C.M., has been reappointed Medical Officer of Health for the Featherstone Urban Sanitary District for three years. £40 per annum.
CAMERON, J., L.R.C.S.Ed., has been reappointed Medical Officer for Kintore and Kenmay, Aberdeen.
DAVIES, H., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Llanybyther District of the Lampeter Union.
DAVISON, R. T., M.B., has been appointed Medical Officer to the Second District of the Battle Union.
EVANS, A., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Lampeter District, and Medical Officer for the Lampeter District of the Lampeter Union.
FOWLER, Dr. J. K., has been appointed an Assistant-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.
FOX, F., M.R.C.S.E., L.R.C.P.L., L.S.A.L., has been appointed Dental Surgeon to the Infant Orphan Asylum, Wanstead, vice J. S. Tracy, M.R.C.S.E., L.R.C.P.L., resigned.

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HARTT, C. H., L.R.C.S.I., L.K.Q.C.P.I., has been appointed Assistant Medical Officer and Dispenser at the Workhouse and Infirmary of the Greenwich Union.

HOLDERNESS, W. B., M.R.C.S.E., has been appointed Visiting Surgeon to the Royal Windsor Dispensary and Infirmary, vice T. Fairbank, M.D.

JONES, T., M.B., F.R.C.S.E., has been appointed a Honorary Surgeon to the Royal Infirmary, Manchester, vice S. M. Bradley, F.R.C.S.E., deceased.

JONES, W. G., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of the Third District, and Public Vaccinator of the Second District of the Hastings Union.

LEWIS, J. R., M.B., C.M., has been appointed Public Vaccinator of the Third District of the Barton Regis Union, vice Colman, resigned.

LIMRICK, O. E. B., L.K.Q.C.P.I., has been appointed House-Surgeon to the Liverpool Dispensaries, vice Bradley, resigned.

LOGAN, F. T. B., M.R.C.S.E., has been appointed Medical Officer for No. 1A District and the Workhouse Hospital of the Bedminster Union, vice Carter, resigned.

LUNDY, L. F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Sunbury District of the Staines Union.

MCCLELLAND, J., M.D., M.R.C.S.E., has been appointed Medical Officer of Health for the Toxteth-park Urban Sanitary District, vice Pendleton. £25 per annum.

MACEWEN, F. A., M.B., has been appointed House-Surgeon to the Alnwick Infirmary, vice Oliver, resigned.

OSBORN, W. H., M.R.C.S.E., has been appointed House-Surgeon to the Queen's Hospital, Birmingham.

PARTRIGE, M. W. C., L.R.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the Workhouse and the Meriden District of the Meriden Union, vice Adkins, deceased.

PULLIN, T. H. S., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Church-Stanton District of the Taunton Union, vice Mackey, resigned.

ROXBURGH, R., M.B., has been appointed Physician to the Weston-super-Mare Hospital and Dispensary, vice F. Gourlay, M.D., deceased.

SWEETING, R. D. R., M.R.C.S.E., L.S.A.L., late House-Physician to the London Hospital, has been appointed Medical Superintendent of Fulham Hospital.

SYSON, E. J., L.R.C.P.Ed., L.R.C.S.Ed., has been reappointed Medical Officer of Health for the Rural Sanitary Districts of St. Neots, Caxton, Arrington, and Stamford, for one year.

WHITFORD, W., M.D., C.M., has been appointed Medical Officer to the Fifth District of the Liverpool Parish.

WILSON, H. S., M.A., M.D., has been re-elected, for a further period of four years, Examiner in Anatomy at Glasgow University.

WILSON, W., M.B., C.M., has been appointed House-Surgeon to the Cumberland Infirmary, vice Beverley, resigned.

Births, Marriages, and Deaths.

BIRTHS.

ALDERSON.—On the 1st inst., at Southerton House, Hammersmith, the wife of F. H. Alderson, M.D., of a son.

ARMITAGE.—On the 29th ult., at Springfield-road, N.W., the wife of Joseph Armitage, M.R.C.S.E., of a daughter.

AVELING.—On the 3rd inst., at 14, Portland-place, Lower Clapton, the wife of Charles T. Aveling, M.D., of a daughter.

BROCK.—On the 2nd inst., at Clapham-road, the wife John Brock, M.R.C.S.E., L.R.C.P., of a son.

CHILD.—On the 2nd inst., at New Malden, Surrey, the wife of Edwin Child, M.R.C.S.E., L.R.C.P., of a son.

DOUGLAS.—On the 9th April, at Tapanin, Otago, New Zealand, the wife of T. Kennedy Douglas, M.B., C.M., of a daughter.

GOWERS.—On the 2nd inst., at Queen Anne-street, Cavendish-square, the wife of W. R. Gowers, M.D., F.R.C.P., of a son.

HUTCHINGS.—On the 3rd inst., at Southborough, Tunbridge-wells, the wife of Edward J. Hutchings, M.R.C.S.E., of a son.

NEWTH.—On the 7th inst., at Ardlin, Hayward's-heath, the wife of A. H. Newth, M.D., of a son, stillborn.

MARRIAGES.

FIRTH — OWEN.—On the 3rd inst., at the Church, Gordon-square, Charles Firth, F.R.C.S., of St. Giles-street, Norwich, to Cathleen Mary, second daughter of David Henry Owen.

MANNING—DIPNALL.—On the 3rd inst., at Christ Church, Newgate-street, Frederick Manning, Esq., M.R.C.S.E., of East Bergholt, Suffolk, to Helen Fanny, surviving daughter of the late Sidney Smith Dipnall, Esq., of Lewisham High-road.

SARELL—VARSAMI.—On the 24th ult., at the British Embassy Chapel, Constantinople, by the Rev. G. Washington, Chaplain to the Embassy, Richard Sarell, M.D., M.R.C.P., to Thalia, third daughter of Constantine Varsami, Esq., formerly of Glasgow.

DEATHS.

GREALY.—On the 1st inst., at Galway, Joseph Grealy, L.R.C.P.Ed., L.R.C.S.Ed., aged 24.

HARRISON.—On the 3rd inst., at Nicholas-street, Chester, John Harrison, Esq., J.P., F.R.C.S., aged 71.

HAWKINS.—On the 4th ult., on her homeward voyage from Australia, Ellie, the beloved wife of Howard Hawkins, M.R.C.S.E., aged 27.

HENRIQUES.—On the 5th inst., at Upper Berkeley-street, Dr. Amos Henriques, M.R.C.S.E., in his 69th year.

SAWYER.—On the 1st inst., at Cann, Shaftesbury, Harriet, the beloved wife of R. H. Sawyer, M.R.C.S.E., aged 33.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, June 10th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
June 4	29·84	N.	52	49	93	58	48	0·14	Overcast
,, 5	30·00	N.W.	53	49	94	63	40	..	Cloudy
,, 6	29·90	WNW	55	54	90	65	50	0·23	Raining
,, 7	29·64	W.	52	50	97	66	49	0·05	Raining
,, 8	29·82	W.	55	52	98	63	47	0·10	Cloudy
,, 9	29·82	S.W.	55	50	85	60	45	0·20	Hazy
,, 10	29·84	WSW	55	51	79	58	44	0·07	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE LANCET Commissions

ON WORKHOUSE INFIRMARIES,

ON SCHOOLS, and

ON WINES FOR MEDICAL PURPOSES,

are still willing to receive communications and letters containing information or remarks.

SEWER-AIR POISONING.

MR. WALTER BARBER, of Old Ford, has favoured us with the following notes of a recent case of illness following upon exposure of an old and particularly foul sewer, which, in the execution of his duties, the patient had had to enter. The day following that on which he had been at work in the sewer he complained of pain at the pit of stomach, and had great irritability of that organ. All food was immediately rejected; the tongue was coated with a very foul, ropy, blackish mucus, and was much swollen, as were the lips and gums; breath very offensive; pulse weak; temperature normal. He complained of aching in the limbs and general malaise. The next day the bowels were very relaxed, the motions at first extremely black and offensive, and at last little more than blood and slime. Vomiting of blood set in; the purging continued, the patient being very restless and delirious at night. He wasted rapidly, and finally sank on the twenty-first day of illness. From the fact of the sudden accession of the symptoms, and the temperature being at first normal, and throughout showing little tendency to rise, Mr. Barber concluded that the case was one of "blood-poisoning" from sewer-air rather than of the specific fevers.

Mr. Greenwood.—The paper will be inserted as early as possible.

HEALTH OF SANDOWN, ISLE OF WIGHT.

To the Editor of THE LANCET.

SIR,—A rumour being current that there is "a great deal of sickness at the Isle of Wight," and that "several cases of typhoid fever" have occurred, "one fatal case at Sandown," will you allow me, through the medium of your columns, to give an unqualified denial to such report as regards Sandown. The town is in its usual healthy condition. There has been no case of typhoid fever. The death-rate during the last ten years has averaged 14 per 1000 *including*, and 13 per 1000 *excluding*, visitors. For the last three years the death-rates have been 14, 14, and 11·3 per 1000 *including*, and 11·8, 10·8, and 10·6 *excluding*, visitors.

In the interest of the island generally, and of Sandown in particular, during the forthcoming season, I beg you will publish these facts and figures, which a discriminating public will find more trustworthy than such rumours as the one above mentioned.

I am, Sir, your obedient servant,

JAMES NEAL, M.D.,
Medical Officer of Health.

Sandown, I.W., June 8th, 1880.

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"RAILWAY SPINE."

IN the Queen's Bench, Dublin, last Saturday a dentist claimed £8000 damages from the London and North-Western Railway Company for injuries received in a collision at Holyhead last December. The medical evidence, as usual in these cases, was of a most conflicting nature, several surgeons believing that the plaintiff had sustained concussion of the spine; while others were confident that it was only a severe nervous shock, and that after a little rest and relaxation he would be as well as ever. The jury after a short deliberation returned a verdict for the plaintiff for £1750.

Mr. R. Williams.—1. St. Martin's-place.—2. Through any bookseller.

A HUGE CALCULUS: SUPRA-PUBIC LITHOTRITY.

To the Editor of THE LANCET.

SIR,—In your last issue, under the heading "A Huge Calculus," you make a reference to a case where the removal of the stone was effected by the adoption of the operation of supra-pubic lithotrity, published in an American medical paper. This constitutes, to my knowledge, the first record of the adoption of this method of performing the operation; and as the operation of supra-pubic lithotrity was first suggested by myself through your columns, I should feel gratified if the subject received the advantage of further notice and consideration. It is known to every surgeon that the usual method of performing lithotrity in some cases, if not impossible, at any rate is attended with great difficulties. It cannot be urged as a satisfactory objection the existence of danger of wounding the peritoneum, because we have it on good authority that the bladder may be reached in this position with ease without such an occurrence taking place, and it seems as far as that objection goes, under proper precautions and certain treatment, the peritoneum may be "cut, bruised, and damaged" with impunity, and without the results being of a bad character.

In conclusion, Sir, allow me to add to this brief communication, not with a sense of gratification, that there is a conviction existing in many minds that America, as compared with England, contains by far the sharpest set of bipeds. Your obedient servant,

Birmingham, May 29th, 1880. JOHN GODSON.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

AT the half-yearly pass examination for the Fellowship of the College, which was brought to a close on the 29th ult., there were nineteen candidates, all of whom, with one exception, were members of the College, the dates of their diplomas ranging from January, 1865, to April last. Unfortunately for them, eight candidates were rejected. The following were the questions on Pathology, Therapeutics, and Surgery submitted to the candidates at the written examination, when they were required to answer all the questions:—

1. Describe the changes which may be found in the spinal cord after death from injury to the spine.
2. Describe the structure, development, and course of the various forms of cystic tumours of the mammary gland.
3. To what causes may a rise of temperature, after a severe injury or operation, be due? Describe the circumstances which would influence your view of it in relation to diagnosis and prognosis.
4. What are the diseases which may cause obstruction of the nasal fossæ? How would you distinguish them from each other? Give the treatment you would adopt in each case.

A new feature was introduced on the present occasion. After performing surgical operations on the dead bodies, the candidates were again called into the theatre, and examined on Surgical Anatomy.

House-Surgeon.—The fullest description of the disease is contained in Erb's articles in Ziemssen's Cyclopædia.

Mr. J. Coutts had better put the question to his medical attendant.

Dr. S. Gee.—Thanks.

HOT-AIR BATHS.

To the Editor of THE LANCET.

SIR,—Having read in your issue of the 5th instant a notice on the above important subject, in which you make some reflections on the management and arrangements of a well-known Turkish Bath, and which is likely to prejudice strangers against these establishments, but to which your remarks do not apply, I feel sure that in the interests of justice, and to prevent any misconception, you will willingly allow me an explanation, through your valuable and influential organ, of the system adopted at the Grosvenor Turkish Bath: "A convoluted ribbed furnace, which supplies a constant inlet of pure hot air, having been previously purified before entering the ribs by being passed through crape to extract the carbon, and afterwards through lime to more thoroughly purify it. Around the floor of the hot chambers a series of ventilators are provided, connecting with the main shaft, which is brought direct from under the furnace, and the foul air is thereby completely consumed." As regards the treatment of bathers at this bath, it is a uniform practice to treat each person medicinally in accordance with his constitutional requirements.

In conclusion, I shall be most happy to be honoured with a visit by any member of the medical profession, and to afford him every information respecting the above valuable and efficient system.

I enclose my card, and remain, Yours obediently,

The Grosvenor Turkish Bath, Buckingham Palace-road, June 5th, 1880. B B.

SPECIFICS FOR DRUNKENNESS.

DR. C. W. EARLE, of America, has been examining the validity of the claim made in Chicago for chinchona as a specific for the cure of inebriety. The result of Dr. Earle's investigation, says the *New York Medical Record*, is that the chinchona treatment made more drunkards in the past year than any one liquor saloon.

NEURALGIA.

To the Editor of THE LANCET.

SIR,—Facial or otherwise, your correspondent, "F.R.C.S.," sayeth not. The following compound has served me well in obstinate cases of the former sort:—Chloral, five grains; iodide of potassium, three grains; compound liquor of ammonia, one drachm, in camphor water or infusion of gentian, three times a day, and once in the night if awake. *Fas est et ab hoste*, &c. Years ago there was a quack remedy of much local celebrity, sold as "anti-neuralgic drops." It consisted of iodide of potassium, half a drachm; compound liq. ammon., one ounce and a half, coloured with extract of gentian; dose, a teaspoonful three times a day. Opium in any form, in my experience, uncontrolled by belladonna, is bad in neuralgia, and even so a mere palliative, more or less distressing. Iron or strychnia, or both in combination, or, if alone, particularly the latter, I have found, when given in addition to the above, very powerful for good.

I shall be glad to learn some day, through your universal pages, the results of the treatment here indicated.—Yours faithfully,

June, 1880. M.D., F.R.C.S.

To the Editor of THE LANCET.

SIR,—I have found a combination of croton chloral and tincture of gelseminum very efficacious in acute neuralgia of the facial branch of the seventh nerve (if that is the region alluded to by "F.R.C.S." in your last issue); five grains of the former and fifteen minims of the latter given night and morning or three times a day, relief often follows five or six doses. The positive pole placed over the parotid gland and the negative to the terminal branches of the nerve from a battery of five or six cells also assists the above. Yours obediently,

Lewes, June 7th, 1880. J. G. BRADEN.

THE NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL SCIENCE.

THE Council of this Association has adopted the following resolutions submitted by the Health Committee:—

"This department recommends the Council to memorialise Government that, in order to lessen the evils resulting to health from the growth of suburban districts outside the boundaries of towns having urban powers, authority be obtained to bring both the districts within the boundaries of the town and the suburban districts, in every case, whatever be the nature of the local authorities, within the control of one sanitary authority, having urban powers; the central authority to have power to act for this purpose by provisional order; no application from any local authority being required. That this department, while unprepared to recommend at the present time an entire conformity of rural to urban powers, is nevertheless firmly of opinion that the distinction between them is maintained with serious disadvantage to the community in regard to the control of new buildings; and it would urge the Council to represent to Government the importance of giving to urban and rural authorities power to make building bye-laws relating to the same subjects: the bye-laws themselves to be adapted in each case to the wants and circumstances of the locality."

The Health Committee had also had under their consideration the question of new buildings, and they brought up the following resolution, which the Council confirmed:—

"That it be a recommendation to the Council that a memorial be presented to Government, praying in any further amendment of the law provision may be made for the better securing the healthy condition of houses before they are occupied, by enacting that no new building be occupied as a dwelling-house until the drainage and water supply thereof have been made and completed, and until a certificate have been given by a duly qualified person appointed by the local authority for those purposes that the same is fit for human habitation."

BLINDNESS IN CONNEXION WITH PREGNANCY.

To the Editor of THE LANCET.

SIR,—Mr. Power may wish to hear of a case of blindness which I found in a case of mine in November, 1874. The woman was in the seventh month of pregnancy. After retiring to bed she had a sudden rigor, followed by severe hæmorrhage. On my arrival I found a partial placenta prævia; but the patient was quite blind, and remained so for four days. After this she recovered the sight by degrees, and finally her vision returned to normal. Since then I have attended the same person in two confinements, and both were perfectly natural.

Yours truly,

Leamington, June 1st, 1880. JAMES THOMPSON, M.D.

GERMAN YEAST.

To the Editor of THE LANCET.

SIR,—Would you or any of your readers kindly inform me if there is any deleterious effect produced by eating bread made with German yeast? Yours obediently,

Lewisham, June 7th, 1880. M.R.C.P.

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STIMULANTS IN WORKHOUSES.

THE Committee appointed by the Bristol Guardians to inquire into the question of the consumption of alcoholic drinks in workhouses have sent in their report, which has been adopted. The Committee return the annual cost per hundred paupers for wine, spirits, beer, eggs, and milk in several unions as follows:—Barton Regis, £170 10*s.*; Nottingham, £165; Charlton, £144 14*s.*; Bristol, £138 14*s.*; Portsea Island, £133 4*s.*; Birmingham, £118 10*s.*; Bedminster, £109 8*s.* The Committee recommended that beer and other stimulants ordered for paupers acting as nurses be supplied to them only with their meals, that stimulants ordered for sick paupers be administered only by paid responsible officers, and that once a quarter the medical officer should reconsider every case in which stimulants were administered.

THE LATE DR. A. S. TAYLOR.

A CORRESPONDENT draws attention to the singular omission in all the biographical notices of this gentleman of any mention of the fact of his having been the recipient of the Swiney Prize, the second so awarded.

Mr. C. Glasier.—We have no special knowledge of the colony in question.

"EXTRACTING TEETH AND PUTTING THEM BACK INTO THE JAW."

To the Editor of THE LANCET.

SIR,—As one of those from whom you invite a brief expression of opinion upon the subject of the extraction and replacement of teeth, allow me to return the following remarks, which I may preface by the statement that I am aware that announcements have from time to time been made that the twofold operation has been favourably accomplished under various circumstances both in America and at home; but that until they are verified by the exhibition of one or more cases that have stood the test of at least a year's probation, the experience I have gained during a practice extending over a long period forbids my yielding credence to an affirmation at startling variance with the physiological laws bearing upon the subject, as at present understood.

The reports to which I allude do not relate merely to the restitution of teeth to their original position after manipulation, but bear evidence to the fact that there are practitioners amongst the home body who go so far as to advocate the insertion of foreign teeth from the surface of which all trace of the periosteum has perished, and which may, they further add, for convenience sake be kept ready for use in a dry bottle.

I do not hesitate to assert my own conviction that a tooth cannot be replaced after extraction under the most favourable conditions without the sequel of periostitis, which will differ in intensity according to the health and constitution of the patient, and, at times, involve grave complications, tedious in duration, and too varied in character to admit of enumeration in detail. When the conditions are unfavourable, as, for instance, if the tooth has been detached from the jaw sufficiently long to cause extinction of the vitality of the enveloping membrane, for which occurrence half an hour would, to the best of my belief, suffice under manipulative treatment, but one result may be looked for—viz., the expulsion by natural processes of what has now become a foreign substance. It is, of course, well known to me that there are instances in which teeth displaced by accident have been immediately, with infinite labour and corresponding suffering to the patient, reinstated, with results more or less permanently prosperous; but I do not consider a theory founded upon these exceptions sufficient to justify the extension of the practice without the warrant of necessity, and we do not yet know of any operation upon, or manipulation of, the structure of the tooth that may not be performed with perfect safety and ease to the patient without having recourse to extraction. The possibility of inserting in the human jaw a tooth which, in obedience to the same definite law of nature that determines that no two human faces should exactly resemble each other, must distinctly differ in one or more particulars from the predecessor whose socket it would be necessary it should fill with more than mechanical exactness, has never appeared to me to be worthy of serious consideration.

That John Hunter succeeded in transplanting a tooth fresh from its original locality to the head of a fowl is no proof that the same issue will be attained when the receptive organ is as dense as the process of the human jaw, instead of a tissue as vascular and capable of the rapid transmission of nourishment as that of which the comb of a cock is composed.

Permit me, in conclusion, to offer my best thanks for the opportunity you have afforded for the expression of individual opinion, and to join with yours my hope that it will be not without interest to the profession, and of benefit to all whom it may concern.

I am, Sir, yours faithfully,
W. DONALD NAPIER.

George-street, Hanover-square, June 7th, 1880.

To the Editor of THE LANCET.

SIR,—In reply to your invitation for opinions on the subject of replacement of teeth after removal from the jaw, I beg to offer you something of more value than an opinion—viz., a case in point.

A lady, while skating in the month of December last, fell heavily on her face on the ice. One of her upper incisor teeth (which happened to be rather prominent) was completely knocked out, the fang, a long one, being quite entire. Her husband, after raising her, picked up the tooth, cleaned and wiped it, and put it in his waistcoat pocket. A young lady who formed one of the skating party, hearing what had happened, came up and strongly advised the gentleman to put the tooth back in its socket. He did so with some difficulty, and the tooth is now, six months after the accident, firmly rooted and of its natural colour. About ten minutes elapsed from the time the tooth was knocked out until it was replaced.

The lady being a patient of mine, I can vouch for the accuracy of what I have stated. I am, Sir, yours truly,

Tenby, June, 1880. DOUGLAS A. REID, M.D.

To the Editor of THE LANCET.

SIR,—The invitation contained in your journal of the 29th ult. will doubtless call forth the opinions of many dental surgeons relative to the replantation of teeth, and probably the majority of them will allow that, while this operation is attended by a moderate amount of success in the case of healthy teeth accidentally dislocated, yet the percentage of failures would be sufficiently great to make the operation always one of doubtful result. The subject has on previous occasions been discussed in dental circles, and experiments have been tried, but from the absence of a more general adoption of the practice I should argue that it had been "weighed in the balance and found wanting." The fact of rupturing the vessels and nerves at the apex of the fang of the tooth is sufficient to render that tooth dead; its only source of vitality then being the intra-alveolar layer of the periosteum of the maxilla, and should it not unite with this it becomes a source of serious inflammation, leading perhaps to necrosis and exfoliation of the bone. I think, however feasible this operation may appear in theory, so many adverse contingencies surround its practice that it will not be extensively adopted till we can make success more certain in all cases.

I remain, Sir, yours obediently,

June, 1880. T. C. WHITE, M.R.C.S.

"MORE SEATS AND SHORTER HOURS."

Punch is always amusing, and often socially useful. We have great pleasure in quoting the following remarks from the issue of June 5th:

"*Mr. Punch* has, with much sympathy for the poor sufferers, been studying, in his excellent contemporary THE LANCET, some very painful revelations of the treatment of poor shop-girls, employed at the great Mercers', and Linen-drapers', and other marts for the sale of women's wares, or 'wears,' as the word should be spelt, so as to include both the garments of Lady-customers and the wear and tear of the shop-girls who serve them.

"When the cracking of a joke is likely to help the removal of an abuse, *Mr. Punch* is content to crack his joke and await the results. But this subject of seats and shorter hours for shop-girls, *Mr. Punch* feels to be quite beyond a joke.

"The thoughtlessness of the more or less fine Ladies—they are all alike—who, by their patronage without protest help to keep alive what is at once a petty torture on the strong, and a great sanitary evil for the weak, as well as the unfeeling greed of employers who sanction and superintend the torture, and perpetuate the evil for their own benefit, lie out of the pale of *Punch's* pleasantry. He can be angry over it, but not pleasant.

"Public opinion has been directed to the matter. Science has signalised the mischief, and insisted on a remedy. A country where humanity interposes on behalf of an over-driven cab-horse, will surely not go on suffering hard-working, weak, and defenceless girls to be driven to death with impunity."

Tapanin.—Our correspondent has been considerably overcharged. The amount due for the period mentioned should be £5 19*s.* 3*d.*

D.L.R.C.S., D.D.S.—We cannot insert communications from any but *medical* men.

Dr. Smith (Brussels).—The book must be forwarded in the usual way.

"THE TITLE OF 'DOCTOR.'"

To the Editor of THE LANCET.

SIR,—Referring to the fact that the College of Physicians of Edinburgh sometimes address some of their fellows and licentiates as "Dr.," I would beg to point out that this is a very different thing from such fellows and licentiates dubbing themselves "Dr." In the one case I take it to be a matter of courtesy, however overstrained; in the other, arrogance, on a par with that of the man whose only title to be called "Dr." is a bogus. Allow me also to point out that the licentiates of the Edinburgh College are not alone in fault: those of the London College are likewise guilty, and more so, inasmuch as that they ought to know better, having a special law against the perpetration of this peccadillo. Yours truly,

M.D., L.R.C.P., L.R.C.S., L.M.,
June, 1880. (all of Edinburgh.)

TREATMENT OF SPINAL MYELITIS.

To the Editor of THE LANCET.

SIR,—Will any of your readers kindly suggest a line of treatment for an obstinate case of spinal myelitis, accompanied with intense pain and hyperæsthesia of the skin and deeper parts? The patient is a plethoric lady, aged about sixty, and also the subject of diabetes. Belladonna, iodine, &c., externally have been tried, and internally codeia, belladonna, hyoscyamus, ergot, bromides, and iodides have been given with apparently no benefit. Yours truly,

June, 1880. S.

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THE INTERNATIONAL CONGRESS ON HYGIENE.

THE official programme of the arrangements of the forthcoming Congress to be held in Turin in August has been published. The co-operation of the officials of the town has been secured, and a grant of 10,000 francs has been voted towards meeting the expenses to be incurred.

W. J. T.—The brick-work should be removed and the earth immediately behind the brick-work, or, if there be evidence of leakage there, to the extent and somewhat beyond where the signs of leakage are apparent. Then fill up with good dry materials.

SALICYLATE OF QUINA.

To the Editor of THE LANCET.

SIR,—With reference to Mr. Jeffreys' question in your issue of June 5th, "whether salicylic acid or any of its salts has been used in gout, and with what success?" I would advise him to try the formula mentioned by Dr. Dearden, in THE LANCET of May 1st. Since then I have used it with perfect success. The dose to be taken every three hours.

I am, Sir, yours &c.,

Brimington, Chesterfield, DAVID BRADLEY, M.D., M.Ch.
June, 1880.

To the Editor of THE LANCET.

SIR,—May I ask through your pages what dose of the salicylate of quina Dr. Hewan employs in the treatment of rheumatic fever &c.? If he employs the salicylates in very minute doses, we may account for certain disparities between his conclusions and those of Dr. Greenhow.

Yours faithfully,

June 7th, 1880. M.D.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Peacock, London; Dr. Broadbent; Dr. Hughlings Jackson; Mr. F. Jordan; Mr. Wharton Jones; Mr. B. Browne; Dr. Bell, Bradford; Mr. Baber, Brighton; Mr. Mumby; Dr. Campbell, Garlands; Dr. F. de Chaumont, Netley; Dr. Neal, Sandown, I.W.; Mr. Thresher; Mr. J. N. Porter; Dr. Mair; Mr. A. R. Brown, Glasgow; Mr. J. Hadfield; Mr. Braden; Dr. Smith, Brussels; Mr. Beavis; Mr. Parker, Cork; Mr. Greenwood; Mr. Whitehead; Mr. J. Havers; Mr. Scott, Bromley; Mr. C. Wahab; Mr. Robertson, Buxton; Mr. Parnell, Forest-hill; Dr. Armstrong, Newcastle-on-Tyne; Dr. Sheen, Cardiff; Mr. Saunder, Manchester; Dr. Mason, Brooklyn; Mr. Barber; Mr. Stewart, Antrim; Mr. Darch; Dr. Glascott, Manchester; Mr. E. D. Gray, M.P., Dublin; Mr. Glasier; Mr. T. A. Mitchell, Catford; Mr. Workman, Reading; Miss Shakell; Mr. H. T. Wood; Dr. Gee, London; Mr. Morris, London; Dr. Elliott, Bristol; Dr. J. W. Ogle; Mr. Morton, New Brompton; Mr. Johnson; Mr. Hayman; Mr. Baker, Birkenhead; Mr. Carter; Mr. Hardwicke, Bury St. Edmunds; Dr. Nicholls; Professor Gamgee; Mr. J. Startin; Dr. Bowles; Mr. Bell, London; Mr. Gabb, Hastings; Mr. Tallack; Mr. Bennett, Liverpool; Dr. Tibbits, Bradford; Dr. More, Rothwell; Mr. Miskin, London; Mr. Davidson, Carlisle; Dr. Sangster, London; Dr. Carlyle; Mr. Hughes; Dr. Sigerson; Mr. Embleton, New Hampton; Mr. Osman Vincent; Messrs. Beadel and Co.; Dr. Dickson Hunter; Dr. Borck, St. Louis; Dr. Macleod; Mr. Banks; Dr. R. F. Weir; Dr. Bradley; Mr. E. J. Hardwicke; Mr. J. Howell; Mr. Dawson; Dr. J. Robinson, Rockfield; W. J. T.; Esperance; L.K.Q.C.P.I.; The Editor of the *Coffee Public-house News*; Vindex; Nauseous; M.D., F.R.C.S.; An Old Anatomy Lecturer; Surgeon-Major; Justice; House-Surgeon, Huddersfield; Public Orator, Cambridge; Flos; M.D., L.R.C.P. Ed., &c.; Bonâ Fides; M.D.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Atkins, Chichester; Mr. Wallace, Silloth; Dr. White, Bradford; Dr. Alderson, Hammersmith; Mr. J. W. Smith, London; Mrs. Bryden, Stockport; Dr. Glisson, St. George's; Mr. Coutts, Teignmouth; Mr. Whitfield, Hereford; Mr. Yate, Godalming; Mr. Shaw, Attercliffe; Dr. Douglas, Tapanin; Mr. Heywood, Pendleton; Mr. Everton, Birmingham; Dr. Gurdon, Hopton; Mr. Pickop, Blackburn; Mr. Sharp, Wigan; Mr. Saunderson. Burnley; Mr. Young, Bridgwater; Mr. Winder, Canterbury; Mr. Wilson, Eastbourne; Mr. Wall, Wigan; Mr. Robinson, Chesham; Mr. Hunter, New Seaham; Mr. Price, Wolverhampton; Miss Cobb, Manchester; Mr. Jennings, Newport; Dr. Moore, Grouville; Messrs. Struve and Co., Brighton; Mr. Gibbons, Edinburgh; Mr. Booth, Oswaldtwistle; A. B., Newcross; G., Wigan; M.; Dr. A., Silverdale; Cosmos, Exeter; R. W. C.; L.R.C.P., Brighton; Hector; K., Swindon; K. P., Huddersfield; Devon; W. H.; Beta, Edinburgh; G. C. H., Clapham; Alpha, Bradford; Questor, Hackney; Medicus, Chappel Ash; E. H. K. D., Woodside; Medicus, Liverpool; X. Y. Z., Over Darwen; J. P., Kensington; Medicus, Liverpool; Upsilon; E. F.; C. D., Liverpool; &c.

Blackburn Times, Bradford Observer, Students' Journal, Philadelphia Medical Times, La Independencia Medica, Chorley Standard, Colonies, Blackburn Times, Borough of Hackney Express, Wakefield Express, Midland Gazette, Los Avisos, Analyst, New York Medical Record, Boston Medical and Surgical Journal, Man of Ross, Colliery Gazette, Gazette Médicale de Strasbourg, &c., have been received.

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Medical Diary for the ensuing Week.

Monday, June 14.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND. — 4 P.M. Professor J. Hutchinson, "On some of the Surgical Bearings of Gout and Rheumatism."

Tuesday, June 15.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
STATISTICAL SOCIETY.—7¾ P.M. Mr. R. Price Williams, "On the Increase of Population in England and Wales."
EPIDEMIOLOGICAL SOCIETY.—8 P.M. Discussion on "Continued Fever in India."

Wednesday, June 16.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND. — 4 P.M. Professor J Hutchinson, "On some of the Surgical Bearings of Gout and Rheumatism."

Thursday, June 17.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, June 18.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND. — 4 P.M. Professor J. Hutchinson, "On some of the Surgical Bearings of Gout and Rheumatism."

Saturday, June 19.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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A. FÉRIS, Official Reporter.

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Clinical Lecture
ON
SOME EFFECTS OF BLOWS UPON THE EYEBALL.

Delivered in the Eye Department of St. Thomas's Hospital, Oct. 1879,

BY EDWARD NETTLESHIP,
OPHTHALMIC SURGEON TO THE HOSPITAL.

GENTLEMEN,—Severe blows on the eyeball by blunt objects are very often followed by dilatation of the pupil and paralysis of the accommodation. It seems that in many cases both the circular and radiating fibres of the iris are affected, since not only is the pupil somewhat enlarged (paralysis of sphincter), but the use of atropine fails to effect complete dilatation (paralysis of radiating fibres). It may be added that the pupil is often oval or subangular, instead of round.

It is not often that we have the opportunity of noting the interval between the blow and the onset of the symptoms referred to. In the case of an old man of seventy-one (Wm. W——), however, whom I saw within twenty minutes of a tipcat blow, I found the pupil inactive to light, and dilating incompletely to atropine. At his age paralysis of the ciliary muscle would of course be undiscoverable. Whatever may be the pathology of this condition, there is little reason to doubt that the paralysis or paresis of the ciliary muscle and iris usually passes away completely, for patients with uncomplicated traumatic cycloplegia seldom remain long on our hands. The symptoms, however, may be prolonged, and even permanent, as the following two cases show:—

CASE 1. *Mydriasis persisting three months after a severe blow on the eye.*—Henry W——, aged forty-six, was knocked insensible for ten minutes by the rebound of a piece of wood as thick as the wrist which he was chopping, the stress of the blow falling, as he believed, on the left eye. There was some swelling of the lids, but no "blackening" either of them or the eye. He had always considered the left the better eye. Two and a half weeks after the accident the pupil of the injured eye was considerably dilated, irregularly oval, and motionless to light; eyeball rather congested, and a patch of infiltration in the cornea. Myopia $\frac{1}{16}$; vision $=\frac{20}{70}$; accommodation not carefully tested. Right eye: myopia $\frac{1}{14}$; vision $=\frac{20}{50}$. No ophthalmoscopic changes in the injured eye. Six weeks after the accident the left pupil, still dilated, was now circular, and acting a little to light; and the eye showed no defect either of visual acuteness or of accommodative power, as compared with its fellow. At the end of three months the pupil had not altered from the last note; it was observed also that it dilated very little more when covered, whilst its fellow acted freely and quickly.

The next case was of considerable interest and importance, the question being whether the state of his eye was due to a former injury or was a sign of disease of the nervous system.

CASE 2. *Severe fist-blow on right eye, eleven years; enlargement of pupil and paresis of accommodation; doubtful symptoms of syphilitic disease of nervous system.*—Wm. S——, aged thirty-four, a very anæmic man, easily fainting, was sent over to me by Dr. Greenfield, for my report on the cause of the inequality of his pupils, the man having lately been an inpatient of the hospital for nervous symptoms of uncertain nature. Eleven years ago he had had a severe blow on his right eye by a fist. Both the pupils acted fairly to light, both together and separately; but whilst the left was of average size, the right was always nearly twice as wide. The accommodation was difficult to test since he was astigmatic, and the refraction differed in the two eyes; as, however, after allowing for this difference, he required a rather stronger glass for reading with the injured eye, the accommodation was probably affected. There were no ophthalmoscopic changes. Though he did not know how long the condition had been present, I thought the change in the pupil and accommodation attributable, with great probability, to the blow, since the signs of disease of the central nervous system were very obscure.

My object to-day, however, is more especially to draw your attention to another series of cases in which an injury, apparently of just the same kind, has an entirely different or sometimes an additional effect. I allude to the cases which have been described under the title of "Commotio retinæ," in which the defect of sight, sometimes temporary, occasionally permanent, caused by a blow, is accounted for neither by paralysis of accommodation nor visible intraocular hæmorrhage or rupture, and in which there are sometimes really no ophthalmoscopic changes. Berlin of Stuttgart was, I believe, the first to give a full account of the ophthalmoscopic changes and clinical and pathological characters of these cases. He disbelieves in "commotio retinæ" as the cause of the visual defect, and attributes the moderate amblyopia, which he states is usually noticed, to transient irregular astigmatism from changes in the form or position of the crystalline lens consequent on the blow. Immediately after the blow, according to Berlin, central vision is lowered from $\frac{1}{1}^{s}$ to $\frac{1}{15}$ or $\frac{1}{100}$. This is followed in an hour or two by a cloudy white opacity of some part of the retina, or sometimes of two separate areas, occasionally with minute hæmorrhages; this haze attains its maximum in twenty-four to thirty-six hours, and in from forty-eight to seventy-two has usually quite disappeared. The same changes were experimentally produced in the eyes of rabbits, and in these animals a layer of blood was always found between the choroid and sclerotic corresponding to the area or areas of retinal haze; the hazy retina was in a state of "simple acute œdema," with foldings and fissures running perpendicularly to its surfaces. His reasons for dissociating the failure of vision from the observed changes in the retina, and from their cause, the subchoroidal hæmorrhage, are—(1) that vision improves rapidly (to a certain point) within the first day or two, at the very time when the retinal opacity is still on the increase; (2) that this improvement does not afterwards keep pace with the disappearance of the visible retinal change, vision as low as from $\frac{1}{2}$ to $\frac{1}{3}$ remaining for some days after the retina has cleared; (3) he has seen a precisely similar defect of vision in two cases after blows, without the slightest ophthalmoscopic change, and therefore, as he supposes, without the occurrence of the subchoroidal hæmorrhage.

It appears to me, however, more probable that the changes in the retina (doubtless due, as Berlin states, to œdema with foldings and fissures of the rod- and cone-layer, and produced by the subchoroidal hæmorrhage) do, after all, furnish the true explanation of the failure of sight without appealing to traumatic changes in the lens. I am the more inclined to this view since in one of the cases I shall relate a temporary opacity of the retina, like that described by Berlin, with some amblyopia, was followed in three weeks by a definite patch of disease in another part of the fundus; although in the interval between the resolution of the primary retinal haze and the appearance of this patch the amblyopia persisted, during which no visible changes were present.

The first case of the so-called "commotio retinæ" that I saw was published in THE LANCET, Aug. 21st, 1875:—

CASE 3.—A man, aged thirty-seven, received a severe blow on his left eye from a lump of iron; ten days later vision (with H. $\frac{1}{15}$, corrected) $=\frac{20}{40}$; six months after the injury $\frac{20}{40}$ and 6 Jaeger, the other eye $\frac{20}{20}$ and 1 Jaeger; no ophthalmoscopic changes; eye believed to have been perfect until the blow. In this case there is no precise note as to the *character* of the defect of sight, but in the next case the notes and examination were much more complete.

CASE 4.—Master W——, aged fourteen, was sent to me by Dr. Bristowe on Oct. 1st, 1879, just fifteen hours after a blow on his right eye by the ferule end of a walking-stick thrown endwise across the room. The eye was congested and very tender, no abrasion of cornea, tension normal; vision $\frac{12}{20}$ and words of 3 Jaeger; pupil rather smaller than the other even in bright light, dilating very little when shaded, though expanding widely to one drop of atropine, but not quite round; iris looking healthy. Media clear; retina over a wide area in the lower outer part towards the periphery, quite hazy and whitish, the change being beneath the vessels, which consequently were preternaturally distinct. By the most careful estimation of the refraction, however, I was unable to prove that the whitened area was elevated (H. $\frac{1}{4}$ in all parts); slight doubtful haze of retina at yellow spot. Six days later (after leeching, ice, and confinement in the dark),

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eye not congested; the retinal haze described above has quite disappeared; at the yellow spot region just above and outside the fovea centralis, a small patch of doubtful change of the choroidal epithelium; vision (under atropine) $\frac{1}{100}$, H. $\frac{1}{10} = \frac{1}{10}$, + 10 = 6 or 8 Jaeger barely, and only at the sides of the page. He now told me that there was a mist over the middle of everything he looked at, and that if he looked at the middle of his finger he could not see it. On trial with two candle flames, the one at which he looked appeared duller than the other placed a few inches apart from it, but nowhere on the defective part was perception of light anything like abolished. With the perimeter the defect (scotoma) was easily mapped out; it was nearly round, of about 3° aperture, and almost central, its densest part being downwards and inwards from the fixation point—i.e., corresponding exactly to the little spot of doubtful choroidal change. The scotoma was only relative, nowhere absolute; within its area white looked very dull; red was invisible on its densest part, elsewhere on its area "reddish," beyond its area "bright red"; green was "bluish" on the densest part, elsewhere "greenish"; dark blue was scarcely visible on any part of the scotoma. A fortnight later (Oct. 21st) pupil remains larger than the other (as 4·5 mm. to 3 mm.), but circular and quite active (no atropine for fourteen days). Vision $\frac{1}{10}$ slowly, and words of 10 Jaeger slowly; the scotoma just covers short words such as "when," and in order to see he looks a little to his right of the object. The little patch of doubtful choroidal change at yellow spot has now become a well-defined white patch of the same size (? choroidal atrophy or deposit). On Nov. 19th (seven weeks after blow) vision $\frac{1}{12}$ slowly, and 1 Jaeger well; the scotoma still apparent as "a little white spot" if he looks for long at anything, and seen most easily when looking at distant objects. The pupil is still rather larger than the other; it acts well with accommodation, but dilates and contracts less actively to light than the other. The white spot of disease at the macula lutea is smaller, and is now quite bright, like a spot of fatty change in the retina; close to it the choroid is rather disturbed. On Dec. 18th (nearly three months after the accident) scotoma still apparent as a little white spot, or spot of mist, on the limb of a letter of 20 Snellen, seen at twelve feet. The spot of disease still present, but smaller; no disease elsewhere. He considers his sight perfect.

This case is instructive as a good example of Berlin's "commotio retinæ," typical both as to the early and widespread retinal haze and the rapidity with which this disappeared. It is also important on account of the gradual appearance, some days after the injury, of a very limited but perfectly defined ophthalmoscopic change (expressing itself subjectively by a corresponding patch of dimness in the visual field). Moreover this change occurred at a part of the fundus where the haze typical of "commotio retinæ" had never been present. Probably this spot of disease represented a little patch of choroiditis leading to exudation upon its inner surface, but whether set up by a subchoroidal extravasation or not remains doubtful.

CASE 5.—In September, 1876, I was asked to examine a policeman who was under the care of Mr. Brudenell Carter, my then colleagues at the South London Ophthalmic Hospital. About three months before he had received a blow on the eye by a stone. Between the disc and yellow spot were two small well-defined patches of superficial disease of the choroid, on which the epithelium was disturbed and partly removed. Though the case is incomplete, it may be placed side by side with those just narrated.

The next is a very good instance of uncomplicated "commotio retinæ" seen quite early, but of which the final state is not known with certainty.

CASE 6.—Joseph M——, aged nineteen, came to the Eye Department towards the end of last September, four hours after having received a blow on one eye by a portion of a large iron "nut," "about as large as two walnuts," which he was cutting out. Vision with the damaged eye $\frac{20}{200}$ and 10 Jaeger at from 3" to 9", an abrasion of the lowest part of the cornea not encroaching on the pupil, and a small non-perforating wound at the sclero-corneal junction; aqueous rather blood-stained; pupil partly dilated (4·5 mm.) and oval downwards, dilating fully to atropine; media clear; well-marked white deep-seated opacity of the retina over the lower half of the yellow-spot region, the vessels standing out by contrast with excessive distinctness; towards the fovea centralis (which was unaffected) the opacity was sharply defined, but towards the periphery it faded away quite gradually; the upper half of the yellow-spot region was natural; the hazy area was not measurably raised above the surrounding level. At the next visit (Sept. 23rd) the retinal haze was less marked, and a few days later it had further much diminished in extent. He did not attend again, and I have been unable to trace him.

I will conclude this lecture by citing some cases which were less completely noted, but were probably all instances of the same kind. As, however, none of them came under care until after the period assigned for the disappearance of the transient retinal opacity in "commotio retinæ," this point remains unproved.

It would seem that usually the damage to sight in "commotio retinæ" is but temporary, for the cases do not remain under care long, nor do we find them returning for advice long afterwards. But before we can pronounce with certainty it will be necessary that a larger number of cases should be carefully followed up.

CASE 7. *Blow by a piece of iron; defect of sight without changes.*—Ellen S——, aged forty; a week ago right eye struck by a piece of iron as large as half a walnut; the eye was red but not "black." On admission, Aug. 11th, 1877, eye irritable; vision: right, 6 Jaeger badly, p. 8" and $\frac{20}{40}$; vision: left, 1 Jaeger fairly, p. 8" or 10" and $\frac{20}{20}$. No change in cornea, aqueous, or iris; pupil and accommodation normal. No ophthalmoscopic changes (erect image), except rather pronounced white lines along the arteries on the disc, which were probably normal. Only attended once.

CASE 8. *Slight defect following a blow; doubtful haze of retina at yellow spot.*—Henry F—— (boy), severe blow on right eye by a stone eight days ago. On admission (June, 1877), complains that he sees "a skin" over everything with the injured eye; yet he makes out 1 Jaeger with it as well and at as short a distance as with the other (cannot read fluently); pupils equal and quite active.

26th.—Ophthalmoscopic examination (eye fully atropised), retina around yellow spot unusually grey and reflecting, but the appearance may be no other than the natural "halo" or "watered-silk" appearance so common in children. No later note. It is quite possible that the "skin" mentioned by this boy was caused by a central scotoma, slight in degree.

CASE 9. *Blow on eye, followed by a fixed musca (? central scotoma); doubtful ophthalmoscopic changes.*—Sarah W——, aged forty-five, struck her right eye with a stick ten days ago, and has since then seen "a little black thing like a bit of dirt floating at a distance from the eye." On admission (Aug. 13th, 1877), lower lid shows remains of ecchymosis. Vision: right, 2 Jaeger and $\frac{20}{40}$; left, 1 Jaeger easily and $\frac{20}{20}$ (*sic*). On ophthalmoscopic examination (after atropine) no opacity can be found by the most persevering search in the vitreous. Doubtful slight haze about yellow spot; refraction hypermetropic.

CASE 10. *Blow on eye; mydriasis and weakening of accommodation; defect of sight at first slight, but increasing a few days later.*—Susan A——, aged twenty-four. Severe blow by the fist on the right eye ten days ago. On admission (April 21st, 1875), there was ecchymosis of lids and of ocular conjunctiva at outer part; pupil wide; the outer part of the iris, corresponding to the ecchymosed conjunctiva, is greenish. Vision: right, 1 Jaeger at 12" only, and $\frac{20}{60}$; left, 1 Jaeger, p. 9", r. 12", and $\frac{20}{20}$. No opacities in vitreous.—28th: Sight of right much worse, and has had burning pain at the back of the eye. Pupil now of same size as left, and active. Vision of right only 18 Jaeger badly, and $\frac{20}{200}$, not improved by glasses. Ophthalmoscopic appearances (after atropine) normal. No later note.

ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.—The annual meeting of this society was held last week at the College of Physicians, and from the annual report it appears that there has been a falling off in the income and an increased number of applicants. The total number of applications for relief this year was 115, twenty of which were new ones, seven being from medical men, thirteen from widows, and two from orphans. The committee have allocated grants to the amount of £1165, which, together with £280 7*s.* 6*d.* of anticipatory grants, make the distribution of the year £1445 7*s.* 6*d.* Dr. Denham, in seconding a resolution, lamented the apathy of the profession in the provinces in respect of the Society, and suggested that in an Act dealing with medical matters a clause should be introduced to compel dispensary practitioners to subscribe to the Fund.

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AN INFECTIVE VARIETY OF TUBERCULOSIS IN MAN, IDENTICAL WITH BOVINE TUBERCULOSIS (PERLSUCHT).[1]

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THE observations which I am about to relate were made by me partly while looking on at, or informally taking part in, the post-mortem examinations at Addenbrooke's Hospital, and partly in the course of examining microscopically the material which I had collected from time to time from the various subjects examined. From six out of the eight cases referred to in the sequel, I have preserved, for microscopic examination, larger or smaller portions of the affected parts; it was not with any preconceived opinion on the nature of all or any of the cases that I preserved the specimens, but because they appeared to me, as they occurred one by one, to be pathological curiosities that would repay study. As the view that I am about to explain gradually developed itself, and came to include within the same category cases that I did not at first associate together, I found it necessary to authenticate my observations by reference to the notes of the cases, and I desire to express my indebtedness to Dr. Latham and to Dr. Bradbury for the free permission that they have given me to make use of the cases. The conclusion that I arrive at cannot but appear at first to be somewhat venturesome, and I fear that I must take the responsibility of bringing it forward wholly upon myself. The present communication is preliminary to a more detailed account, and contains only an outline of the facts observed. I am much indebted to Mr. A. Shann, house-physician to the hospital, for giving me access to his notes of the cases.

CASE 1.—C. P——, male, aged twenty-one, admitted April 14th, 1880, under Dr. Bradbury. History of cough and wasting for several months, and of dyspnœa for several weeks. Physical exploration of chest (details deferred) showed disease chiefly in left lung. After being thirty-six hours in the hospital he died suddenly. He slept quietly till about two or three minutes before his death; he suddenly began to gasp for breath, and died almost immediately.

Post-mortem.—The pulmonary arteries were searched for a clot, but none was found. The left lung contained a number of centres of disease, varying from the size of a walnut to the size of a pea; some of them were in the periphery of the lung, projecting on the pleural surface, others were in the centre. They were remarkable for their white medullary appearance. The centre of the mass was usually softened. In the base of the lung was an extensively excavated mass, into which a branch of the pulmonary artery appeared to open freely, although there was no appearance of hæmorrhage having taken place. The right lung contained only one mass, which was felt as an isolated nodule in the midst of the compressible lung substance; it occupied the hinder border of the lower lobe at its upper margin, and it was distinctly wedge-shaped, about an inch and a half long, of the same medullary consistence and colour as in the other lung, and softened in the centre. The spleen was very large, and the surface of it was covered with small flat white bodies of a pearly appearance, such as are sometimes described as occurring on the spleen, without any particular pathological significance being assigned to them.

CASE 2.—S. J——, female, aged thirty-eight, admitted March 13th under Dr. Bradbury. Had typhoid fever in August, 1879, and has never been quite well since. Now admitted for certain ill-defined abdominal symptoms (details deferred). There was great fluctuation between morning and evening temperature, the record on April 8th, for example, being 99·2° morning, and 104·5° evening. Acute tuberculosis was diagnosed. On April 19th she became much worse, the face becoming dusky, and the respiration rapid. Died on 20th.

Post-mortem.—Both lungs full of translucent miliary tubercles of a very small size. Small translucent tubercles on the pleura. In the lower lobe of the right lung there was a well-marked embolic infarct, wedge-shaped, about two inches long, and one inch and a quarter broad at its base on the pleura. It was quite firm and somewhat tough, not at all broken down, of dry texture, and brownish-yellow colour, not everywhere of the same shade. In the abdomen there was recent peritonitis, the intestines being glued together. The whole peritoneum was covered with an eruption of large flat nodules, up to the size of a split pea, sometimes confluent, most abundant in the right iliac region, where there were old adhesions. They contained minute points of black pigment. Recalling the fact of typhoid fever six months before, and that healed typhoid ulcers may have black pigment in the cicatrix, I referred the peritoneal eruption to that source, and proceeded to unravel the matted intestines, so as to examine the ileum. I found only two healed ulcers; one of them was of considerable size just above the valve, and another half an inch in diameter, about a foot higher up. The latter I kept for microscopic examination, and a thickening, partly in the floor of the cicatricial depression, but more to one side of it, has afforded very remarkable specimens. Both cicatricial depressions had minute points of black pigment in their extreme centre. The peritoneal covering of the liver and spleen was studded with the same large flat tubercles as elsewhere. Mesenteric glands not altered in colour nor enlarged.

CASE 3.—E. P——, female, aged seventeen, admitted on the 14th April, under Dr. Bradbury. Pulmonary symptoms since four months. On admission, physical signs of disease in lungs (details deferred); fluctuations between morning and evening temperature (e.g., 21st April, morning 100·8°, evening 103°); stupor, sordes, dry tongue, vomiting, delirium at night. Epileptiform fits on 17th and 21st. On the day before death, paralysis of left arm and leg; duskiness of face, and rapid respiration, preceded death on the 27th.

Post-mortem.—Body wasted. Left lung adherent, especially to diaphragm, its pleural surface covered with adhesions containing healthy translucent tubercles. The upper lobe was of a rose-red colour. In the lower lobe, near its upper and posterior angle, was a single well-marked wedge-shaped embolic enfarct, 1½ in. long, and 1¼ in. broad at base, of white medullary colour, into which a branch of pulmonary artery entered underneath the thin end. The wedge-shaped area of white substance was composed of a number of round masses, the size of peas or larger, touching each other. There was another whitish mass at the extreme base, where the lung adhered to the diaphragm. A number of small white masses, with round central space, as if lined by a membrane. The right lung contained only the smaller kind of nodules. The pleura was studded with minute nodules. The peritoneal surface of the diaphragm on the right side was the seat of a most remarkable eruption of large, flat, confluent, lobulated nodules, from the size of a split pea downwards. This eruption was more like that of tumour infection of the serous membranes. The same kind of flat nodules occurred in the peritoneum covering the back of the bladder, and in the parietal peritoneum of the right iliac fossa. On the broad ligaments and surface of uterus the nodules were smaller, more pearly and sessile. There was an embolic infarct in the anterior end of the temporo-sphenoidal lobe of the right hemisphere, yellow softening extending for a short distance on each side of the middle cerebral arterial branch. Miliary tubercles in the Sylvian fissure on both sides.

CASE 4.—A. T——, girl, aged eight years, admitted on the 22nd April, under Dr. Bradbury. Typical case of acute tuberculosis in a child; first signs of it five weeks before. Died on the 2nd May.

Post-mortem.—Large packet of caseous bronchial glands. Abundant tubercles on pleura, both pulmonary and parietal; the tubercles were white in colour, sessile, and even pedunculated. Both lungs were full of tubercles of unusually large size, and white medullary substance. At the right apex, a dense collection of white nodules, having the general outline of a wedge, with some lung-tissue within the outline not occupied by the white substance. The scattered white nodules appeared often to be perforated in the centre by a smooth-walled aperture. Tubercles on the surface of the spleen, and in the fissure of Sylvius.

CASE 5.—J. B——, male, aged forty years, admitted on the 9th May, under Dr. Bradbury. Pulmonary symptoms said to have existed for two years. On admission: face congested; tremors of the tongue and facial muscles; much prostration; frequent cough, with expectoration of very offensive purulent sputa. Evening temperature 104·2°; next

[1] Paper read at the Cambridge Medical Society, June 4th, 1880.

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morning 100°. Physical signs of lung disease on left side (details deferred). Before death, his dyspnœa increased much; face much congested; perspiration on forehead. Died on the 13th May.

Post-mortem.—Remarkable appearance in thorax. Bronchial glands formed a diffluent white mass, like the softer variety of lympho-sarcoma. Left lung firmly adherent; extensively œdematous; contained a number of gangrenous cavities, one of them (on the periphery) distinctly wedge-shaped; and, in the intervals between the cavities, the lung-tissue was occupied by a number of greyish nodules, of uniform size, as large as peas. I did not see the right lung, but the note is that it "contained a considerable quantity of caseous substance, just beginning to break down."

CASE 6.—J. B——, male, aged eighteen, admitted on the 6th March, under Dr. Latham. Five months before, he had to give up his occupation of baker on account of weakness and shortness of breath. During the last month the dyspnœa has been constantly present. Four days before admission he was obliged to take to his bed. Physical exploration of chest reveals disease on both sides (details deferred). Delirious next day, and picking the bedclothes. Died on the 8th.

Post-mortem. — The parietal pleura was thickly studded in parts with tubercles. A few adhesions at base of both lungs. Pearly tubercles all over the surface of the lungs; same on the spleen, but more distinctly pedunculated, and sometimes tongue-shaped. The peritoneal surface of the diaphragm was thickly covered with large flat nodules, exactly as in Case 3. Intestines showed no appearance of tuberculosis. The striking feature of the post-mortem examination was the condition of the portal glands. They hung down from the portal fissure as an extensive tuberous mass, about five inches long; the glands composing it were united by connective tissue, but they were rarely confluent; some of them were very nearly the size of a hen's egg. The portal vein (and the splenic and superior mesenteric before their junction) were closely involved in the growth, the glands appearing to grow into their walls. The substance of the growth was very firm, hard, creaking under the knife, brownish-yellow (like the embolic infarct of Case 2). This kind of substance occurred in each gland in the form of several round centres, separated by bands of translucent tissue, the whole being enclosed in a thick translucent capsule. There were several bronchial glands which presented exactly the same appearance of round yellowish-brown nodules, the size of peas, scattered through their black pigmented substance. Nodules, also the size of peas, and surrounded by a translucent thick capsule, in liver and spleen, along with smaller tubercles. Small tubercles in left Sylvian fissure. The condition of the lungs was like that of the next case, and will be referred to under it.

CASE 7. — T. C——, male, aged fifty-seven, admitted on Feb. 11th, under Dr. Latham. Quite well till seven weeks ago; then had quinsy. The throat was lanced by a surgeon, and a quantity of matter evacuated. Lost his voice at that time, and still speaks in a whisper. No cough or night-sweating, but has had sometimes shortness of breath. On admission there is no pain in chest or elsewhere, but constant slight dyspnœa. Temperature on two successive days: 101·8° morning, and 103·4° evening; 100·8° morning, and 103·8° evening. Before death severe dyspnœa. Death on Feb. 15th.

Post-mortem.—Both lungs firmly adherent all round. In the right lung a cavity the size of a walnut at the apex; the rest of the lung thickly studded with tubercles, small and translucent in upper part, opaque and becoming confluent at the base. The special interest centres in the condition of the left apex, which exactly resembled the condition in the corresponding apex of Case 6, and which is probably characteristic of the bovine disease. The lung was as if honeycombed with smooth-walled cavities from the size of a pinhead to that of a large pea or even a hazel-nut. To use a homely illustration, the lung resembled the substance of a crumpet. I at first took this condition for bronchiectasis; but the cavities are found to result from the central softening of large tuberculous nodules, the periphery of the nodules being formed of translucent and highly vascular tissue, which remains as a smooth membrane like the wall of a cyst. Solid whitish nodules of various sizes, up to that of a pea, were seated as if on the outer walls of the excavations, or in the lung-tissue between them.

CASE 8.—A. P——, female, aged eighteen, admitted moribund on Feb. 27th, under Dr. Latham. Died shortly after.

Post-mortem.—Body well nourished. The whole upper lobe of the left lung was occupied by one enormous cyst or cavity, on the inner surface of which there was not a trace of friable caseous substance. Its wall was compact like the wall of a cyst, and its inner surface was smooth or slightly granular, or finely trabeculated, and of a red colour, as if from blood. In the walls of the cyst and in other parts of the lung there were hard brownish-yellow opaque nodules from the size of a pea to that of a hazel-nut, sometimes slightly confluent, surrounded by a thick translucent capsule, and with lighter or caseous points in their centre. In the right lung, at the apex, there was a round cavity with a uniform inner surface, the size of a billiard-ball; its walls were of great density or firmness, creaking under the knife; a branch of the pulmonary artery appeared to end in its periphery. In the lung-substance round the cavity the same yellowish-brown encapsuled nodules as in the left lung. In the middle lobe of the lung the opaque nodules were smaller and more uniform in size, and at the extreme base they formed grape-like clusters. There were extensive pleuritic adhesions on both sides. On the surface of the lung there were a number of flat pendulous nodules, one of which, about three-eighths of an inch in diameter, was suspended by a piece of the adhesion, like a small medallion. Round the sharp margin of the right lower lobe there are a few small pleural nodules, partly fused into a cord, giving the margin a beaded appearance.

My contention is that these cases of tuberculosis are all of them cases of bovine tuberculosis; that they show the distinctive and specific characters of that disease in their pathological anatomy and are related to it in their etiology, and that they have precisely that relation to bovine tuberculosis which glanders in the human subject has to equine glanders. Bovine tuberculosis (*Perlsucht, Pommelière*) is a disease by itself, as much as glanders is. It is only from directing too concentrated an attention upon its histology that one would be led to conclude, with Schüppel,[2] that bovine tuberculosis is identical with the ordinary indigenous or autochthonous tuberculosis of man. It has well-marked distinctive characters,[3] which appear to me to be reproduced more or less in all the cases above related. I must content myself for the present with summarising in the briefest way what may be considered to be the salient features of the cases that I have grouped together, without attempting to make out the identity with bovine tuberculosis from point to point. The salient points I consider to be: (1) the occurrence of tumour-like embolic infarcts in the lungs; (2) the implication of the bronchial, or of the mesenteric and portal lymphatic glands; (3) the characters of the new growth in the wedge-shaped infarcts and round nodules (of various sizes) in the lungs, and its corresponding character in the lymphatic glands; (4) the characters of the eruption in the serous membranes, and its relative frequency; (5) the microscopic appearances; (6) the element of obscurity in the cases viewed as cases of ordinary or autochthonous tuberculosis; (7) special points in Case 2.

1. *The Embolic Infarcts in the Lungs.*—There can hardly be a doubt that the isolated wedge-shaped masses in Cases 1, 2, and 3 were due to blocking of terminal branches of the pulmonary artery; in Case 3 a block occurred also in the middle cerebral artery. The infarcts so produced had a certain definite structure of new growth, and the emboli that gave occasion to them must be held to have been emboli charged with specific properties. In Case 4 there was one wedge-shaped area, which included, however, some patches of uninvaded lung-tissue; in the other more uniform infarcts, it could be seen that they were made up of the confluence of several round masses. In Case 5 the infection was of a more intense kind, and the infarcts had the appearance of gangrenous cavities.

2. *The Condition of the Lymphatic Glands.*—The occurrence of a packet of caseous bronchial glands in a case of acute tuberculosis in a child (as in Case 4) is hardly calculated of itself to arrest the attention. But in Case 5, aged forty, the white medullary, and even diffluent condition of the bronchial glands, resembling a very soft lympho-sarcoma, was remarkable. Still more remarkable was the extraordinary appearance presented by the portal glands in Case 6. The mass, which I spent some time in dissecting, was unlike scrofulosis on the one hand, and unlike lympho-sarcoma on the other. It corresponded to the tuberous masses of

[2] Virchow's Archiv, vol. lvi. (1872), p. 38.

[3] See Virchow's Lectures on Tumours (French translation), vol. iii., p. 184.

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lymphatic glands found in bovine tuberculosis; the individual glands were some of them of very great size; they were joined together by connective-tissue, but the hollows between them were not so much filled up as in scrofula and lympho-sarcoma. The French name of bovine tuberculosis (*Pommelière*) is said to refer rather to the potato-like clusters of nodules that grow from the serous membranes; but the enlargements of the lymphatic glands seem to take on the same external form. A more reliable character is that each enlarged gland contains several distinct round masses (large tubercles). The implication of the abdominal and thoracic lymphatic glands is a well-known distinctive character of bovine tuberculosis.

3. *The Character of the New Formation in the Pulmonary Infarcts and Nodules, and in the Lymphatic Glands.*—Perhaps the most striking thing in the group of cases is the white medullary appearance of the lung infarcts in Cases 1, 3, and 4, and of the bronchial glands in Case 5. So far as colour went they might have been the softer variety of lympho-sarcoma; but they showed points of structure which lympho-sarcoma never shows. Virchow has remarked upon the resemblance, in some respects, of bovine tuberculosis to lympho-sarcoma. In Case 2, the solitary lung infarct was brownish-yellow, hard, and tough, and these were also the characters of the lymphatic glands (portal, mesenteric, and bronchial) in Case 6, and of the encapsuled round nodules in the lungs in Case 8. I believe the difference between the brownish-yellow and very hard formation, and the white medullary formation, to be that the former are products of a more chronic infection. The extreme degree of intensity of the infection is probably exemplified in Case 5, where the bronchial glands were diffluent, while the infarcts in the lungs resembled gangrenous cavities. Cretification, often observed in the bovine disease, was not found distinctly, but the nodules in Cases 2 and 8 were of extreme hardness, and I have observed in some of the microscopic sections the radial streaked appearance of the opaque brownish substance, which appears to indicate the approach of cretification.

4. *The Eruption on the Serous Membranes.*—It is from the character of the serous eruption that the German name *Perlsucht* is derived. Bovine tuberculosis has also been called "serous tuberculosis," from the frequency with which the peritoneum and pleura are implicated.[4] Cases 3 and 6 are remarkable for the eruption of large flat, confluent nodules on the diaphragm; Cases 4, 6, and 8, for the tendency to pedunculated nodules on the pleura. According to Virchow,[5] the breadth and the pedunculated disposition of the serous nodules afford a striking means of distinguishing the bovine from those of man. The appearance of short strings of pearls is well marked in the pleural nodules of Case 4, and the beaded appearance of the thin margin of the lower lobe is noticeable in Cases 4 and 8. Tubercles of the serous membranes that are large and flat, sessile rather than embedded, often in pearl-like rows, often pedunculated, and even tongue-shaped, apt to be associated with adhesions, apt to form on the abdominal surface of the diaphragm, and round the sharp margins of the lung, and in circumscribed patches elsewhere, may be said to be indicative of the bovine disease. The relative frequency, or the preponderance of the serous eruption, is also a differential point.

5. *The Microscopic Characters.*—In all of the numerous microscopic preparations that I have made of the pulmonary infarcts and large round nodules, of the lymphatic glands, of the serous eruption, and of the floor of the ulcer in the ileum (Case 2), I have found *giant-cells*, not only in enormous numbers, but also of the most exquisite forms. One is naturally familiar with the occurrence of these remarkable elements under many different circumstances both of health and disease. They are in themselves not distinctive, but it is worthy of note that it was in the bovine variety of tuberculosis that they were first described and figured by Virchow.[6] I have elsewhere[7] contended for the vaso-formative significance of these elements, and I think it is certain that such is their significance in the nodules of bovine tuberculosis. The nodules in the above cases are often surrounded by a remarkable circlet or wreath of numerous and wide bloodvessels, distended with blood-corpuscles; internal to this lies the peripheral zone of giant-cells. I believe that the bloodvessels are new-formed, and that the giant-cells are the agents of extending the vascular formation still further. It is by this means that the excavated centre of the nodule is bounded by a smooth-walled membrane like the wall of a cyst, giving rise to the remarkable and characteristic appearance of the lungs that might be (and has been) mistaken for bronchiectasis. Without the aid of drawings it is difficult to enter more into the details of microscopic structure. I must be content to say that the brief description of the distinctive microscopic characters of bovine tubercles given by Perls[8] corresponds with what I have generally observed in these cases, and most exactly with the appearances in the thickening near the healed ulcer of the ileum in Case 2. In general, it may be said that the bovine new formation, while it is by no means exempt from caseous necrosis, is better vascularised, more stable, and more like a vigorous connective-tissue formation than the corresponding indigenous product in man.

6. *The Cases otherwise unaccountable.*—In none of the cases, with the doubtful exception of the case in a child (Case 4), were the clinical facts or the appearances after death those of ordinary tuberculosis. Seven of these cases were in adults; there was, in none of them, caseous bronchopneumonia; nor were there spontaneous centres of caseation elsewhere; the lymphatic enlargements were distinctly not those of primary scrofulosis, for the round nodules within them contained the same structural elements (including giant-cells) as the serous tubercles. In the clinical history, dyspnœa was more or less constant as a symptom.

7. *Special Points in Case* 2.—In the case of the woman who had typhoid fever six months before, I could find only two healed ulcers in the ileum, the one near the valve being of considerable size. In and around the floor of the other there was a considerable thickening, which has yielded me the best specimens of the microscopic structure that I possess. That the serous eruption of the peritoneum spread from the centre in the ileum is almost certain, from the fact that it reproduced the minute specks of black pigment in the intestinal cicatrices, according to the mimicry of infection. A doubt is suggested whether the disease six months before was really typhoid fever; and that doubt would extend to certain other cases, or groups of cases, supposed to be typhoid, and more particularly to the remarkable group of four cases recorded by Dr. W. H. Spencer.[9] I do not doubt, after reading Dr. Spencer's cases, to which my attention was directed by Dr. Bradbury, that the outbreak in the industrial school, of which they formed the fatal contingent, was not an outbreak of typhoid, but one of bovine tuberculosis.[10]

Of the eight cases related above, four were in females, and the four males were of various occupations (baker, labourer, falconer). The patients came from various parts of town and country. It is probable that a special intensity of the virus and predisposition in the individual are in most cases necessary for the establishment and development to any considerable extent of the bovine disease in man.

At the International Congress for Hygiene, &c., held at Brussels in 1877, Professor Virchow spoke as follows:[11]—"In conclusion, I would briefly direct attention to a question much ventilated in Germany at present—viz., in how far one of those diseases which we have hitherto regarded purely as a spontaneous disease of the ruminant animals—I mean bovine tuberculosis *(Perlsucht)*—is a communicable disease, and, indeed, a disease communicable to man. If this were the case, it would follow that sanitary regulations should be directed against this disease to a much greater extent than hitherto. It has, in the first place, been determined, by the inoculation upon other animals of substances from animals that have died of *Perlsucht*, that the disease may be communicated exactly in the same way as in the inoculation of tuberculosis. On that point there is in Germany no longer any doubt.[12] A further question is, whether, by the partaking of substances coming from a tuberculous *(perlsüchtig)* animal, similar, and, in fact, tuberculous, diseases may be induced in man. This question divides itself into two main points—in how far such an infection may arise from the partaking of flesh; in how far through milk."

So far as I am aware—and I rely on the statement of

[4] Virchow, loc. cit. [5] Loc. cit., p. 189.
[6] Archiv., vol. xiv. (1858), p. 47.
[7] Journal of Anatomy and Physiology, vol. xiii. (1879), p. 183.

[8] Lehrbuch der Allgemeinen Pathologie, 1877-79, Bd. i., S. 399.
[9] Bristol Royal Infirmary Reports, 1878-1879.
[10] See also Dr. Spencer's additional case at page 36.
[11] Address reprinted in his Gesammelte Abhandlungen aus dem Gebiete der Oeffentlichen Medicin, 2 vols. Berlin, 1879. Vol. ii., p. 627.
[12] See Gerlach, Virchow's Archiv., vol. li. (1869), p. 290.

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Professor Virchow, in an address on this subject made a few weeks ago to the Medical Society of Berlin—no series of cases have yet been described as cases of specific and distinctive bovine tuberculosis communicated to man. It is as such that I regard the above cases. I say "specific and distinctive bovine tuberculosis" *(Perlsucht, Pommelière)*, and I am not concerned to maintain, according to the conjecture of Klebs, that any other variety of tuberculosis in man is referable to that extraneous source.

It may be convenient also to take the present opportunity of pointing out that the above observations give no countenance to what is called the "parasitic" theory of an infective disease. The bovine disease in man reproduces, on the whole exactly, the morphological features of the disease in the cow. When it comes to be a matter of conveying somewhat special and even complex morphological features—as distinctive as the pattern of a wall-paper or a carpet,—it is in the juices and particles of the tainted animal that we must suppose the contagion to reside.

FURTHER HISTORY OF TWO CASES OF CEREBELLAR DISEASE, TOGETHER WITH NOTES OF A THIRD CASE SIMILARLY INDUCED BY A FALL, AND COMPLICATED BY INCIPIENT HYDROCEPHALUS.

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A CLINICAL lecture on two cases of cerebellar disease occurring in children, and in each instance as a result of a fall upon the occiput, was reported in THE LANCET of Aug. 17th and 24th, 1878. One of these cases has since terminated in complete recovery, and the other in death, mainly owing to the sequential development of chronic hydrocephalus; and as both of them are, from different causes, of rather exceptional interest, I now propose to supplement the account which has already been given by some additional notes.

Concerning the elder of the two children, Jessie J——, aged ten years, not much requires to be said. The symptoms in her case were of an acute and urgent character throughout the earlier stages of her illness. She began to suffer almost immediately after falling over a flight of ten stairs, when she struck the occiput and the lumbar spine principally. The symptoms consisted chiefly of occipital pain, uncontrollable paroxysms of sickness, fits, gradually failing sight till nearly total blindness was produced, and a staggering gait followed by almost complete powerlessness. These symptoms attained their maximum severity from the sixth to the ninth month after the accident. In reference to this time, the notes already published say: "About the middle of October, and thence onwards to Christmas, she became decidedly worse, and it was scarcely considered possible that she could recover. The pains and sickness were most obstinate. The sight became much worse. She could not stand at all for some weeks, and for a time she could not sit up, or even raise her head from the pillow." In the month of January, 1878, she began to improve, and continued to do so steadily in all directions, so that she left the hospital on April 8th with her sight greatly improved, able to use her hands as well as ever, and walking fairly well, though still having a staggering and abnormal gait. As late as July in the same year, her gait was still unnatural, but she was practically well in all other respects. Her mode of walking is thus described:—"She treads overmuch on her heels, keeps her legs well apart, reels slightly, and occasionally brings the feet down quickly. In fact, she walks in some respects as a person does on the deck of a vessel, in a rather rough sea. There is, however, no giddiness even when the eyes are closed."

When last seen, a short time since (March 13th, 1880), this child, now twelve years old, was convalescent from an attack of typhoid fever which had confined her to bed for six weeks. She had been "up and about" only for the last two weeks. She walked across the room quickly with a slight and scarcely appreciable unsteadiness, and according to her father's account only rarely showed any tendency to stumble. Her sight was good for all ordinary purposes, and she could read and work like other children. Optic discs were now of almost normal colour, and seemed natural, except that the outer margin of the left was a little indistinct.

The view originally taken as to the nature of this little patient's cerebellar disease was thus expressed:—"The history and mode of onset make it seem most probable that in Jessie J—— some slight traumatic or concussion lesion occurred at the time of the accident, and that gradually some irritative or sub-inflammatory change was set up at the original seat of lesion (whether this was a mere superficial bruise or some internal small extravasation of blood), which finally led to the production of a small abscess. After a time its increase was checked, and after a still longer time (coincident with the great improvement in the patient's condition about last Christmas) its contents began to be absorbed. Now, we may have a mere shrunken cyst-like cavity, and it is to be hoped that in time the last symptom of disease may disappear, and the patient's mode of walking may again become quite natural."

This, therefore, is an interesting example of complete recovery from an affection of the cerebellum, which was so severe that for weeks a fatal result seemed almost inevitable.

The younger child, Ada B——, aged five years, presented from the first symptoms of a more chronic order, which have since gone on to a fatal termination. Here an autopsy enabled us to verify the original diagnosis, as to the existence of a tumour in the middle lobe of the cerebellum. This child fell backwards off a rather high table, about the end of March, 1877, and thus struck the occiput severely. No immediate symptoms were produced except a certain "dulness of manner," for the first week or two, and this was followed after a month by startings in sleep, and transient attacks of vertigo during the day. These objective and subjective signs were succeeded in a few weeks more by frequent attacks of morning sickness, with occipital and cervical pains. Eight or nine months from the time of the accident, weakness in walking and a staggering gait began to be noticed, together with a slight indistinctness of speech—the attacks of sickness and occipital pain continuing. This child did not suffer from fits of any kind, nor was her sight noticed to be affected till about fourteen months after the accident. At this time she was found to have double optic neuritis; her sight thereafter gradually became worse, and the neuritis slowly gave place to an atrophic condition of the discs. Under treatment with iodide of potassium and cod-liver oil this little patient decidedly improved in almost all respects, as was shown by the last of the already recorded notes on July 18th. This improvement lasted about two months, when she again began to suffer more from some of the old symptoms, together with increased weakness; and shortly afterwards, on Oct. 9th, 1878, she was admitted into the National Hospital for the Paralysed and Epileptic under my care. From this date some notes concerning the further history of her case are given; and these, as the sequel shows, correspond in time with the progressive development of ventricular dropsy (or chronic hydrocephalus), occasioned by the increase in size of a tumour in the middle lobe of the cerebellum.

On admission careful notes were taken of this child's condition by the then resident medical officer, Mr. A. E. Broster, which are here given almost in full.

Present state.—Does not complain of headache; says she feels quite well. The mother says she has been complaining of pains in her right thigh (cried about it, and asked to have the thigh rubbed), but she has not done so since admission. Occasionally when moved, and often when lying at rest, cries on account of pain in her neck. Very restless by night, and seems to perspire profusely. Occasionally during the night screams as if in pain; she may scream three or four times in one night, and then go a whole week and not do so. Her mother does not think she has lost flesh; mental condition appears to be perfectly clear. Special senses: Sight dim, but is able to distinguish a watch, a penny, and big letters. She also recognises people, and apparently as well with one eye as with the other. As far as can be ascertained, she suffers neither from hemiopia nor from diplopia. No paralysis of muscles of eyeballs. Slight nystagmus. Pupils large, equal, and sluggish. Ophthalmo-

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scope shows atrophy of discs after neuritis. Smell, taste, and hearing not appreciably affected, and common sensibility seems good in all parts of the body. Speech drawling, or low and whining at times, but when playing with other children she talks quite freely. Moves both arms equally well; dropping of both wrists, especially of right. Grasp of hands fair and equal. Manages to sit up in bed with very slight assistance, but is not very firm when in that position, and seems unable to support her head. (The nurse says that in dressing or moving the patient about she falls more to the *left* than to the right side.) Able to move both legs when lying. Is unable to stand by herself; her legs collapse under her at once. No rigidity, except of ankle-joints, which require force to be fully flexed. Feet usually occupy position of talipes equino-varus, but can be put by pressure into natural position. No ankle clonus. No vomiting; appetite good; bowels regular; heart and lungs apparently healthy. Temperature normal.

Oct. 22nd.—No vomiting; no pain in thigh since admission; occasional pains in back of neck.

Nov. 19th.—Vomited once; pain in neck and thigh (the left), relieved by rubbing. Not the slightest power of standing. If held moves legs as though for walking, but does so on her toes. Right leg seems weaker than the left. Very doubtful if she sees at all. Appetite very good. Seems rather more cheerful, but on the whole no distinct improvement since admission. (Had been taking from Sept. 6th on to Nov. 9th one drachm of cod-liver oil night and morning, and the following mixture:—Seven grains of iodide of potassium, half a drachm of solution of bichloride of mercury, ten minims of compound tincture of lavender, and half an ounce of infusion of calumba, three times a day. On the latter date, as her gums were a little red and tender, the solution of bichloride of mercury was omitted. The iodide of potassium was taken regularly till Dec. 10th, and then discontinued.)

Jan. 17th, 1879.—Has not been sick since last note. Occasional pains in neck, especially when moved. No pain in thighs or elsewhere. Is totally blind. During the last six weeks head has been increasing in size (very gradually). Its circumference measures twenty-three inches. It is pear-shaped with the large end posteriorly, the maximum breadth being in the hinder part of the parietal region. The sagittal and the coronal sutures have slightly opened, and the anterior fontanelle can be easily distinguished.

Feb. 17th.—Very irritable of late; drowsy; frequently wishes to be moved. Complains of pains in the legs, especially the right. Frequent desire to micturate. Some incontinence of urine and fæces. She is utterly helpless, lies on back with hands turned up on her chest. Wrists drop equally, and to marked extent. Uses hands feebly to nurse her doll, left more than right. Legs straight down, ankle-joint fully extended; some inversion of feet. (On Feb. 10th circumference of head was twenty-three inches and a quarter.)

March 20th.—No change except that for some time she has not complained of pain anywhere. Position as before. Appetite exceedingly good. Sleeps well. Answers slowly but correctly, usually in a whining tone, a marked interval between each word. Iodide of potassium mixture again resumed after a long interval, in which citrate of iron and salines had been taken. On March 29th circumference of head was twenty-three inches and a half.

April 14th.—Vomited after breakfast this morning. No retching. Was as usual afterwards.

18th.—Pains in head all day. No sickness. Cried much and would not eat. Circumference of head still twenty-three inches and a half.

20th.—Spoke to resident medical officer as usual in the morning, saying she was "very well." Pupils equal. Afterwards became very drowsy. At 3 P.M. convulsions commenced, at first very slight, but gradually increasing in severity.—3.30 P.M.: Face flushed; pupils unequal, the left being much contracted; oscillation of eyeballs, especially right; much dyspnœa; breathes rapidly four or five times, then holds her breath, during which her *left* hand is convulsed; at other times almost tetanic rigidity of both arms; wrist flexed to right angle and fingers turned into palm of hand; both legs stiff, ankles extended; feet almost in straight line with legs, soles slightly turned in; is restless and extremely distressed; answers when spoken to in the slow manner previously described; swallows well.—5.30 P.M.: Unconscious; eyes wide open; convulsive movements gradually becoming more extensive; both arms now affected; legs apparently not convulsed; pupils still unequal, rather more so than previously, left contracted almost to pin-point size; face slightly cyanosed; breathing stertorous, shorter and more rapid.—6.15 P.M.: Breathing slower and getting gradually shallower; spasm of limbs relaxed; no convulsions; face pale; eyes wide open till death, at 7 P.M.

(To be concluded.)

"CHANGE" AS A MENTAL RESTORATIVE.

By JOSEPH MORTIMER-GRANVILLE, M.D.

(Continued from p. 909.)

CASE 2.—B. was about five-and-thirty years of age, but prematurely old. He had ample means for his personal requirements as a bachelor, and good expectations, but no settled or earnest purpose in life. He was educated without any view to personal activity, and, though a man of excellent parts, had never achieved permanent success in any enterprise, because, on his own confession, he lacked a motive to prosecute any undertaking beyond the point at which it chanced to become irksome or ceased to inspire interest. He was a lounger in life, less from idleness than from what he and his friends believed to be a "constitutional" inability to engage in any serious occupation, unless impelled by impulse, or excited by some strong liking for the special enterprise; he was emotional and enthusiastic, but of late had lost all zest for existence, and, after a career of somewhat refined dissipation, he had become moody, and fears were entertained for his sanity, so jaded was he mentally and physically, and so completely had he ceased to feel, or show himself capable of the ordinary exertions which even a life of pleasure in society demands. He had been recommended "change," and had spent two years in dragging a weary round of the too familiar centres of fashionable social activity, without benefit. Indeed, he reported himself rather the worse than the better for being incessantly on the move. It seemed to have added restlessness to his previous *ennui*, and unless something was done for his amendment his friends feared, and he himself at times appeared to apprehend, a disastrous ending. There was no indication of physical disease, and no complaining except of insufferable mind-weariness and an oppressive powerlessness to find relief or satisfaction in anything. A fastidious appetite would seem to have been the last source of daily excitement, but even that was beginning to lose its influence as a mental stimulant. He had not even the energy to be an epicure.

The folly of prescribing "change" vaguely, or merely as *change*, in a case of this class must be evident. Nothing can be more unreasonable than to recommend a man who is perpetually on the move to seek change, unless indeed his migrations have become too automatic and his life too rhythmical. Some experiences which seem to be full of change are, in fact, as monotonous as the music of a barrel-organ, and a traveller always on the road may be the subject of mental depression from want of excitement! What would be excitement to others is dull routine to him. The case before us is not one of this sort, but it would manifestly have been absurd to recommend change for a man of pleasure who was ever on the wing, flitting here and there in search of some new mental stimulant. Such a man lives on mental stimulants, and though there might be danger of collapse, should he be compelled to remain in one place during a lengthened period, there is no prospect of serving him by sending him again on his travels. The *rôle* of change as a mental restorative has been played out so far as the cure of such a sufferer is concerned. The physician must find a new way of stimulating his vital energies, and with a view to achieving this difficult feat it will always be necessary to study the mental experience of each individual case of the class very closely before determining on a plan of treatment. It is useless to send a man mountaineering if he has no enterprise; it is idle to drag him round the picture-galleries of Europe if he lacks or has lost interest in art; to make him gaze on beautiful or

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grand scenery if he has no imagination; and it is cruel—I can use no other term—to send him to loiter at places of fashionable resort when he dislikes society; or to wander through Switzerland when he inclines to feed his melancholy in solitude. These are the stock varieties of "change," or familiar forms of prescription, used, for the most part capriciously, because some virtue is supposed to lie in the bare fact of change. It is to ask reconsideration of this mode of prescription I am writing. I do not deny that there are cases in which rapid movement from place to place may prove stimulating to the centres of vitality. Sometimes a "fixed idea," or what threatens to become one, may be, so to say, shaken out of the mind by a process of mental jolting, but such cases are few, and for one patient benefited by this treatment many are injured.

Change is, as a rule, of small value to the loungers in society. They have, for the most part, exhausted the remedy before they seek advice; but if anything can make travel useful to a patient of this order, it will be a sufficiently long tour in a district where the daily experience includes a series of petty annoyances, great enough to rouse the dormant energies, but not so serious as to stir the mind to unhealthy anger, or induce it to abandon the enterprise in disgust. Instances are not wanting of men and women who have been saved from drifting into hypochondriac stupidity by the minor inconveniences of hotel life and locomotion—common thirty years ago all over the Continent. The "change" which consists exclusively in an alteration of the surroundings will not prove restorative in a large proportion of cases, inasmuch as the evil it is designed to cure does not lie in the life of relation, but much deeper. No mere change in the apparatus or the arrangements of the outer life and surroundings can suffice, because the malady does not consist in any derangement of ideas or misdirection of energy, but, as in the last case we considered, though from a different cause, it lies in the fact that the centres of mental, and therefore of vital, energy are dormant, and the remedy must be one that, so to say, reaches through the environment and acts directly on the springs of life.

The feeling of mind-weariness of which a patient of this class complains, and which makes him long for "rest," is either the fatigue due to nerve-weakness and the debility of inertia, or it is the exhaustion produced by straining and effort to do work which ought to be natural and effortless. It is one of the disadvantages of an enthusiastic temperament that it works by impulse. Great spirit is thrown into a congenial occupation, so long as it continues to please, but anything which does not inspire interest is either avoided or quickly abandoned. Bad training, which teaches boys to do what "they like," and leave what they "have no taste for," instead of making the business of life a duty, and the discharge of duty—work for its own sake—a primary object, intensifies this evil where it exists, and creates it in temperaments which are naturally free from it but readily fall into a bad way of working from motives of selfishness. Thus it comes to pass that the interest a man feels in an occupation is the measure, and only the sufficient stimulus, of his energy. When, from any cause, interest flags or the attention is diverted by circumstances, the ordinary business of life becomes irksome, and there arises a need for effort to compel exertion. Nothing wears, irritates, and exhausts the mind like this. It is not the work on an uncongenial task that does mischief; but the consumption of energy in self-persuasion which ought to be devoted to the work in hand; and the amount of moral coercion which needs to be applied to the refractory consciousness by the supreme will or conscience, all because the individual has habituated himself to work by impulse and only when he feels an interest and has an object that inspires. This is the real cause of many a breakdown.

The change a man like B. requires is one which will stir a deeper spring of energy than has yet supplied him with motive-force, by compelling his recognition of the *responsibilities* of life. It is idle to hope that he can be roused to action by the discovery of a new pleasure. Better face the fact that this stimulus to exertion has lost its efficacy. The energies of such a character are more likely to be called out by pain and necessity than by pleasure and satisfaction. In the case of A., the true centres of energy had passed into a state of drowsiness from the subsidence of a legitimate interest in work and duty. In that of B. these centres can scarcely be said to have ever been aroused. Impulse rather than energy has been the source of his motive. It was impossible, therefore, to revive any old associations; there are none to which dormant energies could cling. The emotional part of man's nature lies, if I may so say, more on the surface than that with which judgment and conscience are concerned. It is more dependent on the surroundings. If these are of a sort to stir the sympathies or excite the passions, the nature is readily moved—all the more readily because it is only the surface of the pool which is being stirred, and the agitation whence springs the motive-force of this movement will subside as soon as the external stimulus is withdrawn, or the first effect of novelty has been exhausted, or another excitant has commenced to act. This is why emotional and impulsive persons are, as a rule, what is called fickle in their likes and dislikes. Their joys and griefs, their loves and hates, their purposes and ambitions are short-lived, and as these are almost their only sources of energy, the motive-force of enterprise or action, though strong while it lasts, is quickly spent. They are, in a very practical sense, "the creatures of circumstance," for the environment is the positive, and their superficial characters form the negative part of the circuit through which the energy courses. Up to a certain point in the history of a case like that of B. it is possible to rouse and control the mental system through the surroundings, and change is therefore of temporary value; but a point is sooner or later reached at which all practicable sources of external motive are exhausted, and then *ennui* supervenes. There is, however, always the hope in a case of this class that, by some expedient, the underlying centres may be reached, and that, if this can be accomplished, a new energy—the true energy of life and motive-force of character—will be stirred.

When we are asked, or it occurs to us, to prescribe change for a case like this of B., it is necessary to cast about for the means of carrying out two obvious indications—first, to provide a new set of surroundings; second, to stir, or seek to stir, a deeper motive. Many a man of pleasure who has reached this dead-point in his life has been saved by the loss of a fortune and the creation of pressing need for personal exertion. This remedy is, of course, beyond the reach of the physician, but in so far as it may be possible for him to supply an urgent incentive to action, it is his duty to do so. It is generally too late to win the sufferer to an active career in life; and it is difficult to find employment which will call out the energy of a man who can at any moment retire before a difficulty without humiliation or distress. The poor and friendless *must* persevere or he will suffer loss and disgrace; the rich incur no penalty by desertion, and they are never friendless. The aim must be to search for some inherited seed of ambition or enterprise which has never yet germinated. In this difficulty a study of the ancestral history stands the physician in good stead and may suggest a curative remedy. This is a point of interest to which I am particularly desirous of drawing attention. Instead of simply recommending "change" for change sake to the *ennuyé*, it is the duty of the physician to grope through the top-lumber of a character such as that we are studying, for some impressionable spot in the underlying nature. The story of a father's or grandfather's life will often furnish the clue to the discovery of a latent source of energy, and suggest the means of arousing it. If this search is wisely prosecuted, the change prescribed may be so formulated as to stir the energies of the inner life when the patient least expects such a result. He may be sent, without assigning a motive, or even taking the friends into one's confidence—always a perilous proceeding—to some scene, or on an expedition, which shall bring him suddenly into close relations with the same class of stimuli that once incited the nature he has inherited to vigorous action. Such a plan of treatment involves trouble, great painstaking, and judgment, but all these will be well requited if the patient is rescued from a fate that overtakes too many cases which are not thus closely studied.

B. was cured—I use the phrase advisedly—by the awakening of a strong passion for the breeding of stock which he had inherited from his grandfather, but which had not been aroused in his nature, and probably would never have been if he had not been thrown into circumstances which excited, almost provoked him to emulate the success of a neighbour. His father had no such interest in the subject, and was surprised when a son of whom he had seen little and from whom he expected less—though his heir—returned from a short excursion seriously and earnestly bent on trying a great experiment. A very similar case, in which no such awakening of energy occurred, and where the *ennui* was untreated, being regarded as beyond relief, put

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an end to his existence, almost philosophically, and with the feeling that life was played out; a form of "temporary insanity" which humanity may deem it expedient to recognise, but science must repudiate, or—more charitably—ignore.

(To be concluded.)

DESCRIPTION OF A

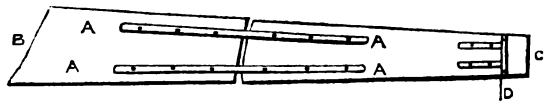
SPLINT FOR TREATMENT OF CONTRACTED KNEE-JOINT.

BY NICHOLAS GRATTAN,

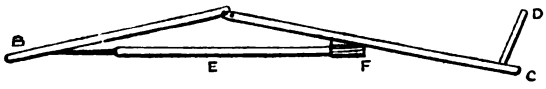
SURGEON TO THE COUNTY AND CITY OF CORK HOSPITAL FOR DISEASES OF WOMEN AND CHILDREN.

IN treating cases of disease of the knee-joint amongst my poorer patients, I have often found a difficulty in procuring a suitable extension apparatus. In the hope that it may supply a want which has doubtless been also felt by other surgeons, I send a detailed description of a splint with which I have lately treated most successfully a very intractable case of knee-disease and contracted tendons at the Children's Hospital.

This splint can be made by any ordinary mechanic, at a cost of two or three shillings. It consists, as may be seen by the diagrams, of two concave splints, joined by strips of tin riveted to the splints on their concave surface; a foot-piece attached by strips of tin, and an arrangement underneath by means of which the splint may be brought to any angle.



Upper concave surface, right leg.



Side view.

B, Short concave thigh-splint. C, Long concave splint for leg to rest on. D, Foot-piece. A A A A, Tin strips joining short concave thigh-splint, B, to long concave splint, C. D, Foot-piece, which is joined to C by tin strip; these strips are firmly fixed to timber by copper rivets. E, a piece of timber sufficiently long to extend from centre of splint, B, to centre of splint, C; it is joined to B by a strip of strong tin, riveted to it; it is not fixed to C, but at F there is a projecting piece of tin, with edges turned down, riveted into the splint, C, in which the piece E is free to glide, or it may be fixed by means of a small pin at any angle which may be found necessary.

The thigh- and leg-splints having been accurately measured, they must be riveted to the tin slips, the foot-piece and the extension-piece must then be attached. The splint having been properly padded, should be carefully bandaged to the patient's foot, leg, and thigh, care being taken not to cover the projecting piece, F, with the first bandage, or the extension-piece, E.

To extend the leg all that is necessary is to roll a second bandage over the knee, up the thigh and down the leg, which will include the piece E, pressing it against the piece C at F.

This careful bandaging will be found to produce slow and steady extension of the contracted joint.

THE Adulteration of Food and Drugs Act has recently been adopted in Forfar, and two convictions have already been obtained. The first culprit was a milkman, who was fined £5 for selling milk diluted so as to consist of eighty-five parts of water; the second, a butterman, was fined a like sum for selling butter adulterated to the extent of seventy-five per cent. with foreign fat.

REPORT OF THE HISTORY OF A FAMILY, THREE MEMBERS OF WHICH ARE THE SUBJECTS OF PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS.

BY MILNER MOORE, L.R.C.P. LOND., M.R.C.S.,

SURGEON TO THE COVENTRY AND WARWICKSHIRE HOSPITAL.

THE family consists of nine members—namely, father, mother, and seven children; five being boys and two girls.

T. S——, the father, is a tall well-built man, aged thirty-six. He married when he was twenty. Had acute rheumatism eight years ago, which has left no cardiac complication. He has had a fistula in ano for the last four years. Breath-sounds at both apices are harsh, but he has no cough, and his body is well-nourished. His father died at seventy-eight, his mother at seventy-six. Three brothers have died: one, aged fifty-six, from apoplexy; one suddenly (no cause assigned), at forty-five; and one after acute rheumatism. One sister only, who had hip-joint disease, and died in childhood.

A. S——, the mother, is an anæmic-looking, pock-marked woman, aged thirty-eight. She had small-pox when four years old. Married at twenty-one, and has had nine children born alive and one miscarriage. Her last two children died: a boy at one year and nine months, a girl at eight months—both of "convulsions." Mrs. S—— now suffers from "queer feeling" in her head and giddiness, and menstruates profusely every three weeks. She presents no physical signs of chest affection. Her father is alive, aged seventy. Her mother died of cholera, aged forty. Two sisters died of consumption, one at thirty, and the other at twenty-four years of age. Three sisters are alive and healthy, and have families of boys, who are likewise healthy.

The children are: Joseph, aged seventeen; John, fifteen; William, twelve; Abraham, ten; Mary Ann, eight; George, seven; and Lizzie, six.

John, Abraham, and George have the disease above-named; the other four are healthy, strong children.

John, aged fifteen, when eight years old began to have difficulty in getting up from the ground, placing his hands upon his knees and helping himself to the erect posture; his calves were large and his back concave. He has gradually lost the use of his limbs, and has not walked for four years. He now presents a miserable appearance, being pale, wan, emaciated to the last degree, and terribly distorted. The lower extremities and body are perfectly helpless, the feet being extended and turned inwards, the ankles being anchylosed and immovable, and the knees lying, the convexity of one in the concavity of the other, in a useless and flaccid manner. The spine is curved with the convexity to the right, and the left costal cartilages are indented permanently from pressure against the arm of the chair in which he sits. He can use his forearm and hands, but has great difficulty in moving the upper arm, the forearm being first fixed to obtain, as it were, a fulcrum for the arm. The flexors of the fingers are fairly strong, and he can grasp objects, and just manage to feed himself. He can also write a little and amuse himself with a book. At times he has great difficulty in keeping his head erect, and it will, when he is moved from his usual crouched position, suddenly drop upon the edge of the chair or table. He micturates twice daily (in twenty-four hours) and defecates daily, or once in two days. The spine cannot be straightened. The signs of puberty are present, and the genital organs large.

Abraham, aged ten, has been gradually developing the disease for the last three years. He is now a stout-looking, fresh-coloured boy, well-nourished and intelligent; his calves, flexors of thigh and buttock, are very large and firm; when sitting in bed an observer would suppose that nothing ailed the boy, but he cannot do more than raise his head and arms out of the seat of a chair after he has been placed prone upon the ground; then the concavity of his back becomes remarkable. Wherever he touches his thighs a red blush appears within a few seconds; the same phenomenon occurs in other portions of his body when gentle pressure is applied. He occasionally has nocturnal incontinence of urine.

George, aged seven, is the last who has developed the

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disease; his symptoms began two years ago, and do not seem to have increased rapidly. He can run about well unless he come to a step, as from the road to the pavement, when he has to help himself up by placing his hands upon his knees; so also when rising from the ground. He, however, soon becomes tired after walking, and wishes to be carried after the first half mile. His back is only slightly curved. Under the influence of arsenic and bi-weekly applications of the constant current he has undoubtedly improved during the five months he has been under observation, while his brother Abraham has as certainly become more helpless.

It would appear that the last recipient of the disease may have had a weaker germ present at his birth, which does not tend to so rapid and fatal development as in the two previous cases. Perhaps the treatment may have arrested its progress!

Coventry.

A CASE OF
COMPOUND COMMINUTED FRACTURE OF THE SKULL.

BY W. J. MERLIN, L.R.C.P. EDIN., L.F.P.S. GLAS., &C.

HARRY B——, aged nine, was kicked by a horse, July 24th, 1879. When called in I found slight wound of the scalp situated about an inch directly below the right parietal eminence, through which some brain matter was protruding. On probing I found a distinct perforation of the skull. At this time the boy was in a semi-comatose condition. He recognised no one.

Seeing that the symptoms of compression were becoming more and more evident, I determined to enlarge the superficial wound. This I did by means of a crucial incision through the seat of injury. My assistant, Mr. Dennis Donovan, administered the chloroform. On reflecting the integuments, &c., I found four pieces of bone lodged in the brain; these I removed with a pair of ordinary sequestrum forceps. I then elevated a piece of depressed bone into its place through the opening already made in the skull. The rough edges were then rounded off, and the integuments brought together and united by means of silver sutures. Ordinary dressings, steeped in carbolic lotion (1 in 40), were then applied. The bandages over the wound were ordered to be kept wet with a carbolic lotion of the same strength, and ice was applied to the head. It is to be remarked that after recovering from the effects of the chloroform administered before the operation the boy was completely sensible, and recognised his mother and sisters. The dressings were removed and reapplied once a day, antiseptic precautions being taken.

The boy had symptoms of 'meningitis for the first few days; these, however, subsided, and everything was going on satisfactorily until the patient was allowed to tear off his bandages and reopen the wound. After this a good deal of the integument sloughed away, leaving a raw granulating surface. Dressings steeped in carbolic lotion were still applied, and in addition a pad of gutta-percha was placed over the wound to exert pressure. Soon after this the patient seemed to take a turn, and went on improving steadily. By the middle of October the granulations were entirely covered with a new skin, and the boy was going about as well as ever. The gutta-percha pad had been discarded, pressure being kept up with strapping and a bandage.

The pieces of bone removed from the skull when put together cover an area of a square inch and a half.

It is worthy of note that for a month after the operation the boy's memory had entirely left him; then he began to remember everything, and shortly afterwards returned to school.

P.S.—It is now near a year since the accident occurred. The little fellow is in excellent health, and getting on well with his schooling.

Sutton, Cambs.

MR. JOHN VANCE, late medical officer for the Plaistow District of the West Ham Union, has received a superannuation allowance of £30 per annum.—Mr. T. T. Smart, lately medical officer to the Bedminster Union, has been granted a superannuation allowance of £80 per annum.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

DIPHTHERITIC LARYNGITIS; TRACHEOTOMY; RECOVERY.

(Under the care of Dr. COUPLAND and Mr. LAWSON)

FOR the following notes we are indebted to Mr. J. Hartley, physician's assistant:—

James P——, aged six years, was admitted on May 30th, 1880. He was a slender, delicate-looking little boy, with prominent forehead and a small face. When seen in the out-patient room he was sitting on his mother's knee with livid face and blue lips, gasping for breath. Cough was frequent, faint, and laryngeal; voice almost reduced to a hoarse whisper; respiration accompanied by audible wheezing. The head was thrown back, and he uttered an occasional feeble cry; there was much retraction of soft part over episternal notch, jugular fossæ, epigastrium, and lower intercostal spaces, and even of the lower ribs themselves, during inspiration. Temperature 98·4°; pulse small and quick. On auscultation, wheezing sounds were heard all over the chest, apparently communicated from trachea; no moist sounds. Some slight tenderness over the larynx; no exudation to be seen on fauces or tonsils. Two-drachm doses of ipecacuanha wine were given at a few minutes' interval; vomiting followed without relief.

About an hour after admission the child was put under chloroform; but even when fully under its influence the wheezing and recession continued. Tracheotomy was then performed by Mr. Lawson. The division of one or two superficial veins was followed by free bleeding, which was controlled by pressure forceps. A transverse incision was made through the deep fascia over the cricoid cartilage, and the isthmus of the thyroid with the thyroid veins was drawn down by blunt hooks, and the trachea freely exposed. An incision was made through the two uppermost rings of the trachea, the dilators passed in, and a feather pushed down the trachea and rotated. This brought out a small fragment or two of thin membrane. A Durham's tube without the inner cannula was then fixed in; the breathing soon became quiet, and the child fell asleep. No blood entered the trachea.

The patient was then placed in a bed without curtains in a separate ward at a temperature of 65°. A spray of sulphurous acid was generated in the room from an ordinary steam spray apparatus every three or four hours. The child's hands were tied down to the sides of the bed to prevent his snatching at the tube. It was ordered that a feather be used when there is any whistling in the tube. Feather to be moistened with a solution of bicarbonate of soda.

About six hours after operation temperature was 100°. Patient had vomited two or three times after operation, but had slept quietly during most of the time. The face was a little flushed; no lividity; no recession of lower spaces.

He coughed up a little viscid mucus through the tube occasionally; nothing given through the night except ices.

31st.—9 A.M.: Air making a slight whistling sound in its passage through the tube. Tube removed; much inspissated mucus cleared from its inner surface.

At 4 P.M., breathing had been less easy for two hours, and there was slight recession of the lower intercostal spaces; also some whistling in the tube. Tube removed and found to be free. A dilator being passed into the trachea, the child coughed violently, and expelled a large thick mass of greyish-white membrane (an inch by half an inch) through the wound, apparently a part of a cast of the trachea. The breathing then instantly became easy, and the tube was again replaced. There were now a few grave rhonchi over the back, but no moist sounds. Urine: sp. gr. 1025, acid, no albumen.

June 1st, 9 A.M.—Temperature 98·4°. Had slept well. Breathing quiet; no whistling; no retraction. Noon: Slight whistling and retraction and more cough; tube re-

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moved and tracheal wound opened by dilators. A considerable quantity of mucus and some shreds of membrane expelled. Breath sounds clear over chest. At 7 P.M. and 11 P.M. the tube was again taken out and much mucus, but no membrane, expelled.

After this the tube was removed three times each day, and much mucus but no more membrane was coughed up.

On June 3rd, temperature 97·2°. The tube was removed; on placing a finger over the wound it was found that the child, after one or two struggles, could breathe freely and speak tolerably clear. The tube was therefore withdrawn, but instructions were given that it should be replaced if any dyspnœa came on.

On the 5th, temperature 97·8°. The child still coughed up a good deal of viscid mucus, part of which came through the mouth. Patient had more colour and appeared brighter and stronger. Edges of wound cleaning. The child breathed without any distress when the wound was stopped by the finger. He also filled his chest perfectly and spoke naturally.

On the 12th he ate and slept well. The tracheal wound was quite closed and the superficial one was rapidly filling up. Voice only very slightly hoarse.

It may be added that the child did not appear quite well on the day before admission, but still was running about and playing. In the middle of the night before admission he awoke with a hoarse cough and blue face and struggling for breath. For a few minutes he looked as if dying. Poultices were applied with some slight relief. He became greatly worse shortly before being brought to the hospital at 1 P.M.

Remarks by Mr. LAWSON.—The favourable result of tracheotomy in this patient is probably due to a combination of causes. In the first place, the operation was performed at an early stage of the disease, before any large amount of false membrane could have been formed. The symptoms, however, were well pronounced; the breathing was impeded and was rapidly becoming worse, and the epigastrium and hollows above the clavicle were forcibly drawn in with each inspiration. Secondly, the treatment which I advocated in the last volume of the "Clinical Transactions" was carried out. Only a single tracheotomy tube was used, so that as much space as possible was given for the free entrance of air, and the opening of the tube during the whole treatment was left uncovered. The tube was removed twice or three times a day, and a clean one inserted. The object in removing the tube was to allow of the escape of the accumulated secretion or false membrane through the wound, which it is almost impossible for the child to eject through the tube. Each time the tube was removed the wound in the trachea was held opened with Trousseau's dilator, and thus the escape of the secretion through the wound was facilitated. No curtains were placed round the bed. A bronchitic kettle was kept on the fire and a little steam was thrown into the room, but it was not allowed to come near the child. Every three or four hours for the first three days a spray of sulphurous acid was generated from an ordinary steam spray apparatus for about ten minutes. An even temperature of from 65° to 70° was maintained in the room. The windows in the adjoining room were opened as required, to keep the temperature within the range prescribed. The tube was removed on the fifth day. Thirdly—and not the least important part of the treatment—the child was intelligently nursed. Mr. Hartley, the physician's assistant, was most zealous in his attention, and aided by two excellent nurses, every turn in the child's favour was secured. The case was undoubtedly diphtheritic without any pharyngeal exudation whatever being present.

Another child from the same house is now in the hospital with the same affection, and has had tracheotomy performed by Mr. Morris, and is progressing favourably. Unfortunately one of the nurses who attended the child kissed him on the mouth, and she is now suffering from the disease.

HOSPITAL FOR SICK CHILDREN,
GREAT ORMOND STREET.

CASE OF DIPHTHERIA; TRACHEOTOMY; RECOVERY.
(Under the care of Dr. GEE.)

FOR the following notes we are indebted to Mr. J. A. Kempe, late senior house-surgeon.

William E——, aged seven years, was brought into the hospital on the afternoon of Sept. 15th in a state of extreme dyspnœa. He had been ill for a fortnight, but previous to this had always been considered delicate (as his mother described it, "weak at the chest,") and on September 10th he lost his voice. On the 14th, however, he had eaten and swallowed well, but in the evening the breathing was difficult, and on the following morning the symptoms became so urgent that his mother sought for medical advice.

On admission tracheotomy was at once performed by Mr. Kempe, and a silver tube inserted; but it was not until some time after the operation that the child was sufficiently restored to admit of his being removed from the operating theatre into the ward. This condition was probably due to the lungs being engorged with venous blood, and to the poisoning of the nerve-centres, not to the effect of chloroform, of which but very little, practically none, was administered. Eventually the child was restored by artificial restoration and other means, and put into a tent bed, no provision being made for moistening the inspired air with steam. A mixture containing iron, quinine, and chlorate of potash was given; stimulants, brandy, and strong beef-tea were freely administered, and a Siegle spray containing a weak carbolic solution (1 in 80) was applied to the throat.

On opening the trachea at the time of the operation, no membrane, but some thick mucus was expelled. An examination of the throat revealed a good deal of thick, yellowish-grey membrane hanging about the fauces, tonsils, and back of the pharynx. There was no nasal discharge.

Next morning (the 16th) the temperature was 99·4°. He had had a quiet night, but early in the morning a large piece of thick, tough membrane was coughed up. During the afternoon some more pieces of membrane were expelled. Urine did not contain albumen. There were no abnormal physical signs in the chest beyond a little mucous râle at both bases posteriorly. Evening temperature 101·6°.

On the 17th the temperature was 100·4°. At 6 A.M. the patient was much distressed, and became very blue. A feather was passed down the tube, and by this means, aided by the coughing efforts of the child, a large and very thick piece of membrane was expelled, rather more than an inch long, but without distinct bifurcation. This was followed by great relief. There was a good deal of swelling on both sides of the neck around the tube; the skin was red and very tender. Urine contained a slight trace of albumen. Evening temperature 101°.

On the 18th the temperature was 100°. Blebs formed on both sides of the neck, and the swelling was increased. Respiration was easy and quiet, and the child's general condition was much improved. Evening temperature 100·4°. Probably the swelling in the neck was the result of the free use of sinapisms before admission.

On the 19th the temperature was 99·4°. The blebs on the left side of the neck had burst, and underneath there was a raw surface, not coated with membrane, but secreting abundant yellow, rather offensive pus. The swelling was less. At 10 30 A.M. the tube was removed (a little discoloured), and the wound, which looked fairly healthy, was covered with a thin pad of carbolic gauze. At noon the breathing had become difficult, so a soft Baker's tube was inserted.

On the 20th the neck was much better, and the swelling less. The membrane had disappeared from the fauces, tonsils, and back of pharynx. The tube was taken out, and the wound left open. The voice, though weak, was natural. At 6 P.M. the soft tube was reintroduced, merely to insure safety during the night. Next day the tube was removed altogether. On the 25th the child was allowed to get up. The wound was granulating healthily.

From this date to the time of his discharge to the Convalescent Hospital at Highgate (October 30th) no unfavourable symptom occurred. The wound healed rapidly, and the urine, which at no time during his illness showed more than a trace of albumen, became normal.

On November 4th he was readmitted for a slight attack of tonsillitis; but from this he quickly recovered, and was discharged on November 10th.

Remarks by Mr. KEMPE.—This case is interesting as showing, that notwithstanding the expectoration of a large quantity of membranous casts from the trachea after the operation had been performed the child made an excellent recovery. In the treatment no attempt was made to soften the membrane, nor to prevent its formation by "spraying" down the tube solutions of soda or lactic acid, nor were the trachea and larynx energetically brushed either at the time of, or after, the operation [the tube was, of course, always kept clear by a feather], and no steam for moistening the inspired air was used. The silver tube was omitted on the

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fourth day after the operation, and a soft tube inserted for twenty-four hours. On the fifth day the wound was left open; but at night the soft tube was reintroduced, and on the sixth day the tube was altogether discarded.

The age of the child was probably in his favour, likewise the fact that he had eaten well the day before his admission, but the extreme urgency of the dyspnœa, slowness of coming round after the operation, and the expulsion of so much thick membrane through the tube rendered a successful issue as unexpected as the recovery was complete.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Reports of Committees on Congenital Disease of Scalp and on Keloid.—Acute Hysterical Vomiting due to Displacement of Uterus.—Acquired Hypertrophy of One Limb.

THE concluding meeting of this Society for the session was held on May 28th, Dr. E. H. Greenhow, F.R.S., President, in the chair. Two committees presented reports, and many communications were read, some of them in abstract.

The following cases were exhibited:—Right Hemiplegia and Left Anæsthesia, following Scarlet Fever, by Dr. Barlow; Congenital Malformation of the Ear, by Dr. Allen Sturge; Epispadias, by Mr. Bryant; and a large Pigmental Mole (on the inner side of the thigh of a woman aged twenty-one), in which the papillæ were markedly hypertrophied, by Dr. Radcliffe Crocker.

The report of the committee appointed to investigate Dr. Radcliffe Crocker's case of Congenital Disease of the Scalp was read by that gentleman. The committee having seen the case, and having, owing to the child's subsequent death, had the opportunity of examining some of the affected skin, have arrived at the following conclusions:—That the disease had not materially altered in size or development since birth. That though the family history afforded no corroboration there was some evidence in the child of congenital syphilis. No connexion between the lesion and syphilis was, however, demonstrable. That the microscope showed diminution in the size of the papillæ, absence of air-bulbs and sweat structures, and increase of the fibrous tissue of the corium, bands of which passed between the lobes of the sebaceous glands, and sometimes completely separated them from the rest of the gland, while in other cases the lobes were still connected together, but fibrous septa passed up between them, and produced a distinct racemose appearance. The glands, as a whole, were abnormally large. The committee thought that this might, perhaps, be due to an intra-uterine inflammation of the corium, which led to a proliferation of the fibrous tissue, the atrophy of the air-bulbs and sweat structures, and the development of the fibrous septa between the lobes of the sebaceous glands. Whether this inflammation was specific or not there was not sufficient evidence to show. The report was signed by Jonathan Hutchinson, Dyce Duckworth, Robert Liveing, and H. Radcliffe Crocker, hon. sec.

Dr. Goodhart presented the report of the committee appointed to investigate a case of Keloid. The committee conceived the case exhibited at the Society one correctly designated keloid, the tumours presenting all the characters of the disease. The patient has been twice examined by all the members of the committee at an interval of five months, and frequently in addition by Dr. Goodhart. As a result of the varied observations, the committee conclude that the keloid growths are all slowly changing and disappearing. The committee drew up a series of questions to guide in gleaning information as to the nature, duration, &c., of keloid, and the results are detailed at considerable length. The conclusions arrived at are to the effect that the great majority of cases of keloid met with clinically originate in scars. The cases recorded as spontaneous cannot be disproved, but it is possible that some of them, like other recorded cases, may have originated in minute scars, and the committee purpose therefore to regard it as a disease of scar tissue, and to discard altogether such terms as true and false keloid. They are, however, of opinion that it is possible that there are conditions which may morphologically be allied to keloid, and which are more deeply placed. It does not appear that any marked differences can be maintained between keloid proper and syphilitic keloid. When present in syphilitic scars it is only less well pronounced than when occurring in simple scars. Other observations follow upon the duration of keloid, and some interesting cases not hitherto recorded are presented in the report. They conclude by referring to the pain of keloid, the manner of its appearance, and the time of life at which it most often appears.

Dr. GRAILY HEWITT read notes of a case of Acute Hysterical Vomiting of Ten Months' Duration caused by Displacement of the Uterus. The case is related as a typical and extreme instance of an affection not uncommon in gynæcological practice. The patient was a young lady, aged twenty, under Dr. Graily Hewitt's care at the All Saints' Institution for Ladies suffering from Illness, 127, Gower-street. She had always been very active, but not accustomed to take her food in fair quantity,—much the reverse. Menstruation before onset of illness irregular. Present illness dated from February, 1879, ten months prior to admission. Since that date there has been a gradually increasing severe and constant sickness. She has now for some time been unable to retain food on the stomach; takes only a small quantity of koumiss. Menstruation has entirely ceased for ten months. There is very marked emaciation; she believes she has lost four stones in weight during the past year. Sleep, none. All attempts to walk produce exaggeration of symptoms; weakness very great. Previous medical attendant had, it is stated, surmised existence of uterine displacement. On admission (Dec., 1879): constantly sick; pulse very feeble; commencing bedsore over sacrum; uterus low down in pelvis, much swollen, and in a condition of acute anteversion with considerable flexion; uterus wide from side to side. The sickness was considered due to this displacement. Later on it was elicited that just before sickness began patient had jumped from a height of six feet, and felt sick after it. Probably the uterus was displaced by this leap. A friend of the patient's took the same leap, and was also made sick, but laid up for it and recovered, whereas this patient did not. Treatment: nutrient enemata thrice daily. Patient to be placed in knee-and-elbow position every hour for two or three minutes. At end of week improvement; sound now used, and uterus elevated; slight temporary increase of sickness, then much improvement. Cradle pessary at end of fortnight introduced, and since retained undisturbed. After this time food began to be tolerated by stomach; sickness entirely gone at end of third week. Afterwards improvement rapid; appetite, sleep, and general condition all good. Pulse changed from 50 to 80. After fourth week literally ravenous. Seven weeks after admission discharged. Weight increased two stones during stay in institution. Menstruation has since returned. General health, strength, and activity quite restored. Summary: The uterus was weak at the time of the leap; it became severely displaced. The displacement set up in a reflex way sickness. Reposition of the uterus at once relieved the sickness.

Mr. CLUTTON read notes of a case of Acquired Hypertrophy of one Limb. A boy, aged eleven, came to the out-patient room of St. Thomas's Hospital in October last, complaining that the whole of the right leg was swollen. It had been noticed for two months and was unaccompanied by any pain, but he found that he was rather lame. His mother was quite sure that previously there was no difference between the two limbs, and that he was never lame before. He had had no illness except scarlet fever at six years of age. This was not followed by any weakness of limb or lameness. In proportion to the trunk the left lower extremity appears the normal limb, while the right seems too large; this being especially apparent in comparing the relative lengths of arm and leg—the two arms being of the same size. There is slight lordosis and tilting of the pelvis as he stands. Measurements taken by Mr. Acland show that the right limb is larger than the left by one inch, of which the thigh and leg take about equal shares. The circumference of the two limbs show a corresponding disproportion—the right being from one to three inches longer than the left. There is no difference in the measurements of the two upper extremities. The temperature taken fre-

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quently with the surface thermometer shows that the right limb is always from one to three degrees higher than the left. Dr. Kilner found that to the interrupted current they react equally and normally; but the right always offers less resistance than the left to the continued current. Mr. Clutton remarked that if this was a congenital case it would not be so remarkable as he believed it to be, for he believed the deformity to be an acquired one. To be congenital we must disbelieve both the mother and the boy, or believe them to have been themselves deceived. They can have no object in the former, and the latter can hardly be conceived possible on looking at the two limbs, and the fact that he has only lately become lame corroborates their statements. The muscles alone are not enlarged as in pseudo-hypertrophic paralysis, but every structure entering into the formation of the limb seems to have gone a stage further in its development than the rest of the body. The limb itself seems to possess its relative proportions when viewed alone, but considered with reference to the rest of the body it certainly appears abnormally large. It will be of great interest to note whether this increased rapidity of growth on the part of one limb over the rest continues as the boy develops. Should any change occur, Mr. Clutton hoped to be able to bring him again before the Society.—Mr. BRYANT asked whether the temperature of the larger limb was not only higher than that of the smaller, but also than the rest of the body. This was important, for he would be disposed to think there was diminution in the size of one limb rather than hypertrophy of the other.—The PRESIDENT nominated Messrs. Bryant, Marsh, and H. Morris to form a committee to report on the case.—Mr. HUTCHINSON did not think the evidence against the congenital nature of the case conclusive. There might have been originally some difference in the arterial supply to account for the difference in growth.—Dr. BRISTOWE said that undoubtedly one leg was abnormally large, but it was naturally developed, and he inclined to Mr. Hutchinson's suggestion.—Dr. GLOVER suggested that the committee should take into consideration the general superiority of the right over the left limbs.—Mr. CLUTTON said the left leg was normal in proportion to the rest of the body. He admitted that it might be a congenital defect after all.

(To be concluded.)

Reviews and Notices of Books.

Fifteenth Annual Report of the Sanitary Commissioner for Madras, 1878. With Appendices containing Vaccination Report, a paper on the Influence of Famine on the Growth of Population, and Statistical Tables of the General Population. Madras. 1879.

IN our recent notice of the Report of the Sanitary Commissioner with the Government of India,[1] we brought before our readers the leading facts relating to the health of the European and native troops, and the gaol population of Madras. It seems unnecessary again to advert to these, and we shall therefore confine our remarks to a few points discussed by Dr. Cornish in relation to the civil population. The most important of these is the effect upon it of the famine of 1877, and the scarcity, not amounting to famine, following in 1878. Dr. Cornish points out the two most marked consequences to have been a greatly decreased birth-rate and an increased death-rate. The very defective state of the registration in India renders the returns for the civil population untrustworthy as absolute records of births and deaths, but they are of considerable value as relative truths. The influence of famine on the birth-rate would, of course, be shown not at the time of the actual famine, unless of long duration, but towards the end of it, and in the months following it. Accordingly it has been found that while the registered births were in the proportion of 21 per 1000 of population in 1875 and 1876, they fell to 16·3 in 1877—the famine year—and 11·9 in 1878; and this difference amounted to an apparent loss of 444,780 children who would, under ordinary circumstances, have been added to the population in the two years. This, it must be remembered, is the result deduced from the registered births alone, but Dr. Cornish is of opinion that if the calculation were made on the actual number which occurred, instead of only those registered, the decrease would amount to not less than 794,000 in the two years. That this decrease was the result of the famine is borne out by the fact that while in the districts in which the famine had prevailed the ratio of births in 1878 was only 8·8, in the non-famine districts it was 19·9 per 1000; the latter ratio, which was under the average of preceding years, was probably influenced by the high prices of food. The registered mortality of the civil population was 27·8 per 1000; this was little more than half the death-rate of 1877, but was 9·0 per 1000 above the average of the eight preceding years. The chief causes of death were fevers, bowel complaints, and cholera; the mortality by the latter, though a little in excess of the average, did not amount to one-seventh of the proportion in 1877. The deaths from all causes exceeded the average of the two preceding years by 1,318,673, and Dr. Cornish estimates that if the non-registered deaths could be ascertained and added, they would raise this total to 1,978,000. The general result of the loss to the population in these two years therefore would be—

	As registered.	With estimated omissions added.
By diminished births ...	444,780	 794,000
By increased deaths ...	1,318,673	 1,978,000
Total	1,763,453	 2,772,000

Or two millions and three-quarters on an estimated population of a little over twenty-nine millions.

Detailed information is given as to the birth- and death-rates in the different districts, for which we must refer those interested in the subject to the Report.

The mortality at different ages brings out a remarkable fact, that the rate among children under one year was lower than in any preceding year, but, as Dr. Cornish points out, this was no doubt due to the very high rate which occurred among them in 1877, and to the much smaller number born in the year. The death-rate among persons over fifty, though lower than in 1877, was greatly in excess of the average.

Dr. Cornish has given a detailed history of the progress of cholera in each of the districts of the Madras Presidency, with tabular statements of the monthly deaths in the different Taluks and municipal towns of each division. The practical outcome of this study of the disease may be given in his own words:—"It is easy enough to chronicle the history and progress of a cholera epidemic, to trace it from its inception to its maximum of prevalence, and to forecast in a certain degree its course; but this knowledge, unfortunately, does not help us to understand the intimate nature and causes of the disease, nor its practical treatment by the physician. A great epidemic has come and gone, and left us practically but little wiser for the event."

As we have already stated, fevers were the chief cause of the great mortality, the ratio of registered deaths by them having been 12·8 per 1000 of the population, the average of five years preceding the famine being 7·6 per 1000. It is stated that the type did not differ in any essential particular from the ordinary miasmatic fever, but that, from their reduced physical condition, the poor easily fell victims to it. No relapsing or typhus fever was observed; and although there was a good deal of low fever of a typhoid character in the Madras hospitals, such "cases were most frequently observed in persons of European or mixed race, and did not appear to be specially connected with poverty or privation."

Small-pox prevailed epidemically to a considerable extent in certain districts. In the Godavari district it was particularly fatal, the ratio of deaths by it having amounted to 11·4 per 1000, or nearly a third of the total mortality in the district. Although considerable improvement has been made

[1] THE LANCET of May 29th, p. 854.

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in the arrangements of the vaccine department, much yet remains to be done to place it in an efficient condition. We are glad to learn that it is proposed to give to the local authorities, who wish to avail themselves of it, power to insist on compulsory vaccination.

A brief summary is given of the sanitary works undertaken, the epidemics which prevailed, and the general state of health throughout the year in the different Local Fund Circles. In the Appendix to the Report there is an interesting paper by Dr. Cornish on the Influence of Famine on the Growth of Population, to which we shall take an early opportunity to refer.

Journal of the Royal Agricultural Society.

THE current number contains a report by Prof. Greenfield on the "Nature, Causes, and Prevention of Splenic Fever, Quarter-evil, and Allied Diseases," the results of an experimental inquiry made at the Brown Institution. The publication of this report at the present moment is of special interest to the medical profession from the light it throws upon the form of anthracoid diseases known as "woolsorter's disease," recent occurrences of which, at Bradford, have excited much painful interest, and for which we have been indebted to Dr. John Henry Bell for the graphic and admirable history given in the numbers of THE LANCET for the 5th and the 12th inst. Previously, Professor Greenfield had shown that anthrax or splenic fever may be transmitted to a bovine animal by direct inoculation from a rodent; that the disease thus given, though severe and possibly fatal, is not usually so, and that the modified attack of the disease confers a certain degree of protection from subsequent attacks communicated in the same way, so far, at any rate, as the experiments had been carried. They showed also that the fungus which constitutes the essential contagion, when grown in successive generations in a cultivating fluid, was still capable of giving rise to the disease, being in one case fatal to a cow in the first generation; in another, fatal to a sheep in a fourth generation. The experiments further showed that an attack thus communicated, causing severe symptoms, appeared to be equally protective against results from future inoculations with the disease given directly from the guinea-pig. Professor Greenfield pointed out with reference to these experiments that, although he had applied as severe tests as were at his command to ascertain the degree of protection conferred, it was desirable to perform the more crucial test of direct contagion from another bovine animal; and that if the experiments were successful the precise method of performing the protective inoculation and the desirability of the protection would require further investigation.

Keeping these points in view, he has continued his experiments, and gives the results in the report above referred to. These results are similar to those obtained in the previous experiments, and he has thus added three more cases of success by this method of inoculation, the protection conferred having been determined by further inoculations. He has not yet been able to perform the crucial experiment of testing the apparently protected animals by exposure to direct contagion from another bovine animal.

In these later experiments another very interesting and equally important point has become clear, which may prove of great value in the future. It is that when the virus of the disease (the fungoid organism known as *Bacillus anthracis*) is artificially cultivated in an indifferent fluid, by the method of successive generations, each successive generation becomes less active than its predecessor, and when inoculated acts not only with less intensity, but more gradually, and often in a somewhat different manner. This modification takes place in such a degree that when cultivation has been carried to the fourteenth or fifteenth generation, it may be introduced with impunity into the system of a mouse, which is one of the animals most susceptible of the poison. Of this fact Professor Greenfield observes, that it will doubtless prove of practical value, for by its means it will be possible to obtain a virus of sufficient activity to produce an attack of the disease which shall be protective, but not of sufficient severity to be dangerous, or in any way injurious to the animal inoculated. With regard to any ill effect upon the animals inoculated, Professor Greenfield states that the cows used have thriven remarkably well, and none so well as the one which has been most severely tested.

In respect to quarter-evil, black quarter, or black-leg, Professor Greenfield's experiments, as far as they have gone, tend to show that the disease must be different from anthrax, and that the danger of infection is as great or greater from the unaffected parts of the body as from the obviously affected and gangrenous quarter; and in respect to "Cape horse sickness" and Loodiana (horse) fever, that, though probably allied to anthrax, they present several characteristic differences.

The report is valuable, both from the particular facts it gives and from its great suggestiveness.

The Lancet Commission
ON
WORKHOUSE INFIRMARIES.

INTRODUCTORY *(Concluded)*.

IN our first article we endeavoured to show how the want of prompt attendance in the earlier stages of acute disease, and the insufficient relief supplied to patients convalescing from such diseases, were important factors in the production of pauperism among the respectable poor. We also expressed an opinion that the existing system of medical relief would doubtless work well were it not for the insuperable objections the poor have to entering the workhouse, or contracting the stigma of pauperism which the reception of relief confers. We therefore advocated that in order to deal effectually with this cause of pauperism at its very commencement it would be necessary that the sick necessitous poor applying for relief should be treated in buildings, and, we may add, looked after by officers distinct from those set apart for the relief of sick paupers. A step in this direction we remarked had already been taken by the separation of many of the workhouses in this metropolis from their infirmaries, and the sick are treated in distinct buildings from those set aside for the able-bodied, the aged, and infirm. Still the objection remains that the *sick poor* and the *sick pauper* are treated in the same wards, and it is very evident, from an examination of the class of cases at present in the wards of these infirmaries, that they receive only a small proportion of the acute diseases arising among the poor. No difficulty, as far as the metropolis is concerned, ought to arise in making provision for the relief of the sick poor distinct from that given to the pauper, since at the present time most of the unions have combined to provide infirmaries separate from their workhouses, and it would only require an extension of the present system to make provision for the separate relief of the two classes. There can be no doubt that if the acute diseases and general ill-health among the poor were promptly and effectually dealt with at their onset by thorough medical treatment, and adequate relief in the shape of nursing and food, far fewer cases would drift into that hopeless condition which ultimately renders them a burden on the rates for months or years.

The erection of infirmaries separate from the general workhouse marks a distinct advance in the treatment of

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the sick pauper, and shows that the public have recognised the claims these unfortunate beings have upon their sympathies. The guardians, too, are to be congratulated on the noble manner in which, as far as the metropolis is concerned, they have carried the scheme into effect. It is no uncommon thing to hear hospital physicians and surgeons, when speaking of hospital improvements, compare the condition of the old hospital wards with that of workhouse infirmaries. But the comparison has lost its point, and the new workhouse infirmaries that have been recently erected are in every respect equal to any hospital we have ever visited; and in the case of some—for instance, Lambeth and Stepney—leave nothing to be desired in the matter of arrangement and accommodation. Nor have the guardians been sparing in providing the necessary appliances for the treatment of the sick. Only in one respect have they been niggardly, and that, unfortunately, in a particular that is most essential—the medical and nursing staff are quite inadequate, in point of number, to deal with the overwhelming amount of sickness and suffering that comes under their care. The guardians have been sufficiently liberal in regard to salary to induce good men to come forward for the posts, but they have neglected to provide that subsidiary medical assistance without which it is impossible to carry out the efficient treatment of disease. A glance at the appended table will show how extremely underhanded these institutions are in respect to their medical and nursing staffs:—

Approximate relationship between number of Sick and strength of Medical and Nursing Staff at six of the principal Workhouse Sick Asylums, May—June, 1880.

	Sick Inmates.			Medical Staff.				Trained Nurses.	
	Acute.	Chronic.		Principal.	Assistants.			Day.	Night.
Cleveland-street		214		... 1	... 1	...		18 *	... 6
Highgate Central	40	...	250	... 1	... 1	...		23 †	... 10
Lambeth	81	...	505	... 1	... 1	...		31 ‡	... 11
Marylebone §		262		... 2	... 1	...		11	... 2 ‖
Stepney	77	...	354	... 1	... 1	...		24 ¶	... 10
Liverpool		1412 **		... 3 ††	... 3 ‡‡	...		59 §§	... 16

* Nine of these are assistant nurses. † Six of these are probationers. ‡ Twenty-one of these are assistant nurses.
§ Not yet distinct from workhouse buildings. ‖ With a pauper nurse to each ward. ¶ Eighteen are assistant nurses.
** About one-third are acute cases. †† Non-resident. ‡‡ Resident. Sometimes there are four assistants.
§§ Including twenty-seven probationers

From this table it will be seen that the average number of sick persons under the care of each medical officer amounts to quite 200, and that too at a period of the year when the asylums are far from being crowded. In the winter months we believe the figures are far in excess of those given, with no corresponding increase in the strength of the medical staff. Physicians and surgeons accustomed to hospital work will appreciate the enormous labour thrown on the gentlemen who have to contend with this immense amount of sickness. In large hospitals with all the appliances for case-taking, without which it is impossible for the resident physician to get a proper grasp of his case, fifty to sixty beds are found to be quite as much as the medical officer can adequately supervise. In these sick asylums, however, the patients under the care of the medical officers are more than fourfold this number, and in addition to this they have the burden of watching and recording the progress of each case. It may be urged that their duties are not in reality greater than those of hospital residents, because the proportion of chronic to acute cases is higher in workhouse infirmaries than it is in general hospitals. But such is not the fact, as those who have had much experience of the treatment of chronic disease will testify. Take, for instance, chronic pulmonary affections: what constant care and watching they require to relieve the ever-varying forms of suffering they successively pass through; at one time to deal with exacerbations of pyrexia, at another with increase of cough and expectoration, to say nothing of intercurrent attacks of dyspepsia, diarrhœa, &c. Then, again, there is the time requisite for the electrical treatment of paralysed limbs, muscular atrophy, Parkinson's disease, a class of cases especially numerous in these asylums. Nor need we allude to the cases of stricture, chronic bladder affection, diseases of bone, ulcerated legs, all of which require daily some portion of the medical officer's care, either in the form of surgical relief, or at least in the supervision of the dressings, &c., to show that our estimate of the duties that fall upon the resident officers of these institutions is not exaggerated. The highest credit is due to the medical officers of the institutions we have visited for the manner in which they endeavour to perform their arduous duties, and the acquaintance they possess with the clinical details of the cases under their charge. It is surprising that they should find time to keep any records at all of even the most important ones. That the work is done as well as it is, is due to the fact that the resident staff have been well selected in the first instance, and are men in the full vigour and prime of life. We cannot conceive it possible that work maintained at such high pressure can for long retain its efficiency; and after a few years one of two things must happen—the occupant will seek for work in a direction that brings less strain, and perhaps affords a better remuneration, or else sink into mere routine practice. Either alternative will involve suffering to the pauper, and loss to the ratepayer. There can be very little doubt that when once the guardians have secured a highly-trained and efficient medical officer it is false economy to make a change. His experience with regard to the management of the institution under his care increases year by year, and he will be able to effect many savings in matter of detail and administration that a man new to the place would probably overlook or ignore. On the other hand, if the medical officer should be overworked and overstrained he will speedily lose his clinical acumen, and sink to mere routine work. The difference to the sick between the man fresh and full of clinical training and instinct, and the worn-out, harassed man, who falls back on mere routine, it is impossible to estimate.

The question now arises, How shall the medical staff be increased without throwing an additional burden on the ratepayers? The plan of securing one responsible medical head for the management of these asylums is indisputably the best, but instead of, as at present, his undertaking the multifarious duties with regard to the sick, we would recommend that his position should be made more analogous to that of visiting physician to an ordinary hospital. At the same time it must be remembered that there is much administrative work now thrown on the shoulders of the medical superintendent from which it would not be easy to relieve him without a radical change in the present *régime*. The assistant medical officers should hold the position of house-physicians, and their number increased to that their duty might be limited to one hundred beds, the estimate being taken for the fullest time of the year. In addition to this there ought to be a clinical assistant for every thirty beds, whose duty it should be to sake full notes of every case, record the temperatures, pass catheters, dress the ulcerated legs, &c.,—in fact, to perform all the subsidiary duties that now press so heavily on the ordinary staff, and distract their attention from more serious duties. It may be suggested that a difficulty would arise in obtaining the required clinical assistance, but we think that if facilities were offered, there would be no lack of candidates for the posts. In the first place, owing to the increasing prominence given to clinical work and methods at the final examinations of the chief examining bodies, the requirements of students with regard to this important

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subject are greatly increased, and in many cases far exceed what their hospital can afford. Opportunity for further clinical study is therefore much needed. Moreover, these asylums furnish a class of cases which are of the greatest value to those who intend to enter general practice. As a rule, the class of disease met with in hospital cases are exceptional examples of a practitioner's daily work, whilst the treatment of chronic forms of disease form the chief part of his duties. It is with this class of cases that the young practitioner finds himself at a disadvantage on commencing practice, simply because so few have come under his observation in hospital practice. Six months spent in the wards of a workhouse infirmary would prove of the greatest advantage to him. For it is a great mistake to suppose that the workhouse infirmary contains only those cases which have been rejected as unsuitable by hospitals. Were this belief ever cherished it would soon be dispelled by the records of many a case that has been published in this journal. Some most interesting and important contributions to clinical work have come from some of these infirmaries, where officers have had both time and inclination to observe well and record carefully. And we have, in our recent visit to a few of these institutions, been enabled to see examples of disease seldom if ever met with in the wards of hospitals. It has been recently remarked in an able pamphlet by Mr. Dolan, the medical officer of the Halifax Union Infirmaries,[1] that the workhouse hospitals are especially fertile in cases of nervous disease, and he points to the work that has issued from the great Paris Infirmary of Salpétrière as evidence of what such institutions may be made to yield. Indeed, the opportunities afforded to the zealous and earnest worker within these infirmary wards are very great; but however zealous or earnest he may be, it is quite impossible for him under present conditions to avail himself of these opportunities. Nor do we think that many obstacles are likely to be offered to such an extension of the work carried on at some infirmaries by the lay authorities. We have evidence of the willingness of the guardians to provide scientific and surgical appliances that is most commendable and praiseworthy; and it is but bare justice to these gentlemen, who have so great a trust imposed on them, to mention this fact. But of what avail is their liberality in this respect if the employment of these appliances is restricted owing to the conditions under which the medical officers work? It is thereby impossible to have observations carried on and facts recorded unless there be a large assistant staff such as we have indicated. Whether, then, we look to the advantages these infirmaries offer from the educational point of view or from the purely scientific, it seems at least unfortunate that such advantages are not made the most of. We believe that if resident clinical clerkships and dresserships were established in connexion with these infirmaries they would be eagerly sought after, and an additional stimulus might be held out if the Local Government Board would make the holding such an appointment for six months an indispensable qualification for a Poor-law appointment.

But in order that such a scheme might be carried out there requires to be effected another change of the greatest importance. The writer to whom we have just referred pleads strongly for the introduction of greater facilities in the performance of post-mortem examinations. At present such examinations, if not absolutely forbidden, are so hampered by restrictions that only a minority of cases are available for such a purpose. We would plead most strenuously for the abrogation of these restrictive measures. It is too obvious that much of the value of these infirmaries, containing, as they do, examples of disease under observation sometimes for years, as fields for pathological research, is at present almost *nil*. Doubtless it is urged that this is neither their main object nor a necessary part of it; they are refuges for the sick, not laboratories for the pathologist to work in, rich as the field may be. This is true enough, but surely it is a short-sighted policy at the best which places undue restriction upon that which we are bound to regard as the corner-stone of our care of the sick—a knowledge of the nature of the diseases from which they suffer. Nor, in our opinion, would it be after all so great a gain to encourage more extended clinical work within these institutions, were it not also understood that equal facilities should be afforded for the complementary pursuit.

[1] Some Remarks on Workhouse Hospitals. 1879.

Passing from matters which some may think lie almost outside the scope of these institutions, or at least to embrace schemes which border on the unattainable, we may turn, in conclusion, to the subject of nursing—one of the most important practical subjects within the management of the infirmaries, and one too which has not only made great advance of late years, but promises to yield more fruit in years to come. When we contrast the care of the sick under the old *régime* with that at present obtaining in all the better-class infirmaries, we are astonished at the revolution that has been effected on this essential point. The ignorant, rough, well-meaning pauper nurse has been replaced in these institutions by a class of intelligent, trained, paid nurses, who perform their onerous duties skilfully and well. The Liverpool Workhouse has the honour of leading the way in this much-needed reform; and lasting credit is due to Mr. W. Rathbone, who originally proposed the change in that infirmary, and actually maintained the new system at his own expense during its years of trial, until the experiment was overwhelmingly proved to be successful. We hope shortly to speak more particularly of the Liverpool Infirmary. Suffice it to mention here that it is now recognised as one of the best training schools for nurses in the kingdom, for from it come many highly-qualified women to take responsible posts in our metropolitan hospitals. The system now in vogue at the larger infirmaries and sick asylums is similar to that obtaining at hospitals and infirmaries unconnected with workhouses. A matron, or in some cases a lady-superintendent, controls the department; then there are a certain number of head nurses, one to two or three wards, and an assistant nurse to each ward. In a few the proportion may be a little under this; in most it is about this, or slightly over it. At any rate, even this hardly seems adequate to meet all that is desired. At first sight it might be thought amply sufficient, for there are always a large number of cases of chronic disease which require but little attention—patients who are up all day, and for whom food and shelter are the chief requirements. But, on the other hand, the infirmaries also abound in sick who are confined to bed, who require every possible attention to keep them clean — and it is these which must tax the resources of the nursing staff, to say nothing of the acute cases which demand constant supervision; and in the winter time especially the nurse's duties are very heavy. Every now and again we hear of misadventures arising within infirmaries which go to prove the necessity of the increase of staff—to which we have alluded. Coroners' juries in rightly censuring cases of error and neglect, should be careful to place the blame in right quarters; and seeing the underhanded condition of these infirmaries with regard to their medical and nursing staff, the wonder is not at the occurrence of such mischances, but that they do not happen more frequently. It would be well if some certain fixed proportion of nurses to sick were established and carried out uniformly throughout the infirmaries—a proportion not less than one nurse to eight or ten beds. By increasing the staff of probationer nurses this might be effected without much addition to the outlay. In that way we might come to see the infirmary utilised—as it is, for example, at Liverpool—for the supply of trained nurses not only to the infirmaries themselves but also to the hospitals, which are ever in need of fresh hands, as their nurses pass out to take up appointments as "sisters" to country hospitals, or attach themselves to private-nursing institutions. There can be no better training-school than the infirmary; and the advantages so gained would be great not only to the sick within its walls, but to the wider community outside of them.

IRISH MEDICAL ASSOCIATION.—The following office-bearers have been elected for the ensuing year:—President: J. H. Chapman. Vice-Presidents: Edward Bagot, Samuel Chaplin, Edmond Coates, James Molony. Council: P. Berry, Robert Browne, Samuel Browne, Henry Gray Croly, Thomas Darby, Thomas Drapes, George Duffey, Robert Gray, J. R. Harvey, Robert Hayes, A. H. Jacob, David Jacob, J. Bellew Kelly, George H. Kidd, Richard Kinkead, James Martin, Robert McDonnell, F. V. McDowell, G. Monogh, Andrew Nolan, Edward Peele, William Perceval, James Pollock, George H. Porter, Thomas Purcell, J. Ridley, Edmund Sharkey, H. J. Smith, A. Speedy, Robert Tagert, W. Thomson, Thomas Lowe Whistler.

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FLEUSS'S NEW DIVING APPARATUS, AND ON LIVING IN IRRESPIRABLE AIR.

THE following is a revised abstract of the lecture recently delivered by Dr. Richardson, at the Society of Arts, on this interesting subject:—

Dr. Richardson began by saying that in Schott's "Technica Curiosa," published in 1664, there was an account given of a man named Taisnier, who described that he had seen, in 1538, two Greeks descend into the water before Charles V., ten thousand other spectators being present. The men descended in the bell, with large kettles suspended over their bodies, and weighted. They carried with them a candle, which burned all the time they remained under the water. This contrivance was called "the aquatic kettle." The same narrator also described the "aquatic armour," which seems to have been used by the same persons, and to have been something after the manner of a small diving bell over the head descending to the feet. Lord Bacon described a somewhat similar apparatus as known in his day. The Hon. Robert Boyle has stated that in the reign of James I. Cornelius Van Drebell, a Dutch physician, contrived a vessel which could be rowed under water, and that he carried a liquid in the vessel which supplied the place of fresh air. This was said to have been tested in the Thames, but what the liquid was that was used to supply air was never disclosed. Dr. Richardson said it was incredible that anyone could have discovered in that day a liquid to yield oxygen, but now we did know of such a liquid in peroxide of hydrogen (a specimen of which he showed, and from which he liberated oxygen in large quantities, relighting a partially extinguished taper from the liberated gas many times). That fluid was not, however, discovered till 1818, by the French chemist Thénard. It was a fluid now used by ladies for the sureoline hair dye. Dr. Richardson traced the history of the diving bell, the first complete one having been made by Halley, the astronomer, and he went on to show Spalding's, Triewald's, Smeaton's, and Klingsert's improvements in submarine apparatus. This brought him to Siebe, who, in 1829, invented what was called the "open air" diving dress, a very remarkable improvement on all others. In that dress there was a helmet, through which air was supplied, and a jacket which descended to the middle of the body; also a pair of watertight trousers, the band of which came up to the armpits. Air was supplied through a tube in the helmet, and it escaped from the jacket, as if it were a diving bell, into the water. In 1837 Siebe invented the "close" dress, the one now used, in which there is both an exhausting and a filling process. This was somewhat improved afterwards by Heinke. In 1854 St. Simon Siccard invented a plan by which the diver carried down condensed oxygen, and used an apparatus containing alkali, for absorbing the carbonic acid of his breath, and for using over again the expired nitrogen. Siccard does not seem to have made sufficient provision for the removal of water, so that the apparatus did not come into general use. In the latter part of last year Fleuss completed his system. It consists of a helmet, in which there is a space of one-quarter cubic foot, and into which he condenses by pressure sufficient oxygen for four hours' breathing purpose. Next he has a cuirass in which there are two chambers, charged with porous india-rubber, cut into small pieces, and saturated with soda. Over his mouth Fleuss has tied firmly a mouthpiece, which is double-valved, and to which is attached a flexible tube like an artificial windpipe, which runs into the front soda chamber. When the helmet is on and all is adjusted, so that he is completely shut out from water or gas, he breathes through the tube into the soda chambers, by which all the carbonic acid of the breath is permanently fixed, while the oxygen which is not used in respiration, together with the nitrogen, passes through those chambers, escaping at the upper part of the chamber at the back of the cuirass, and mixes with the stream of oxygen, which is let down into the helmet by a valve that can easily be regulated. In this way Mr. Fleuss makes, as it were, a new atmosphere of oxygen and of nitrogen, on which he continues to live until the oxygen in the compressed air chamber above is exhausted. To remove the water of the breath (which has proved troublesome) he has made a little trough at the bottom of the soda chambers, in which the water of the breath is collected without impeding the passage of the air from the lungs. The apparatus was at this stage explained in detail. The oxygen chamber was charged before the audience, and all the parts of the dress were put on to Mr. Fleuss. In the next part of the lecture, Dr. Richardson described his own experiments, thanking the Directors of the Royal Polytechnic for having invited him to make his researches when Mr. Fleuss was at that institution. Mr. Fleuss went under water in the large tank, four degrees above freezing-point, and remained in the water for an hour. The object was to ascertain whether he would be affected physiologically by this process. It was discovered that during that time his temperature fell six degrees, but he did not seem at all injured, and after his removal from the immersion his temperature gradually rose till it attained the natural state. In the next experiment, the great diving-bell was filled over water with pure carbonic acid, after which Fleuss ascended into it, and remained in it twenty minutes, without experiencing the slightest difficulty. The next experiment was to ascertain if the apparatus would be applicable to mining operations. The bell was charged with carbonic acid and amyhydride vapour, and in that Fleuss remained twenty minutes. He came out without being affected in the slightest degree.

Dr. Richardson passed on to inquire whether life could be sustained for a considerable period in the artificial atmosphere made by Fleuss, and he gave an account of experiments bearing on that point. It must be admitted that Mr. Fleuss was not living while in the dress in an atmosphere which contained a measured quantity of oxygen and nitrogen like our ordinary atmosphere, because he had no accurate mode of measurement of oxygen. His rule was that when he felt pressure on the drum of the ear he considered he was letting out too much oxygen, and he stopped the supply; and when he felt any sense of suffocation he thought he had not got enough, on which he let in more. But it was probable that at all times he was breathing an atmosphere surcharged with oxygen. At one period it was believed by physiologists that pure oxygen acts as a narcotic poison, a view which was sustained by the experiments of the late Sir Benjamin Brodie and Mr. Broughton. Dr. Richardson detailed his own researches on this point, and from which he deduced and reported to the British Association in 1860, that oxygen does not act as a narcotic poison, except when it is breathed over and over again, and that even then its vital action can be restored by subjecting it to electrical discharge. He showed, however, at the same time, that at a very low temperature pure oxygen does not so combine with the blood and tissues as to insure normal combustion of the body; while at high temperatures, above 75° F., it combines with such rapidity that it causes excessive heat of the body, great craving for food, and rapid waste. He then explained his views as to the use of nitrogen in the atmosphere—namely, that nitrogen is an equaliser of temperature, and in that way it enables the oxygen to come into natural action in all common temperatures. By the presence of nitrogen, which equalises the distribution of heat over the whole surface of the earth, the fluctuations in the activity of oxygen on man and animals are, in short, kept within natural limits.

The practical inference with regard to Fleuss was, that he could live very well in medium temperatures, that he would be in danger in inhaling oxygen in his apparatus in very low temperatures for a length of time, and that he would also be in danger at a tropical temperature. Dr. Richardson spoke lastly as to the applications of Fleuss's apparatus. His conclusion was that we had now a fairly complete apparatus, by which, under favouring conditions, a man could live for a long time under water, or in an irrespirable gas. The appliance was intended for diving, but it had to be proved whether it could be used at great depths. The lowest stated depth to which a diver had gone in the ordinary diving dress was 201 feet, that being a very exceptional case. Whether that were true or not, the evidence was certain that 86 feet had been attained. Theoretically this new apparatus promised to be better than the ordinary diving dress, but Mr. Fleuss had yet to win his spurs in deep diving. He had been 25 feet under water, and he had walked under water four hundred yards. The apparatus was well adapted for rescuing persons from fires; and at all our fire stations it would probably be advisable in the future

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to have a fireproof dress made of felt, saturated with ammonia sulphate, and supplied with a reservoir of oxygen and a soda chamber. A fireman might in this way go into any house, and pass through any gases, to rescue persons in the house, subject still to the dangers of high temperature and accidents from falling materials, but able to breathe freely in any air. Dr. Richardson also suggested that the appliance would be of the greatest use for entering mines where there had been an explosion, and where there was choke-damp. In fact, if a light could be invented that would not cause explosion a man in this dress might move in any part of a mine, the air of which was charged with irrespirable vapour, to the assistance of suffering persons, or for other purposes. The dress might also be used for entering wells or other places where carbonic acid gas was escaping. At this stage, in proof of the efficiency of the dress, Dr. Richardson had Fleuss introduced into a glass chamber, which was lent by the Royal Institution, and which was once used by Professor Tyndall for showing the action of a mask that would prevent the entrance of some noxious vapours and of smoke into the lungs. The chamber was charged by Mr. Orchard, of Kensington, with carbonic acid, and Fleuss remained in it for a quarter of an hour, showing the audience the irrespirable character of the atmosphere by vainly endeavouring to light a candle. A lighted taper was also let down from the roof of the chamber above Fleuss's head, and was immediately extinguished.

"OVER-EXAMINED AND UNDER-TAUGHT."

To the Editor of THE LANCET.

SIR,—From the last number of THE LANCET it appears that Mr. Marshall's scheme for compelling all medical students to appear before properly constituted authorities for examination in Anatomy and Physiology at the termination of their first year of study is likely to be altogether shelved, or so far modified as to be rendered practically useless. It is urged against this scheme that our students are already over-examined, and work so well that they require no extra stimulus to exertion. With reference to the first of these objections it may be observed that Oxford and Cambridge undergraduates are obliged to go up for "smalls" before the end of their second term; failing to pass this examination they are recommended to leave the University for a time. They have to go up for "mods" before the termination of their fourth term; yet we do not hear complaints of their being over-examined. As to the work of our first-year students, we can only judge of that by its results; and THE LANCET not long since stated that forty-three per cent. of medical students fail at the primary examination of the Royal College of Surgeons. To my mind this is a very unsatisfactory condition of things. From the frequency of the occurrence medical students seem to have become almost indifferent about being plucked—a state of feeling we cannot too strongly deprecate, for no right-minded young man can fail at a public examination without some loss of self-respect. Beyond this, if referred by the examiners to the further study of Anatomy and Physiology the extra months employed in this work are usually lost to the time properly spent in the wards of the hospital. I believe that not less than eighty per cent. of the general practitioners scattered throughout England (many of them having sons about to enter at our hospitals) would support Mr. Marshall's scheme, and if so they should exert all their legitimate influence to secure the reform in the medical curriculum of our students which he so strongly advocates.

Yours faithfully,

June 14th. C. MACNAMARA.

To the Editor of THE LANCET.

SIR,—Your leading article on Mr. Marshall's proposal to institute an examination at the end of the first year's medical study has elicited various opinions on each side of the question. The writers have each more or less reason, and valid reason, on the side they advocate. But it seems to me, that the plan of dissection practised at most of the schools (at least so I am told), of attempting to make a student dissect all the minute vessels and nerves in his first attempt at dissection, has something to do with putting the mind of an average student in a muddle. Surely the plan should be to proceed step by step in dissection. Thus after he has fairly mastered the bones, he should dissect the extremities, paying minute attention only to the muscles and ligaments and general attention to the great vessels and nerves. This dissection impresses thoroughly on the mind the bones and muscles, for the dissector in laying bare the courses and connections of large muscles has the bony prominences and surfaces most prominently brought to his mind and memory, and a foundation of the best kind is laid for his future dissection. In the same way he should dissect the abdomen and the thorax, and lastly, if he has time, the head should come under his notice towards the end of his first winter.

I stared with astonishment when a young relative, whom I asked when he commenced dissecting the leg, told me that he had been directed to trace out all the superficial nerves and the minute vessels. Surely such a plan of dissecting is not one calculated to make an anatomist, and lays upon the student's untrained memory such a mass to remember at once that it is not wonderful that some students become disgusted and careless. The logical way of teaching anatomy doubtless is: first the skeleton; the bones, and how these are held together; then how these bones are moved in each way by the muscles, then the vessels to supply the power to move, and the governing force, the nerves.

It may be objected to this plan that the supply of subjects is not equal to it; but an easy way to overcome this would be to let two students dissect together each part, and it would also be well that the demonstrator sees that each of the first few parts is thoroughly dissected down to the last ligament and synovial membrane before it is taken away.

This, as far as anatomy is concerned, would, I feel assured, produce a better result, and one more abiding, than the attempt to cram the first year's student with all the superficial and other nerves, and all the minute vessels contained in the parts of his first winter's dissection. A weekly class examination, with a running commentary by the lecturer instead of one lecture, would probably do more good than a systematic examination as suggested to be undertaken by the College of Surgeons.—I remain, Sir, yours, &c.,

AN OLD ANATOMY LECTURER.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—It became the manifest duty of every man engaged in treating the diseases of women, after reading Professor Clay's ingenious paper in your issue of March 25th, not to criticise it theoretically, but honestly, carefully, and thoroughly to test the action of Chian turpentine upon cancer of the female generative organs.

Mr. Clay's recital of such marvellous improvement in such brief periods justifies me in now stating my own experience.

I was able in a short time at the Women's Hospital and in private practice, to place eight patients under the influence of the drug, and in no single case has the progress of the cancer been checked, or indeed, at all affected by the treatment.

Mr. Clay's formula was used and the Chian turpentine was supplied by Messrs. Southall and Co. All the hospital cases were observed from time to time by one of my colleagues.—I am, Sir, your obedient servant,

J. HICKINBOTHAM, M.D., M.R.C.P., F.R.C.S. ED.,
Physician to the Birmingham and Midland Hospital for Women.

EXCISION OF OBSTRUCTION AT THE NECK OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—The only matter of concern at present between Mr. Teevan and me is not what he did *not* say, but what he *did* say in his Lettsomian Lectures. He fails to meet my allegation that Mercier's operation is abandoned in Paris by the leading surgeons there as useless and dangerous; and he does not offer any explanation of the extraordinary statement which I called in question, that there are "hundreds of men now alive to whom Mercier has restored the faculty of free and natural micturition." I hope I may not in vain assure Mr. Teevan that I alone am responsible for calling attention to his statements.—I am, Sir, yours, &c.,

Wimpole-street, June 14th, 1880. G. BUCKSTON BROWNE.

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"HOSPITAL SUNDAY" SERVICES.

HOSPITAL SUNDAY is an institution in which THE LANCET, as a journal, not less than as the organ of the medical profession, has a peculiar interest. In 1869 we suggested the adoption throughout the metropolis of a concerted and simultaneous effort to stir the sympathies of the community in aid of the medical charities generally, by an appeal from the pulpits of all churches and denominations on a day set apart once a year for that purpose. The service now annually rendered by the Ministers of Religion in this humane cause has come to be one of the highest practical value, not merely on account of the Fund raised, but the permanent interest created. It is, therefore, most desirable that their labours should be specially recognised by a profession which has, of course, the first concern in the treatment of the sick. We have collected a large number of abstracts of sermons delivered on the 12th and 13th inst., and now place before our readers such brief notices of these addresses as our space will enable us to give. It is with regret we find it impracticable to print more. As to the selection made from the material kindly placed at our disposal, it is impossible to avoid the feeling that we have not done justice to the authors of much good work. We have been unable to follow any precise method, and while glancing through all the reports obtainable, have doubtless overlooked much that ought to have attracted attention. For this fault we will stand confessed. It cannot, however, be alleged that anything we have printed could have been omitted consistently with the object we have in view. Many of the observations made by the several preachers strike us as of great suggestive value, and, apart from their benevolent purpose, will well repay the consideration they claim. If ever there was a common platform for all who fear God and are stirred with human sympathies, this enterprise is one where all can stand and labour together, with a common interest in a common cause.

Up to the time of our going to press the Lord Mayor had received £15,000, and the Fund gives every promise of reaching a total greatly in excess of that accumulated in previous years. We are glad to know that the leading article on this subject which appeared in THE LANCET last week was read or quoted in the hearing of most of the congregations, and is believed by the clergy to have contributed to the success obtained.

St. Paul's Cathedral.—At the afternoon service Bishop Claughton preached from St. Peter v. 10, "The God of all grace, who hath called us unto His eternal glory by Christ Jesus, after that ye have suffered awhile, make you perfect, stablish, strengthen, settle you." He observed that whilst the text spoke of a spiritual benefit to arise out of the sufferer's affliction, yet we have no right to deal first with that (which might be out of our power), but to help the *bodies* of our fellow men, to consider them as dependent for the relief of their bodily ills upon us according to our opportunities, and first amongst opportunities he placed hospital institutions, by supporting which we brought to the side of the afflicted medical skill and its whole army of kind offices, and nursing comforts, which tend both to relieve and even cure the object of our compassion. He spoke of this compassion, or instinct, which God has placed within us, and he took his hearers in his discourse through the wards of a hospital, describing the various scenes to be witnessed: strong men bowed by pain; women, themselves so apt in ministering to others, here dependent on the other's care; little children mutely suffering, and looking as if they wondered wherefore they endured. Leaving this picture the Bishop reverted to the subject of *opportunity*. This Hospital Sunday, he said, had come round again, soon its hours would have passed way, but not their responsibility; either they would have used or neglected to use the opportunity afforded them of doing good, and he predicted that the year would not pass without bringing up the memory of that day either with satisfaction or sorrow. Lastly, he said, the care of these sufferers was before them, like Lazarus laid at the rich man's gate, and taking the parable for his illustration, he warned his hearers that even in eternity it was possible that a wasted opportunity might add poignancy to the most terrible remorse. He concluded with a solemn appeal to all to give. A good collection followed.

At *Westminster Abbey*, the Very Rev. the Dean of York preached from Luke xvi. 20. In the hospital the poor obtained that direct treatment of disease or accident with all the professional skill and appliances of science, which they could not have in their own homes. It had the additional benefit, too, of being a school, a point from which healing influences flowed for all the ills to which our flesh is heir. Sermons in aid of the Fund were also preached at the afternoon service at 3 o'clock, and at the special evening service in the nave at 7 o'clock, at the former by the Rev. W. Boyd Carpenter, and at the latter by the Rev. B. Jowett, Master of Balliol. The total amount collected was £266 17*s.* 6*d.*

Bayswater Synagogue.—The Rev. Dr. Hermann Adler preached on Saturday on the text, "For I am the Lord that healeth thee." He spoke on the hygiene of the Bible, and, citing various authorities who have written on the subject (Wunderbar, Biblisch-talmudische Medicin, Dr. Sutherland, Dr. Richardson, and Bible Hygiene, by a Physician, recently published), pointed out how remarkably the health laws of the Bible, more especially those relating to the segregation and purification of the leper, anticipated the suggestions of eminent sanitary reformers of the present day. In the earnest appeal which he made on behalf of the medical charities, he quoted "the valuable statistics given in THE LANCET of that day." The collection realised about £70. [The aggregate collected at all the synagogues was about £900.]

The Oratory, South Kensington.—Rev. Sebastian Bowden preached at the High Mass on Rom. viii. 22. Of the four millions in London at least 200,000 were poor Catholics, furnishing, because they were of the poorest class, far more than their quota of sick. Catholic patients were admitted to the London hospitals without distinction of creed, and enjoyed within the hospital perfect freedom in the practice of religion. Admission to the hospital secured, therefore, to the poor Catholic not only the best medical skill and nursing for his bodily needs, but also the blessed consolations of his religion to a degree he often could not hope for in his own home.

Metropolitan Tabernacle. — The Rev. C. H. Spurgeon preached from 2 Thess. ii. 16., 17. Believers are greatly in need of comfort, and it is most important that their hearts should be in a cheerful and restful condition. The necessary consolations are freely provided and are plentifully bestowed upon us by our heavenly Father without money and without price. Our joys spring from the unmerited love and free favour of our God in Christ Jesus. Those who are thus comforted should be among the first to comfort others; and the freeness of God's grace to them should make them open-hearted and open-handed. The genius of the Gospel is spontaneous love to all who are sorrowing, love which does not spend itself in words but delights in works of charity. Hence a strong appeal for the sick poor of London. The scantiness of hospital funds, the empty beds, and the sufferers waiting their turns, some to die ere the boon was granted, were set forth as arguments for liberal aid. Gentiles and Jews, Romanists and Protestants would all take their share in this concert of mercy, and those who beyond all others believed in free grace and dying love must not be behindhand.

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St. Margaret's, Westminster.—The Rector, the Rev. Canon Farrar, chose as his text, Matt. x. 29, "Are not two sparrows sold for a farthing? and not one of them shall fall to the ground without your father." He said that while the text proved God's tender mercy over all His works, even over the little bird which was thrown in for nothing when *five* sparrows were sold for *two* farthings, yet the illustration was only adduced by Christ to show God's love for man. It was a revelation of the priceless value, the immortal dignity of every human soul, and this revelation was the deep source of love and pity. He argued at length that the force and universality of these great virtues was due to Christ and to Christ alone; that man did not learn pity from the blind force of nature, nor from the lower creatures, nor from his own unilluminated heart. He contended that there was no pity in the heart of heathendom, whether barbarian or civilised. The remains of ancient cities, and the records of ancient biographies alike proved the absence of pity. He compared the conduct of Cæsar and the Romans towards the Gauls at Alesia, with that of Nelson and our sailors saving the lives of their enemies at the battle of the Nile. He showed also that even Christian civilisation was not sufficient without heart religion, to make pity a moving force in life; and this he illustrated by facts in the life of Napoleon I. He proceeded to show the cruel and heartless want of pity avowed in the systems of modern philosophers who rejected Christianity. He contrasted these with the infinite and universal pity towards the weak, the sinful, the impotent, the leper, the publican, the harlot, the demoniac, manifested in the life of Christ, and the place which pity towards all mankind—and most of all towards the weak and the suffering—occupied in all Christ's teaching. He said that the strongest of all appeals for any human being was that he was a brother for whom Christ died, and illustrated them by a striking anecdote of the French scholar Muretus. He ended by a warm eulogy on the medical profession, and their work in hospitals, telling how fourteen medical students in the London Hospital had compressed an aneurism for sixty-six hours, and so saved the life of a poor working man; and he appealed to his congregation to help generously in Christ-like deeds.

St. Jude's, South Kensington.—A sermon was preached by the Vicar, the Rev. R. W. Forrest, D.D., from St. Matthew, xxv. 36, "I was sick, and ye visited me." After referring to the various lessons which the season of sickness is calculated to impress upon the mind, he expressed obligation to THE LANCET for statistics which he placed before the congregation, dwelling specially on the fact that so many beds were unoccupied through lack of funds. He also reminded his hearers that the hospitals were admirable schools, where students were trained by the first medical and surgical teachers of the day for that noble profession to which we are all so deeply indebted; and it was sad to think that so many who might be perfectly restored to health were allowed year by year to "drift into incurable forms of disease," the hospitals being compelled to decline receiving them through lack of sufficient funds. The collection amounted to nearly £400.

Poplar Parish Church.—The Rev. T. W. Nowell, Rector, took his text from Luke xi. 41: "Give alms of such things as ye have." How far, said the preacher, is obedience to this command acted upon. The means of arriving at a fair judgment on this point are easily found in the leading medical journal THE LANCET; it is stated that little more than three-fifths of the beds available, not thought too many for the population, are in actual use, and the reason for their not being in actual use is stated to be want of necessary funds. And the average amount of the Hospital Saturday and Sunday contributions is said to be about £26,000. Now the population of the metropolitan area affected by these institutions is estimated at 4,000,000, consequently if each four people gave as much as threepence only, one day only, in the whole year, the sum of £26,000, stated to have been so received, would be nearly doubled. Is this satisfactory? Does it show much general liberal giving? Let it be tested, by the amount spent in holiday-making by each person or family for their own individual or private pleasure. Would not a mere tenth part of what is so expended, say or but some one day in the year, if devoted to hospital maintenance, yield a much larger sum? Let each one of those present ask himself this question, and suggest it to all others over whom he might have influence.

St. James's, Piccadilly.—The Rev. Canon Barry, D.D., Principal of King's College, London, preached from Romans xv. 1: "We then who are strong ought to bear the infirmities of the weak." The preacher took occasion, first, to dwell on the work of Hospital Sunday as a great work of "help to the weak," marked by two especial features—its generality, and its consecration in the house of God; next, to explain the reconcilement of the law of independence in the strong with the law of help to those who are weak—weak through natural defect, through sickness and calamity, through the effect of the sin of themselves or their fathers, and through the injustice and cruelty of society; thirdly, speaking from experience, to show how the hospitals, not only discharged high functions of public utility as schools of medicine and nursing, and missionaries of beneficence, but, in different degrees, succoured all these forms of weakness, never—except in some trivial and secondary points, which ought to be, and could be, removed—infringed on the law of independence; and, lastly, spoke earnestly of the high privilege of giving to such a work in a wealthy congregation, urging that, as yet, in comparison with other great towns, London did not rise adequately to the occasion, and pleading for fuller gift, not merely in the power of the enthusiasm of humanity, but in fulfilment of the law of Christ.

New West-end Synagogue, St. Petersburgh-place.—The Rev. S. Singer delivered the hospital sermon on Saturday last. His text was taken from Numbers xvii. 13: "And Aaron stood between the dead and the living, and the plague was stayed." After dwelling on the events to which the text referred, the preacher alluded to the discussion that arose from time to time as to the origin of the hospital as an institution. The disposition to claim it as the offspring of an exclusively Christian idea not unnaturally evoked the remonstrance of Jews. But to whomsoever the existence of the hospital in its modern form was due, there was hardly room to dispute that the great principle of humanity—of which the hospital was but one mode of expression—was well understood and practised by the followers of that creed which had taught men not to "stand" idly or indifferently "by the blood of their fellowmen," and which had inculcated a love not only of those who were of the same religious communion, but of "the stranger" also, and especially of the poor and afflicted of all races and creeds. The collection amounted to about £70.

All Saints', Ennismore-gardens.—The sermon in the morning was preached by the Vicar, the Rev. John Blomefield, from the text 1 Sam. ii. 6. That, he said, is a short-sighted philosophy which sees in diseases only the fruit of the violation of some sanitary laws; although for practical purposes this is one good every-day principle upon which to work. The Son of God interposed by acts of grace alike towards suffering bodies and sinful souls; and medical men, as well as clergymen, are Christ's ministers treading in His steps. The most skilful and busy and prosperous of our physicians and surgeons study and minister to the relief of suffering in the hospital ward, as well as in the home. The collections in this church amounted to £142 17*s.*

The New Jerusalem Church, Palace Gardens-terrace, Kensington.—The Rev. Dr. Bayley took for his text Luke x. 36, 37. The hospitals, he said, were in all respects worthy of our support; they were the glory of the metropolis. There charity was seen in her worthiest, tenderest aspect, soothing anguish and restoring health. What a magnificent illustration of charity is that which can say we have dealt with 75,500 in-door cases, and had nearly a million out-patients! We have nearly four thousand beds constantly occupied, but there are more than one thousand that we cannot afford to fill for want of the means. Let us all strive, said Dr. Bayley, to give them the means. The collections were nearly £50.

Hambro' Synagogue.—On Saturday last a special service in connexion with the Hospital Sunday Fund was held by the Rev. S. M. Gollancz, the Senior Minister. The sermon was preached by the Rev. Hermann Gollancz, son of the minister, whose subject was "The Existence of Evil on Earth, its origin and purpose." He said that since man is unable to remove the evils of life it is his duty to help to alleviate their destructive effects. The example of Aaron the High Priest, who, according to the Sabbath's lesson, "stood between the dead and the living," should be followed; we should, like him, take the censer, and bear in speed (for he gives doubly who gives quickly) the frankincense of generous hearts and spirits, and assist in staying the ravaging hand of sickness and disease.

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St. George's-in-the-East.—In the course of his sermon, the Rev. Harry Jones, Rector, pointed out that hospitals are now a Christian inheritance, tending not only to the cure of sickness, but to the promotion of improved science in the healing art. As they are helped we approach a better sanitary condition, and learn more of the laws of life and health with which we are surrounded by God. Remember how our hospitals are an advance on the special and imperfect institutions which preceded them. Formerly there were merely "Spitals," houses for the reception and relief of *lepers*. Thank God, the disease of leprosy may be said to have died out in these lands! But we have much in the shape of even common disease, of which as a civilised Christian people we should be ashamed. The day will, I hope, arrive when those who live then shall look back on some of our familiar pests—such as small-pox, scarlet and drain fever, measles, whooping-cough, and the like—as we now do upon leprosy. Some other bad scourges beside leprosy seem to have left this land. We do not hear of the black death or plague, and cholera, though more recent, has been successfully faced on several occasions, and the law of its progress has been learned. Do not think that the view I am now giving you is a mere "scientific" one. It is radically Christian. It is but the commonest Christian sense to see in the movement of which the hospitals are a conspicuous fruit and sign, true Christian progress in the knowledge of the laws of life, the laws of God. It is ignorance or defiance of these laws which retains, in some countries, those diseases from which we are now freed. And *better* Christian knowledge will help us to drop off diseases which plague us now.

West London Synagogue of British Jews.—The Rev. Professor Marks preached on Saturday, taking his text from Ecclesiastes xi. 1, 2. In the course of his remarks he said that for consumption and cancer, as well as for children, particular hospitals might be needed, but all institutions should be discouraged which are set afoot principally for the benefit of those who desire to acquire a large practice outside the hospitals. No charity was so worthy of the philanthropist as the hospital, for in such a place there could be no fictitious trappings of woe, no dissembled misery, no deception played off on credulity and unwariness. In the collections made in the past years, the Jews had not been behind their countrymen of other creeds, nor was there much merit in their action, seeing that Judaism was based on human benevolence. He hoped that the same liberal spirit which had moved his congregation in former years would influence them to-day, and that every man, woman, and child would share in the good work to which that Sabbath-day was consecrated. It is believed that the collection, when completed, will not fall far short of £200.

Goldington-crescent Presbyterian Church, Pancras-road.—The Rev. Z. B. Woffendale, of the above church, preached in the open air at the band stand in Regent's-park at 3.30 P.M. upon the command of Christ, "Go, and do thou likewise," Luke x. 37. It had been said that Christianity was against the use of material means, but the Good Samaritan used oil, and wine, and bandages, and his own beast. It had been said that Christianity taught men to be content in the place where they were, but the Good Samaritan was lifted and carried to a better position. It had been said that Christianity was against progress, but the Good Samaritan found the poor man as low as he could be, and only left him when his condition was materially improved. The rev. gentleman concluded by narrating incidents of good effected by the hospitals of the metropolis, and was listened to with deep interest by a large audience, who gave in response to the appeal at the band stand £2 7*s.* 10*d.*; at the Midland arches, £1 4*s.* 8*d.*; and at the Cobden statue, Camden-town, 11*s.* 5½*d.*; total in the open air, £4 3*s.* 4½*d.*

St. Andrew's, Thornhill-square.—In the morning the Rev. T. W. Morris preached. In the evening the sermon was by the Vicar (Rev. A. J. Bridgman), from the text, St. Matt. xii. 13, "Stretch forth thine hand." These words, addressed, as it is believed, to a Hebrew artisan whose withered hand had rendered him incapable of work, might be taken as an injunction to Christians concerning the hand of suffering, the hand of succour, and the hand of sympathy. The preacher argued that the aid afforded to hospitals was reciprocated in the experience which they offered, and thus rich and poor were alike benefited. He urged his hearers to imitate the example of Christ, and stretch forth the hand of beneficent sympathy. Collection, £30 6*s.* 10*d.*

St. Paul's, Avenue-road.—Morning: the Very Rev. the Dean of Manchester. Text, St. Matt. xxv. 36. The preacher observed: 1. That in ministering to the sick we ministered personally to Christ Himself. 2. That we are bound to imitate Christ by doing our utmost to relieve those in suffering. 3. That we ourselves as members of the body of Christ suffer in the sufferings of others, and hence cannot be indifferent to their sufferings, or refuse to do what we can to mitigate them. Evening: The Rev. J. W. Bennett, Vicar. Text, Galatians iv. 18, "It is good to be zealously affected *always* in a good thing." Reference was made to the case of the young women employed in the shops, and a quotation read from the article in THE LANCET on the subject, and the ladies were urged to join an association for securing rest and sitting accommodation to the young women so employed. The present needs of the hospitals were then remarked upon, and the necessity shown for not allowing our zeal to flag, and for making indeed increased exertions in order to augment the Hospital Sunday Fund. The collections throughout the day amounted to £85 14*s.* 7½*d.*

London Hospital Chapel.—The Chaplain, the Rev. J. S. Whichelow, in the morning preached from the text, Luke vii. 13: "And when the Lord saw her, He had compassion on her, and said unto her, Weep not." He said that the work of Hospital Sunday was essentially a Christian work—compassion being the very life of Christianity—for without compassion there would be no true human love, no true Christian union. He much wished that what had been suggested in THE LANCET could indeed be carried into effect, and that those to whom appeals would that day be made, could see the sick and suffering faces in the adjoining wards, and in that case he was sure the small coins, which many were doubtless prepared to give, would be exchanged for larger ones, and acts of self-denial be exercised, in order that such a noble work as the maintenance of the hospitals and dispensaries of this great metropolitan city, might no longer be hampered by lack of funds. The total sum collected in the chapel and wards during the day amounted to £31 14*s.* 9*d.*

Warwick Gardens Wesleyan Chapel, Kensington.—The Rev. E. J. Brailsford, resident minister, preached in the morning. The text was Phil. ii. 4. Basing his remarks on information afforded in THE LANCET, he stated the inadequacy of the hospital provision at present made, and pleaded, that by endeavouring to place ourselves in the position of those requiring help, we should contribute more liberally to the funds, "doing unto others as we would that they should do unto us." In the evening the Rev. J. Murgatroyd, B.A., took for his subject "The Good Samaritan." The collections during the day amounted to £24 6*s.* 7*d.*, about £9 more than last year. In addition, collections were made at the chapel in West Kensington Park, amounting to £10 8*s.* 4*d.* The Kensington circuit has, therefore, increased its donations this year by more than £19.

St. Aloysius' Roman Catholic Church, Clarendon-square.—The sermon in this church was preached at the high mass by the Rev. E. English on Romans viii. 22, 23. In concluding his sermon the reverend gentleman called upon his hearers to consider their duties to the sick. "Life," said he, "would indeed be a bitter thing, and the world would indeed be gloomy and comfortless, if when borne down by sickness and its infirmities, and unable to help ourselves, there were no spirit of charity calling others to our aid, and our only prospect was that of abandonment in death. What a melancholy subject of thought the world would be, if by a kind of mechanical process and a sort of iron necessity the weaker were only to be crushed down and trodden over by the stronger in the onward march of the race!"

The evening sermon was preached by Rev. James Rowe, who, after dwelling on the fact that our Blessed Lord during His Passion not only saw all the sins of men for which He was suffering, but also all the pains and sorrows that sin had brought upon the human race, said: That the hospitals for which he had to ask their alms were the most important public institutions for the relief of the sorrows and sicknesses incident to our fallen state. That by their means the highest degree of medical science and skill was brought within the reach of the poorest. That not only was the kindliness of the medical faculty in the assuaging of the illnesses of the poor by human skill proverbial, but they were, as a rule, glad to procure for those suffering the aids and consolations of religion.

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Shoreditch Parish Church.—The sermon was by the Rev. H. Footman, the newly-appointed Vicar; the text, Acts iv. 36: "Joses, who by the Apostles was surnamed Barnabas, which is, being interpreted, the Son of Consolation." The preacher observed that on Hospital Sunday we have an opportunity afforded of becoming Barnabases. What more appropriate day than Hospital Sunday for a truce between Religion and Science, signed, as it were, near a sick bed, in the sight of human agony, which both are anxious to relieve. It may lead on to a permanent peace between Faith and Knowledge, between Medicine and Divinity—a peace needed for the welfare of our common clients, who, in this case, are certainly all sufferers, who are also men!

Agricultural Hall, Islington.—In the afternoon Dr. Thain Davidson preached to a large congregation, and made a special appeal for the Hospital Fund. He based his address upon the words of St. James, "The Lord is very pitiful," and those of Peter, "Be pitiful"; showing that it is the duty and privilege of man to endeavour to resemble the Deity in all His imitable perfections, but in none more than in compassion for the sick and suffering. Dr. Davidson pointed out the immense services which the medical profession had rendered to the cause of humanity, and the great impulse which Christianity had given to every form of true philanthropy. In the evening Mr. J. H. Lydall conducted the service, and renewed the appeal, showing the claims of the hospitals on the hearty support of working men.

Christ Church, Rotherhithe.—Morning preacher, Rev. H. C. Mitchinson, M.A., Vicar. Text, 1 John iii. 8, "For this purpose the Son of God was manifested, to destroy the works of the devil." Disease is one of the physical works of the devil. Christ will one day destroy this, when there shall be "no more pain." Meanwhile Christians should be fellow-workers with Him in alleviating suffering. Collection, £7 3*s.* 10*d.* In the evening the Vicar preached again from St. James v. 14, 15, when the collection amounted to £8 5*s.* 2½*d.*, making a total of £15 9*s.* 0½*d.*, as against £14 6*s.* 6*d.* last year.

St. Katharine's Hospital, Regent's-park.—The Master (the Rev. J. St. John Blunt) chose for his text St. Luke xv. 6, "Rejoice with me." After showing how, in the life of Jesus, "the Man of Sorrows," there are to be found seasons of holy joy, springing from the performance of His Father's will, and the salvation of lost man, the preacher urged the necessity of joining with Christ in His joy no less than in His sorrows. There followed an appeal for the hospitals, which are carrying out the Saviour's work of alleviating pain, of healing the sick poor, and comforting the sorrowful and heavy-laden. The sermon in the afternoon was preached by the Rev. W. Hayes, the Chaplain. The amount of the offertories was £31 19*s.* 1*d.*

St. Luke's, West Holloway.—The Vicar, the Rev. Richard Glover, M.A., preached. In the course of the morning sermon (from Psalm xli. 1), he insisted strongly on the reflex benefits of Hospital Sunday. We cannot feel even a momentary emotion of compassion and sympathy without being all the better for that wave of feeling. Our feelings, like our muscles, grow by exercise, and get stronger by exercise; and therefore every time that they are drawn forth, on occasions like this, they leave us more feeling, more sympathetic men. The collection at this church amounted to £50.

St. Giles, Camberwell.—A sermon was preached by the Rev. John F. C. Dunn, B.A., Curate. Text, St. Mark i. 32. After contending that the miseries which we now suffer in the body are not on account of the wrath of God, because it has been removed by our Saviour who Himself bare our sicknesses and evidenced it by His works, the preacher showed how the supporting of hospitals and other similar institutions was not only a duty incumbent upon all true disciples of Christ, but instrumental in furthering our own future salvation.

St. Peter's, De Beauvoir Town.—The Rev. Charles J. Finch, M.A., preached from St. Matthew viii. 7, "And Jesus saith unto him, I will come and heal him." After explaining and illustrating the narrative of the miracle, he based his appeal for support to the hospitals, not only on the ground that the English are a race who have marked each century of their existence with deeds of philanthropy, but because Christ Jesus is not now here to cool the fevered brow, to restore the paralysed limbs, and to sustain the needy, but has left His flock as stewards in His absence, and stewards must be faithful.

Christchurch, Bermondsey.—The Rev. W. L. Ball, M.A., Vicar, preached from St. Mark i. 40: "The healing of the leper." The subject, he said, was suggested by the earliest hospitals being leper houses. Ancient Southwark is famous for its hospitals; out of Bermondsey Abbey arose four such, of which there still remain St. Thomas's and its offshot, Guy's. The Rev. John Stock, Curate, also preached, taking for his subject, "The joy in Heaven over one sinner that repenteth," St. Luke xv. 7. He compared the healing work of the physician of the body with that of the physician of the soul, and noticed how our London hospitals, by providing the means of grace for their inmates, combine the healing of the body with that of the soul.

Central Synagogue.—The Rev. A. L. Green took his text from the sermon preached by Isaiah, as internal evidence shows, on the fast of the day of atonement, which forms part of the special service used for the Hospital Sabbath in all Jewish synagogues. He pointed out that the prophet's words were, "That thou bring thy poor into the house for the sick;" not, as mistranslated in the authorised version, "*thy* house,"—thus proving that the Jews had hospitals more than three thousand years ago. The collection announced amounted to over £150.

St. Paul's, Onslow-square.—The Rev. H. W. Webb Peploe spoke in the morning from Ps. lxviii. 4-6; and endeavoured to show that God, as known by his name "Jah," is the God who sacrificed self, in order to save the destitute; and that in His holy habitation, which is now the body of true believers, He is in these days revealing Himself to the world by this title; therefore, if we are real Christians, we must be thus showing forth Jehovah, who deigns to dwell in us. We, too, must love with the love of self-sacrifice to give deliverance to the needy. The amount collected was £219.

St. Paul's, Covent-garden.—A sermon was preached by the Rev. S. F. Cumberlege from Gal. vi. 10: "As we have therefore opportunity, let us do good unto all men, especially unto them who are of the household of faith." Showing how the funds of the hospitals are suffering from agricultural and commercial depression, which compelled them to limit their usefulness. The effect being that only the worst forms of disease are received, and the earlier stages are left to become chronic and incurable. In this state of things we are called upon to interfere. The collection amounted to £11 0*s.* 7*d.*

St. Mary's, Islington.—In the evening the Rev. W. H. Barlow, Principal of the Church Missionary College, Islington, preached from 2 Cor. iv. 16: "Though our outward man perish, yet our inward man is renewed day by day." The argument of the sermon was briefly this: Whilst daily dissolution and ultimate death of the body are the common lot of all men, the Christian has present spiritual renewal and future glory assured to him. He, therefore, of all men should be foremost in ministering to the bodily sufferings of the sick and destitute. The collections throughout the day were £29 0*s.* 10*d.*

St. Philip's, Earl's-court-road.—The Rev. W. Crawford Bromehead preached in the evening from Mark vii. 32 and following: The healing of the deaf man who had an impediment in his speech. In the course of his sermon he remarked that it was not to the credit of London to have it said that if Birmingham's example were followed, the Hospital Sunday in the metropolis ought to produce more than twice as much as it does. Hospital Sunday was especially valuable through its inducing all sects and denominations to work together in the noble cause of charity.

Holy Trinity Church, Little Queen-street, High Holborn.—The incumbent, the Rev. Nathaniel Bromley, who is also chaplain to King's College Hospital, preached from St. Matthew ix. 12. He argued that Hospital Sunday afforded to all, rich and poor, an opportunity of expressing their sympathy with "those who were in need of the physician." We are proud of the phrase which we see outside our hospitals, "Supported by Voluntary Contributions;" but a more correct inscription on many a hospital would be, "Not half Supported by Voluntary Subscriptions." The appeal was responded to generously by the congregation.

Presbyterian Church, Islington.—The Rev. Dr. Thain Davidson preached in behalf of the hospitals in the morning, choosing for his subject the mystery of pain, finding his text in Rom. viii. 22, "The whole creation groaneth and travaileth in pain together until now." Dr. Davidson bore an earnest testimony to the skill and devotedness of the medical men of London, to whom, he said, the community owed a debt of gratitude scarcely realised. The collection amounted to £50.

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Christ Church, Mayfair.—The sermon in the morning was preached by the Vicar, the Rev. W. Cardall, M.A., whose text was taken from the first Lesson. Hospitals are the outgrowth of Christianity. Heathenism has never known anything of them. Those noble institutions of our land avail themselves gratuitously of the services of men eminent for their skill in the art of healing. If London that day discharged its duty we should cease to hear the sad complaint that many wards in our hospitals are closed, or a very large number of beds unoccupied through lack of funds.

North London Synagogue.—The sermon was preached on Saturday, June 12th, by the Rev. Isidore Harris, who selected his text from the lesson of the day (Numb. xvii. 13), "And Aaron stood between the living and the dead, and the plague was stayed." The preacher pointed out that the Israelitish priests were the physicians of old. This combination of the priestly and the medical functions was more or less usual among all nations of antiquity, for the priests jealously guarded the keys of knowledge, and were the only class capable of treating disease. The collection realised about £35.

Hare-court Chapel, Canonbury.—Preacher, Rev. W. M. Statham. Text, Luke x. 29, "Who is my neighbour?" Christian charity, said the preacher, knows no limitation of race or creed. The parable is a feature of pharisaic pride and narrowness, for which the Saviour was never forgiven by the Pharisees. The universality of true neighbourhood, the nearest and the farthest off, was then spoken of, as well as the passion which Christ had for humanity, that he loved and cared for men as men. In conclusion Mr. Statham read to the congregation the article from THE LANCET.

Wapping Parish Church.—The sermon in the morning was preached by the Rev. M. C. Browne, M.A., Curate, on the text, "She hath done what she could," the preacher exhorting his hearers to do their utmost for a cause from which many of them had benefited so greatly, and reminding them of the good work done by the neighbouring London hospital. The sermon in the evening was delivered by the Rector, the Rev. Septimus Buss, LL.B.

St. Saviour's, Pimlico.—The Rev. John Walker, M.A., preached on Acts iii. 6, 7. The main idea of the sermon was to contrast what heathenism, as represented by the Stoics, would have done for such a suffering man, if he had lain or asked an alms at the Painted Porch, with what Christianity, as represented by St. Peter and St. John, did at the Beautiful Gate and Solomon's Porch. The offertory amounted to £54 15*s.* 10*d.*, the largest sum yet raised here for the purpose.

Grosvenor Church, South Audley-street.—Sermon by Rev. R. S. Oldham, M.A.; text, 1 John iii. 18. The Hospital Sunday Fund has a special value for us, because it calls upon us to join together in a collective act of kindness to our neighbours. It is an appeal made to us in the Lord's house, on the Lord's day, and in the Lord's name. It is therefore an appeal to us on the ground of our common religion, and the general offertory for hospitals made in our city to-day is London's response to the exhortation of St. John that we should love one another as Christians, not in word only, but in deed and in truth. These hospitals prove that so far at least our Christianity is real.

St. John's, Great Marlborough-street.—The Rev. H. E. Wetherall preached from 1 Cor. xii. 13, and in the course of his remarks said that he hailed with pleasure a day such as Hospital Sunday, when Christians had as it were a short time of rest from the jarring of discordant beliefs, and the rivalry of opposing religious systems—when, forgetting the differences which separated Churchman from Nonconformist, Unitarian from Trinitarian, all united in the most essentially Christ-like effort after the mitigation of human suffering.

St. Ann's Church, South Lambeth.—The sermon was preached by the Rev. W. A. Harrison, the Vicar. The subject was the healing of the paralytic (St. Luke v. 24). A strong appeal was made in this sermon for help for the hospital cause. The collection was the largest ever made for the fund in this church, the amount being more than one-third over the average of the last seven years.

St. Matthew's, Bayswater.—The Rev. E. Grose Hodges preached from Acts x. 38, "Jesus of Nazareth, who went about doing good." He remarked that in Hospital Sunday we have a noble proof of the truth of these words. It is not the fruit of advancing civilisation, science or philosophy, but the direct result of that gentle life which is summed up in the brief, simple words of the text. The collection was £170.

Carmelite Church, Kensington.—The Very Rev. Edmund Sharples, Prior of the Carmelites, preached to a large and appreciative congregation, from Eccles. vii. 39, "Be not slow to visit the sick; for by these things thou shalt be confirmed in love." The Rev. Father said:—"Works of charity to the poor, especially to the sick poor who are unable to help themselves, confirm us in a threefold love—to God, our neighbour, and ourselves"; and in response to his earnest appeal £49 10*s.* was contributed by the congregation.

St. Mark's, Hamilton-terrace.—The sermon in the morning was preached by the Vicar, the Rev. Canon Duckworth, D.D., from Phil. iii. 21, the subject being the Christian doctrine regarding the body of man, with special reference to the final transformation of the resurrection life, which is to set it free from all those humiliating conditions which now make it a "body of abasement."

St. Peter's, Hoxton-square.—In the morning the Rev. W. H. Smith, Curate, took his text from Matt. v. 48, "Be ye, therefore, perfect, even as your Father, which is in Heaven is perfect." And in the evening the Rev. Thomas Priestley, Vicar, preached from Luke x. (part of v. 35), "Take care of him, and whatsoever thou spendest more, when I come again, I will repay thee." He pointed out that the Hospital Sunday movement commends itself as being (1) a Catholic work, (2) a voluntary work, (3) a compassionate work, (4) an acknowledging work.

William-street Wesleyan Chapel, Woolwich.—The preacher, the Rev. J. D. Tetley, took his text from Heb. xiii. 3, "Remember them which suffer adversity, as being yourselves in the body." He remarked that the hospital as an institution has systematised the precept, and habitually embodies the very essence of the religion of Christ, which is Love. In hospital work science and philanthropy were seen in beautiful combination.

Holy Trinity Church, Islington.—The Rev. S. Churchill preached from Heb. xiii. 3, "Remember them that are in bonds, as bound with them: and them that suffer adversity, as being yourselves also in the body." This precept, he remarked, had a special bearing on Hospital Sunday. Support was never more needed than now, one-sixth of the beds in the hospitals being unoccupied for want of funds.

Mercers' Chapel, Cheapside.—The evening sermon was preached by the Right Rev. Bishop Claughton, who took for his subject the parable of Dives and Lazarus, pointing out that on Hospital Sunday the sick poor man was laid again in a figure at the rich man's gate. The offertory amounted to £55 15*s.*, including a cheque for fifty guineas from the Mercers' Company.

St. John's, Chelsea.—The Rev. John Shaw, Vicar, took as his text Jerem. viii. 22. The pressing needs of the hospitals and their lack of adequate support were touchingly enforced by reference to the case of a poor suffering man who, though urgently requiring medical assistance, was unable to obtain admission to one of these institutions, the number of applicants being so many. The collection amounted to £14 4*s.*

Dulwich College Chapel.—Archdeacon Cheetham (taking as his text St. John xi. 4) pointed out how Christ laid upon the strong and wealthy the duty of caring for the sick and poor, and proceeded to state the case of the hospitals and dispensaries of London, often crippled in their work by inadequate resources. The amount collected was £48 3*s.*, with an addition to be made.

St. George's, Bickley.—The morning sermon was preached by the Rev. H. Y. Satterlee, of New Hamburgh, diocese of New York, U.S.A., who took St. Matt. xx. 25-27 as his text. The total amount of the collections during the day was £76 6*s.* 3*d.* The evening sermon was preached by the Rev. W. C. Parr, B.A., Curate of Bickley.

St. Peter's, De Beauvoir Town.—The Rev. W. Stafford Finch, Vicar, preached from Psalm lxx. 1, remarking that sickness and disease are evils which particularly press upon the poor. Christian philanthropy ever desires to help them; and at this time many circumstances have increased the miseries of poverty and sickness; and those noble and necessary institutions, hospitals and dispensaries, are in great and more than usual need of pecuniary help.

Bethnal-green Parish Church (St. Matthew's).—The Rector, the Rev. Septimus Hansard, preached morning and evening. The recruits of the Tower Hamlets Militia (the band of which regiment always accompanies the organ in this church) attended in the morning, and contributed 30*s.* towards the total collection of £13, which is only a small portion of the amount.

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St. Benet's, Stepney.—Sermons were preached morning and evening by the Rev. Thos. Richardson, Vicar. The morning text was Psalm xli. 1, "Blessed is he that considereth the poor," specially noting the marginal reading "the sick or weak." A collection of £5 1*s.* was made. In the evening another collection was made.

St. Stephen's, Gloucester-road, South Kensington.—In the morning the Rev. J. P. Waldo took for his text the parable of the "rich fool." The collection was the largest yet made here, and was supplemented by others in the afternoon and evening.

St. John's-wood Congregational Church. — A "flower service" on behalf of the fund was conducted by the Rev. John Thomas, pastor. The collection amounted to £7 3*s.* 6*d.*, and the flowers, of which nearly every member of the congregation carried a bouquet, were sent off at the close to two of the hospitals.

St. Michael's, Cornhill, E.C.—The Rev. W. Hunt, M.A., Rector, preached in the morning. His discourse was based on 1 Cor. xi. 32. The Rev. R. B. Jukes, B.A., Curate, preached in the evening; text, Matt. v. 7. The collections amounted to £35 13*s.* 2*d.*

St. John's, Paddington.—The sermon in the morning was preached by the Rev. Sir Emilius Bayley, Bart., B.D., on "Who is my neighbour?" Luke x. 29. Collection £121 13*s.*

Wesleyan Chapel, Bromley.—The Rev. J. Buller, from New Zealand, preached, and collections were made in aid of the Hospital Fund. The text in the morning was Matt. xxv. 40.

St. Simon Zelotes, Bethnal Green.—The sermon in the morning was preached by the Lord Bishop of Bedford, from Rom. viii. 22; that in the evening by the Vicar, the Rev. E. Green, the subject of whose discourse was the story of the Good Samaritan. The collection, from a congregation of the poorest people, amounted to £2 8*s.* 3*d.*

St. Bride, Fleet-street.—Two sermons were preached by the Rev. Prebendary Marshall, Vicar. In the morning from St. Matt. viii. 16; in the evening from Jer. viii. 22.

Hackney-road Mission-hall, Union-crescent, Union-street, E.—The Rev. John Girling preached, the morning's text being Mark xiv. 7. Total collections, £2 0*s.* 10*d.*, from a small congregation in one of the poorest localities of the East End.

John-street Chapel, Bedford-row.—A sermon bearing upon practical sympathy with the sick and suffering was preached by the pastor, the Rev. Timothy Harley, from the text Acts xx. 35. The collections for the day amounted to £11 18*s.* 5*d.*

St. Mary's, Moorfields.—The Rev. T. F. Norris preached in the morning on the text, "Thou shalt love thy neighbour as thyself," and the Rev. W. Fleming in the evening on the text, "Blessed is he that considereth the poor; the Lord will strengthen him upon the bed of languishing: thou wilt make all his bed in his sickness" (Ps. xli. 1 and 3).

St. Mary's, Kensal-town.—Rev. H. Bayley spoke of the great benefits received from the hospitals, and especially from St. Mary's Hospital, Paddington, in which some twenty-four or thirty cases from Bosworth-road, and the immediate neighbourhood, had been treated there during the last year.

St. Matthew's Church, Canonbury.—The text of the evening sermon, by Rev. Uriah Davies, M.A., Vicar, was Matthew x. 7, 8. The chief idea of the sermon was the very close union which ever exists in Christianity between spiritual and temporal good, between the soul's welfare and the welfare of the body.

Latimer Congregational Church, Bow, E.—The Rev. J. W. Atkinson preached an eloquent sermon, founded on John v. 3. Special collections were made morning and evening.

St. John's Presbyterian Church, Forest Hill.—The Rev. Dr. Boyd preached from St. Matthew's Gospel, viii. 17: "Himself took our infirmities, and bare our sicknesses." The collections amounted to upwards of £64.

Stoke Newington Old Church. — The Rev. Blomfield Jackson preached on the hindrances to medical science offered by ancient superstition and corrupt Christianity, and the encouragement given both to prevention and cure by the genuine faith of Christ. The collection was £28.

St. Marylebone Parish Chapel.—A sermon by the Rev. C. J. Goody, the incumbent, from John ix. 3, resulted in a collection of £33 12*s.* 6*d.*

St. Mary's, Bryanston-square.—The Rev. the Hon. W. H. Freemantle preached on Matt. x. 8.

St. Mark's College Chapel.—The Rev. Canon Cromwell took for his text Hebrews xiii. 16, and concluded his sermon with an earnest appeal for larger contributions than hitherto had been made. The result was an offertory larger by some pounds than last year.

Rivercourt Wesleyan Chapel, Hammersmith.—The Rev. Thomas Chope delivered two discourses: the text in the morning was, "I am the vine," &c., and in the evening Matthew iv. 23, 24. The collections amounetd to £12.

St. Mary's, Aldermanbury.—The Rev. C. C. Collins, Vicar, preached on Matt. x. 8. He said: The sick and needy are types of sinful humanity whom Christ came to deliver. To partake of His atonement we must follow His commands—a Christian life is the best sermon, and Christian deeds the best proof, that the spirit of Christ dwells in us.

Finsbury Park Wesleyan Chapel.—In the morning the sermon was preached by the Rev. Wm. Hudson, the pastor. The text was Matt. vii. 12. In the evening Mr. S. D. Waddy, Q.C., preached a sermon on 1 Peter ii. 15, to young men and young women. The collections for the day were £42 13*s.*, an increase on last year's amount of £22 12*s.*

St. George's Chapel, Albemarle-street.—Offertorial collection for Hospital Fund, £11 10*s.* 3*d.* Rev. F. Palmer preached from James i. 27 ("Pure religion," &c.), and in the course of his sermon expressed a hope of the opportunity given for aiding the excellent hospital cause being largely availed of by many present.

Trinity Congregational Church, Mile-end New Town, E.—The Rev. W. Tyler, who has been for many years on the Committee of the North Eastern Hospital for Children, preached from Zechariah vii. 9.

St. Thomas, Liberty of the Rolls, Chancery-lane.—The Vicar, the Rev. J. H. Moran, preached in the morning from Luke ix. 6, and in the evening from Isaiah xxxviii. 21.

St. Stephen's, Gloucester-road, South Kensington.—The afternoon sermon was preached by the Rev. Asshar Veysey, the subject being "Barnabas the son of Consolation." The text John xv. 14.

St. Edmund the King and Martyr, Lombard-street, City.—Text, "It is better to go to the house of mourning than to go to the house of feasting" (Eccles. vii. 2). Preacher, Rev. Rowland B. Hill, Curate in charge.

St. Philip's, Clerkenwell.—The Rev. R. H. Clutterbuck preached from St. John xi. 3, "He whom thou lovest is sick."

St. Michael's, Wood-street.—Two sermons were preached in this church by the Rector, the Rev. Robert Wheler Bush, M.A. Text: 1 John iii. 18. The collections amounted altogether to £16.

St. John's, Charlotte-street, Fitzroy-square.—The preacher, the Rev. J. J. Coxhead, M.A., Vicar, took for his text 1 Cor. iii. 17.

Harley-street Chapel, Bow-road, E.—The Rev. W. Evans Hurndall, M.A., preached. His morning text was, Mark xii. 42: "Two mites." The duty of general charity was inculcated, and the special claims of the metropolitan hospitals were set forth, extracts from THE LANCET of the 12th inst. being read. The collections were larger than last year.

Eccleston-square Church, Belgrave-road, S.W.—Sermons were preached in this church on Sunday last by the Rev. J. Hiles Hitchens. The text for the morning was Revelation xxi. 4. From this passage suitable lessons were deduced, showing the needs of humanity and the healing power of Christ. Collection, £30.

St. James's, Clerkenwell.—A sermon was preached by the Rev. Wm. Ostle, Vicar of St. Bartholomew-the-Less, from St. Luke xvi. 25.

St. Luke's Mission Church, Bethnal-green. — The Rev. J. Stephens, the clergyman in charge, was the preacher at both services. The rev. gentlemen selected as his text in the morning Matt. iv. 23, and in the evening Matt. ix. 12. The collections amounted to £3 0*s.* 10*d.*

St. Stephen's, Spitalfields. — A sermon was delivered by the vicar, the Rev. Prebendary Reynolds, M.A., from the text Matt. xxv. 40.

New Wesleyan Chapel, Notting-hill. — The Rev. John D. Stevens preached on the group of miracles, Mark iv. 35, v. 43. A good collection was taken.

Allhallows the Great and Less, Upper Thames-street, City.—The Rector, the Rev. J. Russell Stock, preached from Matthew v. 7, and the collection exceeded £50.

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St. Luke's, Deptford.—The morning preacher in this church was the Rev. W. Allan, M.A., Vicar of St. James's, Bermondsey, who took for his text Mal. ii. 10. The collection amounted to £11 11*s.*, which was an unusually large amount. There was a second sermon in the evening by the Vicar, the Rev. James Malcolmson, also followed by a collection.

St. James's, Bermondsey.—The Rev. James Malcolmson, vicar of St. Luke's, Deptford, preached the morning sermon in this church, choosing as his text Psalm lxix. 20. The collections amounted to £18 11*s.* 6*d.*, being larger than ever before made at this church on Hospital Sunday.

Bloomsbury Baptist Chapel.—Services were held and sermons preached by the pastor, the Rev. J. P. Chown. The morning discourse was founded on Malachi iii. 3. The collections amounted to £57 12*s.* 2*d.*, which will be supplemented by those of the Mission Hall in St. Giles's.

St. Jude's, Southwark.—The sermons were preached by the Vicar, Rev. J. W. Pitchford, M.A. The text in the morning was Luke x. 35, "Take care of him"; that of the evening Job xiii. 4. The collections amounted to £20 2*s.* 6*d.*, being nearly £6 in advance of last year.

St. Mary's, Whitechapel.—Sermons in behalf of the Fund were preached, both morning and evening, by the Rev. J. F. Kitto, Rector: texts, John xi. 3, and Psalm xli. 1-3. The collections during the day amounted to £35 11*s.* 6*d.*

St. Peter's-upon-Cornhill.—In the morning the preacher was the Rev. Richard Whittington, M.A., Rector; text, Heb. x. 24; collection, £15 14*s.* 10*d.* In the evening: preacher, the Rev. D. L. McAnally, M.A., Curate; text, 1 Pet. v. 7; collection, £8 18*s.* 9*d.*

St. Olave's, Southwark.—In the morning the Rev. A. Johnson, M.A., F.L.S., head-master of St. Olave's Grammar School, delivered a sermon founded on John iv. 34, "My meat is to do the will of Him that sent me, and to finish His work." The Rev. P. N. Lawrence, M.A., Curate in charge, preached in the evening on Luke vi. 36.

St. John's, Notting-hill.—At 7 P.M. the Rev. T. G. Crosse, Curate, preached from Acts x. 38. In the course of his sermon he read a quotation from THE LANCET, showing how few beds are daily occupied in hospitals (only one bed to 1237 of the population), the reason being want of funds.

Kensington Presbyterian Church.—Rev. Dugald MacColl took his text from Eccles. vi. 1, 2, "Brethren, if a man be overtaken in a fault, ye that are spiritual, restore such an one. . . Bear ye one another's burdens." He remarked that hospitals are the noblest types in bodily suffering of this spiritual treatment of moral and spiritual trouble.

St. Andrew's, Holborn.—The object of the sermon of the Rev. H. Blunt, Rector, was to show that the close relationship of the body and the soul proved the common ground of physical and moral disorder. The collection amounted to £47 11*s.* 10½*d.*

St. Thomas, Columbia-market, Bethnal-green.—The Rev. H. Fawcett, Vicar, preached from Matt. xxv. 36. Offertory £1 16*s.*, considered not bad for a very poor parish.

St. Peter's, Walworth.—Sermon in the morning by the Rector, the Rev. F. F. Statham, from Matt. xxv. 40; in the evening by the Rev. J. B. Doyle, Curate, from Luke vi. 38. Offertories, £5 3*s.*

Stepney Meeting House.—The Rev. Dr. Kennedy preached in the morning on Matt. iv. 23.

St. Matthias Mission Church, Holloway.—The Rev. J. G. Tipper, Assistant Chaplain of the Model Prison, Pentonville, preached from St. Mark vi. 36.

St. Anne's, Spicer-street, Spitalfields.—The Rev. Thomas Maguire, in the course of a most earnest address, entreated his hearers to give all they could spare in aid of the hospitals of London, within whose walls are so many poor Catholics.

St. Helen's, Bishopsgate.—A sermon was preached by the Rev. J. Edmund Cox, D.D., Vicar in charge, and a collection, amounting to £3 7*s.* 8*d.*, was made.

Trinity Presbyterian Church, Clapham-road.—The Rev. Dr. MacEwan preached in the morning from the text, Mark x. 21. The collection amounted to £63, one-half to be given to St. Thomas's Hospital, which does not partake of the benefit of the metropolitan fund.

Hinde-street Wesleyan Chapel, Manchester-square.—The morning preacher, the Rev. T. T. Dilks, selected for his text Matt. iv. 23. Collections, much larger than those of last year, were made morning and evening.

New Jerusalem Church, Flodden-road, S.E.—Rev. W. C. Barlow, M.A. Rev. xxii. 2. A brief *résumé* was given of the progress of medical and surgical science; and a forcible appeal made for help to be given to the carrying out of the aims of Him who forgiveth all our iniquities, and healeth all our diseases. Collections—morning, £4 5*s.*; evening, £2 10*s.*; total, £6 15*s.*

St. Jude's, Bethnal-green. — Rev. A. Strugnell, M.A., Vicar, from the text Philippians ii. 27, insisted on the magnitude, need, and work of hospitals; winding up by bidding his hearers, "Be ye, therefore, merciful, even as your Father, which is in heaven, is merciful."

St. Mark's, Notting-hill.—The Rev. Dr. Thornton, Vicar of St. John's, Notting-hill, preached from Proverbs xxxi. 20.

Bedfordbury Mission Church. — The Rev. A. Green preached from 2 Cor. iv. 7, and in the course of his sermon quoted THE LANCET as to the serious need of funds.

St. Chrysostom's, Peckham.—Two sermons were preached by the Rev. O. Adolphus, M.A., from the texts Matt. iii. 20 and Matt. xix. 20. The collections amounted to a trifle over £17.

All Souls', St. John's-wood.—Two sermons by the Rev. Henry R. Wadmore, M.A., Vicar, resulted in an offertory of £21 9*s.* 6*d.*

Falcon-square Chapel, E.C.—Preacher, W. Justin Evans. The text was from Matthew xxv. 40: "Inasmuch as ye have done it unto one of the least of these, my brethren, ye have done it unto me."

St. Martin's-in-the-Fields.—The Vicar, the Rev. W. G. Humphry, preached from the text, Matt. iv. 24.

St. Andrew's, Upper Westbourne Park, W.—Rev. R. Towers, Vicar. Text of morning sermon, Matt. ix. 12: "The Great Physician." Amount collected £10 10*s.*

Sydney-street Congregational Chapel, Bethnal-green.—Rev. Thomas J. R. Temple, Minister. Sermons were given in the morning from Romans viii. 18; in the evening from John v. 6.

Drummond-road Baptist Chapel, Bermondsey.—Minister, J. Alex. Brown, M.R.C.S. Eng., L.S.A. Lond. Text: "Jesus went forth, and saw a great multitude, and was moved with compassion toward them, and He healed their sick."—St. Matt. xiv. 14.

Church of Our Lady, Grove-road, St. John's-wood.—The Rev. G. S. Delaney preached from the words, in Luke x., "Thou shalt love thy neighbour as thyself." He enforced the obligation of almsgiving, and remarked the institutions for which he appealed were truly Samaritan in their character.

St. Nicholas, Deptford.—A sermon was preached in the morning by the Rev. J. R. Gregg, M.A., the text being Psalm ciii. 13, 14.

St. James, Garlick Hythe.—The sermon in the morning was preached by the Rev. R. B. Gardiner, M.A., of St. Paul's School, on Ephesians iv. 5, 6, and that in the evening by the Rev. E. Wilton South, M.A., head-master of Blackheath School, on St. John ix. 3.

St. Giles's, Cripplegate. — Sermon by the Rev. P. P. Gilbert, M.A., Vicar, founded on 1 Peter v. 10. The collection is expected to reach £50.

All Saints', Kensington-park, W. — Two sermons were preached, that in the morning by the Rev. John Sybil, M.A., Vicar; text, Matthew viii. 5-7. The offertories were nearly double those of last year.

St. Mary the Virgin, Primrose-hill.—The preacher in the morning was the Rev. J. Newton Smith, M.A., and his text was Matthew x. 8. In the evening the Rev. Edward H. Flynn, M.A., preached from John ii. 3.

St. Mary's, Boltons, South Kensington. — Two sermons were preached by the Rev. Canon Robinson, of Torquay, from Psalm xc. 2, and St. Mark vii. 34 respectively. The collections were £82 16*s.* 1*d.*

St. Matthew, Prince's-square, E.—The Rev. J. M. Fidler, Vicar, preached from St. Matthew ix. 2.

St. Saviour's, Paddington.—Two sermons preached by Rev. Thomas Nolan, D.D., Vicar. That in the morning, from John v. 6; and in the evening from Acts iv. 10. The appeal to Christians to maintain hospitals was only asking the parent to support its own child. The collections amounted to £71 6*s.* 4*d.*

St. Mary's, London, E.—The Rev. Henry Tinden, Vicar, preached upon John xii. 8.

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Whitefield's Tabernacle, Tottenham-court-road. — The Rev. J. Jackson Wray preached from John i. 2. An earnest appeal on behalf of the fund was responded to to the amount of £44.

St. Peter and St. Edward's, Westminster.—A sermon was preached by the Rev. F. Kirk on the spiritual and temporal advantages afforded in hospitals to both Protestants and Catholics.

Christ Church, Camberwell. — The sermons were both preached by the incumbent, the Rev. R. H. T. Thorpe, M.A., the texts being Acts iv. 36, 37, and Luke x. 25, 27. The collections amounted to £14 2*s.*

St. Mary's, Putney.—In the evening the Rev. Blomfield Jackson preached on the aggravation of the ills of sickness by poverty; the collection amounted to £9.

St. Mary-le-Strand. — The Reverend Canon Tugnell, Rector, preached in the morning from John v. 3, 4, and in the evening from Matt. xxv. 34, 40. Collections, £7 12*s.* 6*d.*

Chelsea Old Church.—The Rev. R. H. Davies, incumbent, preached from Gal. vii. 9, 10.

Chapel Royal, St. James's.—At the ten o'clock service the Rev. Francis Garden, sub-dean, took for his text 1 John iii. 17.

Caledonian-road Congregational Church.—In the morning the Rev. B. Price preached from Matt. xi. 4, 5; and in the afternoon there was a children's flower sermon, the flowers being afterwards either taken to the Great Northern Hospital, or scattered among the sick of the neighbourhood.

Richmond-road Wesleyan Church.—The Rev. T. Brackenbury preached in the evening from Acts xvii. 27, and a liberal collection was made.

St. Luke's, Evelyn-street, Deptford.—The sermon in the morning was preached by the Rev. William Allan, Vicar of St. James's, Bermondsey, from Malachi ii. 10: "Have we not all one Father?" That in the evening by the Rev. James Malcolmson, Vicar, from Psalm lxix. 20. The day's collection, in a congregation mostly of poor people, amounted to £21 3*s.* 4*d.*

Limehouse Parish Church (St. Anne's). — The Rev. Samuel Charlesworth, Rector, preached, and collections were made amounting to £30 3*s.*, the highest yet in this parish.

Charlotte-street Chapel, Caledonian-road. — Sermon preached by the Rev. J. W. Mawer, from John v. 23. Amount collected £4 5*s.*

Wesleyan Chapel, Hornsey-road.—The Rev. Dr. Thornley Smith preached in the morning from Matt. xxv. 40. Liberal collections were made during the day.

St. Paul's, Paddington.—The sermon in the morning was preached by the Vicar, the Rev. H. V. H. Cowell, who took as his text, "I was sick, and ye visited me." The offertory amounted to £25 15*s.* 6*d.*

New Wesleyan Chapel, Lancaster-road, Notting-hill.—Rev. T. H. Ingram preached from Acts x. 38, and liberal collections were made.

Shadwell Parish Church, E.—The Rev. Alex. Hatchard, Curate, preached morning and evening. His first discourse was founded on the parable of the "Lost Sheep," and his second on Samuel iv., "The Life and Death of Eli." Mr. Hatchard read extracts from the article in last week's LANCET.

Caledonian-road Church of the Primitive Methodist Connexion.—The Rev. John Bailey preached from Jeremiah viii. 22. £4 was collected.

Sion Chapel, Whitechapel-road.—Two sermons were delivered, the texts being John xiv. 23, and Matt. v. 1, 2, combined with vii., 28, 29.

Clare-market Mission Chapel, Strand.—An evening sermon was preached here by the Rev. J. Grant Mills, Hospitaller of St. Thomas's Hospital, from the text Matt. xxv. 36.

St. Gabriel (Newington) District Church.—The Rev. T. Hill, M.A., preached on Sunday morning from Psalm viii. 4, 6, his theme being the present sacredness and future dignity of humanity.

Barnsbury Chapel.—On Sunday morning the Rev. James Ellis preached from Galatians vi. 2.

Chapel Royal, Kensington Palace.—The preacher was the Rev. J. Speer, chaplain, Bengal establishment, and the offertory about £5.

St. Paul's, Covent-garden.—On Sunday evening a sermon was preached by the curate, the Rev. R. Cox Smith, founded on John xi. 3.

St. Paul's, Great Portland-street.—The Rev. Chas. G. Williamson delivered a sermon on "The Purpose and Use of Pain," from the text of 1 Peter v. 10.

Chapel Royal, Savoy.—The sermon was preached by the Rev. Henry White from 2 Cor. i. 3, 4. He quoted THE LANCET as to the appeal that would be made for sympathy by the sight of those suffering faces for whom Hospital Sunday pleaded, could they be beheld.

Jeffries Hospital Chapel, Kingsland-road.—The Rev. H. M. Baker, chaplain of the Ironmongers' Company, preached here from Heb. xiii. 16.

New College Chapel, Upper Avenue-road, St. John's-wood.—The Rev. Johnson Barker, LL.B., minister of the chapel, preached morning and evening: texts, Genesis iv. 9, and Col. iv. 14.

St. Augustine's, Stepney.—The text of the Rev. W. H. Langhorne, M.A., incumbent, was Matt. xiv. 35. An extract from his sermon reads thus: The hospitals have become in their turn dissociated from the Church—more need therefore for the Church to help them in their beneficent work.

Christ Church, Chelsea.—The Rev. G. S. Whitlock, Vicar, preached from 1 Peter iv. 10.

Kensal New Town, St. Mary's, Bosworth-road.—The Rev. S. Andrews, M.A., in preaching here upon the text, "Bear ye one another's burdens," urged his hearers, as Catholics, to show that they were animated by the true spirit of the church, by doing something that day towards bearing the burdens of their suffering brethren.

St. Cyprian's. — The text of the morning sermon was Psalm xi. 1, "Blessed is he that considereth the poor," &c.

St. Giles-in-the-Fields (Holy Trinity). — The Rev. Nathaniel Bromley, incumbent, used the statements of THE LANCET in his appeal to his congregation, and although it was not so numerous as last year, the collection was much larger.

Grosvenor Church, South Audley-street. — In the evening the Reverend J. Abernethy Colbeck, Curate, preached from St. Mark xiv. 8, "She hath done what she could."

Shoreditch Tabernacle.—The Rev. W. Cuff, like many other preachers, took his text from Matt. xxv. 40. He urged that it was still the duty of his hearers to help and pity the needing, notwithstanding that they might be least—least as to money, least as to ability, and even least as to goodness.

St. Augustine, Bermondsey.—The Rev. W. J. Stohart, Vicar, preached from St. Matt. xxv. 40. The offertory amounted to £3 13*s.* 4*d.*

St. Anne's, Soho-square. — The Rev. Nugent Wade, Rector, preached from the parable of the Good Samaritan, Luke x. 37: "Go, and do thou likewise." The sum collected was £138, being the largest for many years for any object.

St. Botolph, Aldersgate.—Sermons were preached in the morning by the Rev. P. Alpe, B.A., from Matt. ix. 2; and in the evening by the Reverend J. W. Cheadle, M.A., from Galatians vi. 10. The collection amounted to £8 13*s.* 3*d.*

St. George-the-Martyr, Southwark.—The Rev. Burman Cassin, M.A., Rector, preached from St. Luke ix. 6, quoting extensively from THE LANCET in the course of his sermon. The collection at this church was £25 11*s.* 1*d.*

Cotton-street Chapel, Poplar.—The Rev. Benjamin Preece preached from Mark vii. 37. He asked his hearers to do for our hospitals and dispensaries, which now represent Christ, what they would have done for Himself.

St. Stephen's, Boyson-road, Camberwell-gate.—Sermons were preached by the Rev. George Dale Copeland, B.D., Vicar, and £10 5*s.* 3*d.* was collected.

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THE LANCET.

LONDON: SATURDAY, JUNE 19, 1880.

THE members of the Council of the Royal College of Surgeons, on the 10th inst., proved themselves equal to their responsibilities. Abandoning all feeling of jealousy, vanity, or caprice, they took a middle course with regard to the two great questions on which they were called upon to decide. As we announced last week, instead of acting upon the recommendation to give notice to the various bodies co-operating for a Conjoint Scheme for England of their intention to withdraw from the scheme, they determined not to disturb the existing arrangements, but rather to institute at once, either alone or in conjunction with other bodies, an independent complete examination in Surgery, Medicine, Midwifery, and the allied subjects, to be passed by all candidates for the diploma of Member. As to Mr. MARSHALL'S proposal to establish at the College a compulsory examination in Elementary Anatomy and Physiology at the end of the first year of professional study, so many concessions and modifications were made, that its character has been completely and entirely changed, and we might add, its practicability wholly destroyed.

The action of the Council as regards the Conjoint Scheme is highly satisfactory. Whether the consummation of the Conjoint Examining Board be near or remote, the Council has shown its willingness and readiness to initiate radical internal reforms. After a preliminary legal question as to the power of the College to hold an examination in all the chief subjects included in the medical curriculum has been satisfactorily settled, we may expect the Council to take some immediate steps towards fulfilling the deliberate pledge it has given. If this be accomplished, it will be comparatively of minor importance when a compulsory conjoint examination for all the divisions of the United Kingdom be enforced. If the Royal College of Surgeons, standing as it does, numerically, far at the head of the examining bodies in England, will, alone or in conjunction with the Royal College of Physicians, and possibly the Apothecaries' Society, institute an adequate complete examination, the death-blow will be given to all lesser and inferior institutions and qualifications. When it can no longer be said of the chief examining body in England that it grants only a one-sided qualification, a salutary diminution of the number of examining boards for the United Kingdom will speedily follow.

Turning to the other topic discussed by the Council; it is not easy to discover where the current of events has left Mr. MARSHALL'S proposal to institute a compulsory examination in Anatomy at the end of the first year, as a practicable scheme. A brief retrospect may assist us to understand its bearings. When Mr. MARSHALL first expounded his views on this subject in November, 1875, he advocated the desirability of instituting "*a compulsory and authoritative Elementary Examination in Anatomy at the end of the first winter session,*" for which there should be marks of three values, such as "*sufficient*," "*defective*," and "*very defective.*" "The 'sufficient' mark," he said, "should entitle the candidate to come up for the existing Primary Examination at the usual time—that is, as soon as he saw fit after his second winter session. The mark 'defective' should postpone the Primary Examination for a certain period, say three months. 'Very defective' should compel the candidate to wait for, say, six months beyond the usual time." It will be seen, therefore, it was at that time intended to make the elementary examination distinctly punitive, inasmuch as those candidates who did not reach a certain standard were not to be allowed to present themselves for the ordinary Primary Examination until the lapse of three to six months beyond the usual period of prescribed study. On the 10th inst. Mr. MARSHALL announced his willingness to abandon this part of his scheme, and to remove every trace of its penal character, though it is difficult to comprehend the wisdom and utility of a compulsory and authoritative examination that shall be in no degree punitive. Such an examination would scarcely rise above the low level of undignified curiosity.

As to the practical application of his proposed scheme, Mr. MARSHALL, in 1875, said, "It has been suggested by some who have carefully considered the subject, that such an examination as is here proposed might be conducted in the various medical schools. But although some good reasons may be assigned for pursuing such a course, a fuller consideration of the subject than can here be given to it can alone decide whether this would be preferable to holding the examination at the College of Surgeons, and under the express authority and control of its own examiners. My own opinion is that the latter plan would be at once more simple and more effectual, more uniform in its action, less liable to friction in its operation, and altogether more manageable in its working and effects. For the country schools the questions for the written examination might be sent down, and the *viva voce* examination be conducted by one or more travelling examiners." It would appear that Mr. MARSHALL now recognises the force of the objections to holding the examination at the College, and is disposed to look with more favour on the suggestion that the examinations should be conducted at the various medical schools, by or in the presence of an assessor from the College.

We have no wish to anticipate the decision of the "Committee on Examinations," which has to consider and report to the Council on the practicability of Mr. MARSHALL'S scheme; but we cannot resist the prediction that the Committee will pronounce the proposal to be impracticable. The question of expediency is involved in that of the practicability. Should the Council make the elementary examination obligatory, the regulation would apply not only to all the metropolitan and provincial schools, but presumably also to the Scottish and Irish schools, and, to be consistent, to those in the colonies likewise. One of two things must inevitably happen: either the College or the intending candidates for the diploma of Member would be put to grievous expense and insufferable inconvenience. Either all first-year students intending hereafter to seek the Membership of the College would have to make a pilgrimage to London from the provinces, from Scotland, from Ireland, and even from the remote antipodes; or the College would have to

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engage a permanent staff of travelling examiners, whose labours and journeyings would leave them neither time nor opportunity to study the subjects in which they had to examine, and would, moreover, prevent them from holding office as teachers, or from engaging in the practice of their profession.

But, we repeat, the practicability of the scheme is quite a secondary consideration; we are chiefly concerned in the question of its desirability in relation to medical education. If the thing were good in itself, all considerations of convenience and cost might prudently be disregarded. And here we would protest against the total misconstruction of our views contained in a letter published in another column. There has been no difference of opinion between Mr. MARSHALL and ourselves as to the evil of which he complains, but only as to the remedy which he proposes to employ. The statements of our correspondent are a complete travesty of our arguments. We have never hinted that "students are over-examined and work so well that they require no extra stimulus to exertion." The burden of our cry from first to last has been that the student is over-examined and *undertaught*. The 80 per cent. of practitioners referred to by our correspondent would assent to both these propositions, and we prefer to assume that they do not take so mean a view of the methods of education as to believe that the student's knowledge will be made better if he is forced to present himself, while imperfectly prepared, at an inquisitorial elementary examination. Five years ago we suggested a simple remedy for the more serious defects in the first year's student's education, and the Council of the College of Surgeons possesses the means of applying it without disturbing the existing order of the examinations at the College. In the regulations respecting the education and examination of candidates for the diploma of member, the Council requires that the certificates of attendance on the several courses of lectures on anatomy and physiology "*must include evidence that the student has attended the practical instruction and examinations of his teacher in each course*" (the italics are ours). Now if the College will, in all instances, insist on the observance of this regulation, teachers of anatomy and physiology would at once be endowed with a power of supervision and control over their pupils which at present they need. Let the College make this attendance on practical instruction and class examination strictly binding, and an immediate improvement in diligence and industry will take place. This we urged five years ago. "If Mr. MARSHALL," we then stated, "were content to suggest that such an examination as that to which he refers would be desirable, or that students, if they wish to present themselves for examination at the end of the first year, should have the opportunity of doing so; or, still better, if the elementary examinations were made compulsory at the medical schools, instead of at the College, we should at once say so let it be. But to make the examination compulsory at the College would be one of the surest means to defeat the object it would have in view." If the teacher had some well-defined authority for compelling all his pupils to attend his class examinations, not only would idleness and inattention in the student be eliminated, but the teacher would be made more directly responsible for the character of his instruction and the reputation of the school to which he is attached. Pending the distant disestablishment of the smaller schools, and the formation of one or two large tutorial centres, with well-paid permanent professors, this suggestion, if adopted, would, we believe, tend to check some of the worst defects and abuses of medical education, and pave the way to substantial reform.

THE verdict of the coroner's jury in the case of the woolsorter, SAMUEL FIRTH, who died of so-called "woolsorter's disease," closes the first stage of the inquiry into this disease at Bradford. It will be remembered that the inquest was held in consequence of the certificate of Dr. BELL that the man died of "woolsorter's disease, or splenic fever," and that his death arose "from his employers' neglect in not having the mohair he was sorting disinfected beforehand." The jury, by a verdict of accidental death, exonerated the employers from the charge of neglect, and it was proved that they had taken all customary precautions. We have already (THE LANCET, May 22nd) given the chief facts of the case. There was no question that the deceased had been sorting the "Van" mohair, which is known to be in some cases dangerous to human life; that after a brief illness with symptoms of blood-poisoning analogous to those observed in similar cases, death occurred, and that no other disease was discovered or suspected which could have caused death. Moreover, there was some evidence that the bacillus commonly found in splenic fever was discovered in the blood. The interest excited by the occurrence of this death and several other fatalities attributed to the same cause, by the direct charge of culpable negligence made against the employers, and, still more, by the inquiry ordered by the Local Government Board, led to a very prolonged and exhaustive inquiry, in which the Sanitary Committee of the Corporation, the Local Government Board, the manufacturers, and the woolsorters were all represented. A large amount of practical evidence was adduced, which is fully reported in the *Bradford Observer*. The general result of this evidence was such as conclusively to prove that the sorting of certain kinds of Persian and Cape mohair is terribly fatal to life. One witness stated that "ten or more" men engaged with himself in the sorting of "Van" mohair had died, and that others had been seriously ill, but had recovered. Moreover, when any measures were taken to render the wool less noxious, they would appear to be not only ineffectual, but very partially and occasionally adopted. Shaking out the wool, washing it in warm water and then drying, or exposing it to the air for a short time, seemed to be the only measures taken at most factories. That even where the most complete system of washing was adopted fatal results often occurred, was shown by the evidence of a witness employed by Sir TITUS SALT & CO., who, after describing the method of purification, stated that he had known twenty-two persons who had died of the disease. Nor can we be surprised that where the storage of wool in the sorting-rooms, and the taking of meals during work were common, the mortality should be even greater.

We have no desire to anticipate the results of the inquiry by the Medical Department of the Local Government Board, which will no doubt deal with the matter much more exhaustively, and from a more scientific standpoint. But the suggestions of the jury will doubtless carry weight with the

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manufacturers, and may be regarded as the practical result of the experience of employers and employed. They recommend that the wool should be freely exposed and soaked in salt-water for not less than twelve hours; that it should then be washed twice successively in water of not less than 120° F., partly dried, and sorted whilst damp; and they further propose certain measures as to the proper ventilation, disinfection, and cleansing of the sorting-rooms. And, what is still more to the point, they suggest that the sorting of wools and hair should be under the control and inspection of the factory inspectors. It would be premature to express too decided an opinion on these presentments, but in our belief they err on the side of leniency. That such measures might prevent a considerable number of attacks we make no question; but that they would be effective in destroying or modifying the poison would be contrary to all experimental evidence, if the poison is the virus of splenic fever—a point on which but little doubt remains. Some much more stringent and radical measures are probably necessary, and we doubt not that they will be recommended as a result of this inquiry. But to what extent and by what means such measures are to be enforced will depend upon future legislation.

Meanwhile, although we may question Dr. BELL'S prudence in charging the employers with manslaughter, we cannot but congratulate him on having maintained the character of our profession for the care of human life at the expense of his own personal advantage.

THE dispensary work of London, despite some drawbacks which we lately pointed out, is worthy of attention it has not yet received, and that from various points of view. We refer more particularly to the work done in charitable and provident dispensaries as distinguished from the Poor-law dispensaries, the creation of which under Mr. HARDY'S Act marked an improvement in Poor-law arrangements. At Poor-law institutions out-door paupers are seen who are not ill enough to need visiting at home. The medicines and a dispenser are supplied at the cost of the guardians. Notwithstanding, however, the improvement in this service, there is a preference amongst the poor for the ordinary dispensaries, the cause of which it would be interesting to know. Whatever the reason be, it is certain that much of the strictly pauper work is done by the charitable institutions. In some dispensaries good judges have estimated that a third of the cases they are called upon to treat, and perhaps to visit at their own homes, are cases that should be cared for by the parish authorities. There are two principal explanations of this preference of the poor for charitable as distinct from Poor-law dispensaries. First, the feeling that in coming to them they are resorting to an expedient less discreditable than an application to the relieving officer. Secondly, the somewhat hard nature of the relief at the Poor-law dispensaries. The medical officers cannot do as they would with the patients who present themselves. They are embarrassed in taking that humane view of a case which they would naturally do. The test of the workhouse is being applied so severely that medical orders for relief are discouraged, and often disallowed. So much is this the case that medical officers are chary of giving them, and in some cases undoubtedly push this chariness too far. They should not hesitate, in regard to extras, to recommend, and that strongly, what they believe to be necessary. And in bad cases they should even be generous, and throw upon the relieving officer and the Guardians the full responsibility of refusing gifts of food that may be more essential than medicine for the relief of the diseases that they are called on to treat, and, being more essential, also economical.

But our present purpose is to show the importance of the work done by the Metropolitan Dispensaries, and to consider what it may be possible to do to utilise and elevate that work. The dispensaries are the natural complement of the hospitals. The hospitals cannot undertake outside work, but the great majority of the sicknesses of the poor are like the sicknesses of the rich, such as cannot receive treatment in a hospital. They consist of the same diseases that make up the bulk of medical practice—viz., acute inflammations, chronic organic disease, zymotic affections, the minor accidents, and the innumerable host of functional diseases. In the rich these are considered fair subjects for treatment. But in the poor it is too lightly assumed that the minor maladies are trivial and do not justify applications for medicine. There are few statements made oftener, and there are few more ill-founded, than that the majority of the diseases of the poor, as seen in dispensaries and out-patient departments, are slight or imaginary. An ulcer of the leg or a prolapse of the uterus; a menorrhagia; a child, or what is more common, two or three children in a family with whooping-cough, scabies, or eczema, to say nothing of scarlatina or measles, cannot be deemed a light affliction. These evils are bad enough with all the amenities and comforts of middle and upper life, but in the straitened homes of the poor they are pitiable, and in these days of rigidly organised charity are apt to be too lightly regarded. In the early days of the Hospital Sunday Fund some of the promoters thought to leave out Dispensaries altogether from the benefits of the fund, and of late years there has been a tendency to treat them stintingly and somewhat shabbily. This is a mistake, when the nature and the amount of the work done is well considered. We have spoken of the nature of the diseases that are encountered at dispensaries. Let us say a word about its amount. It is easy to use large figures in describing the casual and other visits of out-patients. But these are not always very reliable, and do not convey to the initiated the impression of trouble and pains which is conveyed by the statement of the number of visits to the Homes of patients. Medical officers of dispensaries are a practical class of men, and they do not pay needless visits. The number of these may therefore be considered a very sound criterion of work done. It may be ascertained that the number of those in London in a given year is no less than 127,541.

It may be said that in giving such a high place to dispensary work and practice we are perpetuating an objectionable form of charity. Such is not our intention. We see no reason why the charitable dispensaries should not be a lever for lifting the people who use them into higher views of their own duty both to themselves and to the medical profession. This use has been made of dispensaries in certain localities, and they should be so used everywhere. Meantime institutions which, to mention no other work,

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pay 127,000 visits to the homes of the respectable poor in London, are to be respected and supported, and only need adaptation to command entire respect.

DR. CAMERON, by a change of front in regard to animal vaccination, has achieved success. Judiciously restricting the motion he brought before the House of Commons on the 11th inst. to a matter within the competence of the Local Government Board, he elicited from Mr. DODSON a promise that arrangements should be made which would enable the National Vaccine Institution to issue animal lymph as stock to such medical practitioners as desired it, as well as humanised lymph. Dr. CAMERON had moved for a provision of animal lymph sufficient "for the use of those who prefer it to the ordinary lymph," but he wisely accepted the more guardedly worded proffer of the President of the Local Government Board, and withdrew (not without expressions of dissent in the House) his motion.

We congratulate all parties concerned on this termination of a troublesome and irritating discussion. Now that the cultivation and issue of animal lymph are to become a part of our national system of vaccination, we can well afford to leave the question in the hands of the Local Government Board, and to wait with reasonable patience for the results of such arrangements as it may please to make for giving effect to Mr. DODSON'S promise. Whatever may have been the state of the question as to the demand for animal lymph in this country (considerable according to some, infinitesimal according to others, and certainly not of a nature to create a commercial demand for the material), it may be anticipated that the prospect of a ready supply will presently create a greater or less demand, and that there will be some impatience if this demand is not quickly satisfied. It is much to be regretted that the debate on animal vaccination took place at so late an hour of the night that brief reports of it only have appeared, and especially that certain observations of Mr. DODSON'S, bearing upon the subject of the change contemplated, have not been recorded, and which were calculated to show that some time must elapse before arrangements for the issue of animal lymph can be perfected. So far as buildings for a station are concerned, measures for a due supply of animals, the appointment of a staff, and even such further inspection of stations for animal vaccine on the Continent, and their working, as may be held desirable, with a view of obtaining all necessary acquaintance with the administrative requirements of the new organisation, no great delay need, perhaps, occur in getting to work. But a more serious question arises, we apprehend, when the source from which animal lymph should be first taken is considered. It seems to us obviously undesirable that in commencing this great experiment we should have to depend for its origination upon stocks of lymph derived either from the Continent or from the United States which have undergone more or less numerous transmissions from animal to animal. If possible we should begin, both for practical and scientific reasons, with an entirely new stock, and genuine cases of cow-pox among horned cattle are not so common in England that we might not have to wait some time before this desirable aim could be accomplished. We understand that the Local Government Board is already in quest of cases of natural cow-pox, and we trust that the search may be quickly successful. Any way, it is well to understand that probably a longer period of time may elapse before Mr. DODSON can redeem his promise than what might be inferred from the reports of his speech in the House on the 11th inst.

How far the issue of animal lymph as "stock" may meet the requirements of both the profession and the public, we shall not attempt to predicate. Dr. CAMERON had in view a much less restricted issue, and he referred especially to the advantages to be obtained from the cultivation of animal lymph for purposes of revaccination, particularly in face of spreading small-pox, when practically an unlimited demand for vaccine lymph may rapidly arise—a demand of a sort which existing arrangements of the National Vaccine Institution were not designed to meet, and could not meet. This question may, however, be safely left to solve itself. Once we have a station for the cultivation of animal lymph organised, no serious practical difficulty can be experienced in giving it such developments as experience may prove to be necessary.

Annotations.

"Ne quid nimis."

DEATHS FROM STARVATION.

THE Parliamentary Return of the number of all deaths in the metropolitan districts in the year 1879 upon which a coroner's jury have returned a verdict of death from starvation, or death accelerated by privation, has just been issued. From it we learn that 48 such cases occurred in the Central Division of Middlesex, 28 in the Eastern Division, 1 in the Western Division, 2 in Westminster, 1 in Greenwich, and none elsewhere; the total being 80. An examination of the details of these cases shows how little importance can be attached to any such statistical returns as evidence of the actual number of deaths from privation. The term "starvation" is used to denote exposure to cold, we presume exclusively; and "want of the necessaries of life" to denote what is commonly called starvation. Apart from this peculiarity, it would appear that cases which were merely "accelerated" in the sense peculiar to coroners' juries—that, namely, of attaching blame to someone for supposed neglect of duty in cases of disease, are included in the return. Of the 48 cases in the Central Division of Middlesex, 16 were of infants. Most of these cases seem to be properly classed as deaths from privation or improper food, and probably do not represent one hundredth part of the deaths so caused in the same district; but how death from tubercular disease of the mesenteric glands can be regarded as due to privation we are at a loss to understand. Nor is it easy to discover on what evidence the coroner or the juries relied as proof that "uræmic poisoning in Bright's disease," "embolism," "puerperal fever," "epilepsy and congestion of the brain from a fall on the ice," or "disease of the lungs and dropsy accelerated by want of early medical and other attendance," were deaths from starvation.

"INVALID CARRIAGES ON RAILWAYS."

THE *Globe*, while agreeing with us as to the desirability of providing suitable accommodation for the sick who are compelled to travel by railway, thinks it unreasonable to expect that the companies will supply such conveniences without additional cost and previous notice of the requirement. This impression we cannot help thinking must have been produced under a misconception as to what it is we ask, and the circumstances from which the need we desire

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to see met arises, or our contemporary would support instead of discountenancing our efforts. Shall we speak out plainly? As matters now stand, persons infected with contagious, infectious, and offensive diseases, but able to travel in the company of their friends, are in the habit of occupying carriages open to the general public, and for aught any mother going down with her children to the seaside, or any father of a family returning to his home, can know to the contrary, they may be sitting some hour or more close to an invalid whose every breath is poisonous, and whose very garments reek of disease. These persons are for the most part not in affluent circumstances, many are really very poor, and they are returning to their homes in the country, or are coming up to town on errands connected with their illness. They have not the means to pay extra for the use of separate compartments, nor, if they had, could they give notice of their intention to travel. The idea that they could do so is absurd. Meanwhile they have quite enough sense of decency to make use of an invalid carriage if one formed part of every train. We do not see that it would cost the companies an extra penny to make the provision necessary. No costly fittings would be required. When ordinary composite carriages are refitted—as we presume must occasionally happen—it would be easy to make the cushions in a few of the number movable, so that they could be regularly cleansed. It would seldom happen that such a carriage, if properly cleaned and ventilated, was not proportionately occupied by persons who desired retirement, if not by the actually sick. On some of the lines around London the number of travellers daily to and from the hospitals would suffice to keep a carriage of this description in full employ. We repeat the request is reasonable, and it relates to a matter of no small moment to the health of the community. In thinking only of the needs of the upper classes who do not for the most travel much when sick or "sickening," and who are able to pay for any comfort their condition may require, the *Globe* has fallen into a natural and excusable error, but the objections urged against our proposal lose their force.

NAVAL MEDICAL DEPARTMENT.

IT is satisfactory to observe the intention of the War Office to afford a *solatium* to each of the army medical officers in any degree injured by the changes consequent on the Warrant of 1876 substituting sixty for sixty-five years of age for compulsory retirement. The department to which Surgeon-General Gordon belongs will find encouragement in that he has been awarded a good-service pension of £100 a year, in addition to the ordinary retired pay of his rank, increased to £774, in compensation for loss inflicted by earlier retirement than he had rightly calculated on. We are of opinion that it is by fairly regarding such consideration of damages through official changes intended "to benefit a service," they are made acceptable to those meritorious officers whose careers have been cut short abruptly by any newly-devised standard. It was but lately that a dozen or so of colonels of artillery were induced to retire "for the benefit of the service," on security of a larger additional pension, from which we assert that this Surgeon-General has not been unduly or extravagantly "solaced" for his compulsory sacrifice of position. The behaviour of the War Office affords a strong and favourable contrast to that of the late Admiralty with respect to their treatment of the Inspectors-General of the Navy who were displaced by the arbitrary Order in Council of 1875, that omitted to provide similar compensation for the losses inflicted on them by it. They were summarily placed on the retired list on the pension fixed *prospectively* for those who shall in future attain their rank, without compensation to themselves for privation of the advantages of being on the active list, instead of the retired list, between sixty and sixty-five years of age. We find a difficulty in believing that such a difference of action should arise under the same circumstances affecting two bodies of our profession serving the same Government in a military or combatant capacity; but such are the facts of the case as they have come to our knowledge. We know not what may prove to be the effects when two services are desirous to obtain medical officers of equal attainments and respectability; but we can conceive that candidates will find in it an additional reason for preferring the Army to the Navy Service. They may see in this distance that, should their worth and opportunities lead them to the higher positions assigned to medical officers, their services, if rendered in the Navy, will be held to be inferior, and not deserving of the same requital as if they had served in the Army. It will be well for them to appreciate, at the commencement of their career, what are the possible harvests to be reaped at its end.

SCIENCE "ON SHOW."

IT would be an interesting inquiry whether the progress of science has been in any genuine sense accelerated by those annual gatherings of its professors, at which science is, so to say, "on show." In the old days, when there were no public displays in this department of work, when workers were content to labour steadily and secretly with well-defined objects, perhaps remote, but certain to prove worth all the toil and pains of the way when once reached, there was nothing to divert the aim of the scientist, and he had little temptation to waste time and energy, besides incurring the risk of self-deception, in making scraps of work—good in their place, but not meant to be dislocated and viewed singly—the objects of special attack. At the present time all this is changed. If the labourer would prove himself worthy of his hire, he must make a show of himself and his work by putting in an appearance at the yearly celebration. And just as graziers fatten their stock for the show of the Smithfield Club, or agriculturists prepare trophies of their skill for their annual meetings, men of science are, perforce, compelled or induced to set aside their real business for this exhibition work. Nor is this all. It is impossible that men of even distinguished ability can keep up a regular supply of veritable novelties to the display of science *en fête*, and there is no alternative except to fall into the rear or make conclusions known to be based on tentative inferences do duty for solid results. The effect this method produces on science is mischievous in itself and misleading. Year by year unripe fruit is offered in competition at the annual shows of scientific work in its several branches, and year by year the admission has to be made, or the truth suppressed, that grave errors have been perpetrated, wrong conclusions formulated, and false doctrines promulgated, in the haste to appear clever and brilliant, and to *show* work which might have been worth showing if the worker could have afforded to wait. It is impossible to blame those who deceive themselves and others by the impetuous haste of their revelations. It is difficult to avoid being *anticipated*, unless the fleeting opportunity is utilised. Nevertheless, the consequences of this pelting speed, this hot competition, this scramble for places in the front of the procession, are grave, and unless a spirit of moderation should come over the minds of those who head this movement, such a spirit as would induce them to hold aloof from the hurrying crowd, and to discountenance the annual efforts which do so much harm to real science, it is difficult to see how a great *fiasco* can be escaped. It may be urged that we are in error in attributing this haste to the influence exerted by annual celebrations. We are convinced that such gatherings have done more to encourage the impulsive publication of discoveries which are immature, and to foster the modern method of "forcing" the growth of

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what seems to be knowledge, but is, in fact, conjecture, than any other agency, and to their influence most of the mistakes the scientific community has cause to lament are actually due. All societies probably act in this way, but those which glorify results in public once a year do especial mischief.

THE BLOOD IN FEBRILE STATES.

M. HAYEM, who has added so much to our knowledge of various morbid states of the blood, has lately published some observations on the minute alterations in the mode of formation of the coagulum in various febrile states. When the blood is spread out in a thin layer under the microscope, the corpuscles are seen to assume a special arrangement. The irregular spaces which the rouleaux leave are larger and less numerous than under normal conditions. If, after coagulation, an attempt is made to separate the elements, it is found that the corpuscles are united by extremely fine filaments of fibrine, which cause them to assume very irregular shapes; they present also an abnormal viscosity when compressed by the surrounding fibrine. Other changes which the blood presents cannot be, with certainty, ascribed to the inflammatory processes. Even when the pyrexia is high there is no alteration in the dimensions of the red corpuscles. The increase in the number of leucocytes affects equally all forms of pale corpuscles, their mutual proportion being about the same as in normal blood. Nor do these present any structural alterations; their amœboid movements are the same as in health, except that they are somewhat interfered with by the filaments of fibrine which adhere to them. Many "hæmatoblasts" occupy the empty spaces, and, like the red corpuscles, they become more viscous and adherent one to another, and hence quickly form masses, notably larger than those seem in normal blood. Very soon a reticulum appears, considerably denser than in other circumstances, the constituent filaments being thicker and closer than those of normal blood. During this formation, the hæmatoblasts have fused together into little blocks of waxy aspect, to which large numbers of fibrils are attached, giving them a characteristic appearance of balls of spines. The excess of fibrine in the blood gives rise to another appearance if the blood is diluted with the liquid used in the ordinary numeration of the corpuscles; minute solid particles become visible to the naked eye in the mixture, an appearance never seen with normal blood. These particles are composed of hæmatoblasts, surrounded by a finely granular or fibrillar substance, to which many leucocytes and red corpuscles adhere. These changes in the blood may be found, although in a less marked degree, in cases of chronic, as well as in acute, inflammation.

THE MELBOURNE HOSPITAL.

AN inquiry instituted by a sub-committee appointed for the purpose into the trust-deed of the Melbourne Hospital, Australia, has revealed a state of things at once remarkable and embarrassing. It appears from the statement of the case by the *Australian Medical Journal*, that the benefits of the institution are legally confined to "the afflicted or distressed" inhabitants of Melbourne, or sojourners therein, while the practice has hitherto been to admit patients indiscriminately, without regard to their place of residence; thus it is only by exceeding the terms of the trust-deed that the charity becomes metropolitan in the large sense of the word—that is, a place of resort for intricate cases occurring in the various smaller hospitals scattered through the colony. Another result of the inquiry is yet more startling: "Any person having been admitted by the committee and the honorary medical staff, has a right to all the benefits of the charity, and the committee have no power to expel any such person receiving such benefits, or to recover compensation where the charity has been used by those who can afford to pay for medical attendance." We agree with our contemporary that this inquiry discloses a condition of matters which urgently needs rectification.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE annual report of this institution for the year ending 5th April last shows that during that period fifteen candidates were admitted to the Fellowship of the College, 122 received the Licence in Surgery, and nine the diploma in Midwifery. The museum has received several additions, among others forty-three specimens and twenty-one casts from the Coombe Lying-in Hospital, many of which are of the highest value. A considerable amount of attention has also been directed to the preparation of microscopic sections of pathological growths, with the result that the nucleus of a collection of pathological histology has been created, which must prove of great benefit for purpose of reference to members of the profession resident in Dublin.

The following were elected last week Members of Council for the ensuing year, the names being placed according to the number of votes received:—Robert M'Donnell, George H. Kidd, John Denham, Edward Hamilton, A. H. Corley, William Stokes, Rawdon Macnamara, Edward D. Mapother, Henry R. Swanzy, W. T. Stoker, William Colles, Philip C. Smyly, Jolliffe Tufnell, Archibald H. Jacob, John Kellock Barton, William Elliott, William J. Wheeler, F. A. Nixon, George H. Porter.

MIDDLESEX HOSPITAL.

IT is worth recording that within the present week the lecture theatre attached to Middlesex Hospital, in which Sir Charles Bell was wont to deliver his lectures, and in which the late Dr. Murchison and Mr. Campbell de Morgan, and among living men the venerable Sir Thomas Watson, achieved some of their chief rhetorical triumphs, has been demolished in order to make way for the extension and improvements which the continuous increase of the school has rendered imperative. It may not be generally known that among the patrons of Middlesex Hospital were David Garrick, and the famous composer Handel, whose immortal memory is to be celebrated at the festival to be held at the Crystal Palace to-day (Friday), and on Monday, Wednesday, and Friday next week.

OCCLUSION OF THE CORONARY ARTERIES.

THE arrest of the blood-supply to the walls of the heart, in consequence of disease in the coronary arteries, is a well-known pathological factor in certain morbid states of the heart's walls. The effect of such arrest has been studied experimentally by several investigators, who found that it caused rapid enfeeblement of the heart's action. Lately the subject has been reinvestigated by Grünhagen and Samuelson, who have ascertained several new facts. By keeping rabbits under the influence of curara and artificial respiration, they were able to compress the coronary arteries by means of forceps, and to do this repeatedly, so as to observe the comparative effect of arrest and renewal of the flow of blood. The compression caused at once a retardation of the rhythmical action of the heart, especially of the left ventricle, while the contractions of the right ventricle were at first more rapid, and then were also slowly retarded. The slowing of the action increases the longer the compression lasts, or after several repetitions, until finally the contractions cease, first of the left, and later of the right ventricle. A second effect of the compression is weakening of the heart's contractions. This was also observed and estimated by the manometer by Bezold, and it was corroborated by Samuelson with a galvanoscopic frog. As soon

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as the heart became pale and the contractions were less frequent, these were no longer sufficiently powerful to excite the sciatic nerve of the frog, but after the current of blood was renewed, the nerve again responded. This experiment was repeated several times in the same animal. A third fact noted was that the compression of the left coronary artery caused a gradual swelling of the left auricle, which was distended until it appeared like a bright-red, shining bladder, its rhythmical contraction lessening to an oscillating movement, which finally ceased. This phenomenon was observed when the left ventricle was weakened, and its action retarded, while the right auricle and ventricle continued to contract strongly. As soon as the compression was stopped, and the left ventricle began again to contract, the distended auricle emptied itself in one to two minutes, and both series of the heart were again in uniform action. This phenomenon constitutes a striking illustration of the mechanism by which obstruction at the mitral orifice or weakness of the left ventricle leads to auricular dilatation, and to œdema of the lungs.

"A BOX ON THE EARS."

AT the Petty Sessions at Diss, last week, a lad, nine years of age, was convicted on a charge of ill-treating a sheep. He was fined 1*s.*, and 13*s.* costs, or in default fourteen days with hard labour. "But," so the report runs, "as the boy's mother said she had no money to pay, by direction of the chairman she *boxed the boy's ears three times*, after which he was discharged on his mother paying 1*s.* damage." It is to be regretted that the magistrate, whose desire to mitigate a penalty which would fall upon the mother of the culprit, should have led him to prefer the infliction of corporal punishment in the form we have italicised to a mode less liable to lead to serious consequences. We have protested—and not without reason—before now against the wrongful practice of "boxing ears," and are sorry to find that ignorance of its sometimes baneful results prevails even upon the judicial bench.

DEATH FROM CHLOROFORM.

DR. BOGDANIK sends us the following note of a case recently reported as under the care of Professor Bryth of Cracow. The patient was fifty years of age, a drunkard, and the subject of pulmonary emphysema, but no obvious cardiac disease, and on May 14th he was about to be operated on for the removal of an enchondroma of the upper lip. About seven minutes after the administration of chloroform was commenced the respiration and pulse ceased. Artificial respiration was immediately had recourse to and the tongue was drawn forward, but neither these efforts nor faradaism and tracheotomy were successful in restoring life. The post-mortem examination showed extreme emphysema of the lungs, hypertrophy of the right ventricle, congestion of liver and kidneys, and arterial atheroma.

THE WEATHER.

IF a wet spring and early summer should harbinger a dry, warm autumn, there will be ample cause hereafter to rejoice in recollection of the weather we are now experiencing. There is certainly reason to hope that this may be the fact. It is, nevertheless, necessary to remember that for some weeks at least the rain now falling must be so far an evil as to render it desirable to bestow more than the usual care in employing young vegetables in the diet of invalids. After the rain subsides there will be a sudden outburst of vegetables, with abundant show of result; but the bulk of the rapid growth will be immature, and based on a half-rotten structure, which can scarcely fail to do harm. It is at such seasons as this that children and weakly persons suffer most severely from eating "unripe" fruit; the supply is plentiful, and the size and colour fine, but the quality is not merely poor but bad, as anyone who will take the trouble to make a section of some choice specimen of the first fruit offered in the markets after a day or two of fine weather will readily find. The textures will be loose, and the substance pulpy, the growth being half rotten, and for the rest "immature."

TYPHOID FEVER IN INDIA.

THE Indian papers last mail report a serious outbreak of typhoid fever at Delhi, upwards of seventy men of the 54th Regiment stationed there being in hospital. The outbreak, which is happily a mild one in the type of cases, occurred very suddenly and is so far confined to the Europeans, the native soldiers and community being quite free from enteric cases, although malarial affections were somewhat numerous. A few cases of typhoid have also made their appearance in the Civil Lines. The attention of the authorities has been directed to the outbreak, but so far no local insanitary conditions have been discovered to account for its sudden appearance.

"THE WILD BIRDS PROTECTION BILL."

MR. DILLWYN deserves well of the naturalist and the farmer for the able conduct of his measure to prevent the wholesale destruction of wild birds. The mischief small birds are sometimes alleged to do the crop-grower is more than compensated by the service they render in keeping down the insect class, whose depredations would be incomparably more serious. The little birds we allow to be slaughtered are our natural, and in practice our sole, protectors against a multiplication of flies and caterpillars which would devastate the market-gardens and fields. In the interests of humanity and property we hope Mr. Dillwyn's efforts will succeed.

OVARIOTOMY.

OUR readers will be interested to know that Mr. Spencer Wells has just completed his 1000th case of ovariotomy. The patient is doing well. With Mr. Wells' 888th case he began to treat his cases antiseptically. The results since have been even better than before. Recovery has been more rapid, fever being avoided by the antiseptic precautions. Few surgeons in this or in any preceding age have been able to look back on such a history of anxious, original, and life-saving work.

CHARING-CROSS HOSPITAL.

WE are informed that "the Committee have resolved, on financial grounds, which appear justified, to close during the summer months 30 beds of the above hospital, leaving, therefore, 150 still in use. It is hoped that this measure may only be a short and temporary necessity."

THE anniversary session and dinner of St. Andrews Graduates' Association were held at the Greyhound Hotel, Hampton Court, on Saturday last; Dr. Seaton of Sunbury was in the chair, and was supported by Dr. Farquharson, M.P., Mr. Gant, Dr. Richardson, F.R.S., Dr. Macintyre of Odiham, Dr. Phipps of Manchester, and many other graduates. The Council's report congratulated the members on the election of Dr. Richardson as Assessor of General Council, and urged in strong terms the necessity of every graduate of St. Andrews joining the ranks of the Association, that a strong organisation may be ready to defend the interests of the graduates should the talk of coming disfranchisement of the Scotch Universities prove to be more than a mere threat.

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ON account of the alarming prevalence of canine rabies, and because of the number of stray dogs in Edinburgh, the magistrates have seen fit to issue an order, whereby any dog found in the street not under control or muzzled, may be seized by the police, and destroyed, if unclaimed within three days. Already about 60 have been drowned out of 130 captured.

THE *Moniteur Egyptien*, the official organ of the Khedive, announces that Dr. J. A. S. Grant, Physician to the Court, has been advanced to the position of a bey, which, it is understood, ranks next to that of a pasha. Dr. Grant some eight years ago was decorated with the Order of the Medjidie for his valuable services during an outbreak of cholera in Cairo.

THE handsome new "Succursal" Asylum erected at Woodpark, in close proximity to the Lady's Bridge Asylum, Banff, has just been formally opened for the reception of patients. By the new building accommodation will be provided for forty additional inmates. The cost, including furnishing, is estimated at about £2500.

THE *Lyon Médical* announces that Professor Rizzoli, a senator and a large contributor to surgical science, has presented the citizens of Bologna, where he resides, with the munificent sum of 1,250,000 fr. for the purpose of founding an orthopædic hospital.

THE first meeting of the Senate of the Royal University of Ireland will be held in Dublin Castle on the 24th inst., under the presidency of His Grace the Duke of Abercorn, Chancellor of the University.

AT a meeting of the Governors of the South Devon Hospital at Plymouth, on the 10th inst., it was resolved to erect a new hospital for the town, at a cost of £150,000.

DR. MILLER has finished his "Ambulance" lectures, delivered to the Volunteers in Edinburgh; and the formation of an Ambulance Corps is contemplated.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORT OF MEDICAL OFFICER OF HEALTH.

Nottingham.—Dr. Edward Seaton has presented to his Authority, under date May 28th, 1880, a special report upon the epidemic of measles and prevalence of scarlet fever in that town in 1879-80. The epidemic of measles appears to have been exceptionally severe, no less than 238 deaths having been registered in a population, numbering under 90,000 at the last census, during the last quarter of 1879 and the first quarter of 1880. Dr. Seaton protests against the too prevalent—indeed the popular—notion of the triviality of this disease, and comments upon the evil influence it has in preventing proper measures being taken not only for isolating the sick, but in giving due care to them. He writes hopelessly of dealing with this infection, with a view to limitation by providing permanent hospitals for its isolation, and looks to the general advance of sanitary education for any real progress in the direction of restricted prevalence. To this end he approves of action of the sort promoted by Ladies' Sanitary Associations. With regard to the limitation of scarlet fever he is more hopeful. Here, contrary to what happens in measles, he holds, we may cope with the disease at the beginning of infectiousness, and here hospital accommodation for the isolation of cases may become invaluable. Given immediate notification of cases to the Sanitary Authority, and combining isolation with efficient arrangements of disinfection and proper control of schools in regard to infection, Dr. Seaton thinks much may be done in limiting the spread of this disease.

THREATENED DISSOLUTION OF ANOTHER SANITARY COMBINATION.

We greatly regret to learn that a movement is in progress among the sanitary authorities which form the County of Hereford and Hereford Union Combination for the appointment of a medical officer of health for breaking up the combination. Only a week ago we had occasion to report a series of resolutions passed by the greater number of these authorities expressing their high approval of the manner in which the present holder of the appointment (Dr. Vavasour Sandford) had performed his duties, and the great advantages which the several districts had derived from their performance. The movement for disturbing the present state of things, so far as we can at present learn, seems to have arisen in a desire of some of the authorities to appoint local practitioners as medical officers of health. Anything more suicidal, in view of the due performance of the functions of the office, it would be difficult to conceive. We believe that this combination is one of the few combinations which were formed by the Local Government Board itself under Order, the Board exercising the power it possesses for requiring such combination where the public-health interests of the districts involved appeared to require it. The combination moreover appears, as to area and population, one of those which best admits of ready and efficient working by a single medical officer of health. We trust that when the question comes to issue wiser thoughts than those we have referred to will prove to be dominant among the several sanitary authorities, and that the movement for the dissolution of the combination will fail. If not, we hope that the Local Government Board will refuse to assent to the dissolution, and will not suffer its own action to be stultified by the short-sighted restlessness of parochial politics.

NOTIFICATIONS OF INFECTIOUS DISEASE IN BLACKBURN.

The *Blackburn Times* has some observations upon the working of the clauses of the local Improvement Act relating to the notification of cases of infectious diseases to the Sanitary Authority by the medical practitioners of the borough, which would indicate that serious questions of professional etiquette and, probably, also of law arise from the mode of administration of the Act. It would appear to be the custom of the medical officer of health, himself in practice, to visit either personally or by a deputy (in this instance it is stated *unqualified*) the cases notified, for the purpose, among other things, of being able to certify to the Sanitary Authority that each case was a proper one to be notified, and, of course, the notification such as the Authority should pay for. We shall not pretend to say what duties may be imposed upon a medical officer of health by the Blackburn Act, but we should be surprised to find if the use of an unqualified assistant in the performance of the medical officer of health's duties is not illegal. Indeed, we think our contemporary must be in error in believing the assistant unqualified. But be the legal position what it may, it is inconceivable that a method of verifying the notifications of medical practitioners such as appears to be in force could be carried out without giving occasion of offence to medical men, and in other ways discrediting the principle of notification of disease.

THE CULTIVATION OF NUISANCES.

In our issue of May 8th, writing of "Sanitary Partingtons and Partingtonianism," we took occasion to illustrate our observations by reference to an example of a district which was being rapidly built over in the north of England, and where no building regulations appeared to exist. The district in question was Shadwell, in the Wetherby Rural Sanitary District, and not far distant from Leeds. We learn from the local journals that, under instructions from the Local Government Board, Shadwell has been inspected by Mr. John Spear, one of their medical inspectors. We are glad to learn this, and shall hope soon to have a detailed account of the circumstances under which the new buildings complained of here have arisen, and of the action taken (or not taken) by the Sanitary Authority in view of the evils which have been created by the builders.

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THE SANITARY CONDITION OF THE ISLE OF WIGHT.

In our last impression we published a note from the medical officer of health for Sandown, referring to a current rumour of there being "a great deal of sickness in the Isle of Wight," and that "several cases of typhoid fever" had occurred, of which one in Sandown had ended fatally. It appears that this rumour, so far as it concerns the fatal case of fever in Sandown, is unfounded; but we have since received information abundantly confirmatory of the sickly state of the island, and especially of the prevalence of diarrhœa there. Our informants send us information of particular examples of neglect of the local authorities as to the drainage and water-supply of localities frequented by visitors, displaying so extraordinary a state of sanitary negligence that we hesitate to give them in detail, preferring to wait for the results of the Government inspection of the sanitary state and administration of the island now in progress.

SCARLET FEVER AT RUSHOLME.

Not long ago we had occasion to notice a report by Dr. Hubert Airy, of the Medical Department of the Local Government Board, on a remarkable outbreak of scarlet fever at Fallowfield, in the Rusholme Local Board district, near Manchester. At a recent meeting of the Local Board the medical officer of health (Mr. Gregory) reported that scarlet fever was still epidemic in the district.

Mr. John Liddle, in his report on the sanitary condition of the Whitechapel District for the quarter ending April 3rd, 1880, referring to the excessive mortality from whooping-cough during the quarter, observes: "From the fact that whooping-cough principally attacks infants and young children who are carried in their mothers' arms from place to place, and are allowed to run about and play with other children, and are frequently seen in public conveyances, it would be impracticable, owing to the unwillingness of mothers to be separated from their children, to adopt the usual plan for preventing the spread of contagion, such as the complete isolation of the patients and the thorough disinfection of rooms and the clothing used by the sufferers."

A report has gained currency that scarlet fever is prevalent in Ramsgate. Letters from the medical officer of health (Mr. Richard Lyddon) to the *Daily Chronicle* show that the town has suffered very little from the disease this year. Only 11 deaths from scarlet fever were registered in the town in the five months January to May (January, 1; February, 5; March, 1; April, 2; May, 2); and a special inquiry being made of *all* the medical men in the first week of this month, *three cases* and no more were discovered to exist. In a population of 26,000, peculiarly liable to importation of this disease, this certainly shows (to use the medical officer of health's words) "remarkable freedom" from it.

On the 25th inst. Mr. Brand, in the House of Commons, on going into Committee of Supply, will call attention to the operation of the Artisans and Labourers' Dwellings Improvement Acts in the Metropolis, and move "That, in the opinion of this House, it is desirable that all proceedings by the Metropolitan Board of Works with the view to the sale of lands for artisans' dwellings, or to the preparation of new schemes under the provisions of the Acts 38 and 39 Vic. c. 36, and 42 and 43 Vic. c. 63, be suspended until a Parliamentary inquiry has been made into the cost which the working of these Acts has entailed on the ratepayers of London."

In reply to Sir George Campbell, the Home Secretary, on the 14th inst., in the House of Commons, questioned as to "grievous neglect" of the provisions of the Metropolitan Local Management Act, in regard to sewerage and drainage, pointed out that the Metropolitan Board of Works concerned itself with the main-drainage only, the control of the drainage of houses resting with the various Vestries and District Boards of Works. If information of non-observance of the Act referred to reached his office, he should hold it his duty to consider whether further legislation on the subject was desirable.

We learn from the *Surrey Advertiser* that the cost of the late inquiry concerning the Lower Thames Valley Main Sewerage will amount to nearly £20,000—a sum equivalent to a rate of eightpence in the pound on the urban districts concerned, and of more on the rural districts. This has been but one of several inquiries, all more or less costly, to which this scheme in its several phases of development has been subjected.

In answer to a question from Mr. Cubitt in the House of Commons, on the 15th inst., Mr. Dodson said that the Local Government Board had not as yet arrived at any decision upon the report of their inspectors on the recent inquiry regarding the Lower Thames Valley Sewerage.

VITAL STATISTICS.

HEALTH OF LARGE ENGLISH TOWNS.

THE rate of mortality in our large English towns continues exceptionally low. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5576 births and 2765 deaths were registered last week. The births exceeded by 391, whereas the deaths were no less than 510 below the average weekly numbers during 1879. The deaths showed a further decline of 22 from the steadily decreasing numbers in recent weeks, and were equal to an annual rate of 19·2 per 1000, against rates declining from 24·9 to 19·4 in the ten preceding weeks. During the past ten weeks of the current quarter the death-rate in these towns has not averaged more than 20·9 per 1000, against 24·3, 23·1, and 23·3 in the corresponding periods of the three years 1877–78–79. The lowest death-rates in the twenty towns last week were 13·1 in Brighton, 14·9 in Birmingham, 15·3 in Leicester, and 16·5 in Wolverhampton. The rates in the other towns ranged upwards to 22·5 in Nottingham, 22·8 in Sunderland, 23·1 in Manchester, 24·2 in Bristol, and 26·8 in Liverpool. The excess in Sunderland and Liverpool was in great measure due to the fatal prevalence of zymotic disease.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 461 and 411 in the two preceding weeks, further declined to 406 last week; they included 131 from scarlet fever, 105 from whooping-cough, 74 from measles, and 43 from diarrhœa. The annual death-rate from these seven diseases averaged 2·8 per 1000 in the twenty towns; it was but 0·8 and 1·2 in Leeds and Portsmouth, while it ranged upwards to 7·3 and 7·6 in Norwich and Sunderland. Scarlet fever showed the largest proportional fatality in Norwich, Bradford, and Sheffield; measles in Sunderland and Plymouth; and whooping-cough in Liverpool and Sunderland. Two deaths were referred to diphtheria in Plymouth. Small-pox caused 18 more deaths in London, and one in Bradford, but not one in any of the eighteen other large towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which in the preceding ten weeks had increased from 167 to 227, were 221 on Saturday last; 31 new cases of small-pox were admitted to these hospitals during last week, against 50 and 39 in the two previous weeks. The number of patients in the Highgate Small-pox Hospital also declined last week from 19 to 13. These hospital returns afford evidence therefore, that the recent increase of small-pox prevalence in the metropolis is abating. It is, however, unsatisfactory to note in the Registrar-General's last Weekly Return that six of the ten recorded fatal cases of small-pox occurred in private dwelling-houses, many of them under circumstances rendering isolation of the patients an impossibility.

The fatality of lung diseases, which had steadily declined in recent weeks, showed an increase last week, probably in sympathy with the unseasonably low temperature. The deaths referred to diseases of the respiratory organs in London, which had declined from 286 to 191 in the four preceding weeks, rose again last week to 230, and exceeded the corrected weekly average by one; 118 were referred to bronchitis and 72 to pneumonia. The annual death-rate from diseases of this class was equal to 3·3 per 1000 in London last week; the rate from the same diseases was equal to 5·8 in Liverpool, and 4·2 in Salford.

HEALTH OF LARGE SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 24·8 per 1000, against rates ranging from 24·8 to 21·8 in the four preceding weeks; this rate exceeded by 5·6, or 29 per cent., the average rate in the twenty large English towns. The rates in the eight Scotch towns last week ranged from 17·1 and 23·5 in Aberdeen and Edinburgh, to 30·8 and 35·1 in

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Paisley and Perth. The 106 deaths referred to the seven principal zymotic diseases in the eight towns showed an increase of eight upon those returned in the previous week, and included 37 fatal cases of whooping-cough, 28 of measles, 15 of diarrhœa, and 9 of fever. The annual death-rate from these seven diseases averaged 4·3 per 1000 in the eight towns, whereas in the twenty English towns it did not exceed 2·8; this zymotic rate, which was but 2·0 and 2·6 in Aberdeen and Greenock, ranged upwards in the other towns to 7·8 in Perth. The nine deaths referred to fever showed a considerable further decline from recent weekly numbers, but included 3 more in Perth, where the death-rate from this disease showed the largest proportional excess. The fatality of fever, however, again considerably exceeded that which prevailed in the twenty large English towns. Whooping-cough caused 37 deaths, of which 31 occurred in Manchester, and 6 in Paisley; 19 of the 28 fatal cases of measles were also returned in Glasgow. The deaths from acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 106 and 95 in the two previous weeks, rose last week to 116, and were equal to an annual rate of 4·7 per 1000; the rate from the same diseases in London last week did not exceed 2·7 per 1000. A large proportion of the recent excess of mortality in the Scotch towns has been due to the high death-rate from lung diseases, and from zymotic diseases.

THE HEALTH OF DUBLIN.

The return from Dublin was still more unfavourable last week. The annual rate of mortality within the city, which had been equal to 38·0 and 37·6 in the two preceding weeks, rose last week to 42·5 per 1000. During the ten weeks ending last Saturday the death-rate in Dublin averaged no less than 37·0, without any correction for defective registration; the death-rate in London during the same period did not exceed 19·8 per 1000. The 256 deaths in Dublin last week included 65, or 25 per cent., which were referred to the seven principal zymotic diseases, against 40, 50, and 61 in the three preceding weeks; 14 resulted from scarlet fever, 13 from small-pox, 13 from fever, 13 from whooping-cough, and 10 from measles. The annual death-rate from these seven diseases was equal to 10·8 per 1000 in Dublin, against 2·9 in London and 3·6 in Edinburgh. The death-rate from fever (including typhus, enteric or typhoid, and simple fever) is recognised as a sound test of sanitary condition; and it may be noted that the annual death-rate from fever has averaged 1·66 per 1000 in Dublin during the past ten weeks, while it has not averaged more than 0·26 per 1000 in the twenty large English towns. Fever was therefore more than six times as fatal in Dublin as in the English towns.

INCREASE OF POPULATION IN ENGLAND AND WALES.

On Tuesday last a paper bearing the above title was read before the Statistical Society by Mr. R. Price Williams, M.I.C.E. Not alone the importance of the subject, but the mass of fact and information which had been industriously collected and presented in the tables that accompanied the paper rendered it a valuable contribution to the journal of the Society; and valuable not alone to members of the Society, but to all interested in the increase, and in what our neighbours aptly call the "movement" of our population. The paper, in fact, deals far more extensively with the migration of our population than with its natural increase, and all that portion which gives the results of the author's laborious investigation respecting the varying rates of increase of population in the large and small towns of England and Wales in each of the seven inter-census decades of the present century possesses especial interest for medical officers of health and all concerned in the vital statistics of our numerous urban sanitary districts. The value of the material of Mr. Williams' paper is beyond all question, not so the validity of the few conclusions at which he has arrived. Perhaps the only inevitable conclusion to be drawn from a consideration of the information contained in the tables is the insufficiency of a decennial census for supplying a trustworthy basis for even approximate estimates of town populations from year to year. When we consider that quinquennial censuses are held in France and Germany, where the rates of increase and movement of population are so much more moderate than in England, it may well be matter for surprise and regret that we should be satisfied with a decennial census in England. Beyond an historical interest, the main value of such investigations as those in Mr. Williams' paper consists in the assistance they should afford in estimating populations in inter-census years. The difficulty in the way of turning such information to the proper use is, however, exemplified by some apparently unsound deductions by Mr. Williams, of which we will only refer to one. The rate of increase of population in England and Wales was a steadily declining rate between 1821 and 1861, while it turned to an increment again in the decade of 1861–71. The question is whether the current rate of increase during the decade, 1871–81, is greater or less than that which prevailed in the preceding ten years. Mr. Williams insists in his paper that, "in estimating the future population of England and Wales, it is putting it at its highest to assume a continuation of the 5·73 per cent. decrement, which during the last fifty years has obtained in the rate of increase of the population." Bearing in mind that emigration has not generally increased in the present decade, and that the average annual rate of excess of births over deaths, per 1000 of the population, which was 11·9 in 1851–60 and 12·6 in 1861–70, has been equal to 14·2 in the nine years 1871–9, there is the best reason for concluding that the rate of increase of population in England and Wales since 1871 has been greater instead of less than that which prevailed in the ten years 1861–71. The Registrar-General estimates (on the basis of the rate of increase in the last decade) the population of England and Wales in the middle of 1881 at 25,798,922, or more than 200,000 in excess of Mr. Williams' estimate. For the reasons before-mentioned, however, we have good ground for believing that even the Registrar-General's estimate will be found in April next to be below the mark.

URBAN INFANT MORTALITY IN 1879.

The Registrar-General's annual summary of his Weekly Returns during 1879 has only just been issued. It contains, among much valuable statistics, the materials for comparing the rate of infant mortality which prevailed during last year in seventy of the largest English towns. In the twenty largest towns the average proportion of deaths under one year to births registered was 151 per 1000, against 154 and 172 in 1877 and 1878. Infant mortality last year was exceptionally low, owing to the cold and wet summer which prevented the usual fatality of infantile diarrhœa. The rates, however, in the twenty towns showed the usual wide variations; they ranged upwards from 113 and 129 in Portsmouth and Brighton, to 165 in Manchester, 170 in Salford, and 185 in Leicester. The excess of infant mortality in Leicester was almost more strongly marked last year than in previous years when summer diarrhœa showed the usual fatality. The explanation of this remarkable infant mortality in Leicester has yet to be discovered, combined, as it is, with low death-rates at almost every group of ages above infancy. In the fifty smaller town districts the proportion of infant mortality did not exceed 144 per 1000, which was 7 below the average rate in the twenty larger towns, and 7 above the average rate in the whole of England and Wales. The lowest rates in these fifty town districts were 91 in Dover, 103 in Southampton, 100 in Cheltenham, and 110 in Hastings; the rates ranged upwards in the other towns to 167 in West Bromwich, 168 in Halifax, 177 in Bolton, 178 in Stoke-upon-Trent, and 194 in Preston. Thus Preston (where the death-rate was high at all ages) was the only one of the seventy large towns in which the rate of infant mortality in 1879 exceeded that which prevailed in Leicester.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

WOOLSORTER'S DISEASE AT BRADFORD.

The very elaborate and exhaustive inquest into the case of Samuel Firth, who was alleged to have died of woolsorter's disease, was concluded on the 9th instant. We give some of the more important points, taken from the *Bradford Observer*. So far as the particular case was concerned, there is nothing to add to the account we have already given beyond the formal evidence that the wool which apparently caused the fatal attack had been washed with soapsuds and soda at a temperature of 120° F., and dried in a machine of which the average temperature was 204° F. Moreover, the foreman stated that it was a regular practice for the men to take their meals at the sorting "board." A

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number of witnesses were examined in detail as to the history of the mohair from its first importation to the final sorting. The sum of their evidence was to the effect that the Van mohair was divided into two sorts, white and coloured, the latter being also separated into two classes, the inferior quality containing much more dirt. The mohair is called "Van" from the fact that Lake Van is the centre of the district from which the wool comes. It is imported principally from Constantinople, but also from the Persian Gulf. A preliminary sorting is done at Constantinople, and it was not known to be injurious there. In the wool thus imported it was not uncommon to find some "fallen fleeces" (i.e., fleeces of animals which have died of disease), especially in the inferior sorts, these fleeces being distinguished by their unpleasant odour and by the presence of blood and pieces of skin adherent to them. But it was added that the hair of fallen fleeces might also be mixed with the better sorts, and be indistinguishable. At some mills Van mohair was always washed, at others not. There were more fallen fleeces in Van mohair than in any other sort. Cape mohair was never washed, although one witness stated that cases of rapid death had occurred amongst those who were sorting it, and it was sometimes very offensive. Both the method of washing and the extent of its application varied much at different mills, and at most its adoption was recent. The effect of washing was to render the wool more difficult to sort, and steaming was therefore adopted at some mills. A temperature of over 120° F. in water would injure the mohair, and so also, it was believed, would any disinfectants, such as carbolic acid. Various machines used at different mills were described, and some respirators which have been recommended for the use of the sorters were shown.

The only medical evidence was that of Dr. Bell, whose views are too well known from his recent paper to need repetition here. The jury added to their verdict certain recommendations, of which the following are the most important:—"That in the opinion of the jury, the sorting of Van mohair, Cape hair, Persian wools, and all dry Eastern wools and hair is dangerous to life except under effective precautions; and they recommend that the following precautions be adopted:—(1) Before the bale is opened it be steeped in salt water, and remain in water not less than twelve hours; and in case the covering does not freely admit the water, it be opened so as to admit the water. (2) After the bale has been in water the necessary time, the hair or wool be placed in a sud of hot water, washed, passed through rollers, and again washed in a fresh sud of hot water, partly dried, but sorted when damp, and as early as possible after washing; that the temperature of the hot water be 120 degrees at least. (3) That the sorting-room be well ventilated, the floor swept daily, the walls and ceiling once a month and thoroughly cleansed, and the walls whitewashed every six months with lime mixed with carbolic acid; no wool, or hair, or other material be stored in the sorting-room; no meals be taken in the sorting-room, nor food kept there. (4) That proper provision be made for sorters to wash in water near the sorting-room.—The jury do further recommend that if no sufficient legal authority exists for enforcing proper regulations connected with the sorting of wool or hair before referred to, statutory powers ought to be obtained for the purpose, applicable to the United Kingdom, with the object of placing the sorting of wools or hair under the control and inspection of the factory inspectors; and that a copy of this presentment and recommendation be forwarded to the Local Government Board, also to the Sanitary Committee of the Bradford Town Council."

THE CONVEYANCE OF INFECTION BY MILK.

Mr. Sheriff Spens, in the *Glasgow Herald* of the 7th inst., deals, in an important article, with the subject of protection against infection being conveyed by milk. In this article he relates the proceedings taken by a committee of the Municipal Authority of Glasgow—he being one of the members—on this subject, at the time of the occurrence of the serious outbreak of typhoid, due to infected milk, which occurred in the West End of Glasgow and at Hillhead in the latter part of 1877 and beginning of 1878. It may be remembered that this committee, as one of the results of their deliberations, drew up a series of suggestions, which were drafted by Mr. Sheriff Spens, as to an Act for the Sanitary Regulation of Places of Milk-supply to Towns. This scheme of legislation was submitted to Government, but the subject to which it referred to was subsequently dealt with in the Contagious Diseases (Animals) Act then pending. Mr. Sheriff Spens now takes the opportunity of public notice again being directed to the subject by the occurrence of another serious outbreak of typhoid in Glasgow, determined most probably by infected milk, of discussing the operation of the Contagious Diseases (Animals) Act in regard to the conveyance of infection by milk. He looks upon the regulations issued under that Act as unsatisfactory, and regards the attempt to deal with a matter of this kind by bye-laws as, in fact, a blunder. He comments on the anomaly of including in what is in reality a Commercial Act public health provisions of great importance, and entrusting their administration to a Department of the Government (the Privy Council) which has no other concern with public health matters. He points out the perversity of an Act of which the operation may not include the main danger to which milk is exposed of infection, to wit, the danger liable to arise in country farms and dairies. He remarks also on the absurdity of a new Health Authority being instituted in Scotland by the Act with different sanitary powers from the Local Authorities already existing, and having conflicting interests with municipal authorities on the subject. He further observes that the Privy Council regulations do not provide for all the safeguards requisite to guard against infection being conveyed by milk. Finally, he doubts whether the terms of the said Act give power to issue all the regulations referred to. He argues that the subject is one which demands a substantive Act of Parliament for itself, and he reproduces the suggestions for such an Act which he drafted in (?) 1878.

We are glad that Mr. Sheriff Spens has entered upon the discussion of this subject again. We entirely agree with him as to the perversity of the policy which incorporated a public-health matter of this sort in a Commercial Act, and severed the administrative procedure regarding it from the proper public-health administration of the kingdom. We agree with him also as to the insufficiency of the provisions of the Act to meet a danger such as that from which Glasgow has suffered so seriously. Mr. Sheriff Spens' suggestions for independent legislation on the subject demand serious attention; and at least should tend to a removal of the anomaly by which a purely public-health matter is not put under the complete control of the public-health authorities—an anomaly which is responsible for frustrating most of the good anticipated from the Act.

THE PUBLIC HEALTH CONFERENCE.

The Public Health Conference, held at the Society of Arts on the 11th and 12th inst., under the presidency of the Right Hon. J. Stansfeld, M.P., gave unmistakable evidence, we will not say of diminished interest in the subjects submitted to the Conference, but of the want of judgment in regard to the time at which it was convened. When the proceedings in Parliament are occupying attention the public will not throw them aside to listen to a promiscuous gossip on health matters, even under the respectable patronage of the Society of Arts, and of a late President of the Local Government Board. It seems questionable, after the result of the late Conference, whether these conferences will in future be held annually. Two only of the subjects which came before the Conference were rounded off by a resolution. One, relative to administrative organisation, gave occasion for a resolution, confirmatory of one passed by the Conference of 1878, in favour of the formation of county boards to conduct the ordinary administrative (including the sanitary) business of the country. The discussion on this subject occupied the major portion of the time at the disposal of the Conference, and was very instructive. According to the various speakers, as regards sanitary, or rather public health matters, the Imperial—i.e., Local Government Board—administration had failed, as also parochial and municipal administration. We must fall back upon then—upon a county administration—if we would hope to get out of the existing bog of difficulties; in other words, instead of having one Local Government Board, we must have fifty or more local government boards distributed about the country; and the Conference, such as it was, really appeared to think that by multiplying in effect an evil, the best measure would be adopted for curing it. The second resolution referred to the sanitary inspection of dwellings,

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but in form was made dependent upon the constitution of county boards. It was to the effect that the Metropolitan Board of Works in the metropolis, and county boards in the provinces, should be empowered to inspect the sanitary conditions of dwellings, and grant certificates of healthworthiness for limited periods upon application of the owners. The limitation destroys the general public value of the resolution. If a public body should be empowered to perform a duty of this sort, it should be exercised generally, and the results recorded in a register open to public inspection.

SANITARY LEGISLATION.

A deputation of the Council of the Social Science Association, consisting of Mr. G. W. Hastings, M.P., Mr. F. Powell, Captain Douglas Galton, C.B., and Dr. Alfred Carpenter, had an interview with the President of the Local Government Board on the 14th inst., and submitted to him a series of resolutions of the Council relating to the erection of new buildings in districts where the local authorities had no power to regulate their construction in certain important matters touching sanitary and other conditions, and to certifying the fitness for habitation of such buildings; also a resolution recommending the introduction of a provision for the compulsory registration of infectious diseases in any future amendment of the law. Mr. Dodson is reported to have characterised the resolutions "as of high value and importance," nevertheless, as to new buildings they betray an inadequate acquaintance with the subject, and the resolution as to the registration of infectious disease omitted altogether any reference to the conditions which make such registration other than a sham, and which, judging from late experience, it is of primary importance should be urged upon the President of the Local Government Board. In other words, it is mischievous rather than beneficial to seek powers of compulsory registration from the Legislature until local authorities have shown themselves disposed to avail themselves, and have actually taken advantage, of the powers for making provision for infectious diseases already existing, and which must first be put in force if registration of infectious diseases (compulsory or otherwise) is to be other than a delusion as a measure for the prevention of disease.

THE VACCINATION DEBATE.

Dr. Cameron's motion on Animal Vaccination was not the only question as to vaccination which occupied the attention of the House of Commons on the 11th inst. Mr. P. A. Taylor followed Dr. Cameron's motion with an amendment to the effect that it was inexpedient and unjust, in the present unsettled condition of medical opinion in regard to the safety of using ordinary humanised lymph, to enforce vaccination under penalties upon those who regard it as undesirable or dangerous; and Mr. Samuelson moved another amendment as to the expediency of reopening the whole subject of vaccination, and appointing a Royal Commission. It would be a mere waste of space to attempt to follow the sort of arguments used in support of these amendments. The debate on them, however, had one important outcome, inasmuch as Mr. Dodson announced that the Government proposed to introduce a Bill for the abolition of multiple penalties. The abolition had been recommended by a Committee of the House in 1871, and a Bill embodying this recommendation had been passed by the House of Commons in 1872 or 1873, but had been rejected by the Lords. Mr. Dodson held that further inquiry into the general subject of vaccination was uncalled for, and declined to support the motion for a Royal Commission.

THE METROPOLITAN MAIN-DRAINAGE OUTFALLS.

The Metropolitan Board of Works have published a report by Sir J. W. Bazalgette, C.B., on the arbitration between the Board and the Conservators of the Thames, relating to the alleged large deposit of sewage mud at the outfalls of the Main Drainage System into the river at Barking and Crossness. The report briefly states the history of the dispute, and not unnaturally exhibits gratification (duly restrained in expression) that the opinions entertained by the writer should have been so completely confirmed by the arbitrators. The banks under dispute, the arbitrators have decided, do not consist of sewage mud, as alleged, but of the scourings of the banks and bed of the river; and the places of their deposit have been chiefly determined by the dredging operations of the Conservators in the part of the river where they had formed. The effect of the award, Sir J. Bazalgette argues, is, among other things, to set aside the notion that it is necessary to remove the main sewerage outfalls from Barking Creek to the sea, whether as regards the navigation or the impurity of the streams in that part of its course.

On the 8th inst. a mortuary chapel was opened in Bethnal-green by the Rector (the Rev. Septimus Hansard), Churchwardens, and Vestry. The chapel, erected by the Vestry, is built on a site given to the parish by the Rector, and the ceremony of opening consisted simply of an address given by him to the gentlemen assembled together, and the offering up of a prayer specially compiled for the occasion and approved by the Bishop of London. The building is one of the most complete in London. It contains two rooms for the dead, each of which will hold thirty-two coffins, with accommodation for post-mortem examinations and for the holding of inquests.

A letter from the Home Secretary was read at a recent meeting of the Metropolitan Board of Works, approving of regulations made to enable the Board, under the Artisans' Dwellings Act, to remove houses in a dangerously unhealthy condition in High-street, Islington, Peartree-court, Clerkenwell, and other districts. The Works Committee has reported against the prayer of the Kyrle Society for opening to the general public the enclosure of Lincoln's-inn-fields.

The Select Committee of the House of Commons on the provisional agreement for the purchase of the Metropolitan Water Companies met on the 15th inst., when Mr. E. J. Smith, C.E., the gentleman entrusted by the late Government for arranging the terms of purchase, was under examination.

The Taunton Town Council having reduced the salary of the Medical Officer of Health from £200 to £100, the Local Government Board demur to sanctioning such a reduction, but the Council decline to submit to any other arrangement, and threaten to make no appointment at all.

The accounts of the recent outbreak of diphtheria at Stoke-upon-Trent appear to have been considerably exaggerated. Up to the 13th inst. there had been eight cases and three deaths, and no fresh cases within the six days preceding that date.

The School Committee of Boston, U.S., has resolved to appoint a special instructor in hygiene. The appointment is provisional, but it is hoped the result will justify its being made permanent. The salary attached to the office is fixed at 3000 dollars.

ON A NEW METHOD OF EXCISING THE KNEE-JOINT.

To the Editor of THE LANCET.

SIR,—I was greatly interested in Mr. Treves's letter in your issue of the 8th ult., and should much like to see the photographs of the cases he has operated on, as he kindly offers to send them to me. At the same time I wish to point out that the operation as performed by Mr. Treves differs in some essential points from the one I advocated. In the operation I proposed my object is not merely to leave the ligamentum patellæ, but also, if possible, to obtain an anterior *bony* splint by procuring union between the cut surfaces of the patella and of the tibia and femur, as described in my letter, and this I look upon as a most important point.

Since reading Mr. Treves's letter I have tried the operation as described by him upon the dead subject, and I cannot but think that the incision carried across the front of the knee has considerable advantages over the two lateral incisions, inasmuch as I found much more difficulty in doing the operation by his method than by my own, and it appeared to me that the method I proposed gave a better view of the joint, and greatly facilitated the division of the lateral ligaments as well as the section of the bones; further, I do not attach much importance to the preservation of an unbroken line of skin over the front of the joint.

It has been suggested to me that by my method all the pulpy tissue is not so readily removed; on trial, however,

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I think it will be found that there is no difficulty in cutting or scraping away all diseased structures.

Mr. Treves alludes in his letter to his cases acquiring earlier and freer movement than those done by the ordinary method. I should much like to hear whether any movement of the knee-joint after excision is compatible with a stable support for the body.

By the courtesy of the late Mr. Bradley and Mr. Whitehead I have been able to test the practicability of the operation upon the living subject, Mr. Whitehead having a month ago performed the operation, and that without difficulty, though, as might be expected, with somewhat greater expenditure of time. The patient has hitherto gone on uninterruptedly well, although the case, in consequence of the presence of a carious cavity in the femur, was an unfavourable one.

In consequence of a suggestion I received from the instrument maker, I adopted a plan of having a rod to screw through an anterior iron bar, resembling a Nathan Smith's splint, and pressing upon a pad adjusted over the patella, in place of a tourniquet. I am surprised that Mr. Treves should wish to restrict the frequency of the operation of excision; it seems to me one of the greatest advances in modern surgery.

I cannot altogether agree that the mode of operating is subordinate in importance to that of dressing, judging by the case I have seen; the muscles appear so speedily to adapt themselves to their new purpose, that I think from the first they will give greatly increased support to the parts. I shall hope before long to have an opportunity of seeing other cases operated on in this way, and shall be glad, if you think it of sufficient interest, to send you a record of them.

I am, Sir, your obedient servant,

G. A. WRIGHT, F.R.C.S.

Royal Infirmary, Manchester, June, 1880.

PARIS.

(From our own Correspondent.)

TAKING "Liberty of Conscience" as its text, the Radical majority of the Municipal Council are engaged in the "laïcisation," as it is termed, of all the institutions under their control, hitherto directed by the clergy. Nothing is to be deprecated more than the misplaced zeal which is sometimes shown by hospital chaplains and sisters, especially when it takes the form of proselytising amongst the dying sick; but some repressive measures of a less *oppressive* nature might surely be devised. The lower classes are imbued with a superstition which sometimes passes for religion, the more dangerous because it is the more unreasonable; and in the present disturbed state of religious opinion in France the municipal authorities must be very short-sighted to create a new army of martyrs by proceedings which pass for enlightened Liberalism in the bosom of the Council, but which look very much like intolerance and persecution outside of it. At the last meeting of this august body, when the expenditure necessary to furnish the new Maternity Hospital was under consideration, it was determined that an item of 200 francs (£8) for the services of a chaplain should be struck off the estimates. Furniture for the chapel was also deemed superfluous, and the sum of 1300 francs (£52) so saved. It was not, however, proposed to turn the chapel itself into a theatre, although at a preceding meeting, when the annual grant of money for the processions at the Salpétrière was abolished, it was resolved that the *aûmonier* should be forbidden to perform religious ceremonies outside the chapel, and that theatrical entertainments should be substituted in future for the "distraction" of processions. Whilst the measures now taken against the clergy and the devout are for the most part harsh and exaggerated, it is sometimes really necessary to moderate their zeal. At the *hospice* at Samois, for instance, the nuns, who carry on the education of the children, have recently seen a rainbow in the horizon, ornamented with inscriptions, and supporting a naked image of the Saviour, together with a transfixed dove. The sceptical directors of the institution, however, have decided that in future no one shall be allowed to countenance a miracle in the hospital "without the special permission of the committee of the said hospital," and have signed and issued an order to that effect. It must surely emanate from some wag, who has intentionally parodied, for the benefit of the good sisters, the celebrated couplet,—

"De par le roi, défense à Dieu
De faire miracle en ce lieu,"

written *àpropos* the *convulsionnaires* of Saint Médard a hundred and fifty years ago.

The Chamber of Deputies has rejected the *projet de loi*, to make the Army Medical Department independent of the commissariat (*intendance*). The Minister of War, General Farre, as a combatant officer, was naturally opposed to the autonomy of the non-combatant branch, and of course "failed to be convinced" by the arguments of Baron Larrey, whose testimony in favour of the proposed change was as complete as possible.

Those who are now using Chian turpentine should look with suspicion on that which comes from this country. Two months ago I made inquiries on this subject, and I found that only six pounds were to be obtained in Paris. Since then large quantities of *Citriodore*, or Strasburg turpentine, have been exported to England as "Chian," a hundred pounds having been sent to one house a fortnight ago. The extreme rarity of the drug which Professor Clay recommends in cancer renders it desirable that an efficient substitute should be found, if possible; but this must be used for what it really is. Some of your correspondents have already written on the differences between Strasburg and Chian turpentines, and upon the advisability of substituting the former for the latter. No attention, however, has yet been called to the extreme resemblance between Chian turpentine and mastich, which latter is plentiful enough, comes from a plant of the same family, and is a native of the same island. Mesna, who knew how difficult it was to get the genuine article, advised mastich as a substitute, and the present generation may perhaps find it answer equally well.

Paris, June 16th, 1880.

MEDICAL NOTES IN PARLIAMENT.

DR. CAMERON'S annual motion in favour of a national supply of animal vaccine, as an alternative to humanised lymph, produced a smart little debate in the House of Commons on the 11th inst., and resulted in an undertaking being given by the Government to do something in the matter. Of course, the principle of compulsory vaccination was challenged by Mr. P. A. Taylor, who moved an amendment to the effect that "in the unsettled condition of medical opinion vaccination ought not to be enforced," whilst Mr. Samuelson recommended an inquiry into the whole subject by a Royal Commission. Neither amendment met with much support; but there was obviously a strong feeling in favour of Dr. Cameron's proposal, and the exhaustive speech of that hon. gentleman was supplemented by Earl Percy and Dr. Farquharson, the latter of whom assured Mr. Taylor that the medical opponents of vaccination were few and obscure. A vigorous reply to the anti-vaccinators was also given by Mr. Mitchell Henry, who contrasted those "persons of half-knowledge who called themselves doctors" with such men as Sir Thomas Watson, who was devoting the last years of an illustrious career to the perfecting of our vaccination system. But with regard to the motion before the House, Mr Mitchell Henry thought Dr. Cameron was ill-advised, inasmuch as the question of vaccination from the calf was still a vexed question in medical circles. His hon. friend should first get a general consensus of the learned bodies who were engaged in the investigation of the medical phenomena, and let them bring their influence to bear upon the Local Government Board. Dr Cameron, by the way, had stated to the House in opening the debate that the British Medical Association went further than himself on the subject, seeing that they recommended the public distribution of animal vaccine alone, and had quoted THE LANCET and other medical authorities in proof of the progress of professional opinion. The President of the Local Government Board (Mr. Dodson), who followed Mr. Mitchell Henry, stated that his department had considered the subject, and found that experience had removed some of the old objections to calf-lymph, which was now considered to approach more nearly to humanised lymph in merit. That being so, there was no wish on the part of the Department to be a bar to further experiments, or to a practice which could be conducted with safety to the health of the community, and therefore he was prepared to

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say that they would make arrangements by which animal lymph might be supplied as stock as well as humanised lymph, to such regular medical practitioners as might desire it. They would proceed with caution in entering upon the question, as they should not wish to do so without being able to start from a well-established base of cow-pox. He was not prepared to agree to the motion or either of the amendments, but intended to propose to the House to carry out the recommendation of the Select Committee of 1871 in favour of the abolition of cumulative penalties for non-vaccination. Mr. Sclater-Booth expressed his satisfaction at the announcements made by his successor in office, and after some further conversation Dr. Cameron offered to withdraw his motion, which the anti-vaccinators would not agree to, and it was then formally negatived.

On Tuesday, Mr. Dodson obtained leave to bring in a Bill for the abolition of the cumulative penalty for non-vaccination.—Mr. Meldon gave notice that on Thursday he would ask the Secretary of State for War, whether, under the late administration, when the Army Medical Department was being reorganised, a promise was not made that, in future, exchanges between medical officers would be allowed under the same regulations as for the rest of the service, if such a regulation was adopted; whether a rule has lately been introduced that, in cases where such exchanges involve change of station, the officers exchanging shall forfeit all claim for pay for the period they occupy in changing; whether all other officers in the army exchanging under similar circumstances continue to receive their pay without any stoppage; whether the regulation now in force placing medical officers on a different footing from other officers is not highly calculated to make the Army Medical Service unpopular; and, whether he will take steps to have the regulations as to exchange so modified as to carry out the promise made.—Mr. Anderson gave notice that he would ask the Secretary to the Admiralty, if he is aware that meat condemned by the officers of the Corporation of London is dipped in creasote previous to being sold, so as to insure its not being resold for food, and if he will consider the practicability of adopting some such expedient with condemned beef and pork from navy stores, so as to prevent its being used for victualling and poisoning our mercantile marine.

On Wednesday, the Select Committee on Mr. Meldon's Births and Deaths Registration (Ireland) Bill was nominated as follows:—Mr. Meldon, Sir Hervey Bruce, Mr. Johnson, Mr. Gibson, Dr. Lyons, Mr. Macartney, Mr. Errington, Mr. Fitzpatrick, Mr. Daly, Mr. Tottenham, Mr. Brooks, Mr. Severne, and Mr. Foley: five to be the quorum.

The order for the second reading of Mr. Dillwyn's Lunacy Law Amendment Bill is deferred to Wednesday, 30th June.

On Thursday, in reply to Mr. Meldon, Mr. Childers said he could not find any record at the War Office that any promise had been made to the officers of the Army Medical Department in regard to exchanges, and no order had been given on the subject. If his hon. and learned friend would communicate with him privately, he should be happy to look into the matter carefully.—Mr. Shaw-Lefevre stated to Mr. Anderson that condemned beef and pork from the navy stores—since a representation on the subject made by Mr. Plimsoll, was sold to respectable soap-boilers, under a guarantee, and there was no reason to believe that such meat now found its way to the mercantile marine.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on June 10th:—

Branthwaite, Robert Welsh, Westbury Ho, Willesden.
Pritchard, Owen, Commercial-road.
Vaisey, Thomas Frederick, Canterbury Hospital.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Horace Michael Dancy, University College Hospital; Thos. O'Connor, St. Thomas's Hospital.

OXFORD UNIVERSITY.—On the 10th inst. the degree of Bachelor of Medicine was conferred on Joseph Armitage, New College, and Alexander Haig, Exeter.

THOMAS MANDEVILLE NASH, M.D., of Drumkeeran, has been placed on the Commission of the Peace for the County Leitrim.

MR. THORN, carriage and harness manufacturer, of Norwich, has, we are informed, been awarded two first prizes, and one second prize, at the Sydney Exhibition.

NEARLY seventy swine suffering from swine fever were last week ordered by the magistrates of Dorsetshire to be compulsorily slaughtered, and compensation made to the owners.

FROM the Report of the Veterinary Department of the Irish Privy Council it appears that the working of the Contagious Diseases (Animals) Act in Ireland has been satisfactory.

THE building of the proposed chapel at the Bristol City and County Lunatic Asylum is to be commenced forthwith. The plans of Mr. E. H. Edwards have been selected, and the estimated cost is £2565.

THE third anniversary festival of the City Provident Dispensary was held on the 4th inst., the Duke of Northumberland in the chair. A sum of £200 was subscribed in the course of the evening.

THE full list of prize awards has just been received from Sydney, and Messrs. Brinsmead & Sons stand, with two first-class awards and a special certificate, at the head of all the pianoforte manufacturers who exhibited at the Exhibition.

AMONGST the names of the gentlemen called to the Bar at the Inner Temple last Wednesday, we observe that of "William Henry Cross, B.A., London." Mr. Cross has for several years held the office of clerk of St. Bartholomew's Hospital, and we feel assured that all those who know how efficiently and how courteously he discharges the very onerous and responsible duties of his office will heartily congratulate him on having attained such a distinction.—*City Press.*

PROPOSED HOSPITAL RIFLE ASSOCIATION.—A well-attended meeting of representatives from the various London medical schools was held in Essex-street, Strand, on Wednesday, to consider the proposed formation of a "United Hospital Rifle Association," on a plan resembling the Inter-Hospital Football Association. It was resolved that such an association should be formed. Rules were read and adopted.

THE HANDEL FESTIVAL.—We would remind our readers that to-day (Friday) the first of four concerts will be given at the Crystal Palace in connexion with the seventh triennial Handel Festival. On Monday next at two o'clock the "Messiah" will be given; on Wednesday, at the same hour, selections from the great composer's best works; and on Friday at two "Israel in Egypt." The solos will be sung by the leading male and female vocalists, and the magnificent orchestra, composed of four thousand performers, not a few of whom are members of the medical profession will be led by the graceful and facile bâton of Sir Michael Costa.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Messrs. Glyn, Mills, & Co. have given £50, and Messrs. Smith, Payne, & Smiths £50, to the North Eastern Hospital for Children. The New Hospital for Women has received £50 from "Z. T. T." The City of Dublin Hospital has received £105 from the Earl of Pembroke, and £50 from each of the following:—Lord Justice Fitzgibbon, Messrs. Jonathan Hogg, E. H. Kinahan, John Robinson, J. E. Vernon, and William Watson.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

BAKER, J. B., has been appointed Assistant Surgical Officer to Charing-cross Hospital, vice Clarke, appointed Assistant Medical Officer.

CLARKE, W. J., L.S.A.L., has been appointed Assistant Medical Officer to Charing-cross Hospital, vice Hooley, whose term of office has expired.

CORMACK, J. C., L.K.Q.C.P.I., L.R.C.S.I., has been appointed an Honorary Medical Officer to the St. George's Hospital for Diseases of the Skin, Great George-street, Liverpool.

CULLING, J. C., M.R.C.S.E., L.S.A.L., has been appointed Resident Medical Officer to Charing-cross Hospital, vice Bunn, whose term of office has expired.

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DAVIES, G. A., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Marshfield District of the Newport (Mon.) Union.

DEACON, W. O., L.R.C.P.Ed., has been appointed Medical Officer to the Workhouse Casual Wards of the Township of Manchester, and Assistant Medical Officer to the Workhouse Infirmary of the Township of Manchester at Crumpsall.

GORDON, H. A., M.D., L.R.C.S.Ed., has been appointed Surgeon to H.M. Prison, Holloway, vice T. Graham, M.R.C.S.E., L.S.A.L., resigned after a service of twenty-five years.

GRIMWOOD, H. C., M.R.C.S.E., has been appointed Medical Officer to the Workhouse and First District of the Pontefract Union.

KNIGHTS, Mr. J. W., has been reappointed Public Analyst for the County of Huntingdon for one year.

LATHBURY, C. J., L.R.C.P.L., L.S.A.L., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Public Vaccinator of the Stapleford District of the Shardlow Union, vice W. Andrews, deceased.

MACAULAY, S., L.R.C.P.Ed., has been appointed Visiting Medical Assistant to the Newcastle-on-Tyne Dispensary.

MACBRYAN, H. C., L.R.C.P.Ed., L.R.C.S.Ed., late Clinical Assistant at the West Riding Asylum, Wakefield, has been appointed Third Assistant Medical Officer at the South Yorkshire Asylum, Wadsley, near Sheffield.

NICHOLSON, A., L.R.C.P.Ed., has been appointed Medical Officer to the First District of the Hemslet Union, vice Pullan, deceased.

PARRY, J. H., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health to the Horfield Local Board, Bristol.

RANKINE, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Bishopwearmouth East District of the Sunderland Union, vice Taylor, resigned.

REID, Staff-Surgeon W., M.D., has been appointed to Haslar Hospital.

WALKER, W. F., L.S.A.L., has been appointed Resident Obstetrical Officer to Charing-cross Hospital, vice Culling, appointed Resident Medical Officer.

WATSON, F. S., M.R.C.S.E., L.S.A.L., has been appointed Resident Surgical Officer to Charing-cross Hospital, vice Turton, whose term of office has expired.

WEEKES, H., F.R.C.S., has been appointed Medical Officer of Health for the Melksham Rural Sanitary District, vice Keir, whose appointment has expired.

WHITEHOUSE, J., M.R.C.S.E., L.R.C.P., has been appointed House-Surgeon to St. Peter's Hospital for Stone &c., vice D. G. Johnston, M.B., C.M., whose term of office has expired.

WHITEHOUSE, W., L.D.S., has been appointed Dentist to the Metropolitan and City Police Orphanage.

Births, Marriages, and Deaths.

BIRTHS.

BALL.—On the 12th inst., at Albemarle Villa, Staines-road, Hounslow, the wife of William Montague Ball, M.B., of a daughter.

FAIRWEATHER.—On the 14th inst., at West-green, Pocklington, Yorks., the wife of A. F. A. Fairweather, M.A., M.D., of a daughter.

GRAY.—On the 9th ult., at Cinnamara, Jorehaut, Assam, the wife of Edward Gray, M.B., C.M., of a son.

MUMFORD.—On the 13th inst., at Bartlett's-passage, Holborn-circus, the wife of Wm. Lugar Mumford, M.D. (prematurely), of a son.

SNELL.—On the 13th inst., at 17, Eyre-street, Sheffield, the wife of Simeon Snell, M.R.C.S.E., of a son.

MARRIAGES.

ADAMS—ENGLAND.—On the 9th inst., at the Moravian Church, London, S. Hoppus Adams, M.D., of Bedford, to Caroline, youngest daughter of the Rev. John England, of Finsbury-park, London.

DAVIES—BATCHELOR.—On the 8th inst., at Highbury Congregational Chapel, Cheltenham, William H. Davies, M.R.C.S.E., L.R.C.P.L., L.S.A.L., eldest son of W. J. Davies, Esq., J.P., F.R.C.S., of Penner House, near Newport, Mon., to Amelia, eldest surviving daughter of the late T. B. Batchelor, Esq., of Newport, Mon.

STEVENSON—EATON.—On the 12th ult., at St. George's Cathedral, by the Very Rev. the Dean of Cape Town, assisted by the Rev. E. Pemberton, M.A., Naval Chaplain (uncle of the bride), and the Rev. C. Child, Rector of Malmesbury, Edmond Sinclair Stevenson, L.M., M.R.C.S.E., L.R.C.P.Ed., to Anna Emily D'Urban, eldest daughter of T. J. Eaton, Esq., of Drooge Vley, Malmesbury.

DEATHS.

ANDERSON.—On the 11th inst., at 10, South Mansion House-road, Edinburgh, Dr. Alex. Anderson, Staff-Surgeon, Royal Navy.

BUSIGNY.—On the 11th inst., at his residence, Shaw-street, Worcester, Charles Edward Busigny, M.R.C.S.E., L.M., L.S.A.L., in the 50th year of his age.

EVANS.—On the 3rd inst., at Mynd House, Gloucester, suddenly, Thomas Evans, F.R.C.P.L., Consulting Physician at the Gloucester Infirmary and the Gloucester Dispensary, aged 75.

FRASER.—On the 11th inst., at Greenhill-place, Morningside, Edinburgh, Robert Fraser, M.D., late of Florence, in the 65th year of his age.

JONES.—On the 12th inst., at his residence, Beaumaris, Robert Wynne Jones, M.R.C.S.E., aged 71.

WHIDBORNE.—On the 10th inst., at Topsham, George Herbert Whidborne, M.R.C.S.E., aged 37.

WILLIAMS.—On the 9th inst., James Williams, M.D., of Croydon, late of Malvern, and formerly of Aspley Guise, Bedfordshire, aged 60.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, June 17th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jun. 11	29·88	N.E.	54	52	95	66	46	..	Overcast
,, 12	30·02	N.W.	53	51	102	69	45	..	Overcast
,, 13	30·09	N.W.	62	58	110	74	47	..	Fine
,, 14	30·08	N.W.	60	57	103	73	52	..	Overcast
,, 15	30·09	N.	57	53	..	58	53	0·12	Overcast
,, 16	29·89	N.E.	57	56	..	62	52	..	Overcast
,, 17	30 13	N.	63	59	95	66	54	0·12	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

ETHYL BROMIDE.

DR. BENNETT F. DAVENPORT, writing in the *Boston Medical and Surgical Journal* of May 27th, remarks of ethyl bromide: "As an anæsthetic it has always thus far proved safe when a pure preparation only has been used. In action it is more rapid than even chloroform, and is eliminated by respiration more quickly than either of the common anæsthetics; the senses and muscular co-ordination being therefore regained very soon after the inhalation ceases. The pulse and respiration are but slightly increased. It causes less irritation of the respiratory passages than ether, and less of the skin on contact than chloroform. The liability to nausea and vomiting is not as much after either of these. The quantity required to produce anæsthesia, as with the more common ether and chloroform, varies with the individual and the modes of administration. The same precautions in administration and against pushing the anæsthesia to an unnecessary degree should be observed as with ether."

Dr. C. E. Lyster.—The reports forwarded have been inserted. There are none in hand.

Mr. R. J. Haynes.—We cannot advise in the matter.

POOR-LAW MEDICAL SERVICE IN IRELAND.

To the Editor of THE LANCET.

SIR,—The Acts of Parliament relating to Local Government in Ireland have much the same force as in England, but they are not carried out with the same efficiency. For example, I may state that last August an Act was passed—Dispensary Houses (Ireland) Act, 1879,—to enable boards of guardians to borrow money from the Board of Works at a very low rate of interest, three and a half per cent., in order that they might build dispensaries and houses for dispensary medical officers; yet, though this would not cost the ratepayers a single penny, I believe I am correct in saying that not a single house has been built. What a hardship this is to Poor-law medical officers and to the poor themselves can readily be understood from the fact that many medical officers are compelled to live at considerable distances outside their districts, thus increasing their labours and rendering their services less efficient. Indeed it would be impossible in many instances for the sick poor to acquaint the medical officer of their illness, owing to the distance.

Now, if the Irish Local Government Board were empowered to direct boards of guardians to build residences &c. in such cases as their inspectors would certify to be necessary, this would render the Act efficient, and meet all the requirements of the case.

If by your aid this provision were carried out, you would be conferring a great boon on many hard-worked medical men in this country.

I am, Sir, faithfully yours,

May 22nd, 1880. M.D.

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THE FAMINE IN ASIATIC TURKEY.

THE *Bristol Mercury* publishes, from a private letter, a harrowing account of the sufferings the writer witnessed among the starving population of some of the districts between Diarbekir and Bagdad. "At Mosu," says this correspondent, "I found the famine worse than ever. People were continually dying in the streets, and mothers selling their children for slaves, or even worse purposes. It was very common to see men and children, a mere heap of bones, lying naked in the street, covered with the flies they were too weak to brush away. And, worst of all, little dying children were hired by professional beggars for the purpose of exciting charity, and were exhibited naked in the bazaars. I found one poor little baby about four years old quite dead, and the woman who was begging for something to give it was not aware that it was so! Bread, upon which the people generally live, and which is worth generally a halfpenny per pound, was then selling for more than a shilling. The people would have died wholesale had it not been for the root of a sort of thistle that the spring weather had caused to come up, and that is very edible, and of course can be got for the trouble of collection. The ground for miles round the town was all dug up by the people for this root, and while they dug one saw them eating the grass and weeds round about as well."

UNUSUAL FORM OF OBSTRUCTION IN HERNIA.

To the Editor of THE LANCET.

SIR,—The following case may be deemed worthy of record in your pages, as illustrating a somewhat unusual form of obstruction in hernia.

On the afternoon of the 4th inst. I was summoned to the Royal Berks Hospital to see a man admitted with strangulated hernia. I found him to be a farm labourer, seventy-three years old, of very worn and pinched aspect, dull expression, with irregular pulse, and some bronchial râles. He told us that he had had a rupture for years, and for some months had not worn a truss, as he could not entirely return the bowel. On the previous evening, when coughing, he felt a fresh strain in the part, which became painful, and he vomited. A surgeon had seen him, who tried the taxis for some time without success, and then sent him to the hospital. Since his admission the house-surgeon had endeavoured with the aid of the warm-bath and chloroform to reduce the hernia, but, failing, had sent for me. I found the scrotum distended to the size of a large cocoa-nut, red and tender on pressure, and very tympanitic. It did not seem to invite much manipulation, so, having obtained the assistance of some of my colleagues, I proceeded to operate at 7 P.M. It was remarked, however, that the neck of the sac was quite soft, and a gurgling as if returning air could readily be produced there. It was felt, however, desirable to ascertain the condition of the bowel. This was accordingly exposed by the usual incision, and found to be of a deep chocolate colour; one's finger could be passed through the ring of the inguinal canal without the slightest difficulty into the abdomen. What then was the cause of the strangulation? The adherent condition of the bowel prevented its being drawn out of the band, so it was decided to extend this to the base of the scrotum, that the intestine might be fully exposed. Two or three large coils of dark purple colour then came into view, evidently requiring careful handling, and at the lower and posterior part a firm band, not unlike the spermatic cord, was felt tightly constricting a portion. By dividing this the bowel was liberated, but could not entirely be returned into the cavity of the abdomen from pre-existing adhesions. The band in the scrotum was then stitched up and covered with carbolic dressing (all the proceeding had been antiseptic), an enema of laudanum given, and some brandy by the mouth. The man recovered consciousness from the ether he had inhaled, but died about two hours after.

A post-mortem examination showed that the bowel and a part of the ileum had been liberated by the operation, and that it had been constricted at three points by the band. Over two feet had thus been strangulated.

A point of practical interest is to be noted in the delusive softness of the neck of the sac and the gurgling of the bowel, which seemed to promise reduction by taxis, and thus tempt to more perseverance in that method than was safe. It was rather a puzzling case on failing to find any cause for the strangulation at its usual site, and I was very glad to avail myself of the advice and assistance of my colleagues.

Yours faithfully,

FRANCIS WORKMAN,

Reading, June 7th, 1880. Assist.-Surgeon, Royal Berks Hospital.

REMOVAL OF DETRITUS FROM THE BLADDER.

To the Editor of THE LANCET.

SIR,—It occurs to me that patients suffering from vesical calculus in association with enlargement of the prostate gland might, after the performance of lithotrity, be very readily relieved of detritus if surgeons were provided with extra long and nearly straight Bigelow's tubes, constructed on the principle of the flexible metallic catheter designed by Professor Gross. The introduction of an instrument which could accommodate itself to a curve near the neck of the bladder would not be difficult, and, once within the bladder, elastic recoil would bring the flexible portion of the tube nearly into line with the rigid part. Publication of this suggestion in THE LANCET may attract the attention of competent instrument-makers.

I am, Sir, yours truly,

Dublin, June 12th, 1880. PATRICK J. HAYES.

CORPORATION REFORM.

THE *Chicago Medical Gazette* divides medical colleges into four classes: "(1) Colleges which, from their circumstances and surroundings, have the power to introduce any desired reform, and do it. (2) Colleges which, from their circumstances and surroundings, have the power to introduce any desired reform, but, with an eye to dividends, do not do it. (3) Colleges which, from their circumstances and surroundings, have not the power to introduce reforms to the extent which they would desire, but do their best. (4) Colleges which, from their circumstances and surroundings, have neither the power nor the inclination to introduce any desired reforms, and do not try.

Dr. C. Theodore Williams.—In a week or two.

"EXTRACTING TEETH AND PUTTING THEM BACK INTO THE JAW."

To the Editor of THE LANCET.

SIR,—An annotation in your issue of May 29th, inviting the discussion of a subject in dental surgery conveys the impression that you refuse, on this or any future occasion, to admit scientific contributions to your columns from dentists who, although holding a dental diploma, are not fully qualified in surgery. The majority of "surgeons practising dental surgery" are not members of the Association so styling itself; they number among them those who, by scientific and other work, have succeeded in placing their profession in its present improved position, and they are not of the opinion you seem to hold. They recognise the professional worth of the licentiates in dental surgery, and admit them in every way to full and equal professional intercourse. So far as the mere fulfilment of a curriculum and the possession of a diploma can indicate the proper status of a practitioner, there is a vastly greater difference between an M.R.C.S. in general practice and an M.D. Lond. than between an L.D.S. and an M.R.C.S. practising dentistry; yet we never hear nowadays of a physician with the highest qualifications refusing to co-operate in scientific work with a practitioner holding an inferior diploma. The expression of an emphatic opinion, such as I interpret your remarks to imply, by a journal so influential as THE LANCET, cannot fail to be of great importance, and I trust the dental profession may hope you will be kind enough to explain the grounds upon which your judgment is based, so that this matter may be duly weighed by those who are still earnestly engaged in promoting measures for the further reform and advancement of the dental department of the profession.

Your obedient servant,

Wimpole-street, June 1st, 1880. HENRY SEWILL, M.R.C.S.

*** We hold strongly that "dentistry" is an integral part of surgery. We claim the right of every medical practitioner to pursue dental surgery if he pleases without any additional qualification, and we cannot recognise the right or competency of any man who is not a "medical" man to discuss a question in connexion with the surgery of the mouth which involves issues so especially medical as that of transplanting teeth.—ED. L.

To the Editor of THE LANCET.

SIR,—In 1845 I went to a tooth-drawer of much repute in a small town in Radnorshire, where I had just commenced practice, to have an upper molar extracted, taking my own instruments with me. The worthy man was unnerved either by the importance of his patient or by the more modern instruments, whichever it may have been. After making three or four unsuccessful attempts, and between each, for my consolation, saying, "By gam, Sir, it is very tight," came to the conclusion, "I must try my own tools, Sir." This he did, but without better success, ending by saying, "I must try him (the key) the other side, Sir." Much to the operator's delight, and, I think I may venture to add (after the lapse of so many years), to the patient's also, out it came. This hardly gentle treatment of the dental nerves set up intense pain in a bicuspid on the same side, which I also got him to draw, and the pain ceased. The tooth I found to be healthy, so I returned it to its place without delay, pressing it home by the forcible closing of my jaws, a by no means pleasant sensation. It was indeed very painful—the pressure on the ruptured nerve. The tooth remained tender for a few weeks, gradually becoming less so, and for about twelve years fulfilled its vocation satisfactorily, when, without any obvious cause, the crown broke off; the fang still remains, causing no inconvenience. From time to time there was a painless secretion of matter, forming a little abscess by the side of the tooth, and its sudden fracture without caries leads me to suppose that it never regained its vitality, though its colour did not differ from the other teeth, and it became firmly fixed in the jaw.—Faithfully yours,

June, 1880. D. H. G., M.R.C.S.

To the Editor of THE LANCET.

SIR,—In reference to the above in your issue of May 29th, perhaps the following may be of interest.

When in England a few years ago I was asked to go and see a girl who was knocked down in a drunken row. I found three of the upper incisors out, one lying in the mouth with a piece of the alveolar process attached; the others on the ground. I had the latter washed in cold water, and all replaced. I brought the lacerated gum together as well as I could, and ordered the mouth to be kept closed with a bandage. The teeth became firmly fixed in the jaw, and remained so during my residence in England, which was more than a year after.

Yours truly,

Antrim, June 7th, 1880. A. Y. STEWART, L.R.C.P.E.

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THE COLLEGE OF SURGEONS DINNER.

WE are requested to state that Fellows of the Royal College of Surgeons desirous of acting as stewards at the festival, which will take place in the evening of the 1st proximo, should write at once to the Honorary Secretary, Mr. B. T. Lowne, 65, Cambridge-gardens, Notting-hill, W., as names cannot be received after the 28th instant. Sir James Paget, Bart., will take the chair.

Mr. W. Gordon Smythies.—We cannot depart from our rule not to recommend practitioners. Our correspondent should seek the counsel of his ordinary medical attendant.

EXPERIMENTS IN VACCINATION.

To the Editor of THE LANCET.

SIR,—In imparting so malignant a disease as the small-pox to an inferior animal, we might suppose, *à priori*, that we should thereby only increase its virulence. The very contrary, however, is the fact, and we find that it is from this "nettle, danger, that we pluck our flower, safety." That so acute an observer as Jenner when he found the vaccine, did not trace it to its right origin, is indeed surprising; but had he seen in his day the confirmation we now have of his discovery, and of the protective power of the vaccine, he no doubt would have altered his opinion, and recognised its true origin. When I read a paper upon the subject of vaccine before the Brighton Medical Society, Mr. Cordy Burrows (afterwards Sir Cordy Burrows) congratulated me upon the proof which I had of the success of Mr. Badcock's experiments, by showing to the Society some photographs, taken from the cow, of vesicles produced by inoculating the animal with the small-pox virus which he had given to Mr. Badcock. At the time Mr. Badcock was carrying on his experiments Mr. Ceely was conducting similar and independent experiments at Aylesbury, and with precisely the same result—namely, of producing vaccine by inoculating the cow with the small-pox, and in the most honourable manner he completely confirmed the success of Mr. Badcock's experiments. No doubt very careful experiments were made at Lyons without success; but to say that the Lyonaises did not succeed—*ergo*, Messrs. Ceely and Badcock did not succeed—is surely a *non sequitur*, a fallacy. Mr. Badcock informed me that he succeeded best when the animal was in calf. The blood of the animal is then in an inflammatory state, and no doubt takes the disease better. Mr. Badcock succeeded, therefore, because he went the right way to work. The Lyonaises failed because they did not do so; *cela va sans dire*.

We should have some difficulty in recognising our old acquaintance small-pox in the altered appearance of vaccine. For the vaccine is not infectious; it is not diffused over the body; it does not mar the features; it does not suppurate, but dries off into a crust. In one essential particular, however, they both agree, so much so that after vaccinating with Mr. Badcock's matter I could confidently affirm that the individual would henceforth be protected from the small-pox; for it is the same disease, and in no other way can the protective power of the vaccine be accounted for. Immediately after vaccination you cannot produce small-pox by inoculation. Hence in Jenner's time it was deemed an absolute protection; but we find after a lapse of time, when the small-pox is rife and the infection strong, persons having been a long time vaccinated will take the small-pox, but are not so severely affected by it as the unvaccinated. In my practice I have found that the eruption comes to its height about the third day; then dries into crusts, and disappears. In Mr. Simon's report I have stated that I never lost a patient from small-pox who had been previously vaccinated. In contrast to this there were two young women, servants, residing on the Steine, who were affected with the small-pox. They were in the prime of life; they had never been vaccinated; they were taken to the Brighton Infirmary, and each one died there.

I am, Sir, yours respectfully,

Newhaven, Sussex, May, 1880. D. RICHARDSON.

Lord Teynham. — Anatomy: Gray. Physiology: Kirkes. Medicine: Bristowe; Niemeyer. Surgery: Holmes; Bryant. Midwifery: Playfair. Materia Medica: Garrod. Therapeutics: Ringer. Forensic Medicine: Guy.

Medical Student.—No one can have any right to the title of Doctor who has not been admitted to that degree by one of the legally constituted authorities—namely, the Universities.

THE VALUE OF THE VAGINAL PLUG IN CERTAIN CASES OF ACCIDENTAL HÆMORRHAGE.

To the Editor of THE LANCET.

SIR,—As a matter in which I am interested, I should be glad to ascertain the feeling of the profession, as expressed through your widely circulated columns, with regard to the use of the vaginal plug as a means of arresting uterine hæmorrhage, the result of a fall occurring at or about the close of utero-gestation, and complicated with rupture of the membranes. I am anxious to know whether the evacuation of the liquor amnii is likely or not to afford space within the uterine cavity for internal bleeding to take place to such an extent as may compromise the safety of the patient? and whether the use of the plug is to be preferred in such cases to prompt delivery by turning or other artificial means when applicable—e.g., in multiparous cases with previously natural labours? The case I had in view was lost, notwithstanding all signs of external hæmorrhage had ceased after the introduction of the plug.

I am, Sir, yours obediently,

June, 1880. ANACHARIS.

Querist.—A Russian physician, after numerous experiments, is said to speak favourably of the use by myopic patients of books printed with white ink on black paper.

Mr. L. B. White.—Thanks. Too late.

INFANT MORTALITY.

To the Editor of THE LANCET.

SIR,—In Dr. Roberts's interesting lectures published in your columns, he states that it is a matter of indifference, as far as digestibility is concerned, whether milk be cooked or not. Now, I have so often and invariably seen infants, which were doing badly on boiled or scalded milk, thrive excellently upon the mere interdiction of such boiling &c., that I am quite certain that, with regard to infants at any rate, it frequently makes a great and sometimes vital difference. I feel convinced that no one would regret more than Dr. Roberts that the weight of his authority should be given to a statement which, if acted upon, is calculated to produce considerable and frequently fatal mischief. The source of his error, I imagine, lies in the fact of his using for his experiments the pancreatic secretion only; but surely cooked milk would have ample time to set up numerous functional disturbances long before it arrived in the duodenum, and therefore before it came under the influence of the pancreas. The same reason may account for his extraordinary discovery that a cooked egg is more digestible than a raw one, which is contrary to general experience.

Some ten years ago I pointed out in my little work on Infant Mortality the enormous evils arising from the then almost universal practice of feeding infants upon foods containing starch, and I am glad to find that Dr. Roberts's experiments fully corroborate what I then wrote. He says: "In the human infant diastase does not appear to exist in sufficient abundance to digest starchy matters effectively." It is to the better understanding of this subject by the profession may be traced, I would fain believe, some share in the marked reduction of the mortality amongst infants recently commented upon in your journal. But there is still an immense amount of prejudice to be overcome amongst the older mothers, nurses, and, I fear I must add, some of the older practitioners, in favour of the old dietary of boiled bread, baked flour, &c. The strenuously advertised patent foods also still have much to answer for in assisting to keep up the present excessive rate of infant mortality, for, inasmuch as they mostly contain starch, they must be deleterious.

Whilst on the subject of the indigestibility of starch food in the absence of its solvent, diastase, in the saliva, may I add one word with regard to typhoid, exhaustion, and all diseases characterised by dry tongue? The usual practice of giving in such cases, where there is no saliva, arrowroot, corn-flour, ground-rice, &c., has always appeared to me like attempting to revive a flickering fire by means of heaping on salt or damp sawdust, and has too often, I fear, resulted in extinguishing the vital spark.

Your obedient servant,

West Malling, Kent, May 11th, 1880. SELBY NORTON, M.D.

SMALL-POX HOSPITALS.

To the Editor of THE LANCET.

SIR,—Increased interest is now being taken in the question of small-pox hospitals and their influence on their immediate neighbourhoods, and your annotations on Dr. Bridges' report to the Fulham guardians and on the article in the *Revue d'Hygiène* will further tend to set those thinking on the matter whose business it is to attend to it.

With reference to Dr. Bridges' report and its bearing on Mr. Godrich's allegations, there seems to be some mistake. The Fulham Hospital is situate exactly between the parish of Fulham and the district of Brompton, and thus presents two immediate vicinities, so to speak, for examination. Mr. Godrich's allegations, his records, maps, and statistics refer only to the Brompton district, of which he is Poor-law medical officer. Dr. Bridges' report, however, refers to the Fulham side only, and therefore does not in any way touch Mr. Godrich's statements. Dr. Bridges says that, as regards Fulham, the disease has existed chiefly at a distance of three-quarters of a mile from the hospital—a statement directly opposed to the reports of the medical officer of health for Fulham and of the Poor-law medical officer. Having been associated with Mr. Godrich in his practice, and being thoroughly well acquainted with his district, and having, further, seen both his map and the records from which he has made it—records containing the names of the patients, of the streets and houses from which they were removed,—I am in a position to speak of their absolute accuracy, and cannot but share also in his opinion that the hospital has had much to do with what he describes. His detailed method, at any rate, seems to be the only one by which to arrive at a correct conclusion on the matter. It is a very curious coincidence that the sanitary medical officers in Paris should appear to have arrived at very much the same conclusion that Mr. Godrich has, and quite independently of him; such details as they have given in the *Revue d'Hygiène* (which I have seen) very much resemble his, but, as you say, are not sufficient for a complete inquiry. Perhaps that inquiry may now be made, based on Mr. Godrich's, and by an independent and impartial inquirer.

I am, Sir, your obedient servant,

June 7th, 1880. SURGEON-MAJOR.

P.S.—The medical men in Paris who discussed this question appear to think that the disease is spread by the diffusion of the scabs or particles thrown off by small-pox patients (*des croutes*). If so, may not these be carried some considerable distance further than the so-called microscopical spores of Dr. Bridges?

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DECAPITATION OF THE FŒTUS.

the Obstetrical Society of Boston, U.S., Dr. Richardson described a new method of decapitation in cases where there was no hope of saving the life of the child. He advocated the combined use of Ramsbotham's knife and Braun's decollator, the latter being employed for the purpose of breaking the cervical column, and the former for separating the soft parts.

T. C.—As a matter of professional courtesy, the new-comer should call on the qualified practitioners resident in the district.

EXPERIMENTAL INQUIRY INTO HABITUAL TOBACCO-SMOKING.

To the Editor of THE LANCET.

SIR,—In reference to the interesting letter from Mr. M'Dowall in your issue of May 29th, on the above subject, I gladly add my mite of corroborative observation.

A gentleman whose daily work compels him to do much reading and writing at night, and who had been a very moderate smoker for about twenty-two years, found that, although a smoke in the day-time occasionally produced slight drowsiness, yet at night he could read and write, smoking, with a feeling of steadiness of thought, clearness, and absence of drowsiness even as late as one A.M. or later. He has now discontinued smoking, and finds himself less able to work steadily on without feeling drowsy, and he thinks that to gain power for night-work he will have to take to tea, which he had not needed when he smoked. In this case tobacco seems to have acted as a nerve stimulant and "steadier." Did this arise from a slight acceleration of the pulse?

Yours faithfully,

Portugal-street, May 29th, 1880. HEYWOOD SMITH.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. L. Tait, Birmingham; Mr. G. Cowell, London; Mr. Batten; Mr. Bell, Dover; Mr. Sothern; Dr. Bancroft, Brisbane; Mr. Shellshear; Mr. Sangster, Burra Burra; Mr. Tabor, Cheam; Dr. Tuckwell, Oxford; Mr. Varley; Lord Teynham; Dr. Bogdanik; Messrs. Brinsmead and Son; Dr. Shea, Reading; Dr. Stein; Mr. Haynes, Oxford; Mr. Hatton; Mr. Hosken; Mr. Currie, Bungay; Mr. F. Jordan, Birmingham; Mr. P. J. Hayes, Dublin; Mr. Beavis; Messrs. Mayer and Meltzer; Mr. Sandford, Hereford; Mr. Burton; Mr. Ashwell; Dr. J. S. Taylor, Liverpool; Dr. Anningson, Cambridge; Mr. Dyke, Merthyr Tydfil; Mr. Swaine; Mr. G. B. Browne; Dr. Tatham; Mr. Blackburn; Mr. T. H. Elliott; Mr. Thomas; Mr. Crean; Mr. E. S. Gibbons; Dr. Prior, St. Albans; Mr. J. Furness; Messrs. Bennett Brothers, Salisbury; Mr. J. I. Ikin; Messrs. Wood and Co.; Mr. Fox, Bristol; Mr. Hall, Aberystwith; Mr. J. P. Knight; Mr. S. F. Murphy; Mr. Smythies; Mr. J. White, Newent; Messrs. Mottershead; Dr. C. E. Lyster; Mr. Van der Weyde; Mr. J. Smyth; Dr. Sedgwick; Mr. Bridgman; Mr. Crossby, Sunderland; Dr. Hickinbotham; Dr. P. Foster; Dr. Grigg, London; Mr. C. Macnamara; Dr. Major; Mr. H. C. Burdett; Dr. Grosser, Prenzlau; Mr. C. Hewett; Mr. Gristock; Mr. and Mrs. R. Gardner; Dr. Goyder; Mr. Gillespie; Canon Harvey; Mr. Mercier; Mr. Sincock; Dr. Russell, Glasgow; Mr. Sutcliffe; Mr. J. Constantine; Messrs. Horne and Son, Whitby; Country Practitioner; Mary; Spes; M.D. Cantab.; Medicus; M.R.C.S., L.M. Eng.; A. M.; H. G. S.; Spero Meliora; A Sufferer; J. D.; A Surgeon-Major, I.M.D.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Morson, New South Wales; Mr. Casella, London; Miss Sargeant, Blackheath; Mr. Hodgkinson, London; Mr. Douglas, Matlock; Mr. Long, Manchester; Mr. Maguire, Skreen; Mr. Bagshaw, Salford; Mr. Fosbroke, Birmingham; Mr. Sloman, Bradford; Messrs. Seigel and Co., London; Mr. Laing, Tufnell-park; Mr. Brown, Ripon; Mr. Tring, Lechlade; Messrs. Kegan, Paul, and Co., London; Mr. Woodland, London; Mr. Binks, Wakefield; Mr. Thomas, Maesteg; Mr. Dove, Milford; Mr. Stamford, Tibshelf; Mr. Williamson, Sheffield; Mr. Logan, Newcastle-on-Tyne; Mr. Snell, Sheffield; Mr. Brook, Huddersfield; Mr. Field, London; Dr. Dickson, Buxton; Mr. Gray, Chelmsford; Mr. Francis, Sheffield; Rev. Dr. Garratt, Green Hayes; Mr. Brook, Huddersfield; Mr. Rix, Bradford; Mr. Dickinson, Knutsford; Dr. Maclin, Transvaal; Dr. M'Callum, Perth; Mr. James, Pentre; Medicus, Banbury; A. B., Manchester; Gallia, Bootle; C. B., Bath; A. B., Finsbury; Medicus, Cardiff; A. B., Worcester; T. A., Swindon; M.D.; Ellis, Brixton; Medicus; Surgeon, Sheffield; H. H. R.; M., Leicester; Alpha; K., Hull; Delta, Pontypridd; M.D., Clapton; Medicus, Chesham; W. B. G., Richmond; M.D., Blackburn; Questor; T. S. B.; M.D., Bury; H. O. C., Huntington; Practitioner; &c.

Bradford Observer, Pioneer, Chester Courant, Egyptian Gazette, Rock, City Press, Australian Medical Journal, Shield, Warehousemen and Drapers' Trade Journal, Republican, Hobart Town Mercury, Wiltshire Times, Saturday Falkirk Herald, Gloucestershire Chronicle, Englishman, &c. &c., have been received.

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Medical Diary for the ensuing Week.

Monday, June 21.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND. — 4 P.M. Professor J. Hutchinson, "On some of the Surgical Bearings of Gout and Rheumatism."

Tuesday, June 22.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. Peter Bemridge, "On the Aborigines of Victoria."—Professor W. H. Flower, "On a Collection of Crania from the Fiji Islands."—Rev. Lorimer Fison, "On Land Tenure in Fiji."

Wednesday, June 23.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND. — 4 P.M. Professor J. Hutchinson, "On the Etiology of True Leprosy."

Thursday, June 24.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, June 25.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND. — 4 P.M. Professor J. Hutchinson, "On the Etiology of True Leprosy."
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Mr. W. H. Gilbart, "On the Histology of Pitcher Plants."—Dr. Patrick Manson (communicated by the President): "Further Observations on Filariæ."

Saturday, June 26.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Lectures
ON THE
PHYSICAL EXAMINATION OF THE MOUTH AND THROAT.

Delivered to the Junior Class of Clinical Medicine, University College,

BY G. V. POORE, M.D., F.R.C.P.,
PROFESSOR OF MEDICAL JURISPRUDENCE, UNIVERSITY COLLEGE; LATE ASSISTANT PROFESSOR OF CLINICAL MEDICINE; ASSISTANT PHYSICIAN, AND PHYSICIAN IN CHARGE OF THE THROAT DEPARTMENT OF THE HOSPITAL, ETC.

LECTURE III.

THE PHYSICAL SIGNS DERIVABLE FROM THE PHARYNX AND FAUCES.

GENTLEMEN,—We next have to consider the indications of disease which we may derive from an inspection of the fauces and pharynx—i.e., so much of those parts as can be seen without the aid of instruments, other than a tongue-depressor. It may be well to remind you that a considerable part of the pharyngeal cavity, which extends upwards to the basilar portion of the occipital bone and downwards to the level of the fifth cervical vertebra and the cricoid cartilage, cannot be seen except by the aid of mirrors. If a patient be asked to turn towards the light, open the mouth widely and inspire deeply, the tongue is usually depressed on the floor of the mouth, and we get a good view of the fauces and pharynx. We may often get a much better view without than with the aid of a tongue-depressor, the presence of the instrument seeming with many to excite the tongue, as it were, to uncontrollable movements which obscure the view. If it is necessary to use a tongue-depressor, it is well to choose one with a long wooden handle, and with a spatula having a gentle curve which will fit to the natural curve of the tongue. The blade of the spatula should be broad, and should be passed right over the dorsum of the tongue beyond the circumvallate papillæ. The patient should then be asked to inspire deeply, and a slight amount of downward pressure should be exerted with the instrument. We then get a view of (1, 2) the hard and soft palates, (3, 4) the anterior and (5, 6) the posterior pillars of the fauces, (7) the uvula, (8, 9) the tonsils on either side, (10) the posterior wall of the pharynx, and (11) the tip of the epiglottis. In looking into the mouth in this way there are therefore eleven distinct points which demand your attention. I have catalogued them thus because I know by experience that many students look into the mouth without any definite notion of what they are going to look for.

It is well to remember that the parts seen are formed of a highly glandular mucous membrane, the glands being largest in the posterior wall of the pharynx. The mucous membrane of the pillars of the fauces and soft palate covers a stratum of voluntary muscular fibres. Ordinary and special sensation (taste) is afforded by branches of the glosso-pharyngeal and vagus inextricably commingled, and the muscles of the soft palate are supplied by the glosso-pharyngeal, and the motor fibres of the vagus obtained through the spinal-accessory nerve.

It is scarcely necessary to mention how easily reflex contraction of the fauces and pharynx, and even vomiting, is produced by irritation of the mucous membrane.

On inspecting these parts we notice that the appearance of the mucous membrane of the mouth alters close to the margin of the anterior pillars of the fauces. In front of this line it is rosy in hue, and behind it has a more dusky and congested appearance. This, it should be remembered, is a normal condition, and is not indicative of any disease.

The common diseased appearances of this region are *hyperæmia, pallor, swelling, excess of secretion, ulceration, cicatrisation,* and *adventitious* appearances.

Hyperæmia arises here, as elsewhere, from direct or reflex irritation. Hyperæmia without swelling, in which we see the enlarged bloodvessels coursing on the pharynx and fauces, is most often due to stomach irritation, caused by abuse of strong drinks and highly-seasoned food. Once established, it is maintained by cold, tobacco smoke, excessive use of the parts, and foul atmospheres. Hyperæmia is hardly ever seen alone, but is usually combined with swelling.

Redness and swelling of the throat are common in: 1. Simple catarrh, due to ordinary cold. 2. Acute tonsillitis. 3. Scarlet fever, in which occasionally the redness is excessive. 4. Diphtheria. 5. Erysipelas (not very common), and measles. 6. The early stage of syphilis. In all these conditions it may happen that the throat is merely swollen, but usually there are some points which enable us to distinguish one kind of swollen pharynx from another. The degree of swelling and the seat thereof vary much. The uvula may be enormously enlarged and clubbed at the end, owing to a dropsy brought on by gravitation. The soft palate and anterior pillars of the fauces are sometimes the seat of particular swelling and œdema, especially in hospital sore-throat; the tonsils may be swollen out of all proportion to the neighbouring parts, and may threaten suffocation by meeting in the middle line; the posterior wall of the pharynx may be swollen by matter forming behind it, or the epiglottis may be in a state of extreme œdema, threatening life. When the swelling of these parts is due to one of the acute specific diseases, the concomitant symptoms will afford means for diagnosis—the rash in scarlet fever or measles, the patches of false membrane in diphtheria, the facial eruption in erysipelas. The swelling due to ordinary catarrh is usually not very great, and the whole region very often steams with moisture.

In acute tonsillitis, quinsy, or hospital sore-throat, the throat condition is the main trouble. The constitutional disturbance is always severe. There is headache, malaise, loss of appetite, and a look of extreme prostration. The temperature is always raised, and may reach 104° F.; the pulse is quick, the tongue often coated with a thick, creamy, rheumatic fur, with large papillæ. The patient swallows, speaks, and even breathes with difficulty, owing to the faucial obstruction. The bowels are confined, and the breath is foul, owing to the accumulation of catarrhal products in the fauces. The parts look red and œdematous, and are occasionally so swollen as to be past recognition. The swelling may be general, or it is limited to the tonsils, or to one tonsil rather than the other. Often one sees a bulging forward of one anterior pillar and the adjoining part of the soft palate, and on palpation fluctuation may be obtained, showing that suppuration has taken place. The parts may be covered with a yellow, slimy muco-pus, and the enlarged tonsils may have patches of white secretion about the orifices of the crypts, but it may be well to bear in mind that although abscesses often form beneath the mucous membrane or in the tonsil, superficial ulceration of the mucous membrane is not common. This is the ordinary form of hospital sore-throat, with which some of you possibly have only a too practical acquaintance. Occasionally acute septicæmia is ushered in in this way, and the case goes rapidly on to a fatal termination. Here one may well direct your attention to the cause of this sore-throat—viz., foul air. It was more common in the days of septic surgery than now, but it is still common enough in hospitals, and will probably remain so. When you see these cases in private, and especially when a throat of this kind runs through a family, always make a diligent search for the cause, which is usually a foul atmosphere combined with draughts. Living in ill-ventilated and crowded rooms, or in rooms to which sewer gas has access, are the most common causes. Butlers, who sleep close to the untrapped pantry sink, and in whom converge the four great causes of pharyngitis—over-eating, over-drinking, want of fresh air and exercise, and sleeping in an atmosphere laden with sewer gas,—are very prone to this trouble.

On the subsidence of the inflammation the tonsils are often left enlarged, and in patients of a strumous habit this enlargement is very obstinate. It occasionally happens in strumous children that the tonsils undergo a slow progressive enlargement without any acute attack. The tonsils in these cases are large, pale, smooth, and hard-looking, and often meet in the middle line, while the rest of the pharyngeal mucous membrane remains healthy. The cause of the enlargement is either a general hypertrophy of the part, or is due to inflammatory products or occasionally to a lardaceous change. The openings of the crypts on the surface of the tonsil may give the idea of ulceration. If the tonsils meet and rub

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against each other, a superficial erosion of the surface is not uncommon. These enlarged tonsils may inflame and swell up when the patient "catches cold."

There is a form of hyperæmia and swelling of the posterior wall of the pharynx which must be mentioned. In this the vessels ramifying in the mucous membrane are distinctly enlarged, and the mucous follicles are swollen, giving a coarsely granular appearance. Hence the name of "granular pharyngitis" has been given to it. The mucous secretion of the part is increased, and strings of mucus may be generally seen adhering to the membrane. This form of pharyngeal disease is common among gourmands and steady drinkers. It seems, according to Rühle, to be very common in the Rhineland, and the cause of it is said to be found in the convivial nature of the inhabitants and the seductiveness of the famous wines, which leads to a large amount of drinking and singing in close ill-ventilated taverns. Combined with a certain amount of laryngeal congestion, it constitutes one form of the so-called "clergyman's sore-throat"—a form of sore-throat which demands a strict dietetic regimen for its relief. It is very common in gouty subjects.

Pallor of the fauces and pharynx is present in anæmia and leucocythæmia. Occasionally the pallor of this part is out of proportion to that of the rest of the body. There may be extreme pallor combined with a great amount of chronic enlargement of the tonsils.

Ulceration of the pharynx and fauces may be in the form of aphthous ulcers, like those which occur on the tongue and mouth.

The most common cause, however, of ulceration of this region is syphilis. Syphilis may attack the pharynx in its early or late stages, and the manifestations may be either "secondary" or "tertiary." The pharyngeal condition which occurs during the secondary stage, i.e., during the time of the general glandular enlargement, and the symmetrical rashes, is, in its typical form, pathognomonic of syphilis, and once recognised can scarcely ever be mistaken. Looking at the throat we see the tonsils slightly enlarged, and upon the surface of them deep ulcerations. It is characteristic of this form of disease *that the ulceration is not limited to the tonsil, but involves the anterior pillars of the fauces, the margin of the soft palate, and the uvula.* We see this region dotted with mucous patches and superficial ulceration, giving to it a grey mottled appearance, which is so characteristic as to be absolutely diagnostic of syphilis. Should the ulceration be limited to the tonsil, we may be in doubt as to its cause, but should it spread from the tonsil and involve the parts which I have enumerated, and in the manner I have stated, we may be certain of our diagnosis and of the satisfactory result of treatment. Occasionally the mucous patches and ulcerations are very limited in extent, and may be so situated (just at the junction of the anterior pillar with the tongue, for example) as to elude detection unless they are looked for with very great care.

Occasionally the ulceration of this part, from syphilis, is much more severe; the uvula may slough away and the whole margin of the palate may be so implicated as to produce an adhesion between it and the posterior pharyngeal wall, thus shutting off the nasal from the oral cavity. This kind of extensive ulceration has been met with in children, as the result, *probably*, of congenital syphilis. In appearance the throat does not differ from that which is due to acquired syphilis. I have seen one or two of these cases myself. There was lately in the hospital a boy whose throat had all the appearances of extreme ulceration which I have just described, together with adhesion of the palate to the pharyngeal wall. The appearances were syphilitic, but mercury and iodides made him worse. The boy was a wretched strumous foundling out of a suburban workhouse, and good diet, the administration of sulphides, and a visit to Eastbourne completely cured him, and he was able to leave the workhouse and take a situation. Of course the adhesions remained. This case was possibly one of scrofulous ulceration, and a similar case is mentioned by Wilks in his work on Pathology.

In the *tertiary* stage of syphilis the pharynx, fauces, and hard palate are liable to the growth of gummata, which first form hard congestive patches, and then soften and slough, leaving deep clean-cut wounds, or clean-cut "punched-out" perforations of the soft and hard palate. Whether we detect the early hard swelling or the subsequent foul circular slough, or the final perforation, we may be sure that we have to deal with a case of tertiary syphilis. Sometimes in tertiary syphilis we are confronted, not with distinct gummata, but with a uniform infiltration of the parts, which causes them to be extensively thickened and sensibly indurated. This infiltration is often followed by ulceration and sloughing, which leads to great loss of substance, to adhesion of neighbouring parts, to contraction by cicatrisation, and great deformity. The throat which has been the seat of extensive tertiary syphilitic disease looks hard and glazy; the scars of cicatrices are seen scattered more or less all over it; there may be perforations either of the hard or soft palates; there may be great loss of substance (very commonly of the uvula and tonsils), the posterior pillars of the fauces, or the soft palate may be wholly or in part adherent to the posterior wall of the pharynx; and the throat may be generally so contracted and distorted, that the patient can neither speak, swallow, nor breathe with comfort.

There is a form of chronic inflammatory disease of the pharynx to which I would direct especial attention. In scrofulous and syphilitic subjects the nasal cavity and the pharynx are liable to an inflammatory swelling of the mucous membrane, accompanied by hyperæmia, a catarrh of sticky adherent mucus, and occasionally superficial sloughing of the mucous membranes. Either as a cause or a consequence of this chronic inflammatory state, we may have caries of the bones of the nasal cavity. On looking into the throat of a patient with this trouble, which is often called *ozæna* from the stinking of the rotting mucus or sloughing membrane, we may see a granular hyperæmic appearance of the posterior wall of the pharynx; and on asking the patient to breathe deeply, and thus elevate the soft palate, we may see very often the tail end, as it were, of a lump of glairy or black tenacious-looking mucus descending from the pharynx. In cases of old standing, in which the posterior wall of the pharynx has been the seat of chronic inflammation, the soft mucous, granular, glandular appearance of the pharynx gives way to a smooth, glazy, cicatricial, dry-looking surface, which is very characteristic. This condition has been called pharyngitis sicca. Whenever we see sloughs coming from behind the soft palate, or this glazy appearance of the pharynx, we should always search for the causes and symptoms of ozæna, and subject the naso-pharyngeal cavities to a thorough examination, of which I shall have more to say hereafter.

Both tubercular and typhoid ulcerations are said to occur in the pharynx. They are excessively rare, and I need only remind you of them by mentioning the fact.

With regard to the adventitious appearances of these parts, the most common are the white patches which are due to the growth of oidium albicans upon aphthous ulcers. These may appear all over the fauces and pharynx, and their nature is easily decided by the microscope. In diphtheria we are confronted with a whitish or yellowish membranous exudation, which may spread all over the fauces, pharynx, and tonsils. The consistence of the membrane varies from that of cream to that of wet wash-leather.

True diphtheria has to be distinguished from the patches of oidium just mentioned, and from the patches of white secretion which are often seen sticking about the orifices of the tonsillar crypts. The dotted patchy appearance and the discovery of the oidium will serve to distinguish the first, and the latter appearance is limited to the tonsils, and the patches are seldom large. The diphtheritic membrane generally grows from one point, and soon presents a considerable area. But this is not always the case, and the membrane may begin to grow from several points at once. When the false membrane of diphtheria is removed the mucous surface beneath is left raw and bleeding.

It is not necessary to do more than mention the various tumours—adenomata, papillomata, carcinomata—which may grow from the hard and soft palate. Occasionally a papilloma has been seen growing from the end of the uvula. Polypi growing from the nasal or upper pharyngeal cavities may be seen hanging behind the soft palate.

The condition known as post-pharyngeal abscess is due to a collection of pus forming in the bed of areolar tissue, which unites the pharyngeal mucous membrane to the bodies of the cervical vertebræ, and it is usually due to caries of the bodies of these vertebræ. The abscess forms a smooth globular projection, in which fluctuation may be detected, and which often endangers life by its interference with respiration and deglutition.

A few words remain to be said about the neuroses of the mouth and fauces. Of paralysis and motor troubles affecting the tongue I have already spoken. The

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common sensibility of the mouth and tongue is derived from the fifth nerve, and in cases of paralysis of that nerve common sensibility is lost, so that the patient is unconscious of the presence of food or irritating particles upon the side of the paralysis. In cases of paralysis of the third division of the fifth there is very commonly observed a swelling and congestion of the mucous membrane of the mouth, and occasionally ulceration. Whether this ulceration is produced directly by the nerve lesions, or indirectly by the irritation of foreign particles, I will not stop to consider, although I may say that my own opinion is strongly in favour of the former theory. When common sensation of the tongue and mouth is lost, it may seem as though the sense of taste were lost also, because the patient is unable to appreciate irritants such as strong acids and alkalies (like ammonia), which in reality appeal rather to common than to special sensibility.

The special sense of taste is conferred upon the anterior two-thirds of the tongue by the fibres of the chorda tympani, and on the posterior third and the pillars of the fauces by the glosso-pharyngeal. Taste is most commonly impaired in cases where a disease of the temporal bone has injured the facial nerve at a point above the junction with it of the chorda tympani. In testing the power of taste much care is needed. Erb[1] gives the following directions:—"It is expedient that the patient should put the tongue out, with the mouth widely opened, and that he should keep the eyes closed while the sapid substance is being applied to the particular part the sensibility of which is to be investigated, with a glass rod, or a small brush, and in very small quantity. As soon as a taste is perceived, a sign is made, and then only is the tongue to be withdrawn and the conclusion arrived at stated." It is very difficult to prevent the sapid substance from diffusing itself over the tongue, and thus touching a portion in which the gustatory faculty is perfect. On this account I think it is better not to allow the patient to speak while the trial is going on, but to make him keep his tongue exposed, and express his sensations in writing, using the initial letters of sweet, bitter, acid, as symbols. The tongue must be carefully cleaned between each trial. It must be remembered that bitter tastes are best appreciated at the root and sweet tastes at the tip of the tongue. Acids are appreciated by the edges principally. Solutions of quinine or quassia, syrups, and vinegar are employed in these investigations. Subjective phenomena of taste are occasionally complained of, such as the sour, bitter, and putrid tastes in dyspepia.

In paralysis of the facial, from injury or disease in the temporal bone, there is a want of power in the levator palati and the azygos uvulæ on the paralysed side.

Paralysis of the palate is liable to occur from other causes. In these cases the palate is seen to hang loose and flaccid in the mouth, and to remain stationary during deep inspiration, swallowing, and speaking, and not to move when tickled or otherwise irritated. In cases of this paralysis food is very liable to return through the nose, because the naso-pharynx cannot be shut off during swallowing, and in speaking all sounds have a nasal twang.

Paralysis of the palate is particularly liable to occur after diphtheria, and it is generally the precursor of the other post-diphtherial paralytic phenomena. This paralysis may occur after other febrile conditions, and may form a part of labio-glosso-laryngeal paralysis. We have had a girl attending in the out-patient room with absolute paralysis of the palate, which was followed by well-marked symptoms of locomotor ataxy.

[1] Ziemssen's Encyclopædia, vol. xi.

BEQUESTS ETC. TO MEDICAL CHARITIES. — Viscountess Jocelyn bequeathed £15,000 each to the Royal National Hospital for Consumption and Diseases of the Chest at Ventnor and the Hospital for Consumption, &c., at Brompton, in the event of no child of her late daughter, Viscountess Sudley, living to attain twenty-one or dying under that age without issue. Mr. Abraham Mocatta, of Gloucester-place, Portman-square, bequeathed £100 each to the Cancer Hospital, University College Hospital, the London Hospital, the Metropolitan Free Hospital, and the Jews' Hospital and Orphan Asylum, and £50 to the Hospital for Sick Children, Great Ormond-street. The Royal National Hospital for Consumption, &c., at Ventnor, has received £100 under the will of Mrs. Sarah Hardy. "S. A." has given £100 to the Royal Free Hospital.

FURTHER HISTORY OF TWO CASES OF CEREBELLAR DISEASE, TOGETHER WITH NOTES OF A THIRD CASE SIMILARLY INDUCED BY A FALL, AND COMPLICATED BY INCIPIENT HYDROCEPHALUS.

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(Concluded from p. 947.)

Autopsy, eighteen hours after death, by Dr. BASTIAN.—On removing scalp, skull seems to be slightly more prominent over posterior part of left parietal region than on corresponding part of right side. Dura mater firmly adherent to calvaria in several places, but presents no unusual appearances. When this membrane is reflected, the cerebral hemispheres fall widely apart, showing between them the stretched and thinned corpus callosum. On gently tapping surfaces of hemispheres they vibrate like bags of fluid. Surface of convolutions over vertex broad and much compressed, so that sulci are almost obliterated. Arachnoid presents a healthy pellucid appearance. On opening the *left* hemisphere, the lateral ventricle is found to be considerably distended, the corpus striatum presenting a rather shrivelled appearance in its anterior and outer part. Fornix extremely thin and much stretched, almost translucent. Foramen of Munro appears as a slit-like opening rather more than half an inch in long diameter. The greatest amount of distension of the ventricle seems to have taken place in its posterior half, or behind the commencement of the descending cornu. The brain substance constituting the roof of the distended descending cornu has only half to three-quarters of an inch in thickness. The lining membrane of the ventricle is very distinctly tougher and thicker than natural, and beneath it are numerous large vessels distended with blood. On opening the *right* lateral ventricle, very nearly the same appearances present themselves, except that the corpus striatum does not seem to be so distinctly wasted. The ventricles together contained about twenty-seven ounces of clear, almost colourless, fluid, which, on examination, was found to be faintly alkaline and to contain a mere trace of albumen. The velum interpositum was difficult to find, and the veins of Galen could not be detected in the altered and divided parts. But the tissues in regions corresponding to the posterior part of the velum interpositum—i.e., above and around the pineal body—were more closely matted together than natural by ordinary, rather tough connective tissue. No lymph in this situation. On each side two large veins are visible tending towards the direction of the pineal body, one of which seems to come from the roof of the descending cornu under the posterior extremity of the thalamus, and the other comes forwards from the convolutions over the under surface of the occipital lobe.

On removing portions of the cerebrum, the cerebellum is found to be more prominent than natural, especially over the middle lobe. On cutting through the tentorum, and removing the organs, its upper surface presents the following characters:—On palpation, right lobe seemed bag-like, as though from the presence of fluid within. Consistence of left lobe about normal, but middle lobe is rather firmer than natural. On raising anterior extremity of middle lobe the valve of Vieussens is found to be very thin and translucent, and on breaking through it a greyish-black-looking prominence from the middle lobe is revealed, pressing uniformly upon the whole upper half of the fourth ventricle. On making an incision into the right lobe of the cerebellum, a cyst-like cavity, containing from two to three ounces of clear slightly yellowish fluid was found. (This fluid, on subsequent examination, was ascertained to be highly albuminous, becoming almost solid on boiling, and neutral in reaction.) Walls of cavity containing the fluid thin and pellucid, with vessels ramifying over its surface, very similar in appearance to walls of lateral ventricles. Projecting into this cavity from the inner side is a growth, which is also found to occupy nearly the whole extent of the middle lobe. This

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tumour, as already indicated, comes to the surface on the under aspect of the middle lobe for a distance of about two inches in long diameter. On cutting through the tumour itself, it is found to be a soft, greyish, slightly vascular growth, the central parts of which contain a certain amount of fluid bounded by apparently disintegrating tissue, as though retrogressive changes were taking place in these parts of the tumour. (On subsequent microscopical examination the tumour proved to be a soft, small-celled glioma, containing cells about the size of white blood-corpuscles closely packed together, with a scanty granular matrix, but no distinct fibres.) On the left side the growth also extends into a small cyst-like cavity in the left cerebellar lobe, but the cavity is very small on this side, and the degree of projection of the growth is also less. The optic commissure and optic tracts have lost their natural white appearance, and present a distinctly greyish tint. Cut portions of brain with tumour, after draining away of fluid, weighed 53½ oz.

Comments.—The symptoms in each of these cases presented a considerable degree of similarity, although there were differences in their rate of evolution and degree of development. In each there were frequent paroxysms of vomiting, especially in the morning, and mostly associated with severe occipital headache, together with pains in the back of the neck, though in neither of them was there any rigidity of the neck muscles or drawing back of the head. These symptoms were followed by a staggering or reeling gait, together with optic neuritis, and a gradually failing sight coincident with the passage of the optic discs from this condition into one of atrophy. Subsequently a general paresis was developed, making the act of walking, and even standing, impossible—the legs collapsing at once when the child was put into the position for standing. Soon after the sitting posture became equally impossible. In neither case was there any sign of genital excitement—a condition which might be expected to be more prone to manifest itself after puberty than before, so that its absence in these children (as a possible effect of irritation of some portion of the back of the medulla) was natural enough.

The bilateral paresis in such cases is probably caused by the pressure exerted by the tumour upon the pons and medulla; or it may in part be due to the disease of the middle lobe of the cerebellum itself. It is worthy of note that in the second case the inner portion of the right lobe of the cerebellum was considerably damaged, and that the strength of the muscles of the right side of the body was distinctly less than on the left side. (This was shown by the greater inclination of the head to the left side, and by the greater tendency of the child when in the sitting posture to fall over to the left side—from unbalanced contraction of the trunk muscles on this side. Also by the fact that the right leg was weaker than the left, and that the right hand was used less than the left when the patient was lying in bed languidly playing with toys.) The fact of this greater paresis being on the same side as the greater cerebellar lesion tends to show that the weakness was a result of damage to this crebellar tissue, and not of mere pressure upon the corresponding half of the pons and medulla. In the latter case the muscular weakness would have been more marked on the opposite side of the body. But then, what follows is of significance.

In connexion with the disease of the right lateral lobe of the cerebellum in this case, it was a point of considerable interest to find the left corpus striatum presenting a distinctly shrivelled appearance, altogether different from that of the right striate body, though it presented within itself no trace of old lesion or anything to account for its diminished size. It is known that a primary atrophy of one corpus striatum and of the corresponding cerebral hemisphere is prone to entail an atrophy of the opposite lateral lobe of the cerebellum, though I am not aware of any other recorded instance in which it would seem that disease of one lateral cerebellar lobe had tended to entail atrophy of the opposite corpus striatum. This is a point of much interest physiologically, and it is one on which light should be thrown in future, whenever the opportunity arises.

Both these cases were notable from the fact of the absence of any appreciable impairment of common sensibility, or of special senses except that of sight—this latter being impaired in the manner already pointed out, as optic neuritis passed over into a condition of white atrophy.

In disease of the middle lobe of the cerebellum, moreover, convulsions may or may not occur (they were present in one of these cases, but absent in the other till the last hours of life); and, similarly, rigidity of muscles of the neck or other parts may or may not be present. There was scarcely any trace of this latter sign in either of the two cases above recorded, though the fits were characterised by a certain amount of tetanic rigidity of the arms; and it was similarly altogether absent in another case recently under my care, in which there was opportunity for verifying the diagnosis.

As is well known, the tendency for tumours in the middle lobe of the cerebellum to become complicated with chronic hydrocephalus is very great, whenever this lobe, in consequence of the presence of such new growth, becomes notably increased in size. It is, therefore, a question of considerable interest, whether the onset of such a complication can be appreciated during life. The case of Ada B—— shows plainly what I believe would often prove to be the truth, that the existence of this complication cannot be diagnosed till certain external signs begin to show that the head is enlarging. Chronic hydrocephalus not unfrequently begins in a more or less latent manner and without being heralded by any distinctive or typical symptoms; and should this condition supervene after active symptoms have already for some time been present, owing to disease of the middle lobe of the cerebellum, such aggravation of symptoms as may be produced by the ventricular effusion and pressure may easily be ascribed to the mere progress of the original malady. Increased weakness and mental dulness, progressive impairment of sight, the occurrence of fits, may be the effects brought about by the original or by the induced disease, or in part by both, so that we cannot appeal to them for information as to the commencement or not of a hydrocephalic combination. This being the case, it would be a good rule in all cases of suspected disease of the middle lobe of the cerebellum, in children especially, to measure the circumference of the head at once, and take note, if need be, of the condition of the fontanelles, with a view to future comparative observations. This point is of importance, because the gravity of the case is certainly enhanced by the establishment of the fact that ventricular effusion is present as a complication. It is a complication which is only too apt to be progressive, whilst a disease of the middle lobe stopping short of causing this condition may of itself after a time gradually diminish, as in the case of Jessie J——.

There is one other point of interest in connexion with these cases to which I would allude, and that is the nature of the lesion met with in Ada B——, as a result of a fall upon the back of the head. The occurrence of intra-cranial tumour as a sequence of blows or knocks upon the head is one of which it would not be difficult to collect many instances, although numerically speaking it is a rare result. It would be interesting to ascertain whether the liability to such a result is greater in childhood (when formative processes are so active) than it becomes later in life. The blow itself may give rise to slight lacerations of tissue, with more or less capillary or larger hæmorrhage, and in the course of sequential reparative processes the new growth may take its origin. That such lacerations of tissue do occur, as a result of falls, in the substance of the brain, in the medulla or in the spinal cord, I have on three occasions of late verified by post-mortem observations, though in the case of Ada B—— the disease was so far advanced as to make it quite impossible to ascertain anything concerning the initial conditions. At other times the blow may give rise to a modified meningeal inflammation, so that an injury which in one case may be followed by the formation of ordinary lymph-like matter, may in certain rare instances lead to the development of a new growth, having a widespread meningeal distribution. Strangely enough, whilst preparing these notes for publication a most interesting case illustrating both of these points has come under my observation—that is, in another child who had fallen over fifteen steps, striking principally the spine and the occiput, and whose death occurred in two and a half months after the accident. She was admitted into University College Hospital under my care on March 1st, and died on March 13th. At the autopsy I found actual lacerations of tissue with extravasated blood, in the grey matter of the cord in its upper cervical region, together with a cerebro-spinal new growth implicating the meninges in the main, starting from the under surface of the middle lobe of the cerebellum, and also ensheathing the medulla and spinal cord almost throughout their whole extent. The growth—of an encephaloid sarcomatous type—was white or pinkish-white all through, and nowhere was there any trace of ordi-

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nary yellow lymph (though the diagnosis arrived at during life was that of a cerebro-spinal meningitis). In some parts of the cord it formed a layer beneath the distended arachnoid of one-third of an inch in thickness, but it did not invade the tissue of the cord. On the under surface of the middle lobe of the cerebellum, however, the new growth had extended inwards so as to invade more than half of this segment, and this tumour with swelling of the middle lobe had already begun to interfere with the return of blood from the ventricles through the straight sinus. The surface of the cerebral hemispheres exhibited signs of compression, and the lateral ventricles were distinctly distended and full of blood —the two containing about eight ounces of clear serum—so that hydrocephalus had already very distinctly commenced.

HINTS ON THE APPLICATION OF THE PORO-PLASTIC JACKET IN SPINAL CURVATURES.

BY WILLIAM PAUL SWAIN, F.R.C.S.

THE fact that Mr. Cocking, the inventor of the poro-plastic material for splints and spinal jackets, lives in this neighbourhood, gives us unusual advantages in perfecting its use. His foreman, Mr. Dawes, is a most ingenious man and enthusiastic in his endeavours to succeed; and with his assistance I have fitted a large number of cases of spinal curvature, and gained some experience which may be useful to the profession. The late discussion at the Medical Chirurgical Society on Mr. Adams' paper seems to afford a favourable opportunity for some further remarks on the subject. Mr. Cocking, the inventor, originally produced the poro-plastic felt in large sheets, to be cut into pieces for splints. His attention was, however, drawn to Professor Sayre's plaster-of-Paris jackets, and he conceived the idea that his poro-plastic felt might be used for the purpose of forming spinal supports having this great advantage over the plaster-of-Paris jacket—viz., that of being easily removed from the patient and reapplied.

I will now proceed to describe the method of fitting a jacket to a case of spinal curvature. As a preliminary, the following measurements are required: The circumferences at the axilla, the waist, and the pelvis, and from the axilla to the great trochanter. In addition to these measurements accurate notes should be taken of the position of the curve, especially if it be angular; also of the various bony prominences, such as the anterior spines of the ileum. The process admits of any portion of the jacket being left soft, so that these prominent points may not be pressed upon. The upper and lower border is also better left soft, and in case of females the area over the breasts. The felt formerly used was, I think, of too slight a texture, and failed to give sufficient support, or to wear well for any length of time. Now we are using a much thicker felt with considerable advantage. The jacket next undergoes the process of stiffening, and is now ready to be applied. The method of application is as follows: The patient is stripped to below the pelvis, the dress in the case of a female being pinned round just above the pubes. A couple of very thick elastic jerseys are then placed on the trunk, fitting tightly to the form without creasing. It is needful to put on two jerseys, as the heat of the jacket when first applied is considerable. The patient is then suspended by means of the tripod and pulleys, made familiar to us by Professor Sayre. The amount of suspension will of course vary according to the requirements of the case. Whilst these preliminaries are being arranged, the jacket has been placed in a portable steam-bath heated by gas, conveyed by an india-rubber tube from any neighbouring gas jets. If there is no gas in the house the kitchen oven will serve the purpose, only the jacket must be well sprinkled with water before it is put in. It requires about three minutes to make the jacket perfectly soft, but it wants some little experience to know the exact moment at which it is fit for application. It is then removed from the bath, and placed as rapidly as possible on the patient. To fit the jacket well it certainly requires the aid of two persons. The surgeon should take charge of the back, as the moulding to that part is the most important, whilst his assistant proceeds as quickly as he can to buckle the straps in front. A small hint here may be useful to novices. The buckles are very hot on first emerging from the bath, and unless your fingers are well provided with cuticle, a pair of gloves will add much to your comfort. The middle buckle, which will be found generally to tighten the jacket round the waist, is the first and most important one to secure. I take it that the grip of the jacket round the waist, especially on the female figure, is one of the most important points to be attained. The jacket must be made to fit well in that region, and thence to glide without a crease down over the brim of the pelvis. The pelvic buckles should be the next closed, and lastly the thoracic ones. During all this time the surgeon is moulding the jacket to the form posteriorly. I have found after some practice that the best way to accomplish this is to encircle the patient with an arm, placing the hand in front as an opposing force, whilst with the other hand you knead the jacket into the figure, using principally the ball of the thumb. Thus the felt is pressed well into all the concavities. I have found that a slight knock on the jacket with the knuckle tells me if it is "well home." If there is any interspace between the jacket and the skin a hollow sound is produced on percussion. If, on the other hand, the knock elicits a dull note, you may be sure of a good fit at that spot. The jacket very rapidly becomes hard and *apparently* inflexible. I say apparently, for as a matter of fact the steam-softened jacket remains pliant for some time. This is at once an advantage and a warning. The advantage is that you are able deliberately to complete your fitting for some time, pressing in here and turning out an edge there. The warning is that you must keep your patient perfectly still for half an hour after the jacket is fitted, or you will be disgusted to find it has given way at some important point, and finally hardened into a thing of wheals and creases.

If the patient is tolerant of suspension the longer he is kept up in reason the better, else he must be let down and placed on a mattress prepared for him on the floor. It is very desirable that the jacket should not be removed for some days, either by day or night. In fact, I have had patients who have worn them continuously for a month without inconvenience.

The after-treatment of these cases is of great importance, and the idea that when a jacket is once fitted you have done with the case must lead, and I expect often has led, to disappointment. This is more particularly the case in lateral curvatures. In such cases the jacket is, after all, I was almost going to say, subsidiary to other means of treatment. But herein is the special advantage of this method of spinal support, that its use does not preclude the further use of other curative methods. I allude especially to extension by suspension and gymnastic exercises. This necessitates the almost daily removal of the jacket. There is a right and a wrong way of taking off the jacket. The right way is, after the buckles have been undone to slip the jacket round and remove it laterally. The wrong way is to stretch it open sufficiently wide to remove it from before backwards, by which proceeding the back is soon split. When the jacket is off the patient may use the prescribed exercises, and, finally, must be suspended for a longer or shorter time. The apparatus for suspension can be provided with the jacket, and need not include the tripod. The pulleys may be attached to a beam or to a hook screwed in over a door. But this rule must be invariably observed—viz., the jacket must be reapplied during the suspension of the patient. As in removing it, so in replacing it, it must be slipped on laterally. During the early months of treatment the jacket should be worn at night as well as by day. Now there is another point to be attended to, much overlooked I expect. If the treatment of the case is producing favourable results, one of the principal results is a straightened spine. It is manifest that an alteration in the shape of the spinal column necessitates an alteration in the support, if it is to be any longer a support. To effect this the jacket must be again placed in the steam bath and remoulded. And this will most likely be required very soon, and sometimes very often. It is in this part of the treatment that I feel we possess advantages over our brethren, as we have the maker with all his appliances on the spot, so that our work is much facilitated.

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"CHANGE" AS A MENTAL RESTORATIVE.

BY JOSEPH MORTIMER-GRANVILLE, M.D.

(Concluded from p. 949.)

CASE 3.—C. was a little over fifty years of age. He had been for many years actively engaged in work which required intellectual energy of a very high order. He had to read papers, listen to speeches, think, and arrange arguments daily. His labours extended far into the night and involved considerable bodily as well as mental exertion; besides which he was an active man, fond of exercise, and never seemed consciously weary. He fed largely, drank freely, though never to "excess" in the conventional sense of the term, and altogether well lived up to the limits of a politico-social life. Everything went well and his health caused no anxiety until an occurrence from which, to use a popular expression, he received a slight physical, and slighter mental, "shock." For some days after this incident C. scarcely thought of the matter. He engaged in his accustomed avocations, and, except that he was somewhat less rapid and forcible in his manner of working—hesitating a little as though his mind were pre-occupied, or he was momentarily expecting some interruption—there was no marked change in his condition. In the course of a fortnight, however, a sense of effort oppressed him, he began to fail in his appetite, his sleep was disturbed, his skin was bedewed with perspiration on the slightest exertion, he felt weary and longed for rest. Under advice, as matters grew worse rather than mended, he left town for a few weeks' "rest," and returned apparently better in his general health, but with the same feeling of mind-weariness and incapacity for work. From being the most energetic of intellectual workers he became, in less than two months from the date of the breakdown, apathetic, and disposed to shrink from even moderate brain action; although not in the least degree averse to pleasant company, or any ordinary physical occupation requiring strength, and even energy. His bodily condition seemed to be restored, but his mind was still, and increasingly, incapacitated. Prolonged *rest* was again prescribed, and matters grew worse rather than better. The mental disability became so great that the sight of a book, or the introduction of a topic requiring thought into conversation, became intolerable. Change was tried in respect to place, climate, scenery, the surroundings, and the manner of life, without avail, and matters began to look serious, when a sudden call was made on his mental energies by a controversy which at once provoked and excited him—for the moment, as it appeared, injuriously. He returned to work with all his old power and earnestness, and soon surpassed anything he had done before for clearness, extent, and even brilliancy.

The history of this case is representative. It shows at once the value and the danger of *rest*. As I read the symptoms, C. had been working at pressure and by the force of interest in his occupation, until he had unconsciously consumed that reserve of energy upon which the buoyancy and vigour of life depend. If we may use scientific terms metaphorically, I should like to say that the mental part of the organism in the case of this man was in the condition of a lung with no large residuum of contained air. The intimate structure of the mind was, so to speak, not extended. It answered the purposes of daily duty, just as the aerial surface of a partially disabled lung may suffice for the oxygenation of the blood passing through it, so long as the circulation is normal and the atmosphere pure, but if the conditions should cause any sudden demand on its capacity it will be found wanting. The vitality of our being as a whole is principally sustained by the energy of the particular part of the organism which is most actively exercised in our daily life. The intellectual worker is chiefly energised by mental power. Imagination, hope, fear, and the manifestations of mind generally, occupy the foremost place, and play the leading parts in his life and character. Cut him off from the sources of intellectual—as distinguished from physical—strength, and he will languish. His books, his prospects, his means of mental exercise, are the stimuli of his vital energy, and deprived of these he would fall into a state of inertia and ultimately collapse. It is as important to the health of the man of intellect that he should have a reserve stock of *mental* energy as it is to the rustic to be "strong of limb," or the climber of mountains to be "full-chested." In each case the power of endurance under an exceptional strain will depend on the store of strength—of the class chiefly necessary to the individual—held in reserve. If a man unnecessarily exhausts this reserve, he is living from hand to mouth, so far as his supplies are concerned, and whenever a special call is made upon him, having no reserve force to meet the exceptional demand, he may, we might almost say *must*, break down.

C. broke down when he received a mental shock—too slight to affect other men seriously—because he was living on mental power, and working up to the limit of his strength without maintaining a reserve of mental force. All the energy of which he was capable—i.e., the total force evolved by his higher cerebral centres—was expended in the daily life, so intensely did he live by the energy of intellect. A physical injury would not have affected him so seriously. This is evident from the fact that his general health improved under the stimulus of the first change, and the physical strength with its faculty of recuperation could not, therefore, have been exhausted. It is curious to note how the exhaustion of reserves occurs. At first sight it might seem that a man could not reduce any part of his system to this extremity. The law that makes every part of the organism grow by use would seem to provide against such a catastrophe. We might infer that the man who worked his brain vigorously must be developing the faculty of cerebral recuperation side by side with the exercise of its functions. When we come to look more closely into the matter it will be found that unless the work done is perfectly rhythmical, and provides—which is something more than *allows*—due periods of rest under conditions which admit of repose, the repair of tissue does not go on as rapidly as its consumption. I do not assert that the repair of our organs occurs during intervals of their exercise—I believe that is a misconception; but unless periods of rest are observed the strain is not taken off the energies, and, so to say, the bearings of the machinery of life become overheated. Overwork, as I understand it, is not too much work, but work under wrong physiological conditions. A man *may* always do as much as he *can* do, but if he is to preserve his health he must so methodise his time and manner of exertion as to secure distinct and sharply-marked intervals during which each part of the organism may rest.

The several parts of the compound being and organism of man cannot be rested simultaneously, but they must all be thrown into a state of repose at suitable periods; and the sum total of the rest enjoyed must bear a physiological relation to the sum of work, of heat, of energy evolved. Even the heart rests a distinct period in each cycle of its rhythmical movements, and no part of the system can bear a *continuous* strain; nor is it possible, as some persons seem to believe, that exertion should be safely prolonged if only the rest that follows be extended likewise. Every part of the organism has its individual character and departmental method of working. These ways of life are formulated in the process of development, and when a man is old he can seldom depart from them with impunity. In the case of C. doubtless recuperation of the mental organism commenced with the first "change," but it proceeded so slowly that it is scarcely likely to have re-established the reserves in time to save the brain from drifting into a condition of dementia by disuse, if the propitious incident, which with a vigorous impression on the cerebral centres roused the dormant energies to action, had not opportunely occurred. The rest was not *restorative*, because it did not bring the mind back to work; the new excitant performed that service, and rescued the victim of a temporary breakdown from the degeneration from want of exercise with which his brain was threatened. It is not only unnecessary, but perilous, to leave a broken bone too long in splints. Repair may proceed up to a certain point advantageously while the limb rests, but there will be danger of a stiff joint if exercise is too long delayed. The curative treatment of a crippled mind requires as much management as the recovery of a disabled limb.

It is not so much rest that the majority of weary and seemingly "exhausted" persons require, as a new excitement. Their habitual life has become too exclusively automatic, as all eventless and routine existences, however earnest and seemingly active, have a tendency to become. The supreme centres of consciousness, which in the civilised

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and educated races must play the chief part in life, readily cease to work, and by working make force, when the demand on their activity is daily diminishing, as in the case of A.; or suddenly suspended by "rest," employed as a remedy for some temporary evil, as in the case of C. After they have dozed or lain idle for some time these cerebral centres lose tone, and become irritable when specially aroused. Many a man who did good work cheerfully and was mentally healthy so long as he was struggling to the top of a hill and fighting difficulties at every upward step, is morbidly inert, and in danger of intellectual and nervous dissolution, now that he has reached the summit and has little more to strive for, and nothing to win. Rest has already done him a mischief, and *complete* rest as a remedy will be still more mischievous, although somewhat less so than excessive or laboured effort would be. Complete rest is not compatible with life. Short periods of repose alternate with exercise, but they do not normally reach the depth of degradation implied by even comparative quiescence. They are rather like the "banking up" and "damping down" of a furnace than the extinguishing of a fire. The machinery of life may be eased, but the energy must not be depressed below a certain point, or there will be danger of mental death. It is this *energy* with which we are now concerned. It springs from the vital centres, and these cannot be allowed to sleep if the life of mind and nerve-force are to be maintained. When, therefore, we speak of giving a patient rest by change, it should be understood that we mean to give him other surroundings which shall stimulate his energies in a new way, and from a fresh point of vantage. Work is not only the penalty but the *means* of existence, and energy is best "conserved" when the centres by which t is generated are healthily exercised.

A. failed because his higher centres of mental energy had become powerless, if not also disorganised, by disuse, in the course of a placid automatic life; and when a strain fell on the mind it would not bear the pressure, and gave way. B. broke down because his higher centres of mental energy had never been properly developed, by the educational effect of vigorous exercise and healthy mind-training, and they would only respond to the special stimulation of likes and dislikes. When the sources of pleasure were exhausted in the case of this man, who was personally and socially above the level of those annoyances which healthily stimulate the bread-winner and responsible citizen, his mental energies failed naturally—that is, in natural relation to the imperfect evolutionary state of his centres of energy. C. collapsed in consequence of exhaustion by "over-work," in an approximately reasonable construction of that strange term. The real fault was work under wrong conditions—that is to say, conditions physiologically discordant. The energy of life was too exclusively intellectual in its character and source. The business of existence was transacted almost exclusively by the supreme consciousness; every effort being voluntary, and nearly all exertion a product of the Will; little being automatic or relegated to the subconsciousness in the domain of Habit. This is a most costly system of vital economy, and one which must sooner or later exhaust the largest resources and the highest powers, unless more than common care is taken to secure a perfectly rhythmical method of work, with distinctly recurring and sufficiently long periods of rest. The safe and healthy intellectual life is that in which the functions of the supreme cerebral centres and the lower centres which conduct the actions grouped under the term "habit," are discharged naturally, harmoniously, and in due relative proportion, each taking its share of the burden and heat of the day's work.

I believe a fallacy underlies the notion of working the muscular system as a diversion to the mind, when intellectual "weariness" springs from deficiency of energy rather than exhaustion of strength, as in the cases we have been discussing. If an energetic mind becomes worried with its work because the occupation is in itself vexatious and worrying to the consciousness, relief may, indeed, be found in directing the energies into a new channel, as when a vigorous scholar or statesman finds recreation—in the true sense of the term—in felling trees. A man of energy climbs mountains, or hunts, or shoots with advantage; an irritable, though constitutionally well-balanced, temperament may find comfort in fishing; but these are cases in which the source of danger to the mind has lain in the work done, not in failure of the force by which it has been accomplished. If the distinction between exhaustion of strength by work and defect of energy is recognised, it will be seen that "change" can only prove mentally restorative when it acts as a new and appropriate stimulus to the centres whence energy springs; and that the scientific aim of the practitioner should be to select a form of "change" which shall surround the patient with circumstances potent to incite the dormant or failing sources of energy to improved modes of action. The skilful adaptation of the mental remedy to the mental state and temperament will often prove troublesome, but success when it rewards the effort will be a triumph, and disappointment when it occurs can scarcely fail to instruct. Whereas if we prescribe "change" at random, as one may draw a bow at a venture, hoping to "do good," though unable to determine how, we must not be surprised if our practice is deemed empirical and betrays the lack of knowledge from which its want of precision springs.

Every "change" has three component parts, or may be viewed under three aspects:—1. The state, place, or surroundings from which the subject of change is removed; 2. The state, place, or surroundings to which he is transferred; 3. The *change* itself. And this last-mentioned part or aspect, namely, the change itself, has three elements or phases—1. The liberation; 2. The new condition; 3. The movement or alteration. That the therapeutic value of alteration should not be overlooked may be inferred from the circumstance that the ancients, who were keen observers, designated a special group of remedies as *alteratives!* No exhibition of "change" as a remedy for disease, or a restorative, can be scientifically complete which does not take cognisance of this sixfold property of the treatment prescribed. It is in truth a serious business to recommend "change." Carefully adapted to the special needs of each individual case it is one of the most potent of influences which the physician can bring to bear on the treatment of many mental, and not a few physical, states. When not thus precisely employed, it is not merely a waste of power and opportunity, but an agent of mischief, often the very mischief from which it is desirable to protect the patient with a view to a successful and speedy cure. "Change," probably, never fails to produce *some* effect on the case under treatment, and more commonly than not it does harm, if it be only by blunting the sensitive faculties to the impressions of an agent which, if rightly applied in the case, would do good.

It is impossible to draw a sharp line between "change" which chiefly affects the body and which is intended to influence the mind. The mental and physical elements of man's nature are so interwoven that we cannot distinguish between them, or deal with either singly; but the unreasonable and, as I believe, unscientific separation of mind symptoms and diseases from the symptoms and diseases of the body, to form a *specialty* called "mental medicine," has, among other evil consequences, led to the neglect—I might almost say a practical failure—to recognise the æsthetic aspects of "change." Physicians have reformed the practice of prescribing change vaguely for the body indifferently well. They no longer say to a patient, "You want change," or to the friends of a sick person, "Give him the benefit of a change." Even such phrases as "change of air" and "a thorough change" are being superseded by more precise forms of expression. The individual case is studied, and the patient is told when to go, where to sojourn, how to secure for his bodily health or the relief of his malady the special temperature, atmosphere, food and drink, most likely to produce the effect desired. Meanwhile, so little is the mental aspect of "change" regarded, that even those influences which *must* be exerted on the mind and temper of a patient by the carrying out of the plan of treatment recommended for his physical advantage are ignored! For example, the mental irritation which must be produced, the *ennui* endured, the sense of confinement below and of sudden exposure on deck, the regret at leaving home, the impatience certain to be engendered by the voyage with its alternating hopes and fears, the excitement incidental to the change, and lastly, though by no means least in importance, the perpetual sense of being subjected to an extreme measure of treatment—all count for nothing when a patient is sent on a trip to the Cape and back for his lungs, although the mental influences exerted *must* play an important part in the result obtained. Hereafter it may be discovered that the æsthetic element or phase of the treatment by "change" is always considerable in the therapy of bodily disease. At a still more advanced stage of the inquiry it will, I am persuaded, be found to be one of the most powerful agents we possess for the treat-

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ment of disease, derangements, and disturbances of the mental temperament and the mind, but one which to be harmless and useful needs to be specifically applied.

Before leaving this subject of change as a mental restorative, let me embrace the opportunity to say a word by way of caution in regard to the mistaken measures too often taken for the *relief* of what is supposed to be "over-work." In nearly all the cases of this class which fall under the notice of the alienist, there has been a more or less prolonged use of "stimulants" to mitigate the sense and suffering of mental fatigue. It is no uncommon occurrence to find that the patient has been taking alcohol habitually, though in small doses, as a restorative, and "sleeping draughts"—composed of opium in some form, chloral hydrate, or bromide of potassium—night after night for weeks, or even months. Patients of all ages, constitutions, and temperaments, troubled with sleeplessness of all forms and degrees, arising from the most diverse and contradictory causes, are dosed by their friends or physicians with these deleterious drugs. This is a serious business. The reckless routine prescription of stimulants and mild sedatives is one of the most unsatisfactory and unscientific of practices. Alcohol cannot possibly be harmless in cases of the class we have been considering. Over-stimulation of the lower centres is the very evil we have to dread and must sedulously strive to avoid; and alcohol never increases the power of the higher centres; it can only for the moment irritate them, and in the long run lower their nutrition. They are not simply sluggish, but devitalised—if I may use the expression—and alcohol has the effect of diminishing the nutritive value of the blood, "which is the life." I do not share the fanatical opinions prevalent with regard to the effects of alcohol; on the contrary, I think them irrational and mischievous; but the recourse to stimulants in cases of what is called "over-work"—in which the work is not in excess, but the power is deficient—must be as pernicious as it is irrational. The recourse to sedatives to procure sleep is not less absurd. This mistake in practice is due to a misconception of the clinical facts. If the *work* were heavier than usual, while the power remained as before, it might be permissible to get over the difficulty by a process analogous to that of urging a horse up hill, and it would, perhaps, be expedient to quiet down the excitement by a sedative when the temporary effort was over; but, in these cases, it is the horse that has broken down, and under an ordinary load. If by any effort he succeeds in getting through his task, he will be too much exhausted and depressed to bear a sedative without injury. You must not stimulate the inert centres chemically, because they have no reserve of energy to give out, and it is worse than useless urging them. Nor must you seek to procure sleep by drugs, because the faculty of taking natural rest is one of the functions of rhythmical life, and the life is not merely unrhythmical, but at a very low ebb. I do not question that there are cases in which sleeplessness is due to an interruption of the orderly succession of the waking and sleeping states,[1] and in such cases the timely and limited use of a "soporific" may restore the rhythm and cure the evil; but the cases of which I am now treating are not of this nature, and nothing can be more unfortunate than the even moderate use of stimulants and sedatives as palliatives. The aim must be to promote nutrition, and the only way to do this is to exercise the part to be nourished, naturally—that is, by inciting it to action by a natural stimulant, one which operates functionally, creating a mental purpose and stirring the energy through the will. The difference between this method and that which consists in stimulation by alcohol or drugs, is the difference between winding a watch and setting its wheel in motion through the central force of the main spring and compelling the mechanism to move by twisting certain of the wheels on their pivots. For general health purposes drugs may, of course, be necessary; but for the remedy of the mental disturbance only mental treatment will prove effectual. Sensations of mind-weariness, *ennui*, depression, and that misery of self-consciousness which only the worried can understand, are warning symptoms of mind-states which must be "changed" by such alteration in the method and surroundings of the personal life as the considerations to which I have briefly pointed will suggest. The recourse to alcohol, in any form, will only complicate the mental difficulty—hampering the machinery by, if not *in*, which the mind works.

[1] I discussed the question of occasional sleeplessness from this cause in a paper on "Mental Reflexes: Habit," in THE LANCET of 1879, pp. 550, 584.

SCURVY IN CIVIL PRACTICE.

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THE following cases have quite recently come under my observation, and as illustrations of a mode of occurrence of a disease little looked for in civil practice, or under ordinary and favourable conditions of life, may be interesting and worthy of record. As some points in reference to scurvy have been lately debated in THE LANCET, the present time would appear to be opportune for publishing them.

CASE 1.—Mrs. B——, a young married woman, the daughter of an innkeeper, aged twenty-eight, seen with Dr. Ellis. She was suffering from extreme debility, from numerous purpurous spots on various parts of the body, especially the lower extremities, and from spongy and bleeding gums. She was emaciated, and was thought to be rapidly sinking. On careful inquiry it was found that for several years past she had been the victim of very painful dyspepsia, for which, two years before, she was advised to restrict her diet to small and frequently repeated quantities of bread and milk, or bread and broth. This method had relieved her pains, and, in consequence, she had adhered to it ever since, and although she had latterly wasted greatly and grown very feeble, she had feared to take other food, attributing her emaciation and debility to the fault of her stomach, rather than to deficiency of proper nutriment. With this history and the appearance of the gums and hæmorrhagic spots, the diagnosis was formed that she was probably suffering from scurvy rather than from purpura. She was at once put upon lime-juice, and immediately began to improve, and very soon all her scorbutic symptoms disappeared.

CASE 2.—J. C——, aged twenty-four, a prisoner in the Norwich gaol, seen at various times with his medical attendant, Mr. Day, afterwards under the care of Mr. Robinson. After some months' detention he began to complain of being frequently sick, and after a time this sickness became of daily and continual occurrence. He was carefully examined and watched, and although he was believed to be malingering, yet as there was long room for doubt, he was carefully treated for the symptoms of which he complained. Amongst other things he was put upon a diet consisting chiefly of milk and gruel, at first in very limited quantities, but he was afterwards allowed to take more. After some weeks of this and similar forms of dietary, he began to have bleeding from the gums, whilst some purple ecchymotic spots appeared upon various parts of the body. This condition was recognised to be one of scurvy, and upon the enforced administration of lime-juice freely, he rapidly recovered from it, as well as from his other (really feigned) ailments.

CASE 3.—Miss C——, aged fifty-two, an inmate of a private asylum, seen with the Messrs. Watson. This lady was suffering from chronic mania, and was in feeble health both bodily and mentally. In March last an extensive ecchymosis was observed on the upper part of the left thigh, which gradually disappeared. About seven weeks later an ecchymosis of a similar character appeared on the right thigh, which occupied nearly the whole of its inner surface. The skin here was firm and free from tenderness, and there was no sign of venous disease. On examination, it was found that her gums were dark and spongy, and inclined to bleed in several parts; and upon inquiry it was found that the patient, though partaking of a mixed diet, had a marked aversion to vegetable food, and constantly refused all kinds of fresh vegetables, including potatoes and fruit tarts. Under the enforced use of oranges and a little fresh vegetable food daily the symptoms quickly disappeared, and she was soon quite well.

CASE 4.—Mrs. R——, aged seventy-eight, a fine and usually healthy old lady, but very susceptible to bronchitic attacks on changes of weather, and also considered to be liable to indigestion and diarrhœa from eating even small quantities of vegetables. With the exception, therefore, of a little broccoli or asparagus occasionally in their season, she had for many months had no fresh vegetable food; and

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partly because of supposed weak digestion, and partly because of subacute bronchitis, her diet had been very carefully regulated, and chiefly restricted to beef-tea, turtle soup, gruel, jelly, arrowroot, with occasionally a little egg pudding or light fish. She had usually either sherry, Madeira, champagne, or brandy, twice or oftener in the twenty-four hours.

For several weeks her cough and expectoration had been persistent without apparently due cause, and the sputum had occasionally been mixed with small dark blood-clots, or was very viscid and stained with a citron-coloured exudation. She also had had a series of ecchymoses or hæmorrhages under the skin of the feet, legs, thighs, and loins. As she had marked varicosity of the veins, these hæmorrhages were at first considered to be due to rupture of the small veins from disease and from age. In addition to these symptoms she had displayed a most disproportionate debility, so that she would sway about when set upright in a chair as if giddy. Her complexion, too, had become pale-sallow, and though her tongue was clean, her appetite, even for liquids, had greatly failed her. She was entirely edentulous, and the gums were unaffected.

It now occurred to me that possibly these hæmorrhages might be due to diseased blood—i.e., to a scurvy condition arising from insufficiency of vegetable diet, and I therefore ordered for her one or two oranges daily. She took them readily and willingly, and from that time no more hæmorrhage occurred; the cough and viscid or stained mucous expectoration soon ceased, the appetite improved, and the extreme debility gradually disappeared. She is now better and stronger than for a long time past, and she eats some solid food again without inconvenience.

Remarks.—The general facts of scurvy are now well known—its origin in the deprival of fresh vegetable food, and its cure by a proper supply of this material. These cases are chiefly interesting as illustrating a point well dwelt on by Dr. Buzzard (article on Scurvy, "Reynolds' System of Medicine")—viz., the liability to the occurrence of the disease in civil practice when little expected, and the danger of the less-developed symptoms being overlooked, because of their cause not being suspected to be in operation. Such symptoms are—disproportionate debility, an altered complexion, breathlessness, &c.; and doubtless, except under circumstances in which we might be looking for the probable development of scorbutic disease, such signs would almost certainly at first be misinterpreted. This especially happened in my fourth case, and this recent personal experience leads me to suggest the possibility that cases may *frequently* be occurring in civil practice, in which, for various reasons, extreme and prolonged restrictive regulation of the diet may have been resorted to, and where symptoms short of true scurvy may have supervened, but which, though unrecognised as such, are essentially of this character.

The other cases speak for themselves. They were more distinct and easily recognisable; but until the occurrence of the last case, I had scarcely thought it possible that in a private house, or in a patient surrounded by every comfort and with every luxury at command, such disease could spring up,—and it was long before I thought of attributing the symptoms to their proper scurvy origin. But their steady disappearance, and the rapid and complete recovery of the patient under the use of an orange or two daily, when they had resisted all care and all variations of treatment for very many weeks, prove conclusively that this was their true explanation. This patient has quite recovered, and is now in better health than for a long time past.

And if I might venture to carry my observations a step further—from the particular to the general—I would suggest that there may at this moment be some danger of injury gradually accruing in this way to the health of the poor population of the west of Ireland. Their ordinary esculent, the potato, would appear almost to have disappeared as an article of diet, whilst almost the only food supplied by charity seems to be Indian meal. Fortunately the summer, with its fresh green growth, is at hand; but, in the absence of other than meal and milk food, the above cases go far to show that a danger of such disease on a large scale is far from being chimerical.

Norwich.

THE Worshipful Company of Goldsmiths have granted a second donation of £50 to the Association for the Oral Instruction of the Deaf and Dumb, Fitzroy-square.

CASE OF

INTESTINAL OBSTRUCTION OR OCCLUSION, LASTING THIRTY-NINE DAYS; TREATMENT BY SUBCUTANEOUS INJECTIONS OF MORPHIA; RECOVERY.

BY W. H. LAMBART, M.D. T.C.D., &c.

ON Monday, Sept. 15th, 1879, I was called to visit Mr. R. O——, aged sixty-four years. For months past, perhaps a year, he had no regular or healthy action of the bowels, but generally went to the closet four times daily, when a small liquid motion commingled with blood was passed. The appearance of the blood did not alarm him, as he had been treated by his club doctor on several previous occasions for bleeding piles.

The immediate previous history was as follows:—On Sept. 11th he felt uncomfortable, the usual calls to the closet having ceased. He took two rhubarb pills on his own responsibility. No effect being produced, he went to a chemist on Sunday 14th, and got a pill and draught, which he took in the shop, and brought away two more draughts, which the chemist directed him to take if the bowels did not act. The draughts were duly taken without result, so he took an ounce of castor oil; this did not succeed. Feeling very ill, he applied again to the chemist, who advised him to send for a doctor.

On my arrival my patient was in bed; had little sleep during the past night; complained of pain in the bowels, at times very severe, especially when following loud rumbling, which occurred frequently; abdomen swelled and tympanitic; vomiting every ten minutes. Temperature 100·5°, pulse 110. Ordered beef-tea often in small quantities, and an injection of soap and water, small in quantity and to be given with great gentleness.

16th.—Everything rejected from the stomach; symptoms as before. Ordered another injection, which brought away several small scybala, after which he expressed himself as feeling much better; also ordered a draught with quarter of a grain of morphia, to procure sleep, and to relieve the pains, which still came frequently.

17th.—Still vomiting; abdominal distension increasing. Saw in consultation my friend Mr. Owen Thomas, who advised subcutaneous injections of morphia, and the foot of the bed to be raised six or eight inches. Injected quarter of a grain of morphia.

18th.—Much better night; less pain, less vomiting. Quarter of a grain of morphia in the morning, and again at night. To continue beef-tea, rice-water and arrowroot.

19th.—Feels comfortable; vomiting less frequent; if stercoraceous, without smell. Morphia, quarter of a grain morning and evening.

21st.—Pulse 115, temperature 98·2°. Morphia one-third of a grain. Was sent for before my regular time for evening visit, as the patient was much worse and his friends thought he was dying. Morphia one-third of a grain.

22nd.—Passed in night some flatus; felt much better; pains nearly gone; vomited only three times during the day. Morphia one-third of a grain morning and evening.

24th.—Pulse 120, temperature 97·5°. Has not vomited since the 22nd; more flatus passed; abdominal distension gradually increasing.

25th.—11 A.M.: Pains severe since four o'clock this morning. Pulse 128, temperature 98°. Distension still increasing. Injected half a grain of morphia. Sent for at 8 P.M. Much pain since four o'clock this afternoon. Pulse 148. Signs of collapse; still greater distension. Morphia half a grain.

26th.—7.30 A.M.: Pulse 136. Not much pain in night, but turned suddenly in bed this morning, which caused much pain in left side. Feels weak; depressed. Ordered a little brandy and water; morphia half a grain. Distension still increasing. Visited at noon with my friend Mr. Thomas. Very easy since morning. As abdomen was very distended we decided to let out the flatus. Abdomen assumed natural size. Morphia half a grain. Visited at 9 P.M.: Pulse 120; abdomen again filling rapidly. Morphia half a grain.

27th.—Pulse 124; temperature 98·9°. Passed good night;

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no sickness; no flatus. Distension still rapidly increasing. Morphia half a grain; repeated at 3 P.M. and at 10 P.M.

28th.—8 A.M.: Comfortable night. Pulse 124, with temperature 99°. No sickness, vomiting, or pain. Again tapped abdomen till about half its natural size. Morphia half a grain.—2.30 P.M.: Pulse 112, morphia half a grain.—9.30 P.M.: Pulse 110; morphia half a grain.

29th.—No sickness or pain. Morphia half a grain, morning, afternoon, and evening.

30th.—Much flatus in night and through the day. Morphia two-thirds of a grain three times.

Oct. 1st.—More flatus. Morphia two-thirds of a grain three times.

Oct. 2nd.—Pulse 120; temperature 100·2°. Much more flatus. A good deal of rumbling. The abdominal distension not increasing.

Between this date and Oct. 9th pulse varied from 120 to 106. Flatus passed occasionally. A little pain at times complained of. Thought on the 8th he could not recover. Given regularly three times every day two-thirds of a grain of morphia.

10th.—Felt sick. Had much pain in left side when he turned in bed. Morphia as before.

12th.—Felt like a large hard lump in left side, just above Poupart's ligament.

13th.—Abdomen increasing again. Pulse 120; temperature 98°. Much pain since 5 A.M. One grain of morphia three times a day.

14th, 15th, 16th, 17th, 18th.—Nothing particular to relate. One grain of morphia three times a day. Sometimes a little flatus, sometimes a very small quantity of black liquid fæces.

19th.—Two chambers nearly full of fæces, very liquid and black, passed. Such was the report I made to-day.

21st.—More fæces. Morphia three times a day till Nov. 5th, gradually reducing the dose; from that day till the 24th twice a day, gradually reducing the quantity. As he complained of sickness of stomach and had bilious vomit, I gave solution of hydrochlorate of ammonia and extract of taraxacum on and after Nov. 7th with much advantage. Temperature, as a rule, normal every day; pulse varying from 120 to 100.

Dec. 4th.—The dark colour at length disappearing from the fæces, now becoming more natural in appearance.

Dec. 3rd.—Only visit once daily and give morphia once. Motion nearly every day. Beginning to eat; everything he takes in small quantities.

25th.—Had roast goose and potatoes for dinner.

Jan. 4th, 1880.—No occasion to visit.

I was apprehensive of malignant tumour in this case; the history, the cachexy, the hard lump felt on the 12th Oct., all induced my thoughts to converge in this direction. The scybala removed by the injection on Tuesday Sept. 16th, were, I believe, in the rectum below the occlusion, and the small quantities of black fluid on the 17th and 18th of Oct. were too insignificant to allow me to suppose the obstruction was removed. The copious discharge on the 19th was evidence unmistakable. To gain space I have contracted the above notes as much as I could from a full record kept regularly every day.

Liverpool.

CASE WHERE A SET OF TEETH WITH PLATE REMAINED IN THE PHARYNX FOR TEN HOURS WITHOUT PRODUCING URGENT SYMPTOMS.

BY DAVID CARLYLE, M.D.

AT six o'clock in the evening of May 15th a messenger informed me that a widow, aged about fifty-five years, had been very poorly all day, but the symptoms he ascribed to her peculiar habits. He was in no way alarmed or anxious as to her state, so little, indeed, that I did not pay my visit for one hour after receiving the call. I saw her then about seven o'clock in the evening. No person was with her in the house; she was in bed lying on her right side. She made no complaint, nor were any symptoms of uneasiness or suffering indicated. I could obtain no information from her as to any illness; not in the least did she refer to her mouth or throat. I noticed an alteration in her speech, this being accompanied with a peculiar cluck. It was casually mentioned that her false teeth were lost since the morning; she could give no information as to their whereabouts; during our conversation no cough, spasm, or suffering pointed to their situation. Examination along front of neck gave no information. I then got a tablespoon, the only convenient instrument, the handle bent down to nearly a right angle, to draw forward and depress the tongue for examination of pharynx. No foreign body then could be seen there; the effect, however, was beneficial, it induced much straining and vomiting. After these had subsided I again examined the pharynx with the spoon, and could then see the plate and teeth low in back of pharynx. The arch of the plate was upwards, and the roof or upper side of it towards vertebral column. With the tablespoon and the aid of dressing forceps I was able to remove the plate of teeth without any difficulty. A man who lives in her house and some female neighbours knew that her teeth were lost, but had no suspicion that they were in her throat; they state they were missing at nine in the morning; they were removed at seven in the evening (ten hours afterwards).

The case is remarkable from the patient being, as she states, unaware of the presence of the plate in the pharynx, and also from the small amount of suffering and inconvenience it induced.

Carlisle.

REMARKABLE CASE OF FRACTURED FEMUR, RESULTING FROM MUSCULAR ACTION.

BY CLARENCE FOSTER, M.R.C.S.

I WAS requested the other evening to visit a middle-aged gentleman, whom I found on my arrival to be suffering from simple transverse fracture of the left femur at its middle third. As is usual in this accident, there was considerable deformity, rendering the exact nature of the injury at once apparent. On inquiry I found the patient had neither fallen nor in any other way experienced direct violence to the limb, but, in walking across the floor, he unfortunately made a slight trip, and in endeavouring to maintain his equilibrium the sudden muscular action thereby induced caused the bone to snap asunder. The history of this case is at least remarkable, for although Debeaumarchef, Curet, and Léveillé have cited somewhat analogous instances, so eminent an authority as Richerend, in the fourth edition of his Surgical Nosography, vol. iii., p. 12, positively asserts that a long bone when healthy can never be broken by this means alone, and I have no reason whatever for supposing the existence of any abnormal condition of the part in this special patient.

Park-place, Leeds.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GREAT NORTHERN HOSPITAL.

A CASE IN WHICH ONE-THIRD OF THE CRANIUM WAS DENUDED BY AN INJURY; RECOVERY IN FIFTEEN DAYS.

(Under the care of Mr. W. SPENCER WATSON.)

FOR the following notes we are indebted to Mr. Wharry, the house-surgeon.

Eliza H——, a machinist, aged twenty-three years, was admitted on Feb. 5th, at 8 P.M., having thrown herself from a second-floor window (a height of about thirty feet) to escape from a fire. She seemed to have lost consciousness in the act of falling, but thought that she fell upon the body of another girl who had also precipitated herself from the same window. The whole of the posterior third of the scalp,

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from a line extending from the mastoid process on one side to the corresponding part on the other across the top of the head, was detached from the skull and hanging loose on the nape of the neck. It was reapplied, and the edges of the wound brought together by hare-lip pins and strapping, and carbolised oil lint applied as a dressing; the hair of the head was previously cut off close to the scalp. She passed a quiet night, the temperature next morning being 99° and the pulse 96.

On Feb. 10th she was restless during the night, and had great pain in the head. Temperature 102·6°; pulse 120. The dressings were removed and the hare-lip pins taken out. The whole of the scalp felt "boggy," but there was no distinct fluctuation. The face was puffed and œdematous. Charcoal and linseed poultices were applied, perchloride of iron was given in ten-minim doses, and a calomel purge was administered. Next day the temperature was 98·6°, and the girl felt altogether better.

After this date the recovery was only interrupted by a small collection of pus under the scalp at one limited spot; it discharged itself, however, through the original wound, and by Feb. 20th the latter had almost healed. On the 6th of March the wound had completely healed.

Remarks by Mr. WATSON.—The rapid recovery from such an extensive denudation of the cranium is the most interesting feature of this case. The young woman's very good general health must be taken into account, as giving her the best chance of recovery; but the antiseptic dressings must be credited with some part of the good result, and the absence of serious complications.

LIVERPOOL INFIRMARY FOR CHILDREN.

HYDATID OF THE LIVER; TAPPED WITH SOUTHEY'S TROCAR.

(Under the care of Mr. MARTIN OXLEY.)

ELLEN R——, aged eight years, was admitted February 20th, 1880. She was an anæmic, sallow-complexioned child, who had been out of health for six months; suffering from occasional vomiting, loss of appetite, and lassitude. The abdomen was large, and in the region of the liver, bulging was noticed; this bulging gave a distinct sense of fluctuation, and it was considered advisable to introduce a Southey's trocar and cannula; this was done two inches to the right of the linea alba, and three inches below the ninth rib, when six ounces of clear fluid were drawn off, the last few drops of which were stained with bile. The fluid was found on examination to be alkaline, free from albumen, and crowded with the heads of the echinococci. There was a slight rise of temperature on the evening after the withdrawal of the fluid, it fell to normal by morning, and the child went out of the hospital in three weeks quite well.

Note.—The use of the trocar and cannula of Southey contrasted very favourably with aspiration which was employed in another case of a similar nature some few years ago, where the aspiration was followed by two days of very high temperature, and threatened peritonitis, although the needle used was not larger than a Southey's cannula.

NOTES OF MEDICAL AND SURGICAL PRACTICE.

CHIAN TURPENTINE IN CANCER OF BREAST AND UTERUS.

MR. E. J. HARDWICKE (Bury St. Edmunds) records two cases in which he prescribed the above drug with apparent benefit. The first was a case of scirrhous mamma. The organ, which for eleven years had been the seat of some induration, had been rapidly enlarging and becoming very painful during the past two years. The right breast was twice the size of its fellow, exceedingly hard, the nipple retracted, and an open sore existed on the left of the nipple. The axillary glands were enlarged, and the woman had a very cachectic appearance. She refused to go into hospital to have the breast removed, so was put upon the drug according to Professor Clay's formula. In a few days the pain ceased, and when seen on May 29th she had lost the worn haggard look; the breast was at least half its former size, was comparatively soft; and the enlarged axillary glands could no longer be felt. Mr. Hardwicke writes on June 9th as to her continued improvement. The only local application was some simple ointment to the sore. The other was a case of uterine cancer, operated on at St. Mary's Hospital, Paddington, by Dr. Meadows, on Dec. 2nd, 1879. She suffered from much pain, hæmorrhage, and discharge, and had emaciated greatly. The drug was commenced on May 15th, and on June 1st she was free from pain. The emulsion did not agree with her, and for a short time during which it was discontinued by the patient all the symptoms returned, but in the form of pill the medicine was better tolerated. Both cases are still under observation, and the writer says he has put another case of mammary cancer on the treatment. He gives other details—viz., that in each case, whilst taking the drug, the patient complained of a sense of "sinking" and "emptiness" in the stomach.

DR. MACLEOD (Dundee) writes:—"Two cases of cancer of uterus I have recently treated with Chian turpentine pills, as recommended by Professor Clay of Birmingham, without the slightest benefit."

SCARLATINAL DROPSY WITHOUT ALBUMINURIA.

DR. MITCHELL (Catford) forwards the following case:—J. B——, aged twenty-one, of lymphatic temperament, began to suffer from sore-throat about the latter end of April, with slight pyrexia, and four days later a red rash appeared, nearly limited to the lower extremities. He did not keep his bed, and in a few days resumed, on his own responsibility, his occupation in connexion with the fire brigade. Dropsy of the face, lower limbs, and scrotum commenced on the 5th May, and became general and extreme a few days later. Desquamation was then going on. The urine was scanty and brownish, but yielded no albumen on frequent testing. Cardiac and respiratory sounds normal. Diaphoretics were given, and from the 12th to the 17th nitrate of potash with solution of acetate of ammonia, and compound jalap powder with Dover's powder. The urine increased in quantity, but the anasarca did not subside until, on the 17th, medicines were suspended, and a hot-air bath prescribed. This treatment was continued, and after seven or eight baths the dropsy disappeared.

GASTRIC ULCER TREATED BY NUTRIENT ENEMATA.

DR. MACLEOD (Dundee) has recently treated three cases of gastric ulcer on the principle of rest, ice only being allowed by the mouth for three days, during which time nutrient enemata of beef-tea, egg, and milk were given at intervals of four or five hours. Afterwards iced milk with potash water in small quantity was allowed.

RINGWORM OF THE SCALP.

DR. MACLEOD (Dundee), after failing to cure an obstinate case of ringworm by various remedies—as acetic acid, carbolic acid, oil of cade, oil of stavesacre, &c.—found it yield readily to a mixture of iodine and oil of tar in the proportion of two drachms to one ounce painted over the patches three or four times. This plan has been recommended by Prof. McCall Anderson.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Disease of the Mastoid Bone; Rare Cardio-pulmonary Murmur.—Cancer of the Pylorus.—Unilateral Morphœa, with Exostosis and Corneal Opacity.

THE following is the conclusion of the report of the meeting of this Society, held May 28th.

Mr. HENRY MORRIS read notes of two cases of Disease of the Mastoid Bone, in one of which a severe attack of herpes of the face followed thrombosis of the lateral sinus and jugular vein. The object of his communication was to point out the value of trephining the mastoid bone as a palliative measure, even when recovery is not possible, to show the value of a simple incision through the soft tissues over the

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mastoid as a curative measure in cases of periostitis of that bone, and to put on record a case in which a severe attack of herpes of the face and mouth was associated with thrombosis of the lateral sinus and internal jugular vein.—Case 1. Alfred S——, aged thirty-one, had for years suffered from deafness and a discharge from the left ear. Ten days before admission on Nov. 14th, 1879, the discharge became more profuse and offensive, pain and redness over the squamous and mastoid bone of the same side, and shivering followed. On Nov. 16th he lost consciousness suddenly, and his breathing became stertorous. Two hours later the mastoid was trephined, and some very stinking pus escaped. Immediately his pulse improved, the stertor ceased, and after a few hours he regained perfect consciousness, but the following day symptoms of pyæmia were pronounced. On Nov. 19th a few herpetic vesicles appeared on the right cheek and lips, which, by the next day, had spread over the greater part of the right side of the face, and to a less extent on the left side. Before his death, on Nov. 27th, the eruption on the face had become quite confluent, and had scabbed over. The throat, mouth, and tongue were also similarly affected. At the post-mortem the left lateral sinus and internal jugular, as low as the junction with the subclavian, were plugged with a firmly adherent discoloured clot, and there was also a thin clot in the longitudinal right lateral sinus, and in the torcular Herophili. Trephining in this case not only prolonged life and restored consciousness for some days, but it entirely removed the agonising pain suffered for several days before. The herpes might possibly be explained on the hypothesis of active venous congestion resulting from the blocking of the lateral sinus, and the extension of the thrombus along the whole course of the jugular vein. It is, however, admitted that it is quite impossible to deny the neurotic origin of the eruption, and it is even suggested that the congested state of the vessels might have given rise to nerve irritation by direct pressure. Another fact requiring notice is the tendency there was in this patient to capillary congestion of the face and neck, as indicated by a temporary deep red rash, which latterly had been always produced by taking the smallest quantity of stimulants. Arguments against the venous congestion theory are advanced such as are offered by the absence of any similar eruption in recorded cases in which the internal jugular has been compressed or ligatured, or even in cases in which the superior vena cava itself has been occluded; but it is pointed out that there is an important difference in the effect upon the circulation between thrombosis extending from the lateral sinus and ligature of the internal jugular vein.—Case 2. At the end of July, 1879, a gentleman, about fifty years of age, had been bathing in the sea; the water was very cold, and on the following day he was attacked by severe earache. The earache proper soon subsided, but he became subject to violent seizures of neuralgic pain, with marked nocturnal exacerbations. The pain extended all over the left side of the head, but was most severe behind the ear. The hearing on this side became greatly impaired. On September 7th he came to London, the symptoms continuing the same. He had not slept for several nights, and was well nigh worn out with pain. The membrane of the tympanum was sound, but the skin over the mastoid was red and very tender. The ticking of a watch could not be heard close to the ear. Leeches and hot sedative applications failed; the tissues over the mastoid became more red, tender, and swollen, and at one spot as large as the finger tip there was more elasticity than elsewhere. On Sept. 11th a straight vertical incision was made down upon the bone, which was soft and easily penetrated with the knife, and a little pus escaped. Relief was immediate and complete; within a week the wound was all but healed, and the patient is now perfectly well, and his hearing as good as ever. The case shows that in some instances an incision is all that is necessary, not only for the relief of intense suffering, but for complete recovery, by taking off the tension of the inflamed peritoneum and superficial structures. If, however, the local pain continues after, or cerebral symptoms supervene upon, the simple incision, perforation of the mastoid bone by the trephine or drill should be performed, whilst nothing short of trephining can be expected to do good in cases where rigors, tenderness on deep pressure, and œdema over the mastoid, follow shortly after acute suppuration of the tympanum.—The PRESIDENT was reminded by the paper of a case of a gentleman who suffered from deafness and much pain in the mastoid bone after typhoid fever. After consultation with Sir James Paget and Mr. Hinton, the latter perforated the tympanum, and gave exit to a small quantity of pus. The pain, however, persisted, and trephining was suggested. The patient would not at first consent to this, but subsequently the operation was performed by Mr. Heath of Newcastle, pus escaped, and perfect recovery ensued. The patient is still living and in good health.—Mr. MARSH recalled two cases of operative interference for mastoid disease in children, in one with marked relief. The case was one where all symptoms of suppuration were present, and coma was threatening; when, in a few hours after the incision was made, all symptoms passed away. About eight months after the child had a relapse, which was successfully treated in the same manner. In the other case, where trephining was performed, there was an equally good result.—Mr. BRYANT had no doubt of the value of early interference in cases of inflammation of bone connected with the ear—cases which, if left alone, passed on to suppuration, inflammation of the brain, and death. In a case of a boy with symptoms of inflammation of the brain, and tenderness over the mastoid, Mr. Bryant cut down on the bone, which was carious; the symptoms subsided, but the boy was left absolutely blind and deaf. In another case, an infant with otitis and facial palsy, hemiplegia of the opposite side ensued in a few days. There was but little discharge from the ear, and the case was regarded as hopeless. Mr. Bryant cleared out the auditory canal, removed the ossicles, and got rid of inflammatory material by means of a small sponge. Much pus escaped; all the symptoms subsided except the facial palsy and deafness, the hemiplegia passing off. He had had three or four cases which he had treated in the same way, and he urged free opening of the middle ear wherever there are brain symptoms with otitis, for the ear as a hearing apparatus is really destroyed.—Dr. TAYLOR asked what was the condition of the optic discs in Mr. Morris's cases. He had seen a child with mastoid disease, very marked brain symptoms, and optic neuritis, but without any meningitis. What evidence was there of thrombosis of the jugular vein before operation?—Mr. BARKER asked for information as to the precise seat of trephining—for cases had occurred where the lateral sinus had been opened; an accident liable to occur when the mastoid cells were ill-developed—as in children and some adults. The mastoid antrum, of course, exists in all, and its floor is on a level with the upper border of the bony meatus, where it would be desirable to trephine. He urged early interference in cases of otitis media, by a free incision through the tympanic membrane, and crushing out the middle ear. The wound in the membrane heals and hearing returns. By such a procedure many cases might be prevented passing on to mastoid disease.—Dr. CARRINGTON, with reference to Mr. Bryant's case, observed that the angular gyrus in which Dr. Ferrier placed the centre of sight was seated just about the position of the mastoid.—Mr. MORRIS, in reply, did not think either case was examined ophthalmoscopically. The incision was made over the mastoid bone, the periosteum stripped off, and pus was found at a spot where the bone was softer than elsewhere, then the drill was applied carefully. The pus did not come from the mastoid cells, but from beneath the dura mater, although the cells were found afterwards full of inspissated pus.

Dr. F. TAYLOR read notes of an unusual case of Cardio-pulmonary Murmur. The patient, a blacksmith by trade, aged thirty-eight, had suffered from his chest for twelve months. He was first taken ill with cold, clammy sweats, and continual cough and expectoration. The sweating stopped after a time, but the cough persisted, and he lost flesh. In February he gave up work. When first seen he was of ordinary build, rather spare, with anxious expression of face. He was spitting a good deal of dirty-yellow phlegm, his breath was slightly fetid, and he complained of a peculiar noise which he had heard in his chest for two or three months. The chest was flat, fairly symmetrical, and with a wide epigastric angle. The right side was practically normal; the left side, on the other hand, was nowhere healthy, and presented the physical signs of a considerable cavity in the anterior axillary line, just below the level of the nipple. At this point there was tympanitic percussion note with marked cavernous breathing, and very distinct whispering repetition of the voice. Elsewhere on this side of the chest there was more or less impaired resonance, and even complete dulness, soft bronchial breath-sounds, and deficient vocal resonance or whispering bronchophony—the physical signs being more marked below than above. In addition to

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this there was audible over the whole chest a loud double sound synchronous with the heart's beat, and musical in quality. It was heard faintly on the right side, and at points of the chest distant from the heart, loudly over the præcordia, louder at apex than base; and loudest on the anterior axillary line three inches from the nipple, at the point where were the other physical signs of cavity. The sound could also be heard at a distance of twelve inches from the chest, and when he opened his mouth it was audible for a much greater distance, the vibrations being obviously intensified by resonance in their passage through the mouth, and giving one for the moment the impression that they actually originated in the larynx. These sounds were no doubt produced by the strokes of the heart against the walls of the pulmonary cavity; they were intensified by resonance in the interior of the cavity, and their unusual transmission to the pharynx and mouth was probably the result of a very free communication of the cavity with a bronchial tube.

Dr. WHIPHAM read notes of a case of Cancer of the Pylorus; ulceration of the cancerous growth; formation of an abscess; gangrene of left foot and leg. On Nov. 27th, 1879, a man, aged forty-eight, was admitted under Dr. Whipham's care into St. George's Hospital. The history went to show that symptoms of stomach disease declared themselves in October, 1878; that in January, 1879, he became an out-patient at St. Thomas's Hospital, when Dr. Greenfield discerned a hard mass movable by respiration in the region of the pylorus: the patient at this time suffered from pain and vomiting. In June the tumour was less evident to palpation, but the other symptoms persisting the man was admitted into St. Thomas's, and after undergoing treatment there for a few weeks was again made an out-patient, but was subsequently readmitted in September. Merely a fulness over the pylorus was detected at this time. The vomiting, which had been a prominent symptom for eight months and a half previously, entirely ceased on July 16th, 1879. When the patient was admitted into St. George's Hospital he was pale, complained of pain in the hepatic region, and of tenderness on upward pressure towards the under surface of the liver. No definite tumour could be detected, nor any enlargement of the spleen or lymphatic glands, although there was a sensation of fulness to the right of the gall-bladder. Microscopic examination of the blood showed a great excess of leucocytes in the field, most of which exhibited active amœboid movements, and subsequent examination of the blood on a warm stage showed far more active movements of these white corpuscles. On Dec. 9th the abdominal pain had nearly ceased, and at once signs of gangrene appeared in the toes of the left foot, which extended until the lower two-thirds of the leg and the foot were involved. Shortly before death a minute quantity of albumen was found in the urine. At the post-mortem examination the lower part of the femoral artery was found to be blocked by clot; an abscess was discovered lying between the stomach and the liver. The abscess was the result of ulceration of a cancerous growth affecting the pylorus; owing to the ulceration, perforation of the stomach had occurred, and thus an abscess had formed in the situation described. The points of interest in the case were: (1) The entire cessation of vomiting five months previously to the patient's death. (2) The disappearance of the tumour, or perhaps the concealment of the swelling, owing to the formation of the abscess. (3) The occurrence of gangrene. (4) The apparent increase of the white corpuscles in absence of any great enlargement of the spleen or lymphatic glands, an increase due rather to a deficiency in the red corpuscles. (5) The entire absence of that dryness and want of elasticity of the skin which are so characteristic of cancer.

Mr. STREATFEILD exhibited a case of Unilateral Morphœa with Exostosis and Corneal Opacity. An agricultural labourer, aged forty-five, came to the Moorfields Eye Hospital three weeks since for impairment of vision of left eye. In infancy he had had "strong" inflammation in that eye, and often had a "cold" in it, but this had probably nothing to do with his present state. On admission all the lower exposed part of the left cornea was opaque, the opacity was ill-defined, and extended upwards beyond the centre of the cornea. There was no redness at any part around the cornea, no zone as in ordinary keratitis, nor any other sign of inflammation of the eye. But it did not seem like an old opacity, and his eyesight had only been so bad for a fortnight before he came to the hospital. The eyelids could not be widely opened, and all the movements of the eyeball were limited. He had been ten weeks an in-patient, and the corneal opacity is much less, and vision considerably improved. The state of the cornea seemed to resemble in appearance the preliminary irregular opacity which is seen to occur from nutritional change or otherwise in some cases of paralysis of the fifth nerve. There was, however, no insensibility of the cornea. In addition there was a peculiar brawny condition of the skin and subcutaneous parts of the left side of the face; the face has no wrinkles on that side, and within the mouth there was an exostosis of the lower jaw, and hard palate on the same side.—Mr. HUTCHINSON said the case was very interesting, for it showed changes in nutrition of different structures supplied by the fifth nerve. The skin exhibited morphœa changes in the region supplied by the nerve; but there was no defect in sensation, nor in the nutrition of the muscles. Then there was unilateral exostosis in palate and lower jaw; and he showed a skull which presented similar changes, which he had recorded in the Pathological Transactions. He had seen other cases of abnormal growth and defect of bone due to nerve disease, the latest theory being that the disease affects the vaso-motor filaments in the nerve, and not the sensory. Mr. Streatfeild's patient cannot move the eye on the affected side in any direction well, and this is due probably to the condition of the cellular tissue in the orbit. He did not recall any case of morphœa with such impaired mobility of the eye; but this seems the best explanation, for *all* the orbital muscles are weak, yet the iris is natural. The ulcer in the cornea was a transverse one, just where the hardened lower lid touches it.

The PRESIDENT said that concluded the business of the session; and after a few remarks as to the work of the committees still sitting, he declared the Society adjourned until October.

EPIDEMIOLOGICAL SOCIETY.

Endemic Plague in India.

AT a meeting of the Society held at University College, Gower-street, on Wednesday, June 3rd; Sir Joseph Fayrer, President, Dr. FRANCIS read a paper on Endemic Plague in India. After pointing out on the map of India the position of Kumaon and Gurhwal—the only portions of the Himalayan chain in which the plague (known locally as Mahamurree Pootkin-rog, and Gola-rog) has appeared, although others are perhaps in a state quite as insanitary—the author alluded to the ethnology of the people, who claim a Rajpoot descent; and gave a brief sketch of the physical geography and geology of the country, and of the approaches to it from the plains and from Thibet. Of the ground available for the purpose there is but little comparatively under cultivation; and the population is sparse and scattered. The people (though they do not often show it) possess but little stamina, their food consisting chiefly of cakes made from certain grass seeds, and simple herbs in which nettles abound. The Kumaonee wears cotton, the Gurhwalee woollen clothing, this last affording favourable nidus for the residence of the Mahamurree poison. The personal habits and general surroundings of both classes (of the Gurhwalee especially) are filthy in the extreme. Overcrowding and defective ventilation are conspicuous; and, to make the conditions necessary for the development of epidemic disease as complete as possible, the plague-stricken dead are superficially buried by the survivors in a rocky soil in the immediate vicinity of their homes. On the eve of an outbreak of Mahamurree rats are found dead in the morning, as if suffocated, on the floor of the sleeping apartment; and dead snakes are occasionally picked up near the villages, with now and then, it is said, a jackal. Mahamurree, known since 1823, but in existence probably much earlier, frequently accompanied by glandular swellings and hæmorrhages, and characterised in its most fatal forms, carrying off 95 per cent. of those affected, by the extreme brevity of an attack without any prominent symptoms, is endemic bubonic plague; caused by an animal poison which is generated by the operation of local conditions. It is in no way modified by malaria, which here, as in other parts of India, induces intermittents and remittents. Cholera is sometimes fatally prevalent, as is foot and mouth disease in cattle, but both exist quite independently of Mahamurree. The disease usually breaks out towards the end of the rains, and continues (often) till the beginning of December, when it is quiescent. It may break

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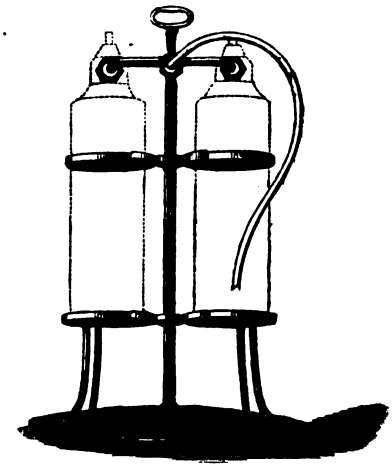
out again in March and continue till May, when, for a time, it disappears altogether. It is intensely contagious amongst the people themselves, but the pilgrims who annually visit the shrines situate near the snow-clad peaks, and the Bhotiyahs, who living in villages from 7000 to 12,000 feet above the sea's level, and conveying merchandise between the plains of India and Thibet, and *vice versâ*, are, it is believed, never attacked, at least not in the present day. Europeans, too, escape; and yet several medical officers have been brought face to face with the disease. The author of the paper saw, when co-operating with Dr. Pearson, ten cases collected from fifty villages, and assisted in making four post-mortem examinations, and in dissecting a plague rat. In discussing the diseased grain theory of the origin of Mahamurree (in connexion with which it has been urged that, whilst the rat died from eating the grain, the snake died from eating the rat, and the jackal from eating the snake), the author pointed out that, if this were so, the cats, *à fortiori*, should succumb; as should the bears, which, in these hills, are very carnivorous and devour the corpses of Mahamurree victims; but neither bears nor cats are ever found dead. The author referred to the Pali plague—a disease having much the same general characteristics as Mahamurree—which, first known in the west of India in 1815 (though not then under that name), and becoming quiescent after existing for four years at various points not far removed from that of its origin, reappeared in 1836 at the village in Marwar which gives the disease its present name. It finally disappeared in the hot season of 1837, since which date, whilst Mahamurree breaks out from time to time, especially when hygienic regulations are relaxed, it has not been heard of. And yet (said Dr. DON, at the conclusion of the paper), Pali was twenty years ago, and —being in a native state—doubtless *is* still, in as insanitary a state as ever! Probably, as Dr. Lawson observed, there is a law affecting the reappearances of epidemic disease, in which case we may see the Pali plague again some day. During this last exhibition of the Pali disease, fevers of various kinds were raging throughout the tract of country that intervenes between this part of the west of India and that part of the Himalayas where Mahamurree maintains its ground. Thus, whilst the Pali plague was in Rajpootana, remittent was very prevalent in Jilwarra; intermittent in Jeypoor and the district around it; and in Rohilcund, up to the very foot of the hills where Mahamurree was rife, a kind of yellow fever was decimating the country. It seemed as if a common factor was at work leading to the development of epidemic disease, each, *sui generis*, being brought out under the influence of local conditions. Whilst acquiescing in the opinion that both the Pali and Himalayan plague *might* be imported, the former, through the medium of the Chippahs, or cotton workers, amongst whom it first appears, receiving plague-infected merchandise from Egypt *viâ* Surat, and the latter by pilgrims, the author strongly believed that, in both cases, the local conditions favourable to the development of plague were abundantly in operation, requiring no assistance from without; and that, as had been most satisfactorily proved in the case of Mahamurree, sanitary reform *rigidly enforced* was efficacious in preventing it. He added that if the coming generation, taught in schools the value of hygiene, would co-operate heartily with the authorities in carrying it out, there was no reason why Mahamurree, like other pestilential diseases in other countries under similar circumstances, should not be finally eradicated from this paradise of India.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

AT the meeting on May 19th, Mr. W. DONALD NAPIER brought forward two instruments of considerable interest. The first was one for the more perfect administration of nitrous oxide gas; for by a simple arrangement the possibility of the gas running short during an operation is prevented. Instead of one wrought-iron bottle containing the gas in a liquid state being used, two bottles are placed side by side in a light frame, and so connected that in the event of one being emptied, gas can instantaneously be obtained from the other. The second instrument shown was the "Polyscope," and by its use the whole mouth can readily be illuminated by the electric light without inconvenience or discomfort to the patient, and a perfect cautery can be obtained when required. The perfection to which this instrument had been brought was due to MM. Brasseur and Trouvé, of Paris.



New instrument for the better administration of nitrous oxide gas.

The PRESIDENT proposed a vote of thanks to Mr. Napier for bringing the two instruments before the notice of the Society; and then narrated the following case. The gentleman formerly lived in New South Wales, and about twenty-five years ago suffered from sunstroke, was very profusely salivated, but recovered his health, married, and returned to this country. In a letter dated September, 1872, describing his own suffering, he says:—"Five years ago I had a most severe attack of neuralgia in my head and face, which continued for about five months, coupled with intense nervous excitement. At the same time I had a carious bicuspid tooth which could not be extracted. I tried change of air and the pain was very much alleviated, but became chronic in its form. My health was excellent up to Christmas, 1871, when I had a sharp attack of what seemed to be suppressed bile. The medical man prescribed the same remedies that I have always taken, but two weeks afterwards I began to feel a metallic taste in my mouth, the gums all became spongy, and my teeth loose in the upper jaw. Pus formed rapidly, and culminated in an abscess on the right nostril, which was opened but afforded relief only for a short time, as matter and bony substance continued to be thrown off. I may add that for fifteen years I have lead a steady life, with nothing to complain of excepting an occasional attack of dyspepsia." When first seen by Mr. Cattlin, a thick creamy discharge was passing from beneath the patient's gums around the necks of the teeth in the upper jaw. The discharge was characteristic, thicker than, and different in colour from healthy pus; it oozed rather than flowed from the alveolar process, and required slight pressure to remove it from beneath the gums. This discharge, coupled with some inflammation of the gums, continued for many weeks, accompanied by distressing pains and neuralgia, until necrosis of the alveolus took place, and healthy teeth with parts of their sockets were removed. Nearly all the teeth of the upper jaw were lost in this way, and the gums then became healthy. There was no history of syphilis, but the patient lived in neighbourhoods where either the drainage or water was not good, and seems to have been peculiarly susceptible to the poisonous action of mercury. To these combined causes the disease must be attributable.

Mr. HENRY LONG JACOB (Birkenhead) related the following unique case:—On March 21st, 1868, he extracted for M. W. G——, aged about thirty-five, the right upper wisdom-tooth, which was carious, loose, and painful. On examination he found the sac of an old abscess round the tooth, and the substance of the thickened fungoid periodontal membrane was studded with globules of mercury of various sizes, from a diameter of $\frac{1}{14}$-in. downwards, some being too small to be seen distinctly with the naked eye. The patient stated that the tooth, to his recollection, had never been filled, and that to the best of his knowledge he had never been subjected to a course of mercury.

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BRADFORD MEDICO-CHIRURGICAL SOCIETY.

THE eighteenth annual meeting of this Society was held in the Board-room of the Bradford Infirmary on June 1st, 1880. The secretary read the report of the proceedings of the session, which proved a large advance on the success of previous years.

The following gentlemen were elected as officers for the succeeding year :—President : Dr. A. H. Rabagliati. Treasurer : Mr. T. C. Denby. Secretary : Dr. Goyder. Committee : Drs. Tibbits, Dunlop, Craig, and Mr. H. Meade. Pathologists : Mr. J. Appleyard, M.B., and Mr. Wilmot. Auditors : Dr. Dunlop and Mr. S. C. Hirst.

Votes of thanks were awarded to Dr. Tibbits and Dr. Whalley, the retiring president and treasurer.

The Lancet Commission ON ATHLETICS.

A CHARACTERISTIC story is told of an old Brasenose scout, who, with the querulousness of age, was lamenting the *præteritos annos* to a visitor in the summer term. "No, sir, the gentlemen now ain't what they used to be ; they're a troublesome dirty set now. When I came here as a boy sixty years ago, one can of water a day was enough for the whole staircase, but now every gentleman must go slopping about in a tub and making a mess twice a day or more." The habit so reprobated by the old man, of keeping the skin in a clean and healthy condition, is undoubtedly one of the results of the modern growth of athleticism, which has been, perhaps, the most important social movement of this century, and is likely to produce the most beneficial effects hereafter upon the physical condition of the English race. The exuberant strength and spirit of youth must have some arena in which to disport itself. In the earlier part of our history this was found in the tournament and the practice of arms, in the rougher contests of wrestling, boxing, quarter-staff, and the like—sports admirably adapted to suit the quarrelsome spirit of the age, and to ensure the survival only of the fittest, but accompanied by too much personal violence to recommend themselves to the less hardy natures, who consequently shrank from them into the physical degradation of a monastic life. More peaceful sports succeeded to these, but it is only within the last twenty years that athletics, as the term is popularly understood, have acquired the dominant position that they now hold in our social economy.

From all branches of modern athletics rowing admittedly carries off the palm. No event during the year creates so great an excitement throughout the country as the University boatrace, and the crowds to be seen last week at Henley testify to the interest which all classes take in this most manly of sports. Henley regatta affords better than any other meeting an opportunity for watching and noting the details of rowing. The crews are not confined to one class or age, but represent all ages from the schoolboy of fifteen to the grey-haired veteran, and almost every profession and calling. This year, too, we were honoured by the presence of a German crew from Frankfort, who came to try their fortune with our best. They were not all novices to our English waters. Two of their number suffered defeat a few years ago on the Thames, but carried back with them no inconsiderable knowledge of the way in which a racing-boat can be made to travel. The crew were strong and kept good time, but rowed short and were deficient in catch and clean finish, but with all their faults they succeeded in lowering the colours of the Kingston Rowing Club, and with good coaching will another year prove a formidable crew. The Eton boys were also an object of special interest, their crew being the heaviest that was entered at the regatta, containing four men of 12st. 8lb. and upwards, and averaging 11st. 9lb. throughout. Critics were heard to say that such heavy weights betokened too much "callow" flesh, and doubtless much of the muscle of a young man of eighteen or nineteen, who scales over 12st. 8lb., will harden and become more serviceable in another year or two, but the boys made a gallant fight, rowing at their usual fast stroke of 43 and 44 to the minute over the whole course, and losing the final heat for the Ladies' Plate not so much by their inferiority to the Trinity Hall crew as by the absurd inequalities of the Henley course, which on a calm day simply give the race to the Berkshire station if the contending boats are at all evenly matched.

The Public Schools Challenge Cup is a recent addition to the programme of the regatta, and a good deal has been said on both sides as to the advisability of including such a race among the events of the day. No doubt it does much to foster the spirit of rowing in our Public Schools, but we have serious doubts whether the amount of practice at a fast stroke on a sliding seat in a racing-boat which is necessary for a crew to undergo before it is at all presentable on public waters, is the best means of training a boy to be a thoroughly good oar. The strength of a boy of seventeen lies much more in the arms than the loins ; at a fast stroke the power of the loins flags first, and arm-work is substituted for united leg-and-loin work ; the tendency to use the arms is increased by the unsteadiness of the racing craft, and we have seen several men at the University who have never been able to get rid of the faults they contracted in thus attempting to run before they were thoroughly able to walk. Moreover, at that age the system has not recovered from the great developmental increase that sets in between fourteen and sixteen.[1] We must therefore consider such immature attempts on a par with the racing of two-year-old colts, and not to be encouraged.

The main object of the modern improvements in the build of boats has been to supplant the use of the flexor muscles of the arm by the use of the more powerful muscles of the leg. Since the first University race was rowed at Henley on June 13th, 1829, great strides have been made in the art of boat-building. The boats then used by the University crews would now excite derision if they appeared in a tenth-rate race ; and what would be thought of crews who, as an old report chronicled, "put forth the whole strength of their arms" ! Doubtless this was a correct account of their style, and from the shape of the boat it could scarcely be otherwise. The boat was deep, the seats placed high, so that the feet were a considerable distance below the seat, and the stretchers were almost perpendicular. In such a position it was impossible to use the legs to their full advantage, and, as the work had in great part to be done with the arms, the oars were small and narrow to avoid too great a strain upon the biceps. It was some years before outriggers were added ; then the oars were lengthened and their blades broadened, and round-bottomed boats were substituted for boats with keels. In 1870 the Cambridge crew at Putney rowed in a boat made by Clasper, which contained another innovation. A very nearly flat-bottom was substituted for the round-bottom, and the depth of the boat greatly reduced, so that the feet and the seat were brought almost to a level. This alteration gave an opportunity for bringing the muscles of the leg into far greater play than before, and its success caused its almost universal adoption in spite of the regrets of the old school at the change of style it necessitated. For whereas in the old days a perfectly straight back at all parts of the stroke was considered the *sine qua non* of a good oarsman, it was now found that very few when placed so low at their work could get forward to their full reach without giving way a little. The curvature certainly spoiled somewhat the look of a crew, but the repeated victories of the Tynesiders about this time, who had no reverence for the old style, made it evident that the pleasure of the eye must give way to economy of power.

A still greater revolution was next effected by the introduction of sliding seats. Before the invention of movable seats on runners, scullers had been accustomed to use a solid seat eighteen to twenty inches deep, on which they moved backwards and forwards with a considerable amount of friction ; but the great difficulty of getting eight men to make these movements exactly at the same time and to the same extent had prevented the practice from being adopted in rowing. The first University race rowed on sliding seats was in 1873, and the slide had a run of about eight inches.

[1] The average growth and development of boys between fourteen and sixteen may be stated at 4·8 inches in height three inches in chest girth, and two stone in weight.

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The course from Putney to Mortlake was rowed in 19 min. 35 sec., beating all previous records by nearly half a minute, and great things were expected from the use of the new invention. But wind and tide were in favour of the crews, and the expectation of a future of universally improved times has been disappointed. Some have even doubted whether the pace of a boat has been increased at all by the introduction of sliding seats, but statistics show that there is no reasonable ground for scepticism. Since 1873 the length of the run of the slide has been increased from year to year till now in sculling boats twenty and twenty-two inches have been reached. This increased run has, in many instances, been accompanied by a change in the form of the rowlocks. Instead of a fixed rowlock forming part of the outrigger, an independent rowlock works on a pivot fitted into the cross-bar joining the ends of the irons of the outrigger, and turns with the sweep of the oar, so that an extra length of stroke can be obtained without making the rowlock so much larger as to render it likely that the button of the oar will will slip out. At present this innovation is mostly confined to sculling boats, but when its advantages become better known it will probably be imported into all racing craft.

Rowing, like riding or cricketing, is an art that requires a long apprenticeship, and excellence can only be attained by beginning early while the muscles and joints are still plastic and the student is still teachable. Only under those conditions will the movements requisite to make a man a good oarsman become thoroughly automatic. We do not merely mean that he will never acquire a perfectly good style in the popular sense of the word, but he will never be able to direct his energies fully to the propulsion of a boat at its greatest pace. The terms *good* and *bad style* are, by the way, often much abused. Some of the most useful oarsmen row in what is called *bad style*, and some very useless passengers are at times praised for their *good style*. So long as these terms imply more or less grace in action the words are unobjectionable; but if they mean more than this, they are misleading. The man who makes the greatest use of his strength and helps most to propel a boat is the best oar, however graceful or graceless he may be. The two conditions must not be divorced. He may individually utilise his strength to a maximum, but not help most to propel the boat, because by his want of swing or time he may throw the rest of the crew out of gear. He must also adapt himself to the circumstance that he is only a unit of a consolidated aggregate of which each unit must work uniformly with the rest. This uniformity is the great essential of good rowing, and must be attained by observance of the rules which are the formulations of experience. The necessity of observing these rules raises rowing from a mere display of strength into an art.

Without entering minutely into the details of rowing, we may, perhaps, best give a general sketch of these rules by describing the action of a typical oarsman. Let us suppose him preparing for a start. Bringing himself forward from the upright position, and at the same time drawing the slide well forwards, with arms extended to their fullest extent, the hands being slightly elevated and resting somewhat lightly on the oar, the blade of the oar is made to catch the water smartly, but evenly, immediately he has completed his full reach forward; at the moment of contact with the water the feet press firmly against the stretcher, and the stroke commences. This striking the water and simultaneously pressing the feet firmly against the stretcher, called the "catch," constitutes the most important element in rowing. Inferior crews often commence the pressure against the stretcher before the contact of the oar with the water, consequently the trunk begins to assume the erect position too soon, and the first part of the stroke is missed. Others develop an equally bad fault in the opposite direction: they wait to feel the water before they use the stretcher, and meanwhile the boat has travelled from under them while their oar is idle in the water; or, again, instead of striking the water immediately the full reach forward is complete they pause with their oar stationary in the air, and are then said to "hang on the stroke." As soon as the grip of the water is obtained and the trunk is begun to be swung back, the legs, which were nearly doubled up by the drawing forward of the slide, are gradually straightened, and the slide moves back as the body resumes its vertical position. The two movements take place simultaneously, so that a double motive power is brought to bear on the handle of the oar—one by swinging the trunk back from the hips, and the other by pushing back the whole body, kept rigid, on the slide. If the slide is pushed back too early or too late in the stroke all its benefit is lost. Until the body has passed slightly beyond the vertical position the arms are kept rigidly straight, as though they were nothing more than ropes attaching the handle of the oar to the shoulders; but when the vertical position is passed and the slide is pushed back to its furthest point the arms are contracted, the elbows passing close by the side of the body and the wrists being brought up so as just to touch the body about three inches below the nipple. As soon as the wrists touch the body they are slightly dropped so as to depress the handle of the oar and raise the blade out of the water, and turned smartly the instant the blade is clear of the water. This is called feathering. It is a common fault to turn the wrists before the blade is clear of the water, in which case the process of feathering under water takes places, the edge of the blade catching the water, and by the little jerk so given the speed of the boat is diminished. Directly the stroke is finished the recovery begins. The wrists have no sooner touched the body than the hands are shot rapidly out so as to clear the knees, the arms are extended to their full extent, the body is drawn to its vertical position, and bent gradually forward at the same time that the knees are bent and the slide drawn forward by the legs, the feet being attached to the stretcher by a toe-strap. These motions are continued till the slide is drawn the whole length of its run forward, and the rower is extended to his full reach, when the stroke recommences as before. Too great importance cannot be attached to a sharp recovery. Unless the hands are shot out past the knees with great rapidity the slide cannot be brought evenly forward, as the handle of the oar will knock against the knees, and a roll of the boat will be the consequence. It is important, too, that when the hands are past the stretcher in the forward movement, the body should move forward at a slightly slower rate than before, in order to give the rower an opportunity of concentrating his strength for the next stroke. If he has been slow in getting out his hands he will have to hurry over the last part of the forward movement, and will find himself unable to get a good "catch" at the beginning of the stroke.

The muscular movements involved in these actions are as follows:—The iliacus and psoas, and, perhaps, in some slight degree, the sartorius and the tensor fasciæ, muscles bring the trunk forwards; the arms are extended by the combined action of the serratus magnus and pectoralis minor, and the forearm is extended by the triceps and the anconeus, extensor muscles of the thigh and the muscles of the calf of the leg being slightly relaxed. The first action of the stroke—that is, the swinging back of the trunk to the upright position—consists in a powerful contraction of the extensor muscles of the leg simultaneous with contraction of the gluteus maximus, which causes the pelvis to sweep round the hip-joint, and by this means the trunk is drawn backwards. The action also sets the slide in motion, which travels forward for a distance of about eighteen inches. The straightening of the trunk is effected by the erector spinæ, and by the action of the trapezius and latissimus dorsi muscles, of which the two latter serve to draw back the shoulder and arm, a movement most important for rowing the stroke thoroughly out. In the meantime the blade of the oar is in the water, but the arms are preparing to bring it out. When the stroke is about two-thirds rowed through the biceps and brachialis anticus muscles commence contracting, and by the time the stroke is rowed out this action has brought the handle of the oar to the chest. This, too, is a very important part of the stroke, for the "finish" is nearly of equal importance as the "catch." If contraction of the biceps commences too soon, then the stroke is not rowed out; if deferred too late, the contraction is too vehement, and the oar is brought out with a jerk. Whilst the oar is being rowed to the chest, the elbows, by the action of the pectoralis magnus, should be brought well to the sides. The late Mr. Skey deprecated this latter movement, believing that greater freedom of the action of the arm was obtained when the elbow was drawn slightly outwards from the body than by being retained in close proximity to it. He, moreover, maintained that the slight elevation of the elbow-joint from the body facilitated rapid and powerful flexion of the forearm. Violent contraction of the flexors of the forearm, however, is not desirable, having, as we have already stated, a tendency to bring the oar out of the water with a jerk. A great advantage, moreover, is gained by bringing the arms sharply and closely to the side at the end

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of the stroke; it aids the respiratory act. Experiments on the dead body clearly show that when artificial respiration is performed, according to Silvester's method, more air can be forced out of the chest when the arms are brought firmly and closely in contact with the chest walls than when the experimenter is simply contented with raising and depressing them. The stroke is now at an end, and two subsidiary actions have to be performed before its recommencement—the drawing forward the slide, and execution of the feather. The former is almost instantaneously performed by a vigorous and powerful contraction of the hamstring muscles—muscles which before the introduction of the slide were comparatively idle. The slide, therefore, has introduced more work into the stroke, and, indeed, may also be considered to be a third action. We, therefore, think the full benefit of the slide would be more marked with a slower stroke than is at present adopted.[2] To avoid feathering under water care must be taken not to bring the handle of the oar too high up to the chest, and to give the turn to the wrist the moment the oar touches the chest wall. On the other side the hands must not be depressed too low, or else the oar will be "skied," and the first part of the stroke rowed in air.

So far we have considered the action of the muscles essentially concerned in the performance of the "stroke." We will now consider some of the supplemental actions—viz., those concerned in the performance of respiration. Seated at the stern of an eight-oar one notices that the frequency of the respiratory act is directly proportional to the quickness of the stroke. At an ordinary paddle the respirations will be about twenty-eight per minute, as compared with the normal frequency, eighteen to twenty, observed when the individuals are taking ordinary walking exercise. On quickening, the respirations increase in frequency, but lose in depth, and at racing pace often amount to thirty-six and thirty-eight per minute. Inspiration is effected in the act of "coming forward," the breath is held during the stroke, and there is a sudden expiration between the conclusion and the commencement of a fresh effort. The full extension of the arms forward of course aids considerably in the expansion of the chest; whilst the abdominal muscles contract in order to steady the contents of that cavity, and prevent their undue propulsion downwards by the descent of the diaphragm. Expiration is effected chiefly by the recoil of these forces, the tension being heightened by the breath being held during the stroke, and also by the action of the internal intercostal muscles, whose action in cases of extraordinary respiratory effort is about one-fourth more powerful than that of the external intercostals, the muscles of inspiration. Expiration too, as we have already stated, is materially aided by bringing the arms well in contact with the side at the end of the stroke. Particular attention should be paid to these points, for unless the chest be well inflated the muscles attached to its walls will not act to the full extent of their power. The trunk will be bent instead of erect, the stroke will not be rowed out, and instead of the oar being brought to the chest the body will fall forward to meet it. This condition will be observed in weak crews, in those who are urged to row a quick stroke early in the period of training, before their respiratory powers are developed, and in some individuals of a well-trained crew, after a long and close-contested race, which has entailed a succession of severe spurts. Trainers, therefore, should always be careful to regulate the rapidity of stroke to the respiratory power of the crew under their care.

[2] We expressed a similar opinion on the occasion of the last Inter University Boat-race.—THE LANCET, April 3rd, 1880, p. 535.

ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.—The following have been appointed office-bearers for the ensuing year:—Committee: Lombe Atthill, J. T. Banks, J. H. Benson, D. F. Brady, R. G. Butcher, F. Churchill, M. W. Daly, B. G. Darley, J. Denham, J. F. Duncan, J. Magee Finny, Thomas Fitzpatrick, C. Fleming, Samuel Gordon, C. Hamerton, J. Harvey, G. Hatchell, Thomas Hayden, Alfred Hudson, J. S. Hughes, A. H. Jacob, E. Kennedy, J. McDonnell, Robert McDonnell, G. Morrogh, G. H. Porter, P. C. Smyly, R. M. Tagert, J. Tufnell, A. J. Walsh, J. H. Wharton, and the Presidents of the Colleges of Physicians and Surgeons (ex-officio). Hon. Treasurer: W. Thomson. Hon. Secretaries: Alfred H. McClintock, James Little. Acting Secretary: W. Marks.

The Lancet Commission
ON THE
MEDICAL USE OF WINES.

INTRODUCTION.

THE alteration in the duties in favour of light wines which have been proposed by the Chancellor of the Exchequer in the "Supplementary Estimates" for the year, and the debates in the French Senate as to the mutual advantages of such changes in the commercial relations between us and our neighbours, show that the importation of cheap French wines into this country will be largely increased by the policy Mr. Gladstone suggests, and which in all likelihood will be adopted as the basis of the new commercial treaty between the two nations. In such a case we must expect not only an immensely increased consumption of the wines which are in ordinary use here, but the introduction of many new varieties, which at present are only known to us from having had them put before us at breakfast or dinner abroad. One effect of this fiscal change will undoubtedly be that the lighter French vintages, which even now are formidable competitors with the more strongly alcoholised ports, sherries, and madeiras, will be placed on even more favourable terms, and the consumption of the former will inevitably increase at the expense of the latter. The trade in Australian, Italian, and light German wines will also be largely stimulated. We say "at the expense of the latter"; for it is apparent to everyone that although the sherry-drinkers may be as numerous, or even more numerous than was the case twenty years ago, the number of port-drinkers has undoubtedly greatly diminished in proportion to the increase in population. Another important consideration is the competition that must ensue between beer and spirits as the national beverages and the cheap wines which the inhabitants of most of the Continental nations, especially France, Italy, and the Peninsula, drink in their lieu, and with advantage not only to their character for sobriety but also to their health. These considerations make it opportune just now for us to give an outline of the therapeutic values and indications for the administration of the wines in every-day use in this country and abroad; and we do so the more especially as from letters addressed to us from medical practitioners as to this wine and that wine, considerable misapprehension would seem to exist as to their value and the indications for their use. Patients are recommended to drink this or that wine, and not the slightest hint is offered to them that wines of a given class will vary largely in their acidity, sweetness, and alcoholic strength; so that whilst the light wines of one class may be of the greatest advantage to the patient, the more full-bodied vintages from the same district should be imperatively forbidden, and *vice versâ*. Again, many medical advisers seem to forget that there are wines other than port, sherry, and claret, which can be recommended and should be referred to. It will be found that, notwithstanding the large variety now imported and in every-day use, the directions which are carefully laid down in most instances are rarely sufficiently extended to embrace any others than those above mentioned, and the patient is allowed to follow his own crude guesses as to whether he may or may not take them, no matter what may be the nature of the ailment from which he is suffering. To take a well-known diet-table for the sake of illustration which is now before us. The patient is recommended to avoid "sour wines," acids, and vinegar. In one case the patient, before whom this was placed, examined many specimens with litmus paper, and finally returned to ask the name of the merchant from whom he could obtain a wine that was not acid. In another case a gouty patient was taking wine with an enormous proportion of fixed acid, and had no idea of the mischief that it was inducing, because the quantity of sugar therein was also large, and completely hid the sour taste which would otherwise have been at once detected. But here it is necessary to point out once and for all that chemical analysis, on which so much reliance is placed, entirely fails to show the therapeutic distinctions between wines. It only roughly classifies them,

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and is of most value in showing two ingredients—viz., sugar and alcohol. Tannin is another important constituent, but the methods in vogue for its quantitative determination are not altogether satisfactory. Again, some choice wines with very little volatile or fixed acid have a great tendency to produce dyspepsia and turn sour in the stomach, and do more harm to a dyspeptic patient than the crudest and most astringent *vin ordinaire*, however rough to the taste this may be; indeed, diluted with water, or with many mineral waters, such as St. Galmier, Apollinaris, or the true Seltzer, *vin ordinaire* may be freely taken by most invalids; although, because of its supposed acidity, they are frequently recommended to avoid it and take spirits, such as brandy or whisky, in its stead. Immaturity of wines, on which so much of its acid properties is dependent, is quite beyond the chemist's range. To avoid any misconception, we would further add that we cannot believe that any wines whatever are necessary for a healthy adult in good physical strength, taking a fair amount of daily exercise, and with no excessive mental strain. Most light wines taken sparingly with the meals do no harm to a person under the same conditions, and are quite as consistent with health as the consumption of tea, coffee, &c., which generally take their place. Indeed, strong tea, strong coffee, and (we would add, strong tobaccos) have much to answer for in the production of indigestion, nervous palpitation, *et hoc genus omne*, and we should not regret to see them displaced by many varieties of sound wines, free from an excess of sugar, and of feeble alcoholic strength. To the invalid the wines are frequently of great value, and in some of the acute fevers the most powerful alcoholic beverages have sometimes to be prescribed, and are more beneficial than any other stimulant. Medical men should know the indications for their use as thoroughly as those for restrictions in diet, or for the employment of the various drugs in the pharmacopœia.

I. WHITE BORDEAUX WINES.

Although these wines form a fairly numerous class, they are in comparison with red clarets but little known in this country, and not nearly so appreciated as they deserve to be. Bordeaux Ordinaire, Médoc, St. Julien, and St. Estèphe—not to mention the red clarets of higher class,—are used as ordinary dinner wines by an immense number of persons to whom even the names of the corresponding white wines are unknown. So that when the physician orders a claret, he refers to the red wines only, and a large number of suitable white wines are passed over without a thought by both the prescriber and the patient, although many of them are as well, and sometimes even better, fitted to suit the exigencies of the particular case. The cheap white clarets are but rarely considered, and the merits of even the high-priced Sauternes or the Château d'Yquem are entirely ignored.

To aid in the selection of white Bordeaux wines by the medical adviser, we may most usefully divide them into two classes. The first division will comprise the thin wines, with less body and flavour, and a slightly acidulous taste. They excite the appetite, are valuable aids in the digestion of fatty foods, and if not actually aperient, are at any rate devoid of astringency. Diluted with the natural mineral waters—Seltzer, St. Galmier, Apollinaris, &c.,—they form extremely pleasant beverages in hot weather, and if iced in addition, are far more grateful refrigerants to a patient parched with the thirst of fever than most of the remedies usually recommended for this purpose. In their natural condition, they may be safely ordered as pleasant tonics when the appetite is fitful and delicate, and they should be put into a prominent position in all dietaries for decreasing corpulence, or preventing its insidious approach in patients who are constitutionally prone thereto. The amount of grape sugar which they contain is so small that even a diabetic patient can safely take them as an occasional change in his strict diet. They are not so good for anæmic cases and people of lax fibre as the more astringent red wines, and should be avoided or taken with great caution by all who have any tendency to acid forms of dyspepsia or to diarrhœa; for their great drawback, indeed almost their only one, is the possibility of their turning acid if the digestive powers be feeble. In the dyspepsia of gouty invalids they require to be used with much caution, but they can be consumed with less fear of increasing the amount of uric acid in the blood than most of the wines in general use. In the so-called "bilious" variety of indigestion they are especially useful. Analyses of two typical samples of this class of wines, one marked Sauterne at 18*s.* [submitted by Dotesio], and the other marked Grâves at 24*s.* per dozen, [Coindreau], are respectively appended, and it will be especially important to note how little alcohol and sugar they contain.

	In 100 vols. A.	In 100 vols. B.
Total solids	2·16	2·03
Grape sugar	·21	·22
Fixed acid	·51	·52
Volatile acid	·17	·12
Absolute alcohol { by weight ...	9·14	9·57
Absolute alcohol { by volume ...	11·35	11·87

The liability of these wines to turn acid is quite inexplicable by the analysis, and depends, apparently, rather on their immaturity than on the amount of fixed acid, or the less important volatile acid, they contain. Other specimens of almost similar quality and value, and varying in price from 18*s.* to 24*s.*, have been furnished to us by several merchants, so that no difficulty need be experienced in obtaining wines of this class. Slight acidity, an almost complete absence of sugar, and little alcohol are the especial characteristics of the varieties to which we have referred.

The second class of white Bordeaux wines differ markedly from these, and their medical uses are, broadly speaking, so very opposite that the physician should never forget to distinguish between them in his advice to a patient. The high-class Sauternes are much more expensive as a rule, full of delicate fragrance and flavour, much sweeter, and contain a greater percentage of alcohol, and in any case can only be ordered in small quantities. Stimulating at first and afterwards slightly sedative, they are valuable to nervous, excitable patients, and often do good where the use of more fortified wines and spirits is unwise; but they cannot be ordered as tonics or refrigerants, like the lighter varieties. Gouty and bilious people must carefully avoid them, and they are even more likely to aggravate an acid dyspepsia than the cheaper and drier wines, while to diabetics and persons with a tendency to obesity they must be absolutely forbidden. They are suited to many cases of lung disease, in which the patient is exhausted by coughing and want of sleep; where opiates are dangerous and chloral not advisable, and may be prescribed when many other wines would be positively harmful. Sparingly taken as a beverage, their fine flavour may recommend them to the lean, but except as a calmative, and occasionally as a restorative in convalescence from acute disease, the indications for their medicinal use are not otherwise very often met with. An analysis of excellent Sauterne, 1870 vintage, at 60*s.* [Nichols, Café Royal], gives the following results:—

	In 100 vols. C.
Total solids	5·28
Grape sugar	1·25
Fixed acid	·50
Volatile acid	·18
Absolute alcohol { by weight	12·31
Absolute alcohol { by volume	15·21

The larger proportion of alcohol and the increase in grape sugar (nearly six times as much) will afford some index to the differences in medicinal properties to which we have adverted. The fixed acid is much the same as in A and B; but, the wine being fully matured, its presence is not nearly so deleterious. Although nearly all the cheaper white Bordeaux wines belong to our first division, and act as mildly acidulous tonics, some of them must be excepted and placed in the second class of full flavoured, somewhat sweet wines, with a slight sedative rather than a stimulating effect on the system. A specimen marked "Vin de Grâve," at 24*s.* [Gallais] per dozen, remarkably full-bodied, rather sweet, and of such fine flavour, that it was difficult to believe that it was really so low-priced a wine, proves that classification according to price is unreliable if pushed too far. It is of special interest, however, as showing that our second division is not placed by cost entirely beyond the reach of a wakeful invalid. The analysis in this instance gave:—

	In 100 vols. D.
Total solids	4·95
Grape sugar	·40
Fixed acid	·31
Volatile acid	·29
Absolute alcohol { by weight	10·31
Absolute alcohol { by volume	12·77

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The small amount of fixed acid is particularly striking. In conclusion, we would again insist on the fact that, whether as beverages or as medicines, the white Bordeaux wines, and more especially the cheaper ones, have not received the attention at the hands of the profession that they undoubtedly deserve.

"CRUELTY TO WOMEN."

ON 17th inst. we issued the following circular letter to the heads of some of the principal drapery establishments of the United Kingdom:—

Gentlemen,—Will you kindly inform us whether you desire the name of your firm to appear in a list we are about publishing of establishments where seats are provided for the accommodation of the young women serving in shops, and the use of such seats is sanctioned by the orders given to the shopwalkers and managers, with whom it rests to make that provision a veritable boon or a farce. The cases of female disease distinctly traceable to the practice of continually standing in shops are so many and various that we have been compelled to take action in the matter, and hope, by the publication of the names of houses where the need is felt and supplied, to clear the way for further endeavours, with a view to the change of the custom or an alteration of the law.

To the above we have received from the undersigned firms replies stating that provision *is* made in their establishments for the relief of the young women in their employ. In some instances special seats are provided; in others, arrangements are made to admit of the shopwomen retiring for rest at suitable intervals during the hours of labour. We are of opinion that in all cases *seats should be provided*, and a public notification placed in view of customers to the effect that it is with the consent of the heads of the house these seats are used.

Alger and Co., Brighton.
Arnott and Co., Jamaica-street, Glasgow.
T. J. Blackwood, George-street, Edinburgh.
J. Brown and Son, George-street, Aberdeen.
Capper, Sons, and Co., Gracechurch-street and Fenchurch-street.
Debenham and Freebody, Wigmore-street and Welbeck-street.
Dickins and Sons, Regent-street.
Farmer and Rogers, Regent-street.
Fraser, Sons, and Co., Buchanan-street, Glasgow.
Gainsford and Co., High-street, Borough.
Gowans and Goodlet, Edinburgh.
S. Hannington and Sons, North-street, Brighton.
Hitchcock, Williams, and Co., St. Paul's Churchyard.
H. Hoadley, Buckingham-Palace-road.
Howell, James, and Co., Regent-street.
Lewis and Allenby, Regent-street.
McBirney and Co., Aston's Quay, Dublin.
M'Swiney and Co., Lower Sackville-street, Dublin.
Marshall and Snelgrove, Oxford-street.
Pim Brothers, South Great George's-street, Dublin.
Peter Robinson, Oxford-street.
William Tarn and Co., Newington Causeway.
T. Venables and Sons, Whitechapel.
William Whiteley, Westbourne-grove.

(To be continued.)

THE HANDEL FESTIVAL.

IN referring to the performances of the band, the chorus, and the singers at the Handel Festival it is difficult to use words free from a suspicion of exaggeration. Those who have not heard Handel's works as they are given at the triennial festivals at the Crystal Palace, under the guidance of Sir Michael Costa's magic *bâton*, and have not beheld the assembled host of performers and auditors, can form no conception of the awful sense of grandeur such a spectacle awakens. The impression cannot be described—it must be felt. Though Monday last was nominally the first day of the festival, it was really the second day. The "Grand Rehearsal," given on the previous Friday, was practically the opening day. The only reason for retaining the name "Rehearsal" must be to reserve to the conductor the right of using, if necessary, the privileges of a rehearsal—which were only once needed on Friday. It is a little short of marvellous that more than four thousand performers, the majority of whom are amateurs, can be brought together, and straightway, at a given signal, go through the "Hallelujah" and "Amen," and other difficult choruses, without a single serious fault or mishap. The phenomenon is unique. But though the rehearsal was admirable, a growth of steadiness, co-operation, and precision was perceptible both in the band and in the chorus on Monday, when the whole of the "Messiah" was performed; and on Wednesday, when the "Selections" were given. The well-known choruses, "For unto us a Child is born," "Glory to God in the Highest," "Worthy is the Lamb," from the "Messiah," were rendered with exquisite skill and power on Monday; as were on Wednesday those of "O Father, whose Almighty Power," and "We hear the pleasing dreadful call," from "Judas Maccabeus;" "Fixed on His everlasting seat," and "Let their celestial concerts all unite," from "Samson;" the realistic choruses from "Acis and Galatea;" and the thrilling trio and chorus, "See the conquering Hero comes." The solos were all sung in a manner beyond praise. To-day (Friday) is the last day of the festival, and will be devoted to the representation of "Israel in Egypt." It will be interesting to medical readers to know that the "Messiah" was first performed in Dublin in April, 1842, and that Handel "generously gave the money arising from the grand performance to be equally shared by the Society for relieving Prisoners, the Charitable Infirmary, and Mercer's Hospital," each of these institutions receiving £127.

ON THE EXCISION OF OBSTRUCTION AT THE NECK OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—I desire to inform Mr. Browne that Mercier's operation is practised by M. Reliquet whenever it is indicated He says that M. Guyon does not perform it. I should be very much surprised if he did, considering that his friend and predecessor, Civiale, in order to prevent Mercier's succession to his post, left the Administration thirty thousand francs, which it accepted on condition that it would not name as his successor any one "qui ne ferait pas partie de son personnel." My statement regarding the numbers of men to whom Mercier had restored the faculty of urination was founded on the following extract:—"Mon expérience repose déjà sur un base assez large, car mes opérations s'élèvent au moins au nombre de *trois cents*." ("Recherches," &c., p. 240.) Professor Paquet, of Lille, in his "Clinical Lectures on Diseases of the Urinary Organs," recently published, states at p. 136: "M. Mercier a préconisé cette opération qu'il a pratiquée un grand nombre de fois avec succès. . . . . Cette opération me parait appelée à rendre des services très réels." In America the "ablation of median prostatic outgrowths" is recommended and practised by Gouley, of New York. In this country a number of cases have been recorded of the removal of prostatic growths in the operation of lithotomy with the happiest results. Mr. Bryant's two cases were especially interesting, inasmuch as the reports made two and three years after the operations showed that the patients remained permanently cured. He says: "And though I am not prepared to recommend that the operation of cystotomy should be performed in all cases of chronic cystitis, the result of an enlarged third lobe of the prostate gland, I would venture to suggest the expediency of its applicability to exceptional cases, believing that a clean cut into the bladder of a man with sound kidneys is not a very dangerous proceeding, and that the removal of a prostatic tumour projecting into the bladder by some crushing forceps or scissors would not add greatly to the danger." (Transactions of the Pathological Society, vol. xxix. p. 167.) A case which occurred in my practice entirely confirms Mr. Bryant's observations.

I remain, Sir, your obedient servant,
W. F. TEEVAN.

Portman-square, June 22, 1880.

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THE LANCET.

LONDON: SATURDAY, JUNE 26, 1880.

AT least once every twelvemonth the Royal College of Surgeons becomes the centre of general professional interest. Every year three members of the Council retire by rotation, and on the first Thursday in July the election of fresh members of the Council, or the re-election of the retiring ones, takes place. Occasionally there is an additional vacancy, caused either by the death, or, as on the present occasion, by the resignation of a member of the Council. There are this year four vacancies, two of which are caused by the retirement by rotation of Mr. GEORGE BUSK, F.R.S., and Mr. CURLING, F.R.S., a third by the death of Mr. HANCOCK, whose term of office would, however, have expired naturally next month, and a fourth by the recent resignation of Mr. SIMON, F.R.S. Neither Mr. BUSK nor Mr. CURLING desires re-election into the Council, of which they have been active and zealous members for seventeen and sixteen years respectively. Mr. SIMON was originally elected a member of the Council in the year 1868, and was re-elected in 1876, so that his term of office would, in the ordinary course of events, cease in 1884. All these gentlemen have occupied the post of President of the Council, Mr. BUSK in 1871, Mr. HANCOCK in 1872, Mr. CURLING in 1873, and Mr. SIMON in 1878, and of each and all it may be said that they have not been unmindful of the trust reposed in them personally, or of the welfare of the College.

For the four vacancies there are eight candidates. Until a few days ago there were nine, but on Friday last Mr. REGINALD HARRISON of Liverpool issued a circular to the 172 Fellows who had signed a requisition asking him to allow himself to be nominated as a candidate for a seat in the Council, stating that after mature deliberation he had decided to ask that his name might be withdrawn from the list of candidates. He was prompted to take this step, he said, by the desire to avoid placing himself in antagonism with interests which he, with others, had always endeavoured to maintain in the selection of representatives of the Council. While fully recognising Mr. HARRISON'S merits it is impossible not to feel that he has acted wisely in retiring so opportunely from the contest. Mr. HARRISON is still comparatively a young man, and his prospects will in no degree be prejudiced by the course he has adopted. Unless some of the remaining candidates may be induced to imitate Mr. HARRISON'S unselfish and public-spirited example, there will still be eight applicants for the four vacant seats. It is clear that one-half must be unsuccessful. Strange that they have not wit enough to anticipate events, and prudently quit the field at once. A mistaken notion of expediency may, perhaps, prevent them from following Mr. HARRISON'S lead; there are doubtless some who fancy that it is necessary for them to make known their desire to enter the Council, not so much now as hereafter. To such of these who may otherwise be judged desirable candidates, the maxim will apply, "Everything comes to him who waits."

Of the eight candidates it is easy to foresee that the stress of the battle will fall on only five. The names of the candidates, given in the order of seniority as Fellows, are, Mr. CADGE of Norwich, Mr. WILLIAM ADAMS, Mr. LISTER, Mr. BRYANT, Mr. SYDNEY JONES, Mr. HULKE, Mr. THOMAS SMITH, and Mr. BERKELEY HILL. All are Fellows by examination, but between the senior and junior candidates there is a difference of more than eleven years, Mr. CADGE'S diploma of Fellow bearing date August 10th, 1848, and Mr. HILL'S November 24th, 1859. Mr. HULKE is the only candidate who holds office either as a member of the Court or the Board of Examiners. This must be deemed a drawback by those who desire to keep the Court of Examiners as free as possible from the preponderating influence of the Council. Our own views on this subject are too well known to need repetition just now. As it is, the Court of Examiners has again almost reverted to its original state of being composed exclusively of the members of the Council. It may be difficult to avoid this conjuncture, but it is desirable that the efforts to do so should not, as a rule, be abandoned. To every rule, however, there is an allowable exception, and if the Fellows who shall vote on Thursday next shall agree to make Mr. HULKE'S case an exception, they will at the same time show a ust appreciation of a gentleman deservedly distinguished both within his profession and outside, and they will strengthen the intellectual and political power of the Council.

Turning to the other names on the list of candidates, the most casual glance discovers the names of CADGE, LISTER, BRYANT, and SMITH outshining the rest. Of the high merits of Mr. CADGE and Mr. LISTER as surgeons and as representative men there is but one opinion. They have both won the confidence and esteem of their fellow-countrymen, and the admiration of foreigners. Though Mr. CADGE may rank nominally as a provincial surgeon, his reputation is really national; and as for Mr. LISTER, his is truly cosmopolitan. Of the certainty of their election there should not be the shadow of a doubt; nor indeed should there be of Mr. BRYANT'S, if worth and fitness were always allowed to regulate the choice. Mr. BRYANT is one of the best known members of the purely English school of practical surgery. Inheriting the great traditions of Guy's Hospital, Mr. BRYANT, in spite of innumerable difficulties and persistent opposition, has attained enviable distinction alike as a teacher and practitioner. Within professional ranks he has worked well and faithfully, and has constantly taken an active part in promoting the welfare of the chief medical and surgical societies. With such antecedents and possessing such qualifications, it is humiliating to reflect that so large a number of the Fellows of the College have twice suffered themselves to be used as the tools of a faction to keep Mr. BRYANT out of the Council. The scandal should not, for very shame, be repeated.

Little need be said concerning the other candidates. Mr. THOMAS SMITH is a favourite with the profession and in his own school. Besides his eminent qualities as a surgeon, Mr. SMITH possesses in a high degree shrewd common sense, a qualification which should not be altogether ignored in a candidate for a seat in the Council of the Royal College of Surgeons. Mr. WILLIAM ADAMS has, on two former occasions, been before the Fellows, and though unsuccessful

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he received an amount of support that has been deemed sufficient to justify another appearance. Mr. SIDNEY JONES and Mr. HILL are now candidates for the first time.

WHATEVER the pecuniary result of our attempt to place the claims of London hospitals and dispensaries fairly and forcibly before the minds of the religious public of the metropolis, we have already ample reason to feel rewarded for any trouble we have taken in the matter. There are times for everything. There are times for criticising the hospitals and the management of them, and there are times for suspending criticism and being generous in our estimate of their work and their claims. Of late years the spirit of criticism has been in the ascendant, and charitably disposed people have been told to be chary in helping medical charities. We have no quarrel with those who wish merely to eliminate unfit cases from these institutions; our present contention is that in a population of four millions of people it is easy to starve the hospitals and to make the work of carrying them on painful and irksome to those who undertake their management. We ourselves shall not forfeit in the least our right or our determination to be critical—at the right time. There are none more entitled to be so than those who try to put into the hands of hospital and dispensary committees the power and the means to be useful. There are numerous faults and abuses in medical institutions to be dealt with, and that severely, but if we would strengthen the demand for having these evils dealt with effectively, we must know how and when to be generous.

Our special article on Hospital Sunday, which we have reason to hope will prove to have been an advantage to the collection, has brought us into practical contact with the ministers of religion in regard to this subject. The large number of communications which we have received enables us to judge of their views and their position in relation to the hospitals and that Sunday in every year, which we may hope will hereafter be made special by the consecration of an increasing sum of money to the most religious of all purposes—that of helping and healing the sick. We must refer to THE LANCET of last week, and to the reports of our lay contemporaries, for details as to the special points in the appeals made by preachers of all churches and creeds. Here we can do little more than say that the work of the pulpit was done with most creditable effect. It is not easy to estimate the difficulty the clergy must have in giving interest annually to a theme so well worn and so well understood—to a duty so obvious, and yet for neglecting which so many plausible excuses can be constructed. The huge expenses of hospital and dispensary establishments go on, and call for the anxious thought of the weekly Board or the monthly Committee, and in all seasons; but these details are of a somewhat prosaic character, and are not easily stated in the pulpit, or realised by the congregation on a pleasant Sunday in summer. They are real enough to the responsible committees. The difficulty of the preacher is to make his hearers feel that they are the really responsible persons, and that the committees are merely their agents. We sincerely congratulate them on discourses so varied, so effective, and withal so sensible, containing many suggestions of most practical value, and so many other points of fine exegetic interest. One great fact appears clear to us, from a perusal of the letters with which we have been favoured from a very large number of clergymen—viz., that the clergymen themselves only need to be asked for help, and to be supplied with the materials constituting their brief for the hospitals, to make the case for Hospital Sunday overpowering. Several of them ask us to repeat in future years some special statement which they may use as they have used our recent article. They complain, in effect, that they are not sufficiently supplied with information—i.e., with the facts of the case, and that to ask them to make the annual appeal under such circumstances is to ask them to make "bricks without straw." The complaint is not unreasonable. It has its foundation in a certain reluctance on the part of the Council of the Hospital Sunday Fund to make public data supplied to it for its own use and for its special calculations. This reluctance may be natural, but, in our judgment, it has been carried too far, and further than the hospitals have any reason to wish. The more particular and the more minute the knowledge of hospital work and of hospital wants can be made, the larger, year by year, will become the collection on Hospital Sunday. More than this, surely the Hospital Sunday Fund could organise some plan by which the ministers may be brought into more personal relation with the hospitals than at present. There can be no doubt, as we said in our former article, that they are already brought into most valuable and direct relation with the hospital system by virtue of their admirable collections. And they will soon find this out, if in any given case of suffering needing a hospital or dispensary letter, or surgical appliance, they put themselves in communication with the Secretary of the Fund. But much more might be done to intensify their sense of the value of Hospital and dispensary work. To use a word better known and more prized in the medical than in the theological world, their knowledge and their interest might be made more *clinical*. This could be done by organising an annual visit to hospitals prior to Hospital Sunday. This would be as grateful to the sick as it would be useful to the clergyman.

Here, for the present, we must leave this subject. It is gratifying to us to have found common ground of pleasant work with the disciples of Him who "healed all manner of sicknessed, and all manner of disease *among the people*," and whose immediate followers included a "Beloved Physician," who, as one preacher on the 13th said with mingled gentleness and irony very euphemistically puts the case of the woman who had made applications and payments to many physicians and could "not be healed of any." Money spent on physicians now is of course much more advantageously spent. But physicians are not, any more than hospitals, infallible. "Yours," as an admirable divine once said to his medical adviser, "is a noble profession, but it has it limits," and at any rate we are grateful, for ourselves and for the hospitals, for criticism that will make us more effective for the great ends of our calling.

THE function of the medulla of bone as a blood-forming organ may be considered as well-established. This discovery is not only important in itself, but it has furnished a new

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field for the study of the origin of the blood-corpuscles—a field which has already yielded important facts. Our knowledge of the process is, however, still imperfect, and some of the conclusions already reached will have to be reconsidered, according to a late and important investigation by Dr. OBRASTOW of St. Petersburg, an abstract of which has been published. Apart from their immediate object these researches are of interest as affording a new view of the nature of the nuclei of many forms of cells. The nucleated red cells or "hæmatoblasts" which are seen in the medulla of all mammalia, are, Dr. OBRASTOW asserts, as many observers have believed, actually the transitional forms of the pale cells to the red corpuscles. But the nuclei, which are seen in both the pale corpuscles and the hæmatoblasts, do not exist in them, as such, during life. The nuclear substance is uniformly diffused through the entire cell. The transformation of the hæmatoblast to the red blood-corpuscle occurs by the diminution of this nuclear substance. This diminution progresses until the substance completely disappears. The nuclei seen in the hæmatoblasts and pale corpuscles are really, as VIRCHOW long ago hinted, post-mortem appearances due to the tendency of the nuclear substance to undergo condensation. Thus we may trace an analogy between the process by which the nuclei arise, and that of the coagulation of the blood. The nuclear substance has characteristics which show a relation to, although not identity with, fibrin. The tendency of this nuclear substance to undergo post-mortem condensation is limited by the density of the medium (protoplasm) in which it is diffused, and which, as it were, dilutes it. If the total quantity of the nuclear substance does not exceed a certain minimum, it retains its diffused condition after the death of the cell. Hence no nuclei are seen, in the hæmatoblasts of healthy animals, which are smaller than two or three micro-millimetres, and the so-called "immature red corpuscles" are homogeneous, and, morphologically speaking, non-nucleated. The presence of the nuclear substance in them can, however, be readily demonstrated by means of a watery solution of methyl-violet. This quickly dilutes the protoplasm; the molecules of the nuclear substance thus lose their condition of equilibrium, and run together to form minute granules, which do not unite into a common mass, but remain isolated where they were formed. Thus the immature corpuscles, under this reagent, present only a uniformly granular appearance. In the bodies of adult mammalia the nuclear substance of the pale corpuscles begins to undergo condensation immediately after death. At this period the protoplasm still retains its intra-vital consistence, which offers no resistance to the process of condensation of the nuclear substance, if this is present in sufficient quantity. The visible expression of this process is that, in the previously homogeneous cell, usually at one of its poles, the peripheral contour is extended, and then this contour splits in two until a protoplasmic crescent is formed, which gradually enlarges, and the enclosed nucleus at the same time contracts towards that part of the cell which is adjacent to the points of the protoplasmic crescent. Thus the nucleus is formed concentrically, but has an excentric position. Later on the protoplasmic ring shrinks and becomes more refractive—a change which is regarded as indicating an increased density of the protoplasm, possibly a sort of "post-mortem rigidity." This always occurs later than the condensation of the nuclear substance. The latter can be hindered by the addition of a weak solution of common salt, or hastened by permitting slight evaporation. If the change in the nuclear substance occurs after that in the protoplasm, the former appears as a series of granules, which at first fill the cell uniformly, and then become arranged in radiating lines. They subsequently coalesce and form fibres, which contract gradually from the centre to the periphery, until they are collected into a central nucleus, which has at first a heart-shape, and later appears as an angular shining body.

The pale cells do not undergo transformation into either hæmatoblasts or marrow-cells; the latter are distinguished from them by the circumstance that the nuclear substance assumes during life a definite morphological state—a nucleus possessing nucleoli and a denser edge. The protoplasm becomes strongly refracting, and gradually assumes a granular appearance. The pale corpuscles themselves are formed by growth from cells which may be termed "proto-leucocytes," and consist chiefly of nuclear substance (the assumed free nuclei). The process of growth consists chiefly in a gradual increase of the protoplasm, which progressively dilutes the nuclear substance. The "myeloplaxes" with granular protoplasm, and nuclei scattered through it, are the forms in which the medullary cells end, and by which they perish. After they have attained a certain degree of degeneration they unite; gradually their boundaries vanish, then their nuclei; and ultimately they are transformed into granular masses, which break up. The process of division of the hæmatoblasts must be regarded as a process which regulates the size of the red blood-corpuscles. The extrusion of the nuclei from the hæmatoblasts takes place by the process of condensation of the protoplasm, which gradually presses out the excentric nucleus.

Such is an outline of the conclusions reached in this investigation. They are certainly to a considerable extent novel, and, whether right or wrong, will excite much attention among histologists.

THE Vaccination Act Amendment Bill introduced into the House of Commons by Mr. DODSON and Mr. HIBBERT is very generally regarded as a Bill for facilitating the evasion of vaccination. In reality it has a different and more commendable object—namely, the abatement of the nuisance of so-called vaccination martyrs. It having been found impracticable to secure discretion from a few local vaccination authorities in the matter of pressing for multiple fines for disobedience to the vaccination laws, the Government has thought it advisable to suggest a general law which may give facilities to the public in general to escape from vaccination in order to ease off the pressure of a confessedly beneficent law upon the tender consciences of a recalcitrant few. The question is one that belongs to the region of policy, not of physic, and we are prepared to assume that the politicians who support the Bill have good ground for their action. They may argue that the necessary irritation caused by the manufacture of vaccination martyrs by injudicious local vaccination authorities, is more prejudicial to the progress of vaccination than the facility for escaping from vaccination which the Bill offers is likely to be. It may be said that the occasions for this irritation are very few, while the

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remedy may have effects reaching far beyond the subjects it is intended for. But the occasions exercise an influence not to be measured by their fewness, and which we know by experience to be highly detrimental to vaccination. We know also that the prejudicial effect of these occasions is, in a fashion, proportionate to the degree in which the individuals which give rise to them can assume the position of "martyrs" to conscience. Take away the element of "martyrdom," and interest in these self-cultivated sufferers will collapse, and they will sink to the level of ordinary commonplace law-breakers.

There is not a little that is sound in this point of view, and for our own part we anticipate no evil results upon the general progress of vaccination from the ready means which the Bill provides for escape from the compulsory law. Apart from the growing intelligence of the public in this matter, and in which we have every confidence, the fact of having to appear before a magistrate (twice it may be) and pay a sum of money as a fine, with costs, before being exonerated from the action of the compulsory clause, will be sufficient to deter all who have not been infected with the anti-vaccination craze—and many, doubtless, who have—from taking advantage of the present Bill, if it should become law, as a means of escape from vaccination.

Annotations.

"Ne quid nimis."

OUR COMMISSIONS.

THIS week we publish, or commence the publication of, the results obtained by special representatives of THE LANCET, who are engaged in certain inquiries of more than ordinary interest.

"ATHLETICS."

The recent meeting at Henley has been made the occasion for the commencement of an inquiry as to the different methods of training adopted for athletics, and particularly that of rowing. The facts detailed and suggestions incidentally made by our commissioners will be found to cover a wide field, and to have bearings of practical moment on the measures commonly adopted with a view to the preservation of health and the development of a vigorous physique.

"THE MEDICAL USE OF WINES."

With a view to give more precision to the use of "stimulants" under medical advice and in the treatment of disease, we have instituted an inquiry as to the relative value of different classes of wine, from the general practitioner's standpoint. The summary of conclusions arrived at, after the examination and analysis of a large number of specimens, will, we trust, be of daily-recurring use to the profession.

"CRUELTY TO WOMEN."

In furtherance of our great desire to give practical effect to the opinions expressed in recent articles which have appeared in these columns under the above heading, on the provision of seats for the use of women serving behind counters, we have carried out a series of inspections and made inquiries, finally addressing a letter to some of the leading firms having retail establishments and employing females to attend on their customers. In another column we print the principal passages of our letter, and give the names of proprietors from whom we have received replies. This list will appear from time to time with any additional names we may receive, and we trust members of the medical profession will regard it as a special directory for their own use, and that of the heads of families with whom they have influence, showing where their custom may be bestowed without countenancing the practice of keeping young women standing during the hours of labour. There is another obvious use of this list. Ladies who frequent the establishments named must not only expect, but should lend their personal aid to secure, that the females serving behind counters and in the showrooms, shall make use of the seats provided for them in the intervals of business. The observations made in the course of this inquiry, and the information collected on the subject, show conclusively that ladies are *themselves* in a large measure to blame for the long continuance of this evil, which THE LANCET has now some hope of bringing to an end.

THE NURSING DIFFICULTY AT GUY'S.

THE time has arrived when it is necessary to speak out plainly concerning the regrettable state of affairs into which Guy's Hospital has been plunged by the action of its treasurer. For months that official has, in his public character, opposed himself to the wishes of the medical staff; he has disturbed the nursing arrangements to such a degree that the proper working of the hospital has become a matter of extreme difficulty; and his policy has stirred up disaffection amongst the students. This is a heavy indictment, but it is unfortunately only too true; and it is plain that there is but one way out of the dilemma. Unless that course is pursued by those to whom the treasurer alone is responsible, the administrative business of the hospital must come to a dead-lock. A continuance of this condition of things would be nothing short of a public scandal. To review the whole course of the controversy which has culminated in an expression of feeling on the part of the students—which may have been unwise, but which it is impossible not to feel was prompted by generous motives—would be a long and painful task.

The gist of the matter lies in this. Changes in the nursing department were recognised as necessary by the medical staff, who for some years past have been the means of introducing many improvements in this department. Their wish for further alterations was complied with, but in a way that was wholly unexpected. The question as to whom the control of nursing should be given to was not, as it should have been, settled after consultation with the staff. The person appointed to the office of matron attempted to overturn the existing arrangements, practically broke up the old staff of nurses, and introduced a new and unworkable system in entire defiance of the known wishes of the medical staff. Nor was this all. Exercising, as they did, almost absolute authority, the treasurer and the matron pursued the policy of making the care of the sick subservient to the maintenance of a fanciful system, and allowed it to go forth that whereas this new *régime* was in all respects good, that which it replaced was utterly bad. Ceaseless change, the frequent promulgation and as frequent withdrawal of rules, the arbitrary treatment of old and tried servants, with the result of leaving the patients in incompetent hands, have led to repeated expostulations and complaints from the medical staff, who were never consulted in any of these matters at all. No wonder that the staff, anxious for the reputation of the hospital, should have laid their case before the governing body; and it is to be regretted that, even then, the governors did not see that the compromise which they suggested was sure to fail, as it has failed, because the same irregular course has been pursued by the Treasurer since that recommendation as before it. Once more, indeed, they have urged their views upon the

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governors; and this time their statements must fall with additional force, in the light of recent events. Never in the history of a charitable institution of so high a repute has such a crisis occurred; never have a body of gentlemen been so thwarted in their earnest and unanimous desire by the despotic will of one official as have the long-suffering medical staff of Guy's Hospital. There can be and there ought to be no room for compromise now. The system of reform attempted has proved to be a system of anarchy, and the fruits of the policy which the medical staff foresaw would occur because they had knowledge, but which the Treasurer could not foresee for the reverse reason, are becoming only too plain. In exciting such opposition, Mr. Lushington has only himself to thank.

The last phase upon which the controversy has entered has arisen out of the action taken by the students to express their public disapproval of the Treasurer's proceedings. Whether the course pursued by the students was warrantable or not, it is certain that matters could not have come to such a pass without good reason. The immediate provocation of the demonstration—of which the particulars were published last week in *The Times* and other journals in a temperate letter from the senior house-physician and house-surgeon—was the treatment awarded to those of their fellows who occupy positions of authority and responsibility in the hospital, and who had ventured to address the Treasurer upon the reasons which prevented their co-operation with the matron; but in addition they must have been stirred to action by a generous sympathy with the medical staff, whom they have seen for months striving to prevent the downward progress of affairs, without apparently any result. The decision to make this "manifestation" was come to after calm deliberation, and the expression of opinion was conveyed in an orderly, but unmistakable and significant, manner. It is impossible not to accord sympathy with the feeling which prompted their action, however much we may deprecate the means taken to express it. Upon the publication of the letter in question the Treasurer suspended the two gentlemen from their duties, and appealed to the governing body. The Court of Governors had been summoned for the 23rd inst. to elect a President in place of Lord Cardwell, who has resigned. It had under consideration not only the above matters, but a further strong protest from the medical officers showing how the nursing difficulty was still being continued in contravention of the express resolution of the Court, and giving details concerning the nursing in support of their allegations. At the moment of going to press we learn that the house-physician and house-surgeon have been reinstated. The general question as between the governors, treasurer, and staff has been adjourned till next Wednesday. Mr. H. H. Gibbs has been elected President, in place of Lord Cardwell, resigned.

EXCISION OF THE THYROID.

M. TILLAUX lately brought before the Académie de Médecine a case in which excision of the thyroid had been successfully performed for goitre, believed to be of the "exophthalmic" form. The patient was a woman twenty-nine years of age, and the thyroid was enlarged to the size of the fœtal head at the full time. It extended from the thyroid cartilage to below the notch of the sternum, and on the left side as far as the anterior border of the trapezius. She suffered from violent palpitation of the heart, and the pulse was never less frequent than 130 to 140 per minute. There was very little prominence of the eyeballs, but she complained of dysphagia, and there were amenorrhœa and marked vaso-motor disturbances. In the operation Lister's antiseptic method was strictly observed. An oblique incision was made from above downwards, parallel to the anterior border of the sterno-mastoid, and then a horizontal incision perpendicular to the other. On reaching the thyroid, M. Tillaux endeavoured to separate the capsule, but found great difficulties in doing so, each movement of the grooved director causing a jet of blood. The capsule adhered so firmly to the thyroid that it was necessary to apply more than fifty hæmostatic forceps to restrain the hæmorrhage. Relinquishing the attempt to attack the right lobe of the tumour, he made a second oblique incision parallel to the first, on the left side, and obtained thus a flap, which he raised over the chin. There were no adhesions on the side, and the thyroid body was enucleated without difficulty. The bleeding points were secured. It was noticed that when the trachea was exposed, after the removal of the mass, there was great difficulty of breathing, but as soon as the flap was replaced, and the trachea covered, the dyspnœa at once ceased. A drainage-tube was placed on the lower extremity of the wound. For four days all went on well. On the fifth there was free hæmorrhage from the left crico-thyroid artery, from which the suture had escaped, but it was arrested without difficulty. From the time of the operation the woman had not a single attack of suppuration; the other phenomena also disappeared, and the woman made a good recovery. M. Raynaud doubted whether the case was really one of Graves' disease, believing that the absence of exophthalmos must leave the diagnosis in doubt. The frequency of the pulse is, however, in favour of the view. Even as a surgical success the case is of considerable interest.

"LOCAL OPTION."

WE are not of the number of those who feel at all alarmed at the success of Sir Wilfrid Lawson's "Local option" resolution, for giving to the "inhabitants themselves" legal power of restraining the issue or the renewal of licences. We admit that the resolution is somewhat vague and indefinite, and that it may contain in some highly latent form the principle of the Permissive Bill. But these are objections that have no power to take away our satisfaction at the success of the resolution. The fault of vagueness will be removed when the resolution has to take definite shape. And, as regards the second objection, we have not the slightest fear of the resolution assuming the form of prohibition. This is a bugbear which may do to frighten timid politicians, but it will not scare anyone who seriously considers the question. The notion that any considerable majority in an English—or, for that matter, Scotch or Irish—parish could be got to prohibit the sale of intoxicants in all forms and quantities, is one which will excite nothing but a smile in medical men, who know by special experience the strong part that drink plays in the social and dietetic economy of the British people. Even if Sir Wilfrid Lawson sees in the success of his resolution the prospect of a millennium of abstinence—though we take him to be too shrewd a man for that—that is not the view of those who have carried his resolution.

Mr. Gladstone's part in this discussion was very important. While objecting to the abstract resolution, and apparently to the further development of a monopoly that has had various and grave political and social disadvantages, he made several very noticeable admissions. He expressed his sympathy with the principle of the resolution. He distinctly disclaimed all sympathy with those who maintain that legislation has nothing to say or to do with intemperance. "I do not agree," he remarked, "with those who say that legislation is of no avail in this matter. ..... Nor do I agree with those who say that legislation in this matter must be class legislation, because I think that the mover and seconder of the resolution are right in holding that it is eminently and peculiarly from the people that the movement and the expression of sympathy and desire proceed." These

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are great and statesmanlike words, and may well be taken as a rebuke by those petty politicians of both sides who would fold their hands in helplessness, or satisfy their consciences for winking at the greatest social evil of the day by such arguments as are rebutted by Mr. Gladstone's words.

It is monstrous to say that the Legislature is to do nothing to abate the misery and the disease and the premature death brought about by drink. And our satisfaction at Sir Wilfrid's success is satisfaction at the fact that we have got a Parliament which means to try to do something in this direction. Those who rightly and generously resent class legislation must study this fact, that the people who suffer by the excessive number of public-houses, and the great temptations which they involve, are the very people who ask for more restriction and more regulation. It is idle to assert that the mere political democracy could create such a demand as that implied in Sir Wilfrid's majority, apart from the instinct of the people themselves, teaching them that this drink question is at the root of English life and prosperity. Education has something to do in our national deliverance from the destructive and degrading vice of drinking. The example of the higher classes has something too. The strong teaching by the medical profession, and the stronger effect of its example, are beginning to tell. But legislation has its duties too; and we do not see any better combination for guiding such legislation than that of Mr. Gladstone and Sir Wilfrid. Mr. Gladstone will see that honest and sober men get any reasonable amount of alcohol, and his legislation, including his Budget, will favour the weaker combinations of it. Sir Wilfrid will see that drunkenness is recognised as an evil, and all who abet it are diminished in number and curtailed in power. Sir Wilfrid will see that men are not made drunk by Act of Parliament; and Mr. Gladstone will see that Acts of Parliament do not unduly interfere with the freedom of sober and intelligent men.

HOME HOSPITALS AND PAYING PATIENTS IN GENERAL HOSPITALS.

THE governors of St. Thomas's Hospital have decided, at a General Court held on Wednesday last, to admit paying patients into the general wards, as well as to open a block of the hospital for their reception. The consent of the Charity Commissioners to the scheme has been obtained, and they have issued an order authorising it. The plan proposes to divide the patients into two groups—one called Remunerative-paying patients, the other Poor-paying patients. The first-class, limited to forty-one in number, will pay 8*s*. and upwards per diem, will occupy two wards ("Adelaide" and "Alice") in Block No. 2 of the hospital, which are to be made ready for their reception, and named the "St. Thomas's Home." They are to be under the charge of a salaried medical officer, but liberty is to be had to call another medical man, connected with the hospital or not, into consultation with him. They are to be admitted and discharged only at the instance of the treasurer and House-Committee. The number of Poor-paying patients is limited to fifty-two, they will pay 3*s*. a day for the expenses incident to their reception and treatment, and will be distributed among the ordinary wards of the hospital, not exceeding five in each ward at the same time. They are to be subject to the same conditions as ordinary patients, only their admission and discharge rest with the treasurer and House-Committee. The two questions, that of admitting paying patients into the general wards, where they are to be under the care of the physician and surgeon in charge of the ward, and of establishing and maintaining an independent "Home Hospital" in St. Thomas's, in which the control and medical attendance will be completely separated from the work of the general hospital, stand on an entirely different footing. The matter has been discussed repeatedly, both in our columns and elsewhere, and has been the subject of much dispute between the lay authorities and the staff of the hospital. The staff maintained, very justly, that they would not be in any way connected with or responsible for the scheme, except in so far as it affected the welfare of the patients in the general hospital, or the status of the hospital itself. If it be true that it is the intention of the governors to force upon the staff the attendance upon paying patients in the general wards, some explanation of the change ought to be given. We shall not be surprised to hear of fresh difficulties if such a plan should be persisted in. Meanwhile, until the complete regulations for the new paying block are in our hands, we reserve our comments upon that part of the scheme.

The code of regulations for the first Home Hospital, "Fitzroy House," started under the auspices of the Home Hospital Association, seems to be well adapted for its purpose. It remains to be seen how far it will be successful in attracting patients. If well worked we can hardly doubt that the demand will soon be in excess of the supply.

EXPERIMENTS ON ANIMALS.

THE report of the inspectors under the Vivisection Act for the year 1879 has been issued. It appears, from Mr. Busk's report, that the total number of experiments performed in England and Wales was 270; of these 126 were performed under the restrictions of the general licence; 61 were under certificates for experiments in illustration of lectures; 35 under special certificates for experiments without anæsthetics; 24 were under certificates which dispensed with the obligation to kill the animal before recovery from the anæsthetic. Under two other possible certificates—one permitting experiments on cats, dogs, horses, mules, or asses, and the other permitting experiments "for the further advancement of knowledge by testing previous discoveries"—no experiments were performed. The number of experiments "in which there is reason to believe that any material suffering was caused" was about 25. Whatever horror may be felt at this statement will be surely lessened by the further remark on the nature of the suffering produced. "Of these, 15 were cases in which disease followed the inoculation of infectious matter, but in which no painful operation was performed; and 10 were experiments upon as many frogs, in which an incision of the skin was required for the introduction beneath it of a medicinal substance." If the suffering in the latter case is to be described as "material," we should be interested to learn the inspector's idea of suffering which may be designated as "trifling." All the other experiments were conducted and completed while the animals were in an unconscious state.

From the details of the report some other facts of interest may be gathered. The number of licensees in England and Wales was 36, but of these no less than 10 did not perform the experiments for which they had obtained licences. Thus the 26 who availed themselves of their opportunities performed on an average 10 experiments each. In Ireland, according to the report of the inspector, W. T. Stoker, eight persons received licences, but of these four did no experiments. Twenty-three experiments were performed, giving an average of six per licensee. In England and Wales no less than 13 licences are no longer in force. We think the report should have stated the reasons for this. One of those whose licence is thus terminated is no less distinguished a physiologist than the professor of physiology at Cambridge.

The report was furnished at the request of Mr. Pease, and is, we presume, intended for the satisfaction of the anti-

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vivisectionists. We think that it is very desirable that a return should be obtained which should illustrate a little more directly the injury which the mode of carrying out the provisions of the Act is doing to physiological and therapeutical science in this country. In the case, for instance, of the fourteen licensees who did none of the experiments for which they had obtained permission, it is very desirable to know what reasons were alleged by them for their inability to avail themselves of the opportunity. It is well known that in many cases the conditions under which the licences are obtained interfere very much with the object. An investigator has the opportunity and leisure to carry on a set of important experiments and applies for a licence. So long a delay elapses before the licence is obtained that the opportunity is past, the leisure is gone; the licence is for a limited time, and has expired before an opportunity recurs. We are sure that such a return would throw considerable light on the workings of the Act. Another point on which information should be sought in Parliament is the number of licences which have been refused since the working of the Act commenced, and the reasons for each refusal. We are not aware whether this information could be obtained, but if forthcoming (and it might be in future, if not for the past) it would throw a little more light on the operation of the measure.

DUSTY ROADS.

ONE of the special features at the recent Henley meeting was the dust. Notwithstanding the previous rain the dust rose and covered everything and everybody. It may be difficult to avoid this evil in the roads out of the metropolis—except on special occasions when there is no excuse for the neglect of watering;—but there can be little difficulty in taking measures to protect the moving population of the great city from the annoyance, and more serious inconvenience, of an atmosphere laden with dirt of every description, a considerable proportion of which may be irritating to the sensitive surfaces of the body, if not injurious to health, or even, possibly, productive of actual disease. The *quasi*-scientific definition of dirt as matter in the wrong place is never more appropriate than when applied to the dust that flies about in the faces of the people. It would be an interesting, though startling, experiment, to take a mean of the atmosphere of one of our ordinary streets, and estimate the character and sources of the dust with which it is laden. A revelation such as that which would be likely to be made in the course of such a process would be both suggestive and alarming. The obvious and easy remedy is to put the practice of watering the streets fully into effect, even though the trouble and cost of the measure should be considerable, which is not likely to be the case when properly carried out.

FRENCH ARMY MEDICAL SERVICE.

IN the French Chamber a few days since, in a discussion on the Army Administration Bill, a comparison was drawn between the system under which the French and British Medical Departments are respectively conducted. One of the distinctive differences between them has always been that the administrative head in the former is an officer of the Military Intendance—corresponding to our Commissariat—while in the latter it is a medical officer. The comparison made by the member was far from favourable to the French system when judged by results. He stated that in the Crimea, while the English lost 13 per cent. of their sick, the French lost 29 per cent. The cost per sick man in the English army was 4 fr.; and in the French, only 2 fr. 60 c. a day per sick man; but the saving cost the French army 40,000 men. We recommend this to the consideration of those who, during recent discussions on the reorganisation of the Army Medical Department, suggested the abolition of the appointment of Director-General, and the substitution of a General Officer as its administrative head. We may add from personal knowledge, that this subordination of the medical to the military branch in the French army is a course of much dissatisfaction, and of great difficulty in obtaining a good class of educated medical men to enter the department. From the remarks of the member we are further led to believe that prevention has not yet been sufficiently taken up by the medical officers of the French army, their chief duty being considered to be the cure of disease. In this matter our own service has set an excellent example, for which we are in a great measure indebted to the late Lord Herbert, and to the Royal Commission over which he so ably presided.

THE DISTRESS IN IRELAND.

IN answer to a question put by Mr. A. M. Sullivan in the House of Commons on the 21st inst., relating to certain newspaper reports of the occurrence of famine fever in the county of Mayo, Mr. Forster stated that he had no definite information on the subject, but that the Local Government Board (Ireland) had been directed to send a medical inspector to make inquiry in the localities to which the reports referred. He expressed the opinion that the reports had probably some basis in fact, but he hoped they would turn out to be exaggerated.

The Times has published in a cheap and handy form a history of "The Great Irish Famine of 1845-46," a collection of leading articles, letters, and Parliamentary and other public statements, reprinted from the columns of that journal. The want of a readily accessible work giving information of the kind included in this publication has been much felt of late, and we are grateful to our great contemporary for having supplied it.

THE EXECUTIVE COMMITTEE OF THE GENERAL MEDICAL COUNCIL.

THIS Committee met on Wednesday, June 16th. Two resolutions were passed in favour of accepting foreign examinations in preliminary subjects in place of one of the recognised preliminary examinations. One was an examination in a Prussian High School; the other, an examination in Sweden, equivalent to the Abitwientem-Examen, required for admission to the German Universities. Other subjects were referred to the approaching meeting of the Medical Council, including a counter-memorial from the Representative Board of the British Dental Association, in reply to the memorial lately published and addressed to the Council by the Association of Surgeons practising Dentistry.

STATE OF THE UNDERGROUND RAILWAYS.

THE walls of the stations of the underground railways require thorough cleansing and re-whitewashing or painting, not simply to make them decently respectable, but to place them in the sanitary condition in which such places should be carefully maintained. The tunnels also are in need of measures to purify their foul interiors. It would be a most regrettable circumstance if these important lines should fall into a neglected state, and again awaken anxiety in the public mind! It is impossible, in the nature of things, that they can ever be as bad as they were before the tunnels were ventilated by openings at suitable intervals, and houses were demolished to give them air space, both which reforms were effected by the intervention of the press years ago, but there is still room for improvement, and of late the condition of the stations, and the general state of uncleanliness which prevails, do not satisfy the most modest demands.

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WOMEN CLEANING OUTSIDE WINDOWS.

THE late Mr. Wakley, when member for Finsbury, introduced a clause into an Act of Parliament, having the effect of prohibiting the cleaning of outside windows by women. The practice is dangerous in the extreme, and it is to be regretted that the law for its repression is not rigorously enforced. Women are often to be seen standing on the ledges of windows at a great height from the ground, and risking their lives with impunity. Housekeepers should see to this matter, and the police ought to be reminded by their superintendents that it is one which falls within their official ken. It should not be necessary to wait until an accident—which is likely to involve the loss of life—has occurred before the useful Act of Parliament which now lies dormant is put into effect.

THE ACTION OF ERYTHROPHLEINE.

MM. SÉE and BOCHEFONTAINE are using erythrophleine, the active principle of the Mancona bark, in the treatment of different cardiac and respiratory affections. The plant from which it is derived, the Erythrophleum guineense, is employed in some parts of Africa as an arrow-poison, and we have already given an account of the physiological action of the extract obtained from it by MM. Hardy and Gallois (THE LANCET, Dec. 2nd, 1876). MM. Sée and Bochefontaine find that erythrophleine increases the vascular tension and first slows the pulse and respiration. Then the respiratory movements are quickened, and when death takes place they persist long after the cessation of the cardiac contractions.

FECUNDITY EXTRAORDINARY.

WE do not know whether Malthusian theories and practices are in favour on the borders of the Gironde, but if so, nature there appears to be capable of asserting herself in spite of art. According to a paragraph in *La France Médicale* a woman, whose name and address are given, was several months pregnant when she was seized with colicky pains. Attributing them to ordinary causes, she went into her vineyard, and was profoundly astonished to discover presently that she had been confined. Dr. Watering, of Maregnac, was called to her, and found that she had given birth to eight children, perfectly formed. They were enclosed in a sac, and had apparently perished from mutual pressure during their growth. The mother did well.

THE latest total of the Metropolitan Hospital Sunday Fund—i.e., at the time of going to press—was £25,600, in round numbers, counting the balance carried from last year. Without that balance it would be about £24,600.

Dr. MOORE, the medical officer of the County Gaol, Preston, has, we regret to hear, been seriously injured by a savage attack by one of the prisoners. It appears that the miscreant felt aggrieved at his complaint of illness not being verified by the doctor, and by way of revenge seized a hammer, and, watching his opportunity, struck his victim on the head, inflicting a deep scalp wound. Dr. Moore, however, closed with his assailant, who was subsequently secured by the warders.

AT the recent quarterly meeting of the trustees of the Bristol Royal Infirmary the resolution passed at the last annual board, "That house-surgeon's apprentices in future be not received in this institution, and that the rules referring to them be rescinded," was read and confirmed.

THE *Englishman* states that there has been much sickness, principally "low fever," amongst the men of the 68th Regiment at Meean Meer.

FROM the report by the Governor of the University of Durham College of Physical Science we learn that during the past session 107 students have attended the College, being the largest number enrolled in any one session since its establishment. This number included twenty-eight students from the College of Medicine.

THE present year's receipts from the Hospital Saturday collection in Birmingham amount to £3945. This collection is made entirely among the working classes in the factories and workshops of the town.

A NEW mineral, "titanite," is said to have been discovered by Professor Silvestri, of the Observatory of Etna.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Newcastle-upon-Tyne (population 146,948). — Mr. Henry E. Armstrong's report for the year 1879 contains much matter for note. The births represented an annual rate of 36·6 and the deaths 23·5 per 1000 of the population. Interesting information is given respecting the Fever Hospital of the borough previous to its transference to the Corporation in (?) 1874. It is to be regretted that the table of admissions and deaths was not continued to the present time, and some clearer indications given of the influence of the transference upon the use of the hospital. The following is an account of the casualties affecting the hospital staff during the period 1864-73: "One physician and three medical officers caught fever in the hospital, and one of the latter died. From 1865 to 1873 twenty-seven residents in the hospital—viz., nineteen nurses, three matrons, two inspectors, and three servants—contracted typhus; of whom five died—viz., three nurses, one matron, and one inspector." The total number of admissions during this period of ten years had been 3508. With reference to the contraction of fever by the staff, it is said "the above cases are all attributable to the defects of accommodation and ventilation of the hospital"; but we do not find any statement in the report relative to the removal of these defects. The advantage of a Sanitary Authority possessing hospital accommodation is made evident, and in Newcastle has been markedly shown in the control of typhus. Two outbreaks of this disease are referred to, which it became possible to check by the early removal of the cases to the hospital. Mr. Armstrong gives a detailed account of a localised outbreak of malignant scarlet fever, illustrated by maps, which was probably due to the dissemination of the infection of milk supplied from two dairies. The outbreak was subjected to careful inquiry. The difficulties to be overcome in tracing the infection to its source were very great, but the facts elicited appear to justify the conclusion at which Mr. Armstrong arrived with reference to the infection of the milk. One of the most interesting parts of the report is a section dealing with "infectious disease, the causes of its spread, and the possibility of its extinction." Mr. Armstrong sets forth, as the results of his consideration of this important subject, the following elements, which he thinks must enter into any sufficient scheme for dealing successfully with infectious maladies. Premising that he does not look for thorough efficiency until the local authority have compulsory power, and undertake the duty of isolation on the public behalf, he lays down the following needful requirements: (1) The compulsory and early notification to the local authority of every infectious disease; (2) sufficient hospital accommodation for cases, admission being free to the public wards, and at as low a rate as possible to the private ones; (3) homes of refuge for the accommodation of the poor whilst their own homes are disinfected; (4) isolation homes (home hospitals) for the compulsory reception of all infectious cases not removed to the general infectious hospital, the patient providing his own medical attendant,

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who during his visit to the home hospital should wear special apparel, and before leaving use disinfectants for washing his hands, &c.; (5) in addition each sanitary district should be supplied with a fever ambulance, disinfecting stove, mortuary, &c.; and arrangements should be made for the isolation, under proper restrictions when desired, of relatives along with patients. In illustration of this part of his report, Mr. Armstrong gives some interesting details of the diminution and almost extinction of typhus fever, at one time "endemic, and fearfully prevalent in the town," by the energetic action of the sanitary authority even with the present imperfect provisions and powers at their command.

Merthyr Tydfil (population 50,354).—Mr. Thos. J. Dyke reports, for the year 1879, a death-rate of 20·5 and a birth-rate of 31·7. There would appear to have been an "almost complete immunity from any widespread diffusion" of contagious fevers in this district during the year under consideration. Nevertheless, a record of twenty deaths from enteric fever appears to indicate that there is still an undue prevalence of this disease in the district. In every instance of inquiry into cases of or deaths from this malady, sanitary defects admitting of remedy were found in or about the dwelling where the sickness had occurred. Mr. Dyke appeals to his professional brethren in the district for early information respecting cases of enteric fever under their care, seeing how readily means may be applied for the removal of the insanitary conditions under which they may have occurred, and the benefit thus accruing to others. The "comparative freedom" from fever which Merthyr Tydfil now enjoys, Mr. Dyke attributes to the means of ventilating the sewers the surveyor of the local authority has supplied. With regard to "constitutional diseases" it would appear that the death-rate since the introduction of sanitary works into Merthyr has fallen from 38⅞ to 22½. Mr. Dyke gives interesting information about the hospital accommodation for infectious diseases in Merthyr. It would appear that the authority possesses two hospitals—one at Merthyr (the old cholera hospital known as the "House of Refuge," with accommodation for thirty-four patients), and one at Dowlais with accommodation for twenty-four patients. A hospital staff is maintained at each of these hospitals. We are disappointed to see the little use made of these hospitals in the intervals of epidemics—so little that Mr. Dyke has recommended, with a view of economising staffs and service, the enlargement of the Merthyr Hospital so as to give it fifty beds, and the giving up the Dowlais hospital. The local authority has held that, having entered into certain engagements with the Board of Guardians to receive pauper patients, it would not be prudent to disturb the present arrangements. Mr. Dyke quotes certain remarkable data as to the health of Merthyr before and since the beginning of sanitary work there, part of which he gives on the authority of the present Medical Officer of the Local Government Board, Dr. Buchanan. During the eleven years 1845–55, where sanitary works were in progress but not fully carried out, the average annual mortality was 332 in every 10,000 of the population; the deaths of children under one year was 80¼; the mortality from enteric fever 22; from diarrhœa 11¼; and from consumption 38⅜. In the year just past (1879) the mortality in the order here stated had fallen from 332 to 205; from 80¼ to 21⅛; from 22 to 4; from 11¼ to 1½; and from 38⅜ to 22. Finally, the average length of life had increased from 17½ years to nearly 32! Mr. Dyke briefly enumerates the sanitary improvements which have brought about these "beneficent results," but modestly omits to refer to the essential part which he himself has played in guiding the local authority in the various works of sanitary improvement they have undertaken, and in securing by his individual exertions that those works should not fail of their effect.

REPORT OF THE HOMERTON HOSPITALS.

The report of the Committee of Management of the Metropolitan Asylum Board's Fever and Small-pox Hospitals at Homerton for 1879, including the reports of the medical superintendents of the hospitals (Drs. Collie and Gayton), has other merits than that of brevity. They tell in few words and a larger allowance of figures of the movement of patients in the hospitals, and of the need there was for giving up the Small-pox Hospital for a while to the use of fever patients during the prevalence of scarlet fever. Dr. Collie records the occurrence of four cases of enteric fever among the nursing staff of the enteric fever wards, and he reverts to the opinion he had formed from previous occurrences of such cases upon the direct contagiousness—the personal contagion—of the disease. He makes also some important observations upon the element of age in the question of immunity from the disease, giving tabulated data, with a view of showing that after thirty years of age few susceptible people are to be found. "This element of age is, I believe," he says, "the reason of the relative immunity of nurses from enteric fever in certain hospitals, an immunity which might exist always, and be everywhere complete, if due regard were had to the age of those who nurse enteric fever; and yet this immunity would prove nothing against the views which I maintain, that enteric fever is contagious." The committee, in closing their report, make certain suggestions as to an amended legislation for the isolation of the sick from infectious diseases, revaccination, inquiry by house-to-house visitation relative to vaccination, and the registration of cases of infectious diseases.

BADLY-SMELLING ROADS.

The contractors in charge of the roads in the district of St. Mary's Abbot may be using old road scrapings and slime from the banks of the Thames as a binding material for the crushed stone, heavily rolled, to form the roadways. If this should be the fact, it would account for the shockingly bad smell perceptible in the district. It is worth while to inquire into the matter because, if putrescent material is being employed, there is danger that after every heavy fall of rain the nuisance may be renewed for some time to come; and wherever there is a nasty smell there must needs be floating particles in the atmosphere, which when taken into the lungs may do harm. We have no wish to overstate the proposition, but it is desirable to remember that what is offensive may also be a medium for the propagation of disease. As a matter of fact the dirt of the streets in the district is deposited on the shores of the Thames, and the foul débris is now redistributed.

THE WATER-EXAMINER'S ANNUAL REPORT.

Colonel Bolton's annual report for 1879, as Water-Examiner under the Metropolis Water Act, 1871, has been issued as a Parliamentary paper. It contains matter of special interest, particularly with reference to the unification of the metropolitan water-supply, regarding which Colonel Bolton offers certain observations which deserve attention, and, in view of such unification, the establishment of *standards of filtration and quality*. The report will be read with much interest at the present time in view of the proceedings of the Committee of the House of Commons on the Metropolitan Water-Supply.

A Parliamentary return has been issued containing a financial statement on which the calculations were based of payments to be made to the London Water Companies under the Metropolis Waterworks Purchase Bill proposed by the late Government. The return, in fact, forms the financial statement attached to the report to the Home Secretary (Sir R. A. Cross) of Mr. Edmund James Smith, the gentleman empowered to enter into provisional agreements with the Water Companies on the subject.

VITAL STATISTICS.

HEALTH OF LARGE ENGLISH TOWNS.

The rate of mortality in our large English towns shows a further decline. In twenty of the largest, estimated to contain in the middle of this year seven millions and a half of persons, or nearly one-third of the entire population of England and Wales, 5240 births and 2717 deaths were registered last week. The births exceeded by 55, while the deaths were no less than 558 below, the average of weekly numbers during 1879. The deaths showed a further decline of 48 from the decreasing numbers in recent weeks, and were equal to an annual rate of 18·9 per 1000; in the eleven preceding weeks the rate declined steadily from 24·9 to 19·2. During the past eleven weeks of the current quarter the death-rate in these towns has not averaged more than 20·7 per 1000, against 22·7 and 22·9 in the corresponding periods of 1878 and 1879. In London the rate was only 17·7 per 1000, while it averaged 20·1 in the nineteen provincial towns. The lowest death-rates in the twenty towns last week were 12·4 in Portsmouth, 14·6 in Brighton, 14·9 in

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Leicester, 15·3 in Plymouth, and 15·7 in Leeds. The rates in the other towns ranged upwards to 22·5 in Salford, 25·0 in Sunderland, 26·7 in Norwich, and 26·9 in Liverpool. The excess in the three last-mentioned towns was mainly due to the fatal prevalence of zymotic disease.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 461, 411, and 406 in the three preceding weeks, were 419 last week; these included 134 from scarlet fever, 118 from whooping-cough, 55 from measles, and 41 from fever. The annual death-rate from these seven diseases averaged 2·9 per 1000 in the twenty towns. It was but 0·3 in Newcastle-upon-Tyne, and 1·4 in both Oldham and Wolverhampton, while it ranged upwards to 5·4 and 6·3 in Liverpool and Sunderland. Scarlet fever showed the largest proportional fatality in Norwich, Sunderland, Sheffield, Salford, and Bradford; whooping-cough in Liverpool, Birmingham, and Salford; and measles in Sunderland and Plymouth. Nine deaths were referred to fever (principally enteric) in Sheffield. Small-pox caused 8 more deaths in London and its suburban districts, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 227 and 221 at the end of the two preceding weeks, rose to 229 on Saturday last, and exceeded the number under treatment at any time since April, 1879; fifty new cases of small-pox were admitted to these hospitals during last week, against 39 and 31 in the two previous weeks. The number of patients in the Highgate Small-pox Hospital had declined to 9 on Saturday last. These hospital returns, however, afford but slight evidence of any considerable decline of small-pox prevalence in the metropolis.

The fatality of lung diseases declined again last week. The deaths referred to diseases of the respiratory organs in London, which had been 191 and 230 in the two preceding weeks, declined again last week to 198; 103 were referred to bronchitis, and 67 to pneumonia. The annual death-rate from diseases of this class was equal to 2·8 per 1000 last week; the rate from the same diseases was equal to 5·4 in Liverpool, and 5·6 in Salford.

THE HEALTH OF DUBLIN.

The return from Dublin shows but slight improvement. The annual rate of mortality within the city, which had been equal to 37·6 and 42·5 per 1000 in the two preceding weeks, declined again last week to 39·3.

During the eleven weeks ending last Saturday the death-rate in Dublin averaged no less than 37·2 per 1000; the death-rate in London during the same period did not exceed 19·6 per 1000.

The 237 deaths in Dublin last week included 53, or 22 per cent., which were referred to the seven principal zymotic diseases, against 61 and 65 in the two preceding weeks; 15 resulted from scarlet fever, 14 from small-pox, 9 from measles, 7 from fever, and 5 from whooping-cough. The annual death-rate from these seven diseases was equal to 8·8 per 1000 in Dublin last week, against 2·7 in London, and 3·8 in Edinburgh. The fatality of scarlet fever in Dublin last week showed a further increase, and the recent increase in the number of deaths from small-pox was maintained; the deaths from whooping-cough and fever were, however, considerably less numerous. Since the beginning of April last the number of deaths recorded in the city of Dublin has exceeded the number of births registered by no less than 357.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE OUTBREAKS OF ENTERIC FEVER IN GLASGOW DUE TO INFECTED MILK.

Dr. Russell's report of the recent outbreaks of enteric fever in Glasgow due to infected milk is a masterly account of the circumstances under which the outbreaks occurred, and the mode of procedure by which their source was successfully elucidated. Not less than 373 cases of the disease, distributed in 257 families, are assigned to milk infection. It would be impracticable (and we shall not make the attempt) in any summary to do justice to the conspicuous ability with which the numerous difficulties which had to be contended with in prosecuting a complicated inquiry into the source of local outbreaks amidst a great population among which enteric fever is constantly present, were successfully overcome by Dr. Russell and his coadjutors. The report is not only of value from the facts it records respecting certain occurrences of enteric fever of exceptional importance, but also from the instructive light it throws upon the principles which should guide medical officers of health and others when called upon to investigate outbreaks of enteric fever of a character similar to those which have recently occurred in Glasgow. The conditions of the dairy-farm from which the infected milk came, and of the circumstances under which the milk must have become infected, were revolting beyond description, conditions against which, under the present state of the law, the inhabitants of towns have no real protection. Dr. Russell points the moral, so far as Glasgow is concerned, of this "the last and worst of the many milk epidemics from which Glasgow has suffered," and refers to Mr. Sheriff Spens' draft "Act for the Sanitary Registration of Places of Milk-Supply to Towns" (see last week's LANCET), the principle of which he approves heartily. It is painful to think how a piece of petty Departmental perversity on the part of the late Government may have postponed indefinitely some such solution of this grave question of sickness and death as Mr. Sheriff Spens would have.

ENTERIC FEVER FROM INFECTED MILK IN HOBART-TOWN.

We learn from the *Hobart Town Mercury* that the question of enteric fever originating from infected milk has arisen in Tasmania. Dr. Benjafield, in a letter to that journal for the 14th April last, directs attention to a series of cases of enteric fever which may have had connexion with the use of milk from a dairy where enteric fever was known to exist, and where the arrangements were characterised by that slovenliness and sanitary negligence with which we are too familiar at home. He complains of the local authority not displaying such readiness of action in the matter as the occasion seemed to him to call for. Let us hope that the reasons for his complaint and the occasion for it have now ceased to exist.

ENTERIC FEVER FROM INFECTED MILK AT PENZANCE.

Penzance, we learn, has had a sharp localised outbreak of enteric fever, numbering twenty-six cases in all, which has been traced to infected milk brought into the town from a farm in the country, where two members of the farmer's family had suffered from enteric fever. We understand this is the second outbreak from infected milk which has happened in Penzance within the past eighteen months.

Small-pox has of late prevailed so generally in Dublin that it may well be called epidemic. In a report by the Secretary of the Public Health Committee lately submitted to the Corporation, it appears that during the seven years ending 1871, there was little or no small-pox in the city, but that since that time it has seldom been entirely absent, except for short periods in 1874, 1875, 1876, and 1877. Two circumstances are indicated to account for the prevalence of the disease—the insufficiency of hospital accommodation and imperfect vaccination; although the lymph may be as efficacious as ever it was, yet it would be desirable that all vaccinators, more especially public ones, should not be satisfied unless they can produce at the least three vaccine marks on each patient operated on.

The Local Government Board for Ireland will shortly issue an order closing the Old Church graveyard, at Queenstown, against future interments, except by certain persons having certain vested interests therein.

THE SERVICES.

NAVAL MEDICAL DEPARTMENT.

THE Navy Estimates for the current year afford correct data for a survey of interest to the medical profession, and particularly to that branch of it employed in the Royal Navy.

The full strength of officers, seamen, boys, and marines, including coast-guard and Indian troopships, is voted at 58,800; the auxiliary bodies of men employed in yards, hospitals, and police, at 19,000; making a grand total of 77,800 persons, for whom, in a general sense, medical and surgical care has to be provided for the first, and surgical care alone for the second, of these bodies.

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The several Parliamentary votes, embracing all employed in the Department, and all the working material, are as follows:—

Vote.	For the Effective Service.	
1.	Full-pay of medical officers	£100,702
1.	Wages to attendants	6,000
3.	Salaries and wages at Admiralty	5,450
5.	Scientific, at Netley, &c.	2,500
6.	Salaries of surgeons in dockyards	6,405
8.	Salaries, wages, police, &c., in hospitals ...	63,445
11.	Repairs and alterations of structure in hospitals	14,685
12.	Provisions, stores, medicines, instruments, &c., in hospitals, and sick bays, &c.	46,040
12.	Various expenditures on stores	29,560
Vote.	**For Non-effective Service.**	
15.	Half-pay of officers, unattached	9,235
,,	Retired pay of 244 officers	72,390
16.	Good-service pensions	400
	Total expenditure of Naval Medical Depart.	£357,812

From Vote 1 to Vote 12 inclusive the expenditure is upon the actual working service for care of sick and hurt; and Votes 15 and 16 on that waiting for, or past, active employment; the former taking £275,787 (A), and the latter £82,025 (B). (A) comprises all charges for the fleet, hospitals, dockyards, sick quarters, and contagious-disease prevention, and it naturally forms two divisions connected with the service afloat and the service ashore, of which the charges are capable of separation; but Vote 12, for medicines and medical stores, &c., requires division under these heads. As it stands complete it is £63,390, with abatement of £17,350, leaving £46,040 to be allotted thus approximately:—To service afloat (A), £10,000; to hospital service (B), £36,040. With this alteration of disposal of Vote 12 we may proceed to arrange this national expenditure under separate heads, and we will first take that which is general (I.), next the service afloat (II.), then the service ashore (III.), which subdivides into the naval hospital service, and external but allied services relating to health and disease; and, lastly, the "Non-effective Service."

Vote.	I. General Service.	
3.	Head-quarters, Admiralty	£5,450
5.	Scientific branch, Netley	2,500
		£7,950

Vote.	II. Service Afloat.	
1.	Full-pay officers	£101,702
	Lodgings, ditto	450
1.	Wages, sick attendants, about	6,000
12 A.	Provisions, stores, &c.	10,000
		£118,152

Vote.	III. Service Ashore.	
	(*a*) Hospitals and Infirmaries:—	
6, 7.	Medical officers of yards	£6,405
8.	Ditto, with whole of the officers and others in hospitals	63,445
11.	Repairs and alterations	4,685
12.	Provisions, stores, &c.	36,040
		£120,575
Vote.		
	(*b*) Extraneous charges:—	
12 B.	Private sick quarters	12,500
12 C.	Contagious-disease prevention	14,800
12 D.	Miscellaneous	1,810
		£29,110

And, lastly, the Non-effective Service, by Votes 15 and 16, claims a total expenditure of £82,025

The recapitulation yields:—

I.	General service	£7,950
II.	Service afloat	118,152
III.	Service ashore:	
	(*a*) Naval hospitals, &c.	120,575
	(*b*) Extraneous charges	29,110
	Effective total	£275,787
IV.	Non-effective total	82,025
	Grand total	£357,812

For receiving the sick and hurt of those employed under the Admiralty, there are, at home and abroad, eighteen hospitals and infirmaries and a lunatic asylum permanently maintained. In time of war temporary hospitals are usually equipped at the most convenient points for approach and supply as near as possible to the seat of warlike operations.

To perform the duties of the fleets and hospitals there is a sanctioned staff of 1 director-general, 4 inspectors-general, 12 deputy inspectors-general, 210 fleet surgeons and staff surgeons, 250 surgeons, 477 in all; but from lack of can-

Vote.	——	D. G.	I. G.	D. I. G.	F. S.	S. S.	Surg.	Total.	Dispens.	——
3	Head Quarters	1	—	1	—	—	—	2	—	£2,020
5	Scientific Branch	—	—	1	—	—	—	1	—	694
1	Service Afloat	—	—	—	50	93	160	303	—	101,702
9	Royal Marines	—	—	1	4	1	9	15	—	} 29,740
8	Hospitals and Infirmaries ..	—	3	7	7	5	18	40	16	
6	Yards	—	—	—	7	8	3	13	—	6,405
15	On Half-pay	—	—	2	26		7	35	—	9,235
	Effective Total	1	3	12	196		197	409	16	149,796
	On Retired List	—	17	46	60	84	37	244	—	72,790
										£222,586

didates—the provision for salaries, full-pay, and half-pay—of active list comprises only 409, while that for the retired list is for 244 officers. The active-list officers are disposed of in the estimates according to the above table.

These are correct data for judging the state and condition of the Medical Service, and we are of opinion that several deductions of value to the public service may be made from them, the consideration of which we for the present defer.

ARMY MEDICAL OFFICERS NON-COMBATANTS.

AMONG the prominent causes of complaint which led to the complete cessation of candidates coming forward for the Army Medical Service, and compelled the promulgation of the Royal Warrant of last November, was the absurd classification of medical officers as non-combatants. Lord Cranbrook's Committee pointed out how inapplicable such a designation was, and how unjustly the medical officers were treated in consequence of being so classed. It was understood that, under the new Warrant, this grievance was to be redressed, and that the medical officers were to be permitted to share honours and other advantages on the same conditions as the so-called combatant officers. But it appears that the experience of the past has not taught wisdom to the military authorities, and that the old system of exclusion of medical officers from benefits conferred on the other branches of the service is again to be adopted, with what consequences we shall not venture to predict. A Royal Warrant, published in the Army Circular of the 1st of March, to regulate the reckoning of service and retire-

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nent of combatant officers, provides that "an officer placed on half-pay, on account of ill-health contracted in and by the service, may reckon time on half-pay, not exceeding one year, as full-pay service towards voluntary retirement." We understand that a medical officer, who applied to be allowed so to reckon time passed on half-pay, in consequence of ill-health contracted on active service in South Africa, was refused on the ground that the rule was applicable to combatant officers only. On what principle this rule was framed we are at a loss to understand; but to exclude from its operation the officers who are, from the nature of their duties, more than any others exposed to those causes which break down health, and in consequence necessitate retirement on temporary half-pay, is one of those remarkable eccentricities which characterise in so many instances our military administration. It is difficult to conjecture with whom the idea originated of excluding the medical officers from a benefit to which they are at least as much as any other class entitled. As Colonel Stanley showed himself well disposed towards the medical department, and was in possession of a very strong opinion expressed by Lord Cranbrook's Committee on the injustice of this very distinction of combatant and non-combatant officers, it is very clear that if the benefits derived from the judicious Warrant of last November are to be retained Mr. Childers must take care to prevent such unfair treatment, either by abolishing at once this unjust classification, or by adding to the Medical Warrant a clause conferring upon the officers of the department the same privilege in cases of half-pay, arising from ill-health contracted in and by the service, as has been granted to the class of "combatant" officers.

ARMY MEDICAL DEPARTMENT.—Surgeon-General Charles Alexander Gordon, M.D., C.B., Honorary Physician to Her Majesty, is granted retired pay; dated May 26th, 1880. Surgeon-General Edward Gilborne is granted retired pay; dated June 23rd, 1880. Surgeon-Major George Fleetwood Churchill, M.B., retires upon temporary half-pay; dated May 11th, 1880.

MADRAS MEDICAL ESTABLISHMENT.—Surgeons to be Surgeons-Major: Patrick Richard Martin, M.D.; dated April 1st, 1880. Joseph Patrick McDermott; dated April 1st, 1880. Alfred Eugenius Dalgairns; dated April 1st, 1880. Preo Nath Mookerjee; dated April 1st, 1880. John Francis Fitzpatrick, M.D.; dated April 1st, 1880. Henry Mervyn Gray Archdall; dated April 1st, 1880.

BOMBAY MEDICAL ESTABLISHMENT.—To be Surgeon-Major: Surgeon George William Robertson Hay, M.D.; dated April 1st, 1880.

Correspondence.

"Audi alteram partem."

HOSPITAL ADMINISTRATION IN INDIA.

To the Editor of THE LANCET.

SIR,—It was only yesterday that I read the remarks in your issue of the 29th ult., in allusion to hospital administration in Calcutta, and seeing that you have expressed your opinion pretty freely concerning myself, I trust you will find room for this reply.

You are aware that Sir A. Eden, Lieutenant-Governor of Bengal, ordered a Committee of officers serving under him to report on the hospitals of Calcutta, and that that Committee among other things recommended a reduction in the average cost of each diet. Formerly, the rate per native diet had been ninepence, but the Committee recommended that it should henceforth be fivepence farthing, which was to cover the cost of diet, all extras and stimulants. This rate the Lieutenant-Governor ordered to be fixed. In reporting on the hospitals of Calcutta for 1878, I pointed out that in one of those for natives the mortality for years past had been 25 per cent., and I asked if it was not worth while considering whether such a frightful death-rate might not be diminished by a more liberal use of soups, milk, stimulants, and other articles of suitable diet than had yet been tried. On this suggestion the Lieutenant-Governor remarked that he had no doubt there were hundreds of persons *in the streets of Calcutta, as in all other cities*, who would profit by the diet I had indicated, though he was not aware that any Government in the world had recognised it as part of its duty "to raise taxes for the purpose of averting disease by a system of general liberal diets." If you can see any connexion between my suggestion and His Honour's observation on it, it is more than I do. My unlucky remark was construed into an attack on the dietary of the Committee, as appeared by what was written subsequently in the paper from which I have quoted, although I had expressly said that the experience of a single year was hardly sufficient to test the fitness of the new scale. Members of the Committee further took up the matter, and attacked me in the newspapers as if I were hostile to their report, though, as I stated, I had not then read it; I had, however, looked through it. You allude pointedly to this admission. I ought to have said *studied* it. But suppose I had never opened the report, there was no occasion for me to do so, as I was asked no opinion regarding it. Orders were issued based on the report, which were intelligible enough in themselves, and which I saw carried out to the letter. Then, in the matter of my having told superintendents of hospitals to arrange for their contracts which I was prepared to countersign—which you characterise as amounting to a severe comment on myself as an administrative officer—I have only to say that, as an administrative officer, I have always felt that, executive officers being responsible for hospital management, I ought, as much as possible, to comply with their requests, and, in fact, leave good men every freedom of action. My orders from Government were that the sick should be maintained at a fixed rate, and, moreover, that medical officers were expected to keep their expenditure short of the rate. Now, suppose that I had objected that the contract rates for meat did not secure that which was suited for the sick, or that the price fixed for milk only procured milk and water, I might have been told that if dearer articles had to be obtained the rates must be exceeded, while my orders were to see that they should not be so.

You say that in your opinion Dr. Payne has satisfactorily answered statements which I made in the *Englishman*, and that he has "appended documents in support of his opinion." I have replied to all that he has said, and shall send you a copy of my letter when I get it from India. In the meantime I shall direct your attention to one of the documents On the 1st April, 1878, there were in the Campbell Native Hospital 365 cases and 34 entered in the hospital book, from which I took the figures as moribund—(cases dying within twenty-four hours of admission being so entered in Bengal Returns). According to the explanation now put forth they ought not to have been thus entered. Many of them were very feeble and exhausted, though they did not die so soon, and some recovered. Now I find that on the 1st April, for all the sick above given, the only extras issued were 4½ oz. rum, 19 lb. milk, 12 oz. of mutton, one fowl, and two eggs. I give the above as a sample of the issues, but in my letter to the *Englishman* I gave similar details for six days of April and three of May. In one of the documents appended to Dr. Payne's letter is one from the Superintendent of the Campbell Hospital, showing that the thirty-four cases above alluded to were not moribund, although his books represented them to be so, and to prove that they were not moribund cases he gives two tables showing what became of all the cases which I had on the authority of his book entered as moribund. He concludes his letter to Dr. Payne with the following remark: "From the perusal of these tables you will observe the favourable results which took place during the period referred to by Dr. Irving." Now, if you will analyse the two tables you will find that the death-rate was 56 per cent.; and I ask when such was the mortality at the time when the issue of the only food which such patients could take was so very limited, do you consider that I exceeded my duty in asking whether a more generous system of diet might not be tried with advantage in the interest of the sick poor of Calcutta?

You allude to "imputations" cast on me by the Committee. You must mean by the Lieutenant-Governor, as I am not aware that the Committee cast any imputations on me in their report, though members of it have done so anonymously in the public journals. You further say that you cannot approve of my circulating to the native teachers copies of my letter to the *Englishman*, criticising the

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Government. But if I have been unjustly dealt with by Government, am I not when I am at liberty to do so to defend myself, and to secure that my reply is as widely circulated as the documents to which I reply?

I remain, Sir, yours faithfully,

JAS. IRVING, M.S.I.,
Late Surgeon-General to the Bengal Government.

Edinburgh, 18th June, 1880.

THE DISPUTE AT GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—The battle raging at Guy's is so important to the interests of the medical staffs of hospitals generally, that the time seems to be come for an independent expression of opinion on the merits of the controversy. For want of knowledge of the precise circumstances, I will not attempt to decide whether or not the students were justified in the particular form of their demonstration against the treasurer; but a demonstration of some sort was probably required. At Guy's Hospital the treasurer came into the inheritance of a noble reputation, absolutely created by the medical officers of former, and well maintained by those of modern times. To attempt to revolutionise an important department of the work, without one word of consultation with those who are solely responsible for the results, was surely an act not only of folly, but also of ingratitude; and of forgetfulness that the surgeons of Guy's Hospital have made the place so great that to become its treasurer is a distinction. As far as this officer is concerned, I look upon the rebellion against the medical staff as an uprising against the scientific knowledge and the practical skill of men who are renowned over the whole world for both. He holds his office, manifestly, for the advantage of the patients, and therefore his conduct with reference to them ought to be guided by that plain rule, to do as he would be done by. It is hardly conceivable that if he were dangerously ill himself he would desire to be nursed in a manner at variance with the opinions and the instructions of his medical attendants. With regard to the women, no doubt allowances should be made for them. I have read Miss Lonsdale's writings, and in these she seems to me to be careless of the distinction between truth and inaccuracy. She does not purposely disregard the difference, but she does not appear to recognise that there is one. I have been familiar with hospital nursing, on what she calls the old system, now for more than thirty years, and I do not believe her aspersions against the nursing staff. Medical students and nurses are men and women; and it is possible that improprieties may have occurred between them. But, if so, they would not have been prevented by the presence in the hospital of any matron, even one who had been trained in St. John's House. As for the bulk of the stories we hear, which have been so industriously put in circulation, I do not believe one word of them; they are mostly hearsays, which do not rest upon the personal knowledge of those who relate them, and my experience of the world is that slanderers as a rule are untruthful. Taking the question as a whole, I cannot express my opinion upon it more strongly than by saying that, if the system now introduced at Guy's were introduced at St. George's,—where, happily, we live under a different and better form of government—I would not continue to hold office as a surgeon for a single day, not even until my successor was appointed, for the simple reason that I could no longer do my duty to my patients; and nothing fills me with more surprise than that the physicians and surgeons of Guy's should continue to submit to a yoke which I should regard as intolerable. The only explanation which I have heard is one highly creditable to their magnanimity and to their sense of duty. It is said that the governors have been waiting for the resignation of the whole staff; hinting that they then would get men who would bind themselves to obey. The answer has in effect been, "We are not going to hand over a sacred trust delivered to us by famous men into the hands of hirelings."

Your obedient servant,

June 20th, 1880. R. BRUDENELL CARTER.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—Mr. Clay's letter in THE LANCET of June 12th is causing much surprise here. At the Women's Hospital we have been using the drug very largely in various kinds of cancer of the uterus, rectum, and breast, and we have the assurance of Messrs. Southall that the Chian turpentine we are using has been submitted to and "approved by Mr. Clay." His objection to the experience of Drs. Simpson and Macdonald does not therefore apply to ours. In the practice of my colleagues, and in my own, some twenty cases have been subjected to the treatment for several weeks, without the slightest improvement in any case—without the slightest appearance that the ordinary progress of the disease has been interfered with in the least.

I am, Sir, yours, &c.,

Birmingham, June 21st, 1880. LAWSON TAIT.

VOTING BY PROXY AT THE COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—Will you kindly insert in your next number of THE LANCET the following correspondence, relative to voting by proxy at the Royal College of Surgeons, and oblige your obedient servant, EDWIN MORRIS, M.D., F.R.C.S.

Spalding, June 23rd, 1880.

Spalding, June 22nd, 1880.

DEAR SIR,—Several Fellows of the College have written to me to know if you are prepared to pledge yourself to support vote by duly attested proxy papers. As the law now stands, the larger part of the constituency is virtually disfranchised; and it is the determination of several Fellows not to vote for any candidate who will not suppport vote by proxy. It is my intention to make your reply public.

I am, dear Sir, yours truly,

EDWIN MORRIS.

To Sydney Jones, Esq., George-street, Hanover-square, London.

16, George-street, Hanover-square, London,
June 22nd, 1880

MY DEAR DR.—I am quite prepared to support vote by duly attested proxy papers. I think that this is a right to which the provincial Fellows have a very decided claim.

Yours faithfully,

Dr. Morris, Spalding. SYDNEY JONES.

PARIS.

(From our own Correspondent.)

AT the Academy of Sciences a communication was read from Dr. Perroncito on an epidemic of pernicious anæmia, which has recently been observed amongst the miners of the St. Gothard tunnel. Three different helminths were found in the dejections of these patients, an anchylostoma, to which the name of Dochmius duodenalis has been given by Dubini, and two varieties of anguillula—the A. stercoralis and the A. intestinalis. Dr. Perroncito thinks that the presence of these two parasites in the intestine is sufficient to account for all the symptoms.

A new alkaloid, which has been named Thalictrine, has been obtained from the Thalictrum macrocarpum, a plant which grows in the Lower Pyrenees. Two to five milligrammes of this substance killed a frog in from twenty to forty minutes. A gramme to a gramme and a half of the extract injected into the veins of a dog or rabbit kills in five minutes, death being preceded by convulsions, complete abolition of general sensibility, acceleration of the respiration, weakness of the pulse, and vomiting.

Mr. Golding-Bird of Guy's Hospital was summoned last week to Paris to advise in a severe case of osteo-malacia. The patient is a Greek princess, well known in Parisian society, and was anxious to have a jacket applied during extension. Mr. Golding-Bird is the more to be congratulated, as there are now at least a dozen young surgeons here who have adopted Sayre's principle of treatment. But if any envy is felt at the distinction conferred upon our English colleague, it will be tempered by the feeling that a practical

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rebuke has been given to those leaders of the profession who have condemned a method because it was not their own.

There is nothing very new in the following formulæ, unless it is perhaps their simultaneous administration. They have, however, given such good results in some epileptic cases now under the care of Professor Ball, that some of your readers may be glad to try them:—Ammon. bromid., sod. bromid., aa equal parts; take two to five grammes twice daily (with food). Ex. bellad., tinc. oxid., aa ·02 gramme; make a pill: two pills to be taken morning and evening.

Obituary.

THOMAS EVANS, M.D., F.R.C.P. LOND.

THE name of Dr. Evans, of Mynd House, Gloucester, whose death occurred on the 3rd inst., at the age of seventy-five, had for nearly fifty years been a household word in the counties of Gloucester, Hereford, and Monmouth. Dr. Evans obtained the M.D. degree of Edinburgh in 1826, and became a Fellow of the London College of Physicians in 1860. He was appointed Physician to the Gloucester Infirmary in 1833, and held that office till 1867, when, on retirement, he was made Consulting Physician. He was also Physician to the Children's Hospital from its commencement. As Lecturer on Anatomy and Clinical Medicine at the former institution he was remarkable for the lucidity and force of his expositions, whilst his skill and kindness in the practical work of his profession were acknowledged and appreciated by a very large *clientèle*. The immediate cause of death was angina pectoris. The funeral took place on the 9th inst., and was attended by the Mayor and many of the chief citizens of Gloucester.

GEORGE GRAYLING, M.D., &c.

DR. GEORGE GRAYLING died on May 29th, 1880, at Forest Hill, aged sixty-two years, from cancer of the rectum. He was one of a family of sixteen, the children of Mr. Thomas Grayling, of Sheldwick, Kent. Apprenticed to Mr. Castle, of Sittingbourne, who was then in partnership with Dr. John Grayling, he afterwards studied at Edinburgh, where he graduated in 1844. In 1846 he settled in Forest Hill, where he has continued to practise for thirty-four years. In 1865 he was one of the original founders of the Forest Hill Dispensary, which is now established on a firm basis, and is in a prosperous condition, and was one of the medical officers till 1878, when he resigned.

About seven years ago he began to fail in health; but he worked on till 1877, when, acting upon the advice of Dr. Cavafy, Mr. Pollock, and Sir James Paget, he took a partner to assist him in his work. The disease during the last two years rapidly undermined his constitution, and although he suffered at times intense pain, he continued to see some of his old patients till within three weeks of his death, when he could no longer leave his room. He leaves a widow and three children, one of whom is about to enter the profession.

MEDICAL NOTES IN PARLIAMENT.

AMONGST the unopposed motions agreed to in the House of Commons on Wednesday afternoon, after the Bradlaugh scene had closed, was one by the Secretary of State for War (Mr. Childers), for the reappointment of a Select Committee to inquire into the Contagious Diseases Acts, their administration, operation, and effect. The following instruction to the Committee was adopted without discussion:—"That they have power to receive evidence which may be tendered concerning similar systems in British Colonies or in other countries, and to report whether the said Contagious Diseases Acts should be maintained, extended, amended, or repealed."

Lord R. Churchill and Mr. Baring have put down notices of their intention to move the rejection of Mr. Dodson's Vaccination Acts Amendment Bill, the object of which is to abolish the cumulative penalty for non-vaccination.

Mr. Sexton will move the rejection of the Medical Charities (Ireland) Bill, the order for the second reading of which was adjourned to the 30th inst.

Medical News.

UNIVERSITY OF CAMBRIDGE. — At a congregation held on the 17th inst., the following degrees were conferred:

DOCTORS OF MEDICINE.

Alliott, Alexander John, Pembroke College.
Davidson, Alexander Deas, Clare College.

BACHELORS OF MEDICINE.

Biss, Cecil Yates, Downing.
Groome, William Wollaston, St. Catharine's.
Humphry, Lawrence, Trinity.
Niven, James, Queen's.
Parker, William Rushton, Caius.
Street, Alfred Francis, Trinity.
Wolfenden, Richard Norris, Christ's.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on June 17th:—

Cooper, William Astley, Widnes, Lancashire.
Erson, William Robert, Easingwold, Yorkshire.
Harries, Arthur John, Tufnell-park-road.
Prothero, Richard, Everton-road, Liverpool.
Tucker, Joseph, Chulmleigh, North Devon.

The following gentlemen also on the same day passed the Primary Professional Examination:—

John Coveney, London Hospital; Walter Thomas Harris, Guy's Hospital.

A BRANCH of the St. John Ambulance Association has been founded at Wakefield.

DR. J. EMERSON REYNOLDS, Professor of Chemistry in the University of Dublin, has been elected a Fellow of the Royal Society.

MR. CUTHBERTSON has received the Local Government Board award for vaccination of the first class, in No. 1 district Droitwich Union.

DR. MUSGRAVE, of Lisbrom, has been placed on the Commission of the Peace for the County Antrim; and Mr. Samuel Chaplin, F.R.C.S.I., of Kildare, for that County.

ROBERT KEITH GUILD, M.D., who went out from Aberdeen to the Cape a few years ago, has been appointed a Justice of Peace in and for the several districts of the territory of Griqualand East.

ASSISTANT-SURGEON ABDOOR RUZZACK, the author of an excellent report on a medical pilgrimage to Mecca and Medina, noticed lately in our pages, has been appointed Civil Surgeon of Sutna in Central India.

VICTORIA HOSPITAL FOR CHILDREN.—On Sunday afternoon the Princess of Wales, accompanied by the King of the Hellenes, the Princes Albert Victor and George, and the Princesses Louise, Victoria, and Maud, paid a visit to the Victoria Hospital for Children, Queen's-road, Chelsea.

THE Boylston Medical Committee of the Harvard University have awarded 150 dollars and the Boylston gold medal to Mr. W. Watson Cheyne, F.R.C.S., Assistant-Surgeon to King's College Hospital, London, for his dissertation on "Antiseptic Treatment: What are its essential details? How are they best carried out in practical form?"

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

BARNES, A. R., M.B., L.R.C.P.Ed., M.R.C.S.E., has been appointed to the Fourth District of the Hailsham Union, vice J. Sarjint, M.D., resigned.

BLAKER, T. F. I., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Hove District of the Brighton, Hove, and Preston, Provident Dispensary.

BOULTER, W. E., M.D., has been appointed Assistant Medical Officer to the Woolwich Union, vice Holt.

ECCLES, R., M.D., M.Ch., M.R.C.S.E., &c., has been appointed an Honorary Assistant-Surgeon to St. George's Hospital for Diseases of the Skin, Great George-street, Liverpool.

GAVIN, M. F., M.D., F.R.C.S., has been appointed Visiting Surgeon to Carney Hospital, Boston, U.S.A.

GRIMOLDBY, G. H., M.R.C.S.E., L.R.C.P.Ed., has been appointed Medical Officer to the Stickney District of the Spilsby Union.

HANLY, E., M.D., C.M., has been appointed Resident Assistant Medical Officer at the Brownlow-hill Workhouse of the Liverpool Parish, vice Whitford, resigned.

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HEHNER, O., F.C.S., has been appointed Public Analyst for the Borough of Derby, vice Dr. Goode, deceased. 10s. 6d. for each sample analysed.

HOPKINS, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Cleveland-street Sick Asylum, vice H. A. Lediard, resigned.

HUDSON, H. R., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer of Court Prince Arthur of the Odd Fellows, Newport, vice Brizzel, deceased.

JONES, Mr. F., has been appointed House-Surgeon at the London Hospital, vice Shapley, resigned.

JONES, W. C., M.R.C.S.E., has been appointed Medical Officer for the Defynnock District of the Brecknock Union.

KNOX, J., M.D., M.Ch., has been appointed Medical Officer of the Workhouse of the Bethnal-green Union, vice King, resigned.

LONGFORD, H., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Assistant Medical Officer to the Knayton District of the Thirsk Union.

BORTON, J., M.B., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Guildford Urban Sanitary District.

O'CONNOR, B., A.B., M.D., M.R.C.P.L., has been appointed a Physician to the Westminster General Dispensary, Gerrard-street.

PATERSON, A. G., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Caldewgate District of the Carlisle Union.

PROSSER, T. G., M.R.C.S.E., L.S.A.L., has been appointed Surgeon to the Monmouth Hospital and Dispensary, vice W. Willis, M.D., resigned.

SMYTH, W. J., B.A., M.D., has been reappointed Medical Officer of Health for the Shipley District for three years.

TOUGH, W. R., M.B., M.Ch., has been appointed Medical Officer to the Audlem District of the Nantwich Union.

WILMOT, A. E., M.R.C.S.E., has been appointed Medical Officer to the Burnham District of the Eton Union, vice W. Fairbank, M.D., resigned.

WILSON, —, M.B., C.M., has been appointed Medical Officer to the Paddock District of the Huddersfield Union, vice G. Wilson, M.D., resigned.

WRIGHT, C. St. John, M.B., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Sheffield General Infirmary.

Births, Marriages, and Deaths.

BIRTHS.

BENTHALL.—On the 15th inst., at Amyand House, Twickenham, the wife of Albert Benthall, M.R.C.P., of a son.

DE LA COUR.—On the 20th inst., at Camden-road, N.W., the wife of G. F. De la Cour, M.D., of a son.

GREEN.—On the 19th inst., at Wimpole-street, the wife of T. Henry Green, M.D., of a daughter.

TOWNSEND.—On the 13th inst., the wife of Knowlson Townsend, M.R.C.S.E., L.R.C.P.L., of a son.

WILLIAMS.—On the 18th inst., at Brixton-hill, the wife of Wynn Williams, M.R.C.S.E., of a son.

MARRIAGES.

FORRESTER—JUSTICE.—On the 22nd inst., at St. Mary's, Cheltenham, James S. Forrester, Surgeon, Army Medical Department, only son of the late William Forrester, Surgeon-Major, Madras Army, to Marie Clarisse, eldest daughter of the late Rev. John Justice, Rector of Ightfield, Whitchurch, Shropshire.

HEDDY—LATTER.—On the 22nd inst., at St. Luke's, Redcliffe-square, South Kensington, by the Rev. Hugh Hulcatt, M.A., Vicar of St. John's, Bethnal-green, late Chaplain to H.M. Forces, assisted by the Rev. W. F. Handcock, M.A., Vicar of St. Luke's, William Jackson Heddy, M.R.C.S.E., of 25, Hollywood-road, South Kensington, elder son of William Abidah Heddy, of 92, Redcliffe-gardens, to Laura Mary, second daughter of Laurence Latter, of 98, Redcliffe-gardens, and Horns Lodge, Tonbridge, Kent.

VINCENT—THELWELL.—On the 21st inst., at East Dereham, Norfolk, Henry Bird Vincent, M.R.C.S.E., only son of James Vincent, Esq., M.D., to Emily Martha, widow of the late Francis Thelwell, Esq., I.C.S., Bombay Presidency.

DEATHS.

BEGBIE.—On the 18th inst., at Clifton, Bristol, Anna Maria Churchill, widow of the late J. Warburton Begbie, Esq., M.D., of Great Stuart-street, Edinburgh, aged 52.

GRIFFIN.—On the 18th inst., William Royle Mortimer Griffin, Esq., M.R.C.S.E., L.S.A.L., of Rock House, Alphington, Exeter, and late of Real del Monte, Mexico, aged 59.

HOLROYDE.—On the 19th inst., at Clough House, Sydenham, Elkanah Holroyde, F.R.C.S.E. & J.P., late of The Clough, Bolton-by-Bowland, Yorks, and formerly of Manchester, in his 78th year.

JOY.—On the 17th inst., at Northwold, William Joy, M.R.C.S.E., L.S.A.L. (from pleuro-pneumonia of a week's duration), aged 80.

MACKIE.—On the 20th inst., at Callander, James William Reid Mackie, M.D., F.R.C.S.E., of Cupar, Fife.

SEYMOUR.—On the 16th inst., Almeric W. Seymour, M.D., of Montpelier-place, Brighton, son of the late Edward James Seymour, M.D., F.R.S., of Charles-street, Berkeley-square, aged 49.

THOM.—On the 15th inst., at Evan-street, Stonehaven, James Taylor Thom, M.D., F.R.C.S.Ed., aged 45.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, June 24th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jun. 18	30·01	S.E.	65	60	113	78	54	0·01	Fine
,, 19	29·71	S.	62	59	106	72	57	..	Raining
,, 20	29·72	S.E.	59	57	99	70	56	0·14	Raining
,, 21	29·68	S.	63	57	110	73	53	..	Fine
,, 22	29·70	E.	62	57	78	64	57	..	Overcast
,, 23	29·77	W.	62	58	111	75	54	0·07	Cloudy
,, 24	29·74	WNW	62	58	99	70	54	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

BOGUS DEGREES.

IT is satisfactory to learn, as we do from *The Times'* correspondent of Philadelphia, that the operations for the sale of bogus degrees have been very severely interrupted by the arrest of Dr. John Buchanan, the chief dealer. Honest graduates in all countries are indebted for this capture to the proprietor and city editor of the *Record* of Philadelphia. The editor, by assuming different names, got eight medical diplomas from the American University of Philadelphia, the Eclectic Medical College of Pennsylvania, and the Livingstone University. The work was done in connexion with the Government authorities. The papers captured in Buchanan's office show a sale of 3000 spurious diplomas, and a large number were still unsold. Buchanan's trade was chiefly with Germany, but somewhat with England. He is to charged in the United States Court with using the mails for improper purposes and with fraud. The Colleges mentioned are legally incorporated, but this exposure will be made the basis of a demand for forfeiting the Charters.

Mr. J. T. Hinchliffe, (Gringley, Bawtry.)—We believe that the "model bye-laws" referred to are not published in the ordinary course; but we have little doubt that if our correspondent will write to the Secretary of the Local Government Board, Whitehall, preferring his request, a copy will be sent to him.

CASE OF RUPTURE OF THE UTERUS.

To the Editor of THE LANCET.

SIR,—As cases of rupture of the uterus are rare, having been in practice myself for twelve years, and attended over 800 cases without having had a case till the present one, perhaps you might consider it of sufficient importance for insertion in THE LANCET.

On the 10th instant, at 3 P.M., I was summoned to attend Mrs. H——, aged twenty-seven, multipara; three previous confinements, natural. I arrived about 5 P.M., and found the os nearly fully dilated, head presenting, and pains very slight. I was informed she had been having pains of the same character for two days. I administered ergot about 9 P.M., but without any effect. I left her about 11 P.M., and saw her the following morning at 6 A.M., when she appeared in about the same condition, very little advance having been made. Towards noon the pulse became quicker and weaker, and vomiting set in, which soon became of a coffee-ground character. I applied the forceps, but failed to deliver. I sent for the assistance of Mr. Winstanley, of Ingatestone, who arrived at 2 P.M. The patient at this time was falling into a state of collapse. He also applied the forceps, but failed to deliver. I performed craniotomy. On inserting the hand to remove the placenta, a portion of the bowel was found to be grasped instead of the placenta. Death occurred about ten minutes after delivery.

The points of interest in the case seem to me to be the occurrence of rupture of the uterus without there having been any strong pains; also the fact that it appears to have prevented delivery by the forceps.

Yours faithfully,

Brentwood, May, 1880 J. R. WHITE, M.B., &c.

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SEBACEOUS CYSTS IN THE SOLE OF THE FOOT.

SURGEON-MAJOR L. CAMERON contributes to the *Indian Medical Gazette* an account of two cases of the above description which came under his care, one at the Police Hospital Burrisal, the other at the Gya Dispensary. The patient in the first case was a constable who had been sent in from an outpost with an intractable ulcer in the sole of the foot. The ulcer measured three-quarters of an inch in diameter. Its margins, composed of the tissues of the skin, were red, smooth, and healthy-looking, its base being occupied by a brownish, inert-looking membrane, which was found on examination to be comparatively insensitive, and to have a smooth, glistening, secreting surface on the side towards the exterior. It was removed by avulsion, and the ulcer healed quickly. The portion of membrane removed had the character of the cyst of a vein; it consisted only of a portion of the original cyst—the remainder (exterior portion) had been lost in the process of ulceration; it was dense and thick. Having a free outlet, it contained no mass of fatty pultaceous secretion, but looked and felt greasy. The history was of a small painless swelling in the sole, of its gradual enlargement, of its becoming painful, of its bursting, and finally of the formation of the ulcer. In the second case the patient came to the dispensary, complaining of lameness, pain, and swelling in the sole of the left foot. On examination, a dense, resisting cyst, of the size of a marble, was found under the skin on the plantar aspect of the fifth metatarsal bone. The skin over it was red, painful, and adherent. It had been blistered and subjected to other kinds of treatment. Recollection of the constable's case at once occurred, and it was apparent that this was an earlier stage of the same thing. This was confirmed by incision and avulsion of the cyst. It was an ordinary enlarged sebaceous cyst, and the contents were, as usual, pultaceous fatty matter.

A. P. F.—September is a fairly healthy month in Venice.

CASE OF LUNG DISEASE.

To the Editor of THE LANCET.

SIR,—Mrs. B—— came to consult me about her son, aged four years, who had caught a cold by repeatedly looking out of another window. The first time she noticed his quickness of breathing was on Wednesday, June 9th, and she consulted me on Saturday, the 12th. On inspection I found him a strong, healthy-looking lad, well formed and well proportioned, only there was slight venous congestion of the face and vessels of the neck. She said he had not "gone off his food much," and "would not lie in bed," and had spat up a thick viscid mucus, which was very sticky. I percussed the apices, and found nothing out of the normal, except a slight dulness on both sides. Posteriorly I found slight dulness from the top of the scapulæ downwards on both sides to about the middle of the chest behind; then the percussion-note suddenly changed, became dull decidedly on both sides, more marked on right side, and here there was pain on pressure, with fulness on both sides. I may also mention the breathing was rapid and increased in depth. Local fremitus on both sides posteriorly, increased not much in front. In front there was slight sibilus, and posteriorly there were dry râles over the scapulæ on both sides; below that point wheezing was heard on both sides, and at the middle of the chest; posteriorly on both sides I heard first fine crepitation, then bronchial breathing, and at the lowest point coarse crepitation. As yet she had noticed no rusty sputum. On Sunday he got up out of bed, took some food, and then died.

I may mention that the pulse and temperature were not at all in harmony with the lung diseased; indeed the pulse and temperature should have been far higher, and I therefore suspect that the disease had been going on long before it had been noticed by the mother of the child, and that the death had been due to an imperfect crisis. There was slight tenderness over the liver, and increase of dulness, with slight jaundice, and the mother noticed that the child strained while at stool. I prescribed the usual remedies, and gave a little stimulant thrice daily. By-the-by there was slight laryngitis, but no diphtheria.

Yours truly,

Glasgow, June, 1880. HENRY YARROW, M.B., C.M.

MANACA.

THIS is the name of another remedy for rheumatism. Dr. J. H. Egan, of the United States, extols it in the *Medical Brief* as "a specific" in the disease. The drug produces headache (at once relieved by coffee), followed by continued perspiration, and an amelioration of the distressing symptoms.

INTERNATIONAL CONGRESS OF HYGIENE AT TURIN.

To the Editor of THE LANCET.

SIR,—It may interest some of your readers to be informed that I have this morning heard from Professor Giacinto Pacchiotti that the International Congress of Hygiene will be opened on the 6th of September, and will close on the 12th; that the King, the Ministers, the Maire, the Prefect, and all the officials will take part; that the Minister of Foreign Affairs invites all foreign Governments to send delegates; and that there will be a reduction of 30 per cent. on railway fares.

Faithfully yours,

Norfolk-square, June 21st, 1880. P. HINCKES BIRD.

GOVERNMENT MEDICAL FEES IN AUSTRALIA.

MR. H. JAMES, M.R.C.S., of Hamilton, writes to the *Australian Medical Journal*, complaining of the absurdly inadequate fees paid to medical men in that colony for attending inquests—viz., one shilling a mile, one way, for travelling expenses. "A day or two ago," he says, "I drove forty-four miles, and was allowed the munificent sum of 22*s*."

Dr. A. Harris.—1. We are not aware.—2. Messrs. Ihlee and Horne, Aldermanbury, London.

IODISED COTTON AS AN EXTERNAL APPLICATION.

To the Editor of THE LANCET.

SIR,—Dr. Woakes's article on medicated cotton as applied to the nose has reminded me of a further use of the iodised form which, as far as I am aware, has not been formerly applied—viz., as an external application in substitution of the usual mode of iodine painting. Having seen the good effects of Dr. Greenhalgh's iodised cotton in the treatment of uterine cases, I was led to attempt its use where it was desirable for a prolonged period to obtain the maximum of absorbent stimulating action of iodine with the minimum of skin irritation.

In the rough method of painting iodine on the skin, the amount actually consumed is but small; yet, if an effort be made to push the treatment by either repeated painting or increased strength of solution, blistering occurs, necessarily followed for a time by cessation of its use. If, however, a layer of iodised cotton retained by a bandage be employed, not only is the skin placed in a favourable condition to slowly absorb the iodine as the confined perspiration gradually moistens and lets it free, but an additional factor is called into play by the application of equable pressure. In this way I have for years treated all cases where the external application of iodine is indicated, such as scrofulous and syphilitic affections of glands, chronic and acute synovitis and their sequelæ. In acute synovitis unusually rapid cure has appeared to follow where, after aspiration of the joint, absorption of small secondary effusion has been so aided. As an instance of long-continued application, I may mention a case of elephantiasis of the leg which was so treated, with more or less regularity, for nearly nine months, with the apparent effect of checking permanent increase of growth, although the patient underwent attacks of fever and swelling of the limb, which usually precede it; indeed, not only did the disease appear checked, but progressed slowly and regularly from a measurement of instep 10½ in., ankle 11 in., and calf 11½ in., to 9 in., 10 in., and 10 in. respectively. This may not seem great progress in so long a period, but it represents a considerable diminution in circumference, resulting in a vast difference in comfort to the patient. At any rate, the case serves as an illustration of the point in view; for I believe that by no other method could such continuous application of iodine have been carried out without exciting great irritation, followed by thickening of the skin, and hence defeat of the action of the drug as a stimulant of local absorption.

In the case of females, where stains about the neck are naturally disliked, good results can be obtained by the use of the cotton at night-time, the mark left being trifling.

I have always used cotton-wool which has been saturated with tincture of iodine, and subsequently sun-dried, retained in position by a simple bandage. It is possible much is thus lost by evaporation in manufacture as well as in application, unless the layer be fairly thick. It might, therefore, be advisable, for the sake of economy, to use a weaker preparation covered by waterproof bandage; but I have had no experience on the point.—I am, Sir, yours &c.,

June 9th, 1880. W. G. KING, M.B., Surgeon I.M.D.

Mr. H. C. Fox, (Stoke Newington.)—Dr. Arthur Ransome's paper on Epidemic Cycles is published, we believe, in the Transactions of the Philosophical Society of Manchester. Dr. Ransome, we are sure, would willingly furnish the information which Dr. Fox asks from us, and which we are unable to give him at the moment, if a note were addressed to him.

C. M.—No medical man can recover fees unless he be duly registered under the Medical Act, 1858.

Mr. Charles E. Hall.—We cannot give the particulars required. See advertisements.

GAZETTING ARMY MEDICAL APPOINTMENTS.

To the Editor of THE LANCET.

SIR,—Would you kindly draw attention to the very great delay which takes place in the gazetting to vacancies in the Army Medical Department In other branches of the service three weeks is about the average. More than two months is about the usual time in this department. It seems very unnecessary. When men have served nearly thirty years, they naturally become anxious to see their names in the *Gazette*.

Yours &c.,

June, 1880. A SUFFERER.

TREATMENT OF SPINAL MYELITIS.

To the Editor of THE LANCET.

SIR,—In reply to your correspondent "S.," I should try ascending galvanic currents in the treatment of his case. The pains may certainly be relieved by warm baths or wet-sheet packing. Internal remedies are not of much avail; but the most promising is that much-neglected tonic, corrosive sublimate, in recommending which I am only endorsing the opinion of Dr. Radcliffe. Yours truly,

Paris, June 17th, 1880. OSCAR JENNINGS.

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Mr. Chas. J. Lathbury, (Breaston, Derby.)—We learn that as soon as the Local Government Board has made its arrangements for the supply of animal lymph, the fact will be duly announced. It is unlikely, however, that these arrangements can be completed for some little time to come.

J. D.—Every public hospital is bound to employ qualified officers for its medical service; and as the administration of anæsthetics is a medical service, the "chloroformist" should be a qualified medical man.

Thomas G. Prosser.—We fear not.

"TYPHOID" IN INDIA.

To the Editor of THE LANCET.

SIR,—According to THE LANCET of this date a serious outbreak of typhoid fever has occurred among the British troops at Delhi. The outbreak is of a mild type. Malarial affections are somewhat numerous among the native community, and so far no local insanitary conditions have been discovered to account for the sudden appearance of that fever.

It seems to me that with reference to the discussion now taking place on the subject of typhoid fever in India, advantage would accrue were it stated definitely what is the precise sense in which the expression *typhoid* is applied to this outbreak of fever at Delhi.

I am, Sir, your obedient servant,

June 19th, 1880. L. S. GORDON, Surgeon-General.

"TREATMENT OF GOUT."

To the Editor of THE LANCET.

SIR,—In reply to the queries in the last number of THE LANCET, I beg to say that I have for some years, in the treatment of gout, used, with the best results, the salicylate of soda, given in solution (ten grains every two hours), some days consecutively, till pain has ceased, which occurs very soon. I combine with that the external use of iodoform, either with vaseline or with elastic collodium, sometimes daily, covering the affected limb afterwards with india-rubber. My patients soon become accustomed to this method, which they prefer to every other, so that they take the medicaments spontaneously in case of a relapse. For the general treatment the salt of Karlsbad is very successful.

Yours truly,

Prenzlau, Germany, June 14th, 1880. JULIUS GROSSER, M.D.

COMMUNICATIONS, LETTERS, &c., have been received from — Dr. Poore, London; Dr. R. M. Hodges, Boston, U.S.A.; Surgeon-General Gordon; Mr. C. Foster; Mr. R. Harrison, Liverpool; Mr. Yarrow; Dr. Harris; Mr. Hartley, London; Messrs. Tarn and Co.; Dr. Allen; Mr. Treves; Mr. Dolan; Mr. H. C. Fox; Dr. Whitby; Mr. Braden; Mr. Lathbury; Rev. Stephen Cox; Mr. Whiteley; Rev. J. C. Harrison; Dr. C. Kelly; Messrs. Howell, James, and Co.; Mr. Kirkwood; Mr. Greenwood; Dr. Carlyle; Messrs. Hitchcock and Williams; Mr. J. T. Hinchliffe; Mr. Lumley; Mr. Wills; Messrs. Lewis and Allenby; Dr. R. Drury, Birmingham; Mr. Hill; Mr. Dent; Dr. Alcock; Mr. P. Robinson; Messrs. Anderson and Thomson; Messrs. J. Brown and Son; Messrs. Dickins and Sons; Mr. T. Bourke; Messrs. Capper and Sons; Mr. T. Aston; Messrs. Hannington and Sons; Messrs. Alger and Co.; Messrs. Venables and Sons; Messrs. Marshall and Snelgrove; Mr. W. Lindsay; Dr. Haynes, Malvern; Messrs. Goode, Gainsford, and Co.; Mr. W. Beaumont; Dr. J. Robinson, Rockfield; Dr. J. Irvine, Edinburgh; Messrs. Debenham and Freebody; Mr. Jay; Mr. Blackwood; Messrs. Fraser, Sons, and Co.; Dr. J. Morton; Dr. P. Eade, Norwich; Mr. W. Marriott; Dr. Garstang; Dr. P. Hinckes Bird; Dr. Young, Malton; Dr. D. H. Stone; Mr. Wynter; Dr. Kennedy; Dr. P. Foster; Mr. A. Haviland; Mr. W. Bourke; Mr. Diggins, Lancaster; Dr. Lush; Mr. Townsend, Exeter; Mr. Wilkins; Mr. Fosbroke; Mr. Kerbey; Dr. Alison; Messrs. Woollams and Co.; Dr. Allan Duke; Dr. Morris; Mr. Constantine; Mr. Macdonald; Mr. C. E. Hall; Mr. Banks, Cheltenham; Mr. Brett, Leicester; Mr. R. P. Hart, London; J. K. S.; D.; The Treasurer of St. Thomas's Hospital; C. M.; The Registrar-General; The Maltine Manufacturing Company; A. P. F.; Experimentum fit; Justitia; A Senior Student of a Metropolitan School; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from — Mr. Nash, West Haddon; Mr. Smith, Hadleigh; Dr. Hicks, Bushy; Mr. Haynes Long Sutton; Mr. Head, Plymouth; Dr. M'Gill, Littleborough Mrs. Lyons, Sheffield; Mr. Jollye, Donington; Mr. Rose, Bedford Dr. Franklyn, London; Mr. Brown, Ripon; Messrs. Horne and Sons; Mr. Ibberson, Dewsbury; Mr. Clark, Leicester; Messrs. Stent and Son, Guildford; Mr. Morris, Dorchester; Dr. Lee, London; Mr. Joy, North Wold; Mr. Harris, London; Mr. Robinson, Chesham; Dr. M'Adam, Edinburgh; Omega; M., Alcester; Physician; E. R.; Dr. J., Great Yarmouth; The Secretary, Western Ophthalmic Hospital; M.B., East India-road; Chirurgus, Bicester; Medicus, Carlisle; M. X.; M. R., Dumfries; M.D., Bradford; Medical, New Farnley; S. F., Sheffield; Surgeon, Kent-road; A. S., Batley; W., Derby; Amicus, Brighton; Surgeon, Great Grimsby; E. M.; Surgeon, Bow; Surgeon, Portslade; Masonic, Huddersfield; C. J. D.; W. B. G., Richmond; &c.

Bath Herald, Students' Journal, Chemists' Journal, Devonport Independent, Medicinal-Zeitung, Allgemeine Juristen-Zeitung, Spiritual Notes, Revista de Medicina, Journal d'Hygiène, Canadian Journal of Medical Science, Indian Medical Gazette, Record, Carnarvon Herald, North Wales Guardian, Leicester Chronicle, Bradford Observer, Welshman, Liverpool Daily Post, Bristol Mercury, &c., have been received.

Medical Diary for the ensuing Week.

Monday, June 28.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, June 29.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, June 30.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
STATISTICAL SOCIETY. — 4 P.M. Anniversary Meeting: Report of the Council; Election of President, Council, and Officers.

Thursday, July 1.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, July 2.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 3.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Terms for Serial Insertions may be obtained on application to the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris.

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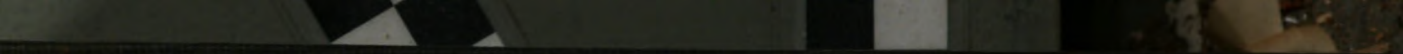
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